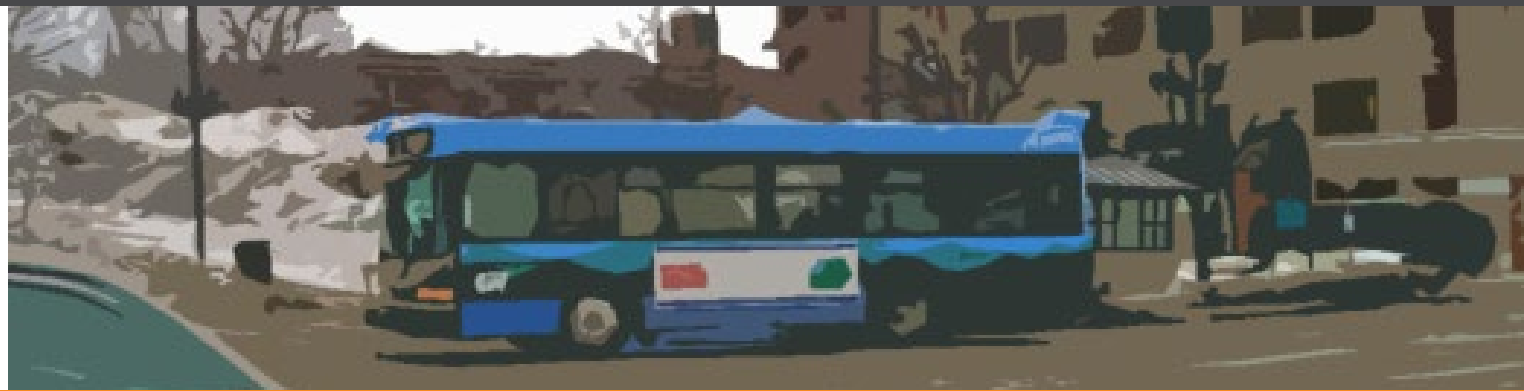




CITY OF BURLINGTON

# TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN

BURLINGTON, VERMONT  
OCTOBER 2015



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TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN

Prepared for:  
CITY OF BURLINGTON AND CCRPC

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# EXECUTIVE SUMMARY

**Purpose:** In 2014, the City of Burlington contracted with RSG and CATMA to create a Transportation Demand Management (TDM) Action Plan for City staff to reduce congestion, encourage healthy choices, reduce harmful vehicle emissions, and reduce downtown parking demand.

**Methodology:** The project team collected data from City documents, individual interviews with City staff in various departments, a best practices scan of comparable cities, focus groups with City staff, and coordination with the Downtown Parking Study.

## MAIN RECOMMENDATIONS: LONG TERM (4 OR MORE YEARS)

- Charge for Parking:** Charge Downtown and South End employees market rate for parking combined with a Commute Allowance.
- Commute Allowance:** Provide a pre-tax subsidy that can be used towards a transit pass, a parking pass, or bicycle commuting.
- Telework:** Enable employees to use telecommunications to work remotely and substitute their physical commute travel.
- Downtown TDM Coordinator:** Create a position that will serve as point of contact with CATMA, including role of Employee Transportation Coordinator (ETC). The Coordinator will keep downtown employees informed of TDM benefits and monitor employee TDM activity/usage.

## MAIN RECOMMENDATIONS: SHORT TERM (3 YEARS OR LESS)

- Unlimited Access/Universal Transit Pass:** Negotiated reduced rate (via CATMA membership), easy to load funds, choice between transit + four parking “tokens” per month OR monthly parking pass.
- Parking Cash-Out:** Allows employees to have a choice of a parking space or to receive the cash equivalent of that space and use a non-SOV commute.
- City TDM Coordinator in Human Resources Department:** Serve as point of contact with CATMA, including role of ETC. Assist TMA and Go! Burlington with keeping City employees informed of the TDM benefits. Monitor employee TDM activity/usage.
- Citywide TDM Offerings Through the General Fund:** Administer Transportation subsidies and programs, including employee CATMA memberships, at a Citywide level for all employees, from the General Fund
- Flextime Policy:** Allow the employer/employee to agree to a modified work schedule in order to avoid peak traffic or accommodate a non-SOV commute.
- Website with Log-in Feature:** Allow employees to track their commute, get information on transportation benefits, carpool, and route-finder.

## STRATEGIES TO MAINTAIN CATMA membership, CarShare VT Business Membership, City Green Bikeshare Program

## CAPITAL AND ADMINISTRATIVE RECOMMENDATIONS Increase and Improve Bicycle and Pedestrian Facilities, Improve Transit Ridership, Monitor TDM Programs, and Coordinate all Downtown TDM Activities

*The following pages summarize these four categories of recommendations. They may be used as standalone documents for the purposes of public outreach.*

## Project Goals Key



Reduce Traffic



Reduce Commuter Parking Demand



Promote Active Lifestyle



Reduce Carbon Emissions and VMT



Create an Attractive Eco-Minded City

LONG-TERM ACTION (4 or more years)	PROJECT GOALS	REASONS	TIMEFRAME
<b>Charge for Parking:</b> Charge Downtown and South End employees market rate for parking, combined with Commute Allowance.		<ul style="list-style-type: none"> <li>City loses money on parking</li> <li>More demand than capacity at lots</li> <li>Makes TDM the default option for employees</li> </ul>	Long-term
<b>Commute Allowance:</b> Provide a pre-tax subsidy that can be used towards a transit pass, a parking pass, or bicycle commuting.		<ul style="list-style-type: none"> <li>Helps employees with commute costs</li> <li>Rewards sustainable transportation modes</li> <li>Makes TDM the default option for employees</li> </ul>	Long-term
<b>Telework:</b> Enable employees to use telecommunications to work remotely and substitute their physical commute travel.		<ul style="list-style-type: none"> <li>Reduces car use</li> <li>Removes the need for a car before, during, or after work for personal reasons</li> <li>Provides flexibility during work hours</li> </ul>	Long-term
<b>Downtown TDM Coordinator:</b> Create a position that will serve as point of contact with CATMA, including role of Employee Transportation Coordinator. The Coordinator will keep downtown employees informed of TDM benefits and monitor employee TDM activity/usage.		<ul style="list-style-type: none"> <li>Increases awareness of TDM offerings</li> <li>Removes need to register at various places for various TDM services</li> <li>Makes TDM the default option for employees</li> </ul>	Long-term

SHORT-TERM ACTION (3 years or less)	PROJECT GOALS	REASONS	TIMEFRAME
<b>Universal/Unlimited Transit:</b> Negotiated reduced rate (via CATMA membership), easy to load funds, choice between transit + 4 parking “tokens” per month OR monthly parking pass.		<ul style="list-style-type: none"> <li>Increases awareness of TDM offerings</li> <li>Automatic opt in for transit</li> <li>Departments will not pay for transit passes</li> <li>Provides employee ID card</li> </ul>	Target Year 2018
<b>Parking Cash-Out:</b> Allows employees to have a choice of a parking space or to receive a cash incentive to use a non-SOV commute.		<ul style="list-style-type: none"> <li>Helps employees with commute costs</li> <li>Rewards sustainable transportation modes</li> <li>Makes TDM the default option for employees</li> </ul>	Target Year 2017
<b>City TDM Coordinator in Human Resources Department:</b> Serve as point of contact with CATMA, including role of Employee Transportation Coordinator. Assist TMA and Go! Burlington with keeping City employees informed of the TDM benefits. Monitor employee TDM activity/usage.		<ul style="list-style-type: none"> <li>Increases awareness of TDM offerings</li> <li>Removes need to register at various places for various TDM services</li> <li>Makes TDM the default option for employees</li> </ul>	Target Year 2016-2017
<b>Citywide TDM Offerings Through the General Fund:</b> Administer transportation subsidies and programs, including employee CATMA memberships, at a Citywide level for all employees, from the General Fund		<ul style="list-style-type: none"> <li>Departments will not pay TDM costs</li> <li>Increases awareness of TDM offerings</li> </ul>	Target Year 2017
<b>Flextime Policy:</b> Allows the employer/employee to agree to a modified work schedule in order to avoid peak traffic or accommodate a non-SOV commute.		<ul style="list-style-type: none"> <li>Reduces car use during peak hours</li> <li>Provides flexibility during work hours</li> </ul>	Target Year 2016-2017
<b>Website with Log-in Feature:</b> Allow employees to track their commute, get information on transportation benefits, carpool, route-finder		<ul style="list-style-type: none"> <li>Increases awareness of TDM offerings</li> <li>Removes need to register at multiple places</li> <li>Makes TDM the default option for employees</li> </ul>	Existing through CATMA, Improvements Target Year 2016-2017

Project Goals Key

Reduce Traffic

Reduce Commuter Parking Demand

Promote Active Lifestyle

Reduce Carbon Emissions and VMT

Create an Attractive Eco-Minded City

EXISTING STRATEGIES TO MAINTAIN	PROJECT GOALS	REASONS	TIMEFRAME
<b>City Green Bikeshare Program:</b> A bicycle sharing system is a service in which bicycles are made available for shared use to individuals (City staff and business colleagues) on a short term basis.		<ul style="list-style-type: none"> <li>Provides employees with active transportation during work hours</li> <li>Increases awareness of TDM offerings</li> <li>Makes TDM the default option for employees</li> </ul>	Existing TDM Program
<b>Bike Parking, Locker, and Shower Facilities:</b> Allow employees to use active transportation modes by providing a place to store a bike during the day and change into work attire after commuting		<ul style="list-style-type: none"> <li>Accommodates active transportation modes</li> <li>Increases awareness of TDM offerings</li> <li>Makes TDM the default option for employees</li> </ul>	Existing TDM Program
<b>Car Share VT Business Membership:</b> Provides employees access to vehicles for work trips throughout the day. Employees may also set up their own account for personal trips.		<ul style="list-style-type: none"> <li>Provides non-drives with vehicle for work tasks</li> <li>Accommodates active transportation modes</li> <li>Increases awareness of TDM offerings</li> <li>Makes TDM the default option for employees</li> </ul>	Existing TDM Program
<b>CATMA Membership:</b> Provides guaranteed ride home, transportation education, Bike/Walk programs and events, and incentives to use sustainable transportation modes.		<ul style="list-style-type: none"> <li>Promotes active transportation modes</li> <li>Increases awareness of TDM offerings</li> <li>Makes TDM the default option for employees</li> </ul>	Existing TDM Program

ONGOING CAPITAL AND ADMINISTRATIVE IMPROVEMENTS	PROJECT GOALS	REASONS	TIMEFRAME
<b>Increase and Improve Bicycle and Pedestrian Facilities:</b> Provide a sustainable transportation and accessibility system and emphasize healthier options over the SOV		<ul style="list-style-type: none"> <li>Promotes active transportation modes</li> <li>Increases awareness of active transportation</li> <li>Makes TDM the default option for employees</li> </ul>	Ongoing
<b>Improve Transit Ridership:</b> Support projects that increase transit ridership		<ul style="list-style-type: none"> <li>Increases awareness of transit</li> <li>Facilitates active transportation modes</li> <li>Supports a robust transit network</li> </ul>	Ongoing
<b>Monitoring:</b> Ensure that the TDM programs are meeting targets and goals of the Climate Action Plan by reducing employee VMT.		<ul style="list-style-type: none"> <li>Data provides information on obstacles to success</li> <li>Tracks progress over time</li> </ul>	Ongoing
<b>Downtown TDM Administration:</b> Coordinate Downtown TDM activities.		<ul style="list-style-type: none"> <li>Increases Citywide awareness of TDM</li> <li>Facilitates adoption of City strategies by downtown employers</li> <li>Achieves economies of scale for TDM offerings</li> </ul>	Long-Term



THREE YEAR GOALS OF TDM ACTION PLAN

Year 1 Goals:

- 33% reduction (284 passes) in Lakeview Garage parking passes issued
- 28% of downtown employees requesting parking cash out
  - (Of the ~153 downtown employees, this includes 24 employees currently request parking pass plus 20 employees who currently use sustainable modes = 44 employees total)

Year 2 Goals:

(After Year 1, review and adjust fees to meet new reduction target.)

- 50% reduction (432 passes) in Lakeview Garage parking passes issued
- 35% of downtown employees requesting parking cash out
  - (Of the ~153 downtown employees, this includes 36 employees currently request parking pass plus 30 employees who currently use sustainable modes = 66 employees total)

Year 3 Goals:

(After Year 2, review and adjust fees to meet new reduction target.)

- 67% reduction (576 passes) in Lakeview Garage parking passes issued
- 42% of downtown employees requesting parking cash out
  - (Of the ~153 downtown employees, this includes 48 employees currently request parking pass plus 40 employees who currently use sustainable modes = 88 employees total)

At the end of year 3, the City should review progress and decide whether to adjust goals to reflect 3-year trends, implement no new changes because the TDM efforts are working, or seek to add disincentives (e.g., parking fees) to complement incentives. This changes the TDM program from being a voluntary incentive-based approach to a mixture of incentives and disincentives, which have a greater impact on transportation behavior than singular strategies implemented on their own.

Estimated 3-Year Financials: Transit Pass and Parking Cash Out (Downtown Employees) Pro Forma

	Year 1	Year 2	Year 3
Expenses	\$33,704	\$51,794	\$77,898
Revenue	\$21,600	\$32,400	\$43,200
Net Operating Income	(\$12,104)	(\$19,394)	(\$34,698)

Notes and Assumptions

- The projected expenses and revenues above are based on the policy and operations recommendations from the TDM Action Plan.
- Figures do not include costs/revenue described in the Downtown Parking Study.
- Figures do not include additional revenue from leasing additional Lakeview Garage parking capacity due to anticipated other downtown garage parking projects.
- The start date for any of the proposed work in the TDM Action Plan would begin in FY17 or later.

Transportation Costs

	Year 1	Year 2	Year 3
Bike Share	\$0	\$0	\$0
CATMA	\$13,000	\$13,000	\$13,000
CarShare VT	\$2,440	\$2,600	\$2,776
Transit	\$7,704	\$8,474	\$9,322
Parking Cash Out	\$10,560	\$27,720	\$52,800
TOTAL COSTS	\$33,704	\$51,794	\$77,898
PARKING LEASE REVENUE	\$21,600	\$32,400	\$43,200
NET COST	(\$12,104)	(\$19,394)	(\$34,698)

Notes and Assumptions

- Bike share program subsidized by BlueCross BlueShield Vermont.
- CATMA membership fee no longer subsidized by federal grant or membership base.
- Estimated 12 new employees would join CarShare Vermont each year (1 per month), and usage/fees would increase by 10% each year.
- Transit ridership costs estimated to increase 10% per year. Transit rides discounted at 28% per ride through the City’s membership with CATMA.
- Parking cash out: About 72 parking passes are issued currently per month to City employees, about 1/3 of which (~24 spaces) are not used, and about 2/3 (~48 spaces) are used less than half the time. Parking cash out is priced at \$20/per pass in year 1, \$35/per pass in year 2, and \$50/per pass in year 3. An estimated 44 employees would choose the parking cash out in year 1, 66 in year 2, and 88 in year 3:
  - This includes 24 employees who currently choose a parking pass (but do not use) in year 1, 36 employees in year 2, and 48 employees in year 3.
  - This includes estimate of downtown employees who currently walk, bike, or “other” and would choose parking cash out (20 in year 1, 30 in year 2, and 40 in year 3).

- Parking lease revenue would be from spaces freed by employees requesting cash out rather than parking pass (24 spaces in year 1, 36 in year 2, 48 in year 3).

Highlights

Between June 2013 and July 2014, the City paid \$31,050 towards employee commute and transportation options in the form of subsidized parking spaces, transit passes, CATMA membership, and CarShare VT membership/usage. The true cost of these services is estimated at \$104,664.

For example, the City of Burlington provides “free” parking in the Lakeside Garage for employees working in the downtown core. Although provided at no-cost to staff, the City pays \$20 per pass, per interested employee regardless of whether or how often the pass is used per month.

Between June 2013-July 2014, the City bought 862 parking passes (at \$20 per pass), or approximately 72 passes per month, for a total cost of \$17,240. Had those spaces been leased at the \$75 market rate, the City would have generated revenue of \$64,650. An internal study conducted previously by the City suggests that two-thirds of these staff passes are used less than half the time, and that close to one-third of the passes may not be used at all. Unlike the peer communities noted in this TDM Action Plan, the City of Burlington is the only one to provide free parking to employees.

While the Lakeview Garage has ample space to meet existing demand, scheduled repairs in the Marketplace Garage will at least temporarily decrease the overall downtown parking supply, which will increase demand for the Lakeside garage. There is also redevelopment planned for the downtown shopping mall. This may include demolition of the Cherry Street Garage, perhaps permanently reducing the City’s overall parking assets by ~700 spaces. The demand for spaces in the Lakeview Garage will be immediate and it will likely be at capacity when those downtown garage projects begin.

The City also provides transit passes (10-ride and monthly) to City staff upon request. These are purchased by the City from CCTA at market rate. The City pays upfront and incurs that cost whether or not the passes are used. This report recommends that the City switch from its current system to an Unlimited Access transit pass program—starting with paper passes that have no production charges—where the City would incur costs on a per-ride basis.

The City also provides CarShare Vermont membership to City staff. Monthly membership fees and per-use charges are borne by individual departments. Membership allows employees to commute sustainably (walk, bike, transit, carpool) but maintain access to a vehicle for work-related trips.

At present, City departments are billed separately for their respective staffs’ use of transportation services. Because departments are charged individually, and because bus passes and CarShare Vermont monthly membership fees are more costly than subsidized parking passes, anecdotal evidence suggests that departments are discouraged from encouraging staff to use alternative modes of transit. Hence, this report recommends that the City pay for commuting programs through the General Fund, removing the burden from individual and limited departmental budgets.

This report also suggests the implementation of a Parking Cash Out program in which employees receive a cash incentive for not accepting a parking pass. According to the literature, this may require up to 50 hours of administrative time per year, depending on the number of employees taking advantage of this program. When the policies and procedures of this program are established and become routine for Human Resources staff, this is anticipated to result in an additional 1-3 hours per month of administration by the Human Resources department. In addition, CATMA has expressed readiness to assist with employee data analysis as part of the City’s associate membership. If and when a downtown Parking and Transportation Management District is created, as recommended in the Downtown Parking and Transportation Management Plan, TDM services could ultimately be provided by a Downtown Improvement District and/or a Transportation Management Association (TMA), such as CATMA. The DID/TMA would service many downtown businesses, including the City of Burlington as an employer, and likely reduce or eliminate time spent by HR staff on transportation programs.

With completion of this TDM Action Plan, a second phase study is planned to examine in more detail the economic costs, technological issues, and other details and logistics associated with the design and implementation of a Unlimited Access/Universal Transit Pass Program, and a Parking-Cash Out/ Commute Allowance Program as outlined in this Plan. The goal is to pilot these efforts with the City of Burlington as a downtown employer, and to examine its potential to serve as a model for the downtown business community.



# 1

## INTRODUCTION



In 2014, the City of Burlington, through grants from the High Meadows Fund and the Chittenden County Regional Planning Commission (CCRPC)’s annual work program, sought to implement a Transportation Demand Management (TDM) Action Plan among City staff to reduce congestion, encourage healthy choices, reduce harmful vehicle emissions, and reduce downtown parking demand. A secondary goal of this Action Plan is to provide a model for other employers and employees in downtown Burlington interested in reducing their transportation and parking impacts. To fulfill this directive, the City contracted with RSG and the Chittenden Area Transportation Management Association (CATMA) to work with the City and the CCRPC to develop an actionable TDM plan.

TDM refers to a collection of strategies and policies that seek to decrease commuting by Single Occupancy Vehicle (SOV) and increase the value and convenience of using sustainable modes of transportation through a set of incentives and disincentives. The needs and preferences of individual communities help tailor the strategies and structure of their TDM program. This Action Plan seeks to recommend a set of TDM strategies that balance incentives and disincentives to influence commuter behavior appropriately while being sensitive to the daily transportation needs of city employees.

### TRANSPORTATION MANAGEMENT ASSOCIATION (TMA) HISTORY

This TDM Action plan informs the City of Burlington, as well as CATMA, of transportation services and strategies that will improve mobility and reduce drive-alone commuting. Established in 1992, CATMA is a non-profit membership-based transportation management association that has been jointly planning and managing transportation and parking for the hill institutions (University of Vermont, Champlain College, and the University of Vermont Medical Center), including administering and managing a comprehensive TDM program. The TMA is primarily funded by its member employers and promotes transportation services through partnerships with other service providers, such as Chittenden County Transportation Authority (CCTA), Local Motion, CarShare Vermont, and Go! Vermont and Go! Chittenden County. In January 2015, CATMA changed its name from Campus Area TMA to Chittenden Area TMA. This reflects the expansion of its successful business model in Chittenden County.



### PROJECT GOALS

As part of this study, the consultant team analyzed the commuting trends of City of Burlington employees, their use of current CATMA programs, and gaps and inefficiencies in the existing suite of employee transportation benefits. Through a process of sharing best practices, program evaluation, and stakeholder interviews, **the goal of this project is to create a set of short and long-term TDM recommendations that will best serve the needs of Burlington’s City employees in an efficient and cost-effective manner.**

Underlying the overall project goal are several planning objectives, including:



**Traffic congestion:** Reduce traffic and congestion downtown



**Environmental sustainability and carbon emissions reduction:** Reduce vehicle miles travelled in the downtown area



**Parking utilization:** Free up more available space for commercial activity by reducing commuter parking demand



**Attractive City:** Make Burlington an attractive city to recruit talented professionals and the eco-minded generation.



**Promote Active Lifestyle:** Encourage commute options that increase personal health

As a part of the scope of this study, the team examined an order of magnitude estimate for potential costs and savings resulting from the reorganization of parking and transportation benefits among City staff. The team studied the timing, location, and quantity of downtown staff parking usage, estimates of future parking utilization and occupancy rates, and anticipated expenditures associated with funding TDM programs.

### PROJECT APPROACH

RSG’s approach to developing this TDM Action Plan followed a methodical approach in gathering existing information, identifying the following:

- **Data Collection and Best Practices review:** The team assembled and analyzed existing data from project stakeholders to develop a concise summary document that contains the following information:
  - CATMA City employee survey data
  - City parking subsidies
  - Union contract provisions
  - Prior TDM and TMA efforts in the City of Burlington
  - Four best practices in parking and TDM in cities and communities comparable in size and climate as Burlington.
- **Focus Group Outreach:** The team facilitated and participated in a focus group outreach process to solicit input on potential parking and TDM elements that would appeal to City employees as well as other downtown Burlington employees and employers. The team met with:
  - One focus group with predominantly downtown city employees
  - One focus group with predominantly South End city employees
- **Parking Coordination:** The team communicated and coordinated with the Steering Committee and the Downtown Burlington Parking Plan team, led by Desman Associates, throughout the course of the project. The TDM plan and Downtown Burlington Parking Plan are complementary and should be consulted together.

# 2

## CITY OF BURLINGTON EMPLOYEE DATA & ANALYSIS

### CATMA CITY EMPLOYEE SURVEY OBSERVATIONS

In CATMA’s 2012 biennial survey, a sampling of Chittenden County employees were surveyed regarding their transportation habits to and from work. Responses from the 125 City of Burlington employees are examined here to determine opportunities and challenges for potential expansion of TDM initiatives in the City.

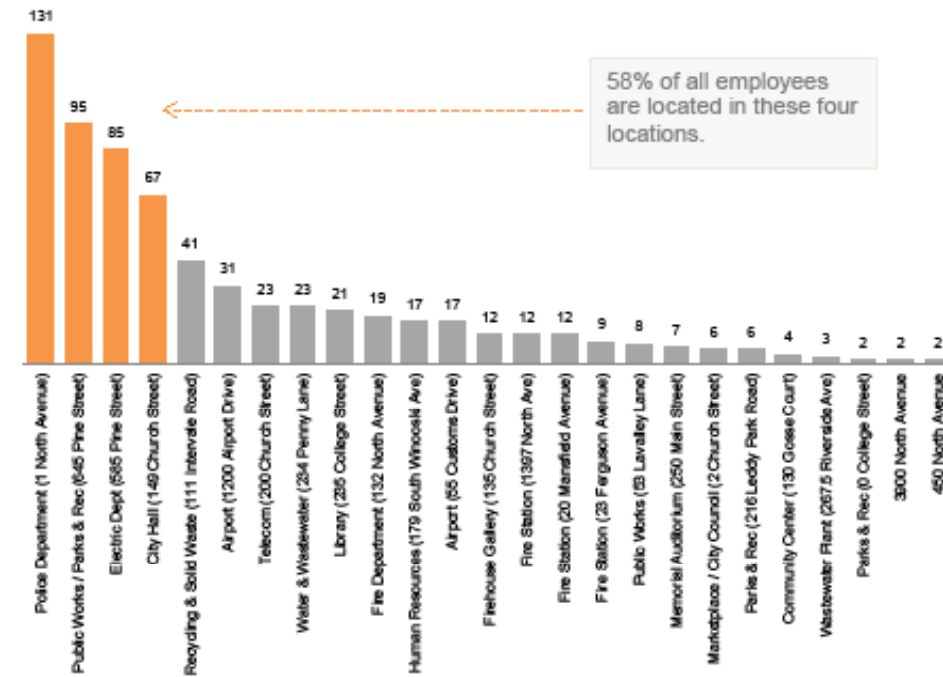
The respondents represent a sample of nearly 20 percent of the City’s 650 employees who work at locations within the downtown core, the South End, and in other buildings throughout the City. The first section describes how City employees in the different locations traveled to work at the time of the survey. The second section examines the potential efficacy of various incentives and disincentives to encourage moving away from single occupant vehicle trips.

Given the relatively small size of the City workforce compared with the number of employees in the City or across Chittenden County, it is not possible to say definitively that these results represent the overall population of workers. However, these survey results do paint a picture of City of Burlington employees’ commuting habits and provide important insights into which elements of a TDM program employees value most.

### Where City Employees Work

Figure 2.1 details the number of City employees working at each employment location for all 650 City of Burlington employees.

FIGURE 2.1: CITY OF BURLINGTON EMPLOYEES BY LOCATION





The survey responses included fifty-five employees from the following *downtown* locations (see Figure 2.2).

- |   |                                 |
|---|---------------------------------|
| • 136 South Winooski Avenue (Fire Station 1)  | • 200 Church Street (Telecom)   |
| • 179 South Winooski Avenue (Human Resources) | • 149 Church Street (City Hall) |
| • 250 Main Street (Memorial Auditorium)       | • 2 Church Street (Marketplace) |
| • 135 Church Street (Firehouse Gallery)       | • 235 College Street (Library)  |

The survey responses also included forty-one *South End* respondents who work at 585 Pine Street (Department of Public Works and Parks Department) and at 645 Pine Street (Burlington Electric Department) as shown in Figure 2.3.

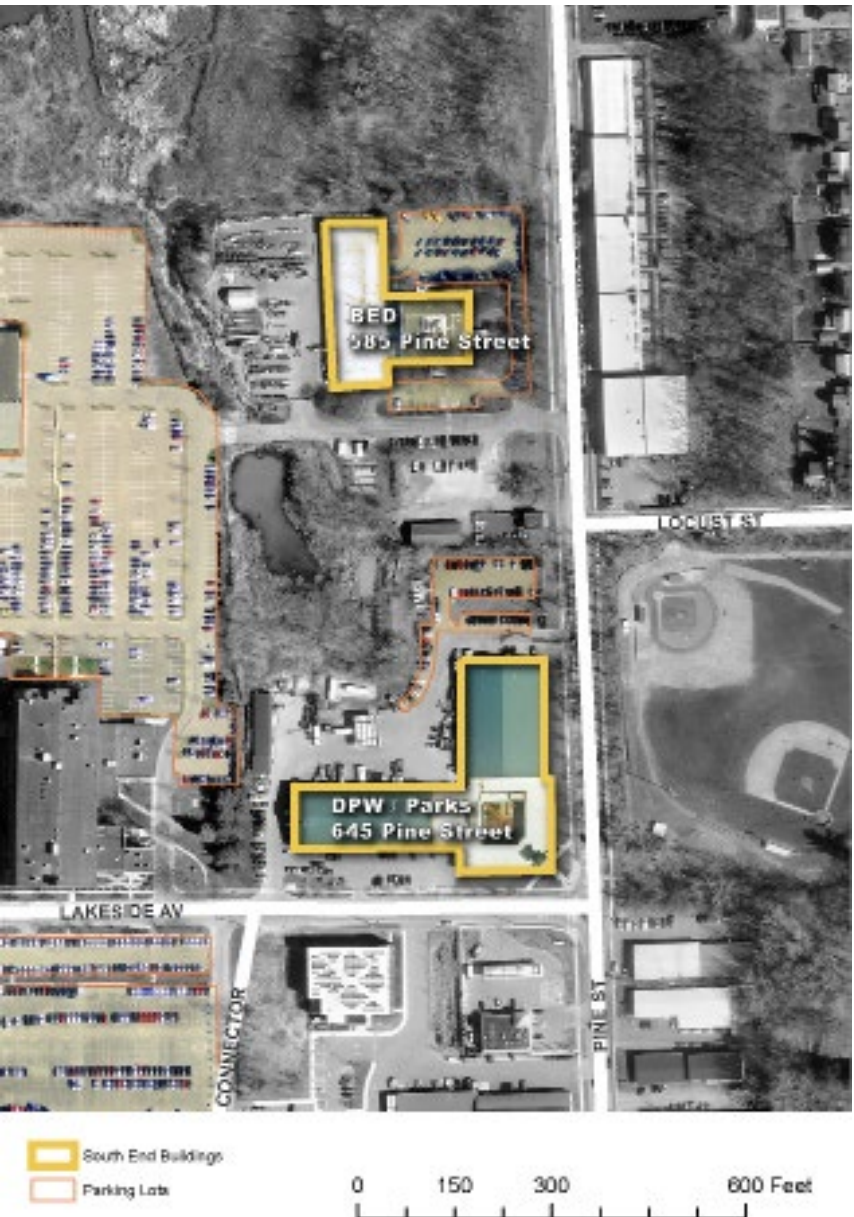
Twenty-nine survey respondents worked at the following *other* locations:

- |                       |                          |
|-----------------------|--------------------------|
| • 1 North Street      | • 1397 North Avenue      |
| • 20 Mansfield Avenue | • 111 Intervale Road     |
| • 132 North Avenue    | • 1200 Airport drive     |
| • 1 College Street    | • 150 Colchester Avenue  |
| • 130 Goss Court      | • 234 Penny Lane         |
| • 216 Leddy Park Road | • 267.5 Riverside Avenue |

FIGURE 2.2: CITY OF BURLINGTON – DOWNTOWN LOCATIONS



FIGURE 2.3: CITY OF BURLINGTON – SOUTH END WORK LOCATIONS

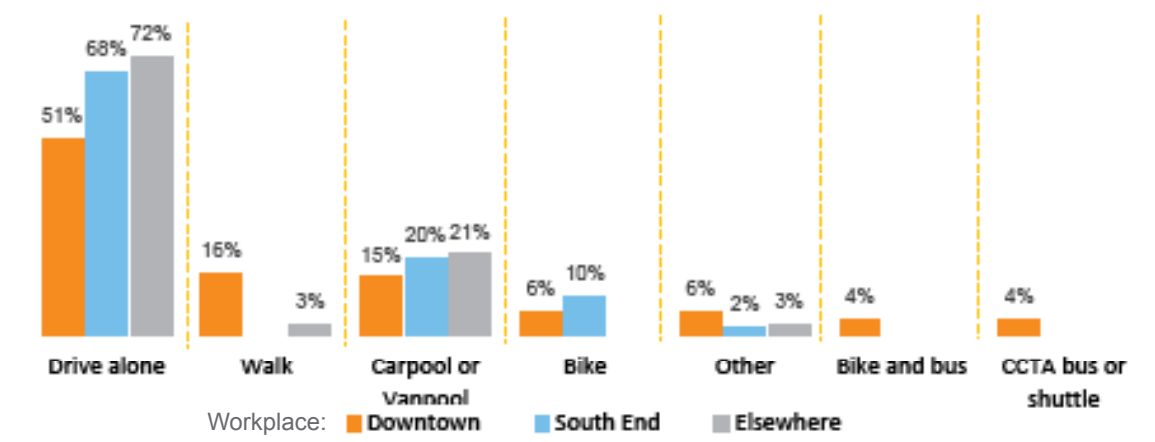


How Staff Get to Work

Figure 2.4 shows the primary commute mode of survey respondents. A majority of respondents from all locations drives alone as their primary mode of transportation, and with slightly more South End respondents carpooling than those downtown. Sixteen percent of downtown employees reported walking to work, but few if any walked elsewhere. Interestingly, 10% of South End employees reported bicycling to work, which was higher than for downtown employees. The other primary commute modes, bus/shuttle, bike + bus, and other, were not reported to be heavily utilized.

About one-quarter of downtown respondents and about half of non-downtown respondents reported driving alone to be their only commute mode. When employees that drove alone were asked what other transportation modes they would be most likely to try, downtown employees chose the bus and telecommuting most often. South End employees chose the bus and biking. Over 50 percent of employees working elsewhere were not open to trying a different transportation mode while the remaining were open to biking, carpooling, and taking transit.

FIGURE 2.4: PRIMARY COMMUTE MODE



Commute Satisfaction

Overall, survey respondents reported largely being “Very Satisfied” or “Somewhat Satisfied” with their current commutes to work. Figure 2.5 shows employees’ commute satisfaction responses given by different employment locations. *Not satisfied* respondents all reported driving alone as their primary commute mode except for one carpooler working downtown.

Since the majority of City employees find their current commute satisfactory (and the majority of those employees drive alone), it may require significant incentives as well as a robust education and outreach effort to persuade employees to change their habits. Making TDM options appealing to dissatisfied drivers will likely be an easier task.

FIGURE 2.5: CURRENT COMMUTE SATISFACTION

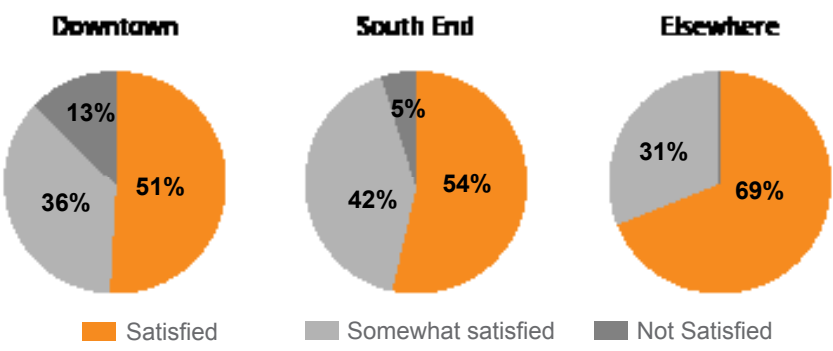




FIGURE 2.6: WHERE EMPLOYEES CURRENTLY PARK



### Parking

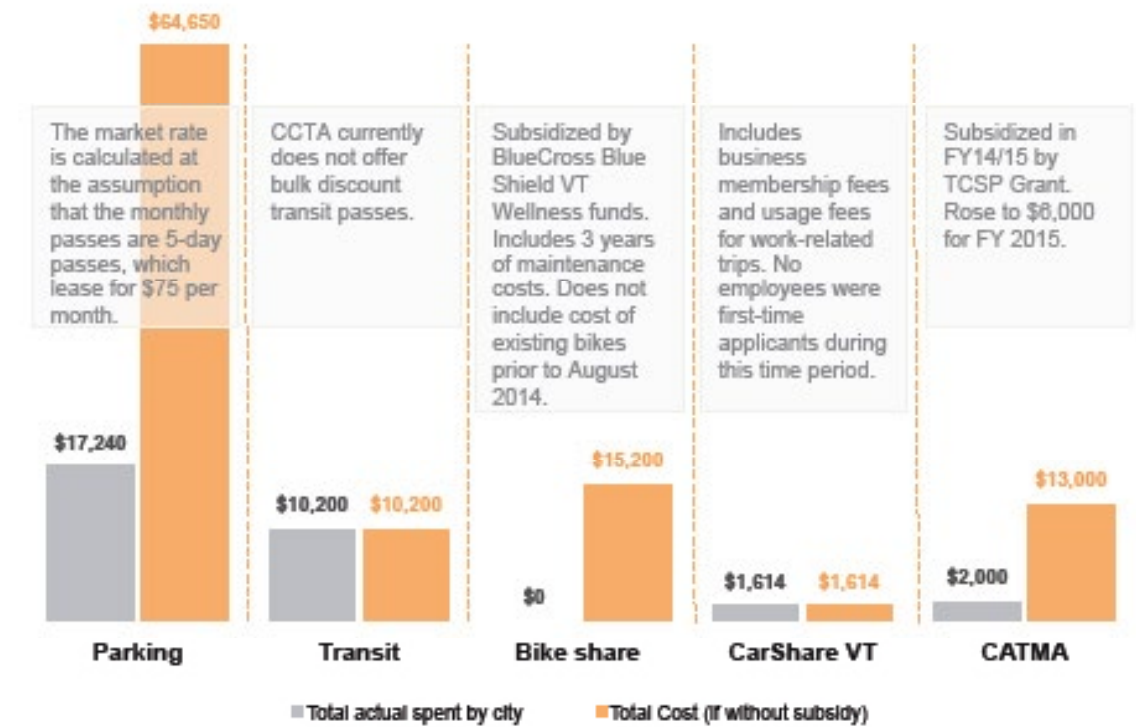
Downtown employees who drive to work most commonly park in the Lakeview garage and on-street in non-metered parking, shown in Figure 2.6. Other parking destinations identified by employees included on-street metered spots, other garages, and at their work location. South End employees all reported parking at their work location, as did most other employees. Some employees, such as department heads, are provided dashboard passes or City vehicles and are allowed to park in metered spots for free.

### CITY OF BURLINGTON EMPLOYEE COMMUTING OPTIONS

#### Snapshot Summary of City Transportation Efforts

Between June 2013 and June 2014, the City and their individual departments contributed an approximate total of \$31,050 towards employee commute and transportation options. The majority of the costs are heavily subsidized. As shown in Figure 2.7, on average the City paid approximately 30% of the market rate costs for parking, bike share, and CATMA membership services. The rest was funded through a federal Transportation, Community, and System Preservation (TCSP) grant, wellness funds from BlueCross BlueShield Vermont, and by discounting City-owned parking spaces.

FIGURE 2.7: EMPLOYEE TRANSPORTATION SPENDING (JUNE 2013 TO JUNE 2014)







Burlington Parking Garage, Creative Commons Image courtesy of Don Shall on Flickr

Parking

The City provides downtown employees who lack on-site parking with the option of parking in the City-owned Lakeview Garage on Cherry Street in the form of a monthly parking pass. An employee must request this pass from Human Resources (HR) who will in turn request the pass from the Department of Public Works (DPW). DPW will then drop off the pass at HR and the employee will pick it up at HR.

Some City of Burlington departments are funded through General Fund monies, such as the Department of Planning and Zoning; some through alternate funding sources, such as the Airport; and some through a combination of the two, such as Public Works. For General Fund departments, parking and transit subsidies (see below) are paid for the same way as other employee related costs, such as health-care and retirement, and are separated from expenses the department has direct control over. In this way, a department is not pressured to reduce an employee’s commute related expenses.

However, for departments that do not receive funding from the General Fund, these costs are part of their discretionary spending. Consequently, managers in those departments may be more aware of commute-related costs and may not actively promote these subsidies to their staff. Staff may also choose not take advantage of transit subsidies because they do not want the cost to fall on their department. One employee said she feels guilty using City-provided bus passes because she knows that the money used for the pass could instead be spent on much needed supplies for her department. When employees must choose between a bus pass and office supplies, it creates a disincentive for them to use transit.

Between July 2013 and June 2014, the City provided 862 monthly passes to downtown employees to park in the Lakeview Garage, or 72 passes per month on average. City passes represented about 10% of the total 678 parking spaces, although the actual number of City employee pass holders varied each month depending on demand. However, the current data management structure for parking pass data lacks a simple, user-friendly way to query the database of pass uses. Therefore, it is difficult to accurately assess actual pass usage by unique individuals over a period of time. An internal study conducted by the City suggests that two-thirds of these passes are used less than half the time and that close to one-third of the passes may not be used at all.

The Lakeview Garage is also open to the public, and City employees receive the same passes as the public. Monthly passes sell for \$75 and \$90 for five-day and six-day passes, respectively. Any City employee parking demand that could be freed up through a TDM program would directly convert into additional revenue to the City (\$900-\$1,080 per space per year) through the sales of additional

monthly public parking passes in the Lakeview Garage.

The cost in lost revenue along with the lack of employee use provides a strong incentive for the City to consider reconfiguring its parking pass policy to explore ways to free up the parking spaces while still meeting its contractual obligations (see Union Contract section). The City’s current parking garage software is able to track real-time garage use as well as produce reports on historical garage use. However, the City may need to purchase a license and undergo training to use those capabilities. Regular analysis will help the City track parking pass usage and maximize its revenues from parking structures.

Union Contract

As part of the City’s contract with the Department Union Steward and approved by the Union President under Article XVIII, the employee parking contract stipulates commute accommodations that the City must provide to all union members. The union contract covers approximately 400 employees but only specifies parking benefits be provided to employees working at City Hall, the Firehouse Gallery, and the Library.

Per the contract, full-time employees are to be provided a “Commute Smart Card” which guarantees 20 days per month of parking at a City parking area either within walking distance of work or accessible by shuttle. The card must also provide five days per month of bus transportation and a guaranteed ride home in emergencies. Currently, the City utilizes separate parking passes and bus passes and does not utilize a “Commute Smart Card” because the parking system and bus system are unable to communicate at this time. Guaranteed Ride Home is provided through the City’s CATMA membership.

In an effort to keep things simple and be equitable to all employees, the City does not distinguish between union and non-union employees when it provides transportation accommodations and so “free” parking and bus passes are made available to all employees. As of August 2014, the City is negotiating a new contract with the Union.

FIGURE 2.8: ARTICLE XVIII UNION EMPLOYEE CONTRACT

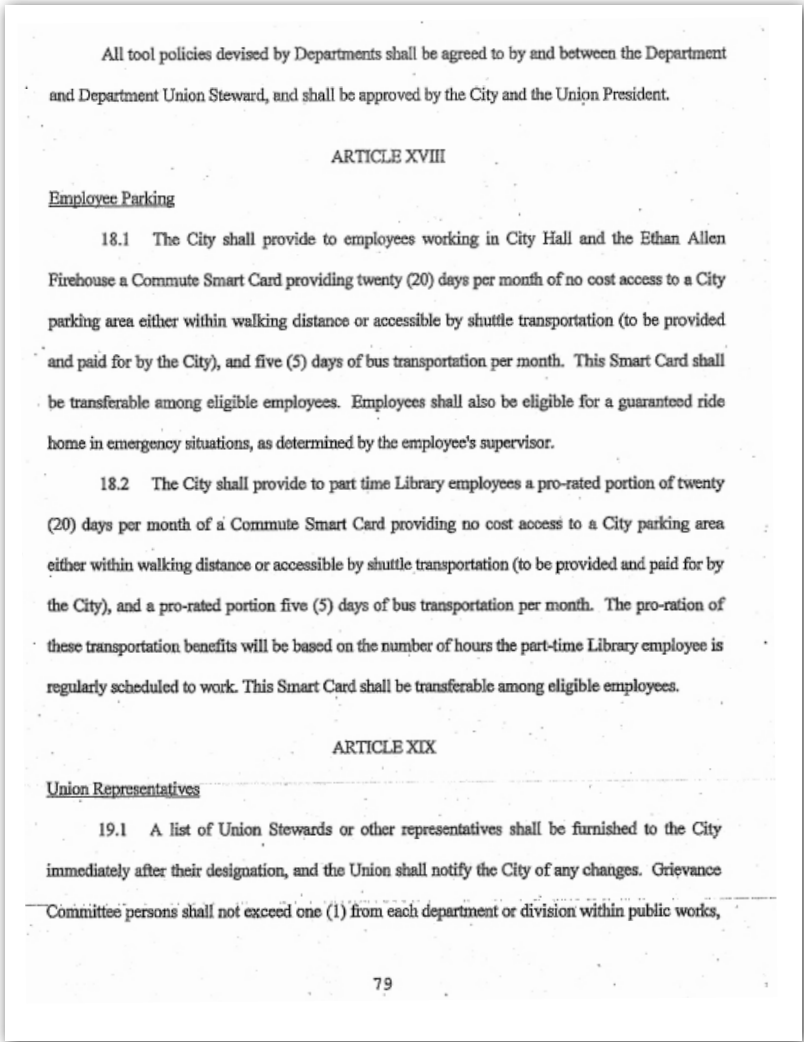


FIGURE 2.9: TRANSIT PASSES: LOCAL 10-RIDE, COMMUTER 31-DAY, AND LINK 10-RIDE TICKETS



FIGURE 2.10: GO! VERMONT PROVIDES A CARPOOL MATCHING WEB PORTAL OPEN TO THE PUBLIC



Transit

The City of Burlington subsidizes bus passes for all employees through the Chittenden County Transportation Authority (CCTA). Similar to the parking pass, bus passes must be requested by the employee, but the funds come from individual department funds. Employees can request passes for 10 rides or 31 days and the passes are valid for three different types of routes: local, commuter (Chittenden County beyond the Burlington area) and LINK Express (beyond Chittenden County linking to other transit authorities). Table 2.1 summarizes the costs of the various CCTA passes. The City of Burlington purchases the passes at market rate and does not receive a bulk discount for their employees.

TABLE 2.1: TRANSIT PASS COSTS

ROUTES	10-RIDE	31-DAY
Local	\$ 12.00	\$ 50.00
Commuter	\$ 20.00	\$ 75.00
LINK Express	\$ 40.00	\$ 150.00

Over a 12 month period (July 2013 – June 2014), the City provided 354 bus passes to 64 unique individuals for a total of \$10,200. Approximately three-quarters of the passes were for 10-ride passes and one-quarter were for 31-day passes.

Guaranteed Ride Home

City employees have access to a Guaranteed Ride Home (GRH) service through the City’s associate membership with CATMA, so transit riders or carpoolers are not stranded due to unforeseen circumstances. This service is only available to employees who have registered with CATMA. GRH provides registered members up to eight rides per year at up to \$60 in value per ride. GRH is an inexpensive TDM strategy that provides peace of mind for users of non-SOV transportation and can encourage people to try a new mode of transportation.

Although 42 City employees are currently registered for GRH, none used the program between September 2013 and June 2014.

Carpool/Vanpool

The City does not currently provide incentives for employees to carpool or vanpool. City employees are eligible to participate in carpool/ vanpool matching services via CATMA and Go! Vermont services, which are open to the public.

Bike and Walk

The City provides a number of accommodations for pedestrians and cyclists. Unisex showers and covered bike racks are located at City Hall and 645 Pine Street. A bicycle repair kit is also available to City employees at City Hall.

The City also provides employees with the option to bicycle for work-related travel during the day even if they did not ride a bike to work. City Hall, 645 Pine Street, and Leddy Arena (216 Leddy Park Road) house a total of five City-owned bikes and helmets that staff can check out during the day for City business. Additionally, the City’s Wellness Committee rolled out City Green’s Employee Bikeshare Program in August 2014, an expanded bike-share program to include ten new bikes and a concerted promotional effort to raise staff awareness. The bikes are distributed to various City buildings based on demand.

Users will reserve bikes through their Outlook calendar and will be required to return a bike to the same location they acquired it from. The 10 new bikes cost about \$850 per bike (including accessories such as a lock and helmet), and the City has contracted with a local bike shop to service the bikes for \$200 per bike per year. The City’s health insurance wellness benefit – BlueCross BlueShield Vermont—is providing the complete funding, which totals \$15,200.

The general summary of costs breakdown is as follows:

- \$6,000 for the bikes
- \$2,500 for accessories (helmets, locks etc) and facilities (racks and hooks at locations)
- \$6,000 for three years of annual maintenance, service and any parts replacement
- \$700 for launch event and promotional materials.

Third parties provide various accommodations and incentives as well. Bicyclists can sign up for Bicycle Benefits through Local Motion where they can receive discounts at local stores when they bike. CATMA also gives \$15 gift cards from local businesses to employees who regularly bike or walk to work and performs a monthly restaurant drawing for registered users. The GRH program provided by CATMA is also available to bikers and walkers who may not be able to bike or walk home due to emergencies such as inclement weather or broken equipment.

FIGURE 2.11: INDOOR BIKE RACK AT CITY HALL



City of Burlington City Green’s Employee Bikeshare program



FIGURE 2.12: CARSHARE VERMONT POD LOCATIONS

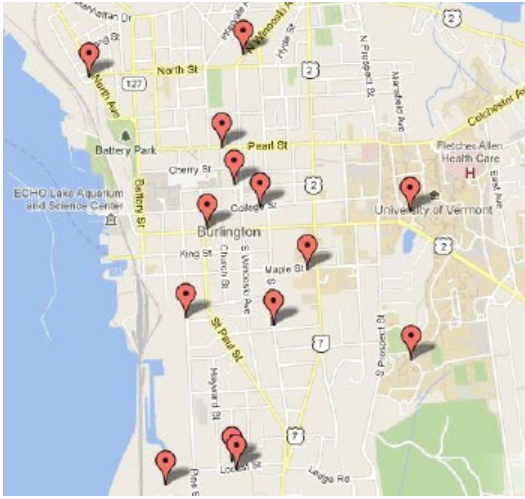
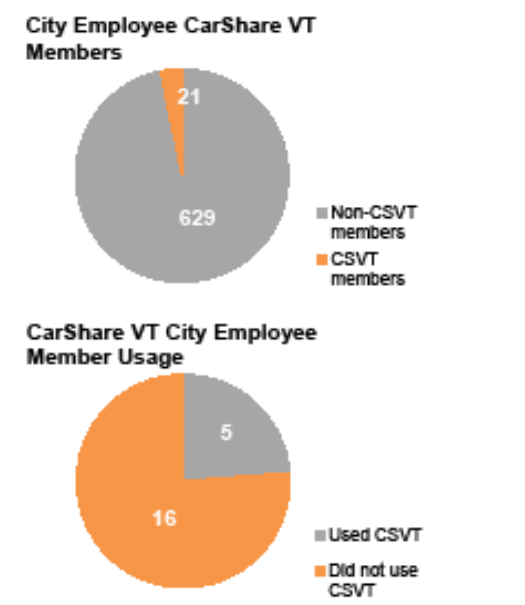


FIGURE 2.13: CITY EMPLOYEE CAR SHARE VT MEMBERSHIP/USAGE (JUNE 2013-JUNE 2014)



Car Share

There may be times where an employee would prefer to take sustainable transportation to work but needs a vehicle during the day. To meet this need, the City is a member of CarShare Vermont (CSV) and provides free membership to all employees. When an employee registers with CSV, she or he receives up to two memberships – one for business trips and, optionally, one for personal trips. This enables employees to use sustainable transportation to commute to work and still have a vehicle available throughout the day if they need it. It also encourages employees to be less vehicle dependent in their personal lives since they have access to CSV vehicles.

The City pays \$40 per month as an employer, as well as the \$30 application fee for any new members to CarShare VT, and any work-related trip fees for individual employees. Employees that choose to use the personal membership pay the monthly membership fee (\$5 or \$15 depending on the plan) and personal trip fees out of pocket.

As of July 2014, 21 City employees were members, or about 3% of total City employees. Between July 2013 and June 2014, five of the 21 employee members – or 24%--used CarShare for a total of 63 business trips and 1,081 miles traveled. Three members used it less than four times while the remaining two members used it 22 and 35 times respectively. Monthly costs to the City vary with membership rates and usage. Between June 2013 and June 2014, the City spent \$1,614 on fees and usage costs, which averages to about \$134/month.

In June 2014, the City restructured its agreement with CSV to include more departments and bill departments separately. CSV also reached out personally to City employees who were not members to encourage them to join. This outreach effort helped attract three new City employee members. Of the 21 members, only one has taken advantage of the dual membership application process. This suggests that most employees either were already individual members before they became members through the City or are not interested in the personal membership.

Flex time and telecommuting policies

The City does not offer the option of telecommuting formally, although some employees may arrange to do it through their individual department heads. Similarly, flex time is not formally provided to employees. Some employees’ contracts stipulate that they work 40+ hours per week, i.e. they must work a typical 40-hour week plus the occasional off-hours obligation. However, other employees report that managers are open to flexible schedules as long as their work gets done.

Outreach and Promotion

The City provides a number of policies and programs to encourage sustainable transportation modes among its staff. Results from the 2012 CATMA city employee survey suggest that many employees are unaware of most, if not all, of these TDM programs. The City, in partnership with CATMA, is currently attempting to spread the word about the TDM programs to City employees by presenting TDM options to different departments and informing all new hires about the TDM programs available, with an emphasis on sustainability.

CATMA Membership

Currently, the City of Burlington (as an employer) is an associate member with CATMA, which allows all full-time employees of the City to be eligible to enroll and participate in CATMA’s suite of TDM programs and affiliated services. A federal TCSP Grant subsidized a two-year CATMA membership for the City of Burlington. The City contributed \$2,000 in FY14 towards CATMA membership, and \$6,000 in FY15. The current CATMA membership fee is \$20 per employee, so with 650 employees at the City (full time, receiving salary and benefits), the total cost without a subsidy would be \$13,000.

The CATMA membership funds the administration and management of Guaranteed Ride Home, incentives, transportation education and workshops, quarterly communications, promotional materials, campaigns, events (e.g., Way To Go! and Vermont Bike Challenge) and contests. CATMA’s staff and website serves as a transportation customer service portal for City employees. Membership includes employee transportation survey, analyses and reporting. The City serves on CATMA’s Outreach Committee enabling collaboration on TDM marketing of initiatives with institutions and new CATMA members. Bike/Walk Rewards Program and the monthly drawings for restaurant gift cards are funded entirely through CATMA and not with City membership dues and they are available to all CATMA members. The City of Burlington is responsible for assigning a point of contact to work with CATMA, as well as coordinating with CATMA on presentations, Wellness Committee meetings, and assist with disseminating communications on TDM programs.

With an associate membership, the City remains responsible for purchasing, offering, and subsidizing CCTA bus passes. If or when the City pursues an Unlimited Access program through CATMA (as recommended in this Plan), the City would be responsible for the cost of ridership on a per-ride basis, and would receive a 28% discount per ride. The City could choose to use paper transit passes (free through CCTA) or an employee ID/pass for an additional fee. CATMA membership provides management, monitoring, reporting and evaluation of the subsidized transit program.



CATMA Employee Commute TDM road show

### Previous Barriers to TDM Adoption

A number of studies and initiatives have been conducted over the years to examine the potential opportunities and benefits of expanding travel options in the City of Burlington (see Appendix 1 for more detail). Below is a list of barriers to TDM adoption that have been observed in the past.

- TDM continues to lack a home within the City of Burlington.
- There is no designated staff member to whom employees can ask questions.
- While the City has designated an Employee Transportation Coordinator (ETC) with the support of CATMA, the current ETC is not in a human resources role and is not officially responsible for promoting TDM.
- Some departments, such as the Community and Economic Development Office (CEDO), emphasize these programs to their staff, but that effort is not City-wide.
- The City has not identified a sustainable funding mechanism to support CATMA membership or TDM initiatives.



# 3

## TDM & PARKING BEST PRACTICES SUMMARY



This chapter summarizes the TDM and parking strategies of four innovative and successful communities comparable in size and climate to Burlington. The four cities evaluated are: Boulder, Colorado; Minneapolis, Minnesota; Madison, Wisconsin; and Cambridge, Massachusetts. These were four cities cited by Steering Committee members as successful and comparable places to Burlington. Like Burlington, all of these cities feature:

- An active downtown,
- A four season climate that experiences snow,
- A relatively young demographic within close proximity to a college campus,
- Goals to improve transportation through a multimodal system.

Although the City of Burlington had a significantly lower population than the four best practice cities, it had a slightly higher population density than Boulder and Madison. Compared to the other cities, Burlington was only slightly above average for drive-alone commute trips and above average in walk and bicycle commute trips. However, Burlington ranked lowest in terms of transit commute trips.

More detailed information on the TDM offerings in each of the four best practice cities is provided in Appendix C: TDM & Parking Best Practices.

FIGURE 3.1: POPULATION AND POPULATION DENSITY COMPARISON (2010 CENSUS)

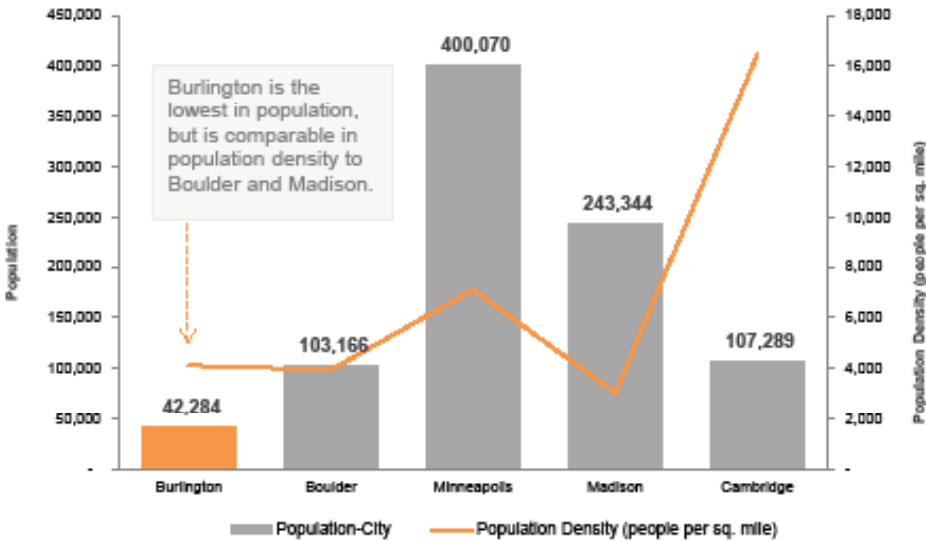
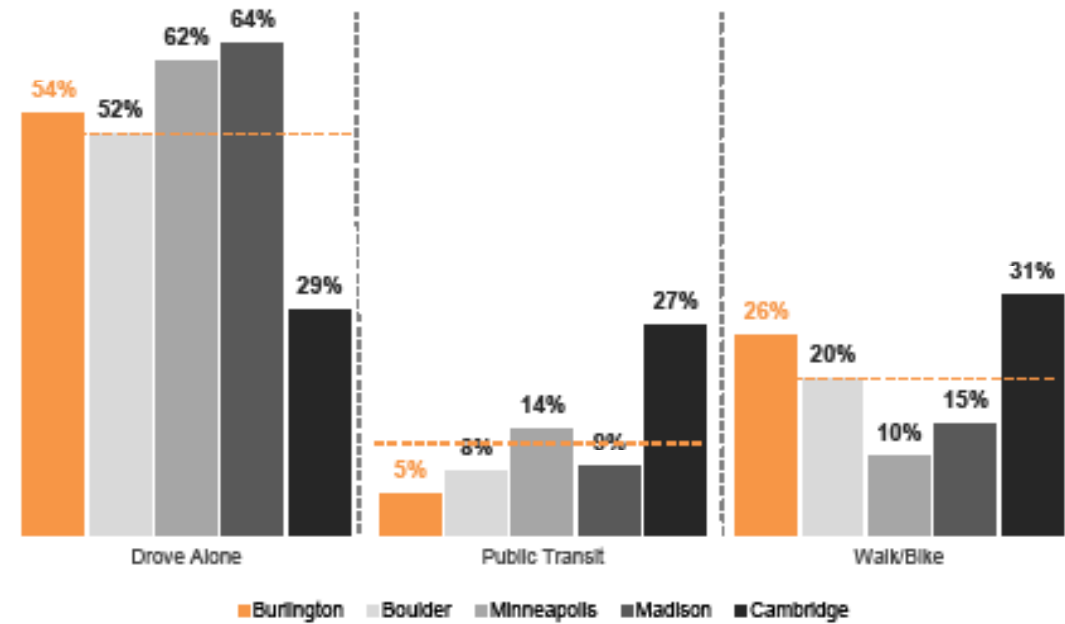




FIGURE 3.2: JOURNEY TO WORK MODE COMPARISON (2010-2012 ACS)



KEY LESSONS LEARNED

- All four of the cities studied in these best practices offer transportation benefits to encourage alternative commutes to work.
- None of the best practices offer non-union employees free parking; city employees are expected to pay market rate for their parking, with the exception of Minneapolis, where employees may contribute pre-tax dollars for vehicular (and bicycle) parking.
- Despite the availability of car share, bike share, and/or guaranteed ride home available in the area or through a TMA, the cities vary on whether they offer it as a transportation benefit to their employees.
- All regular non-union city employees have access to carpool and vanpool matching web portals, which is often administered through a transportation management association (TMA), Metropolitan Planning Organization (MPO), or the state department of transportation (state DOT). Table 3.1 summarizes the transportation incentives that are offered to city employees in each city studied.

TABLE 3.1: BEST PRACTICES - CITY EMPLOYEE TRANSPORTATION INCENTIVES

		Non-Union Employees			
TDM OFFERINGS	Burlington, VT	Boulder, CO	Minneapolis, MN	Madison, WI	Cambridge, MA
Free Unlimited Transit Pass	X*	X		X	
Free Shuttle Use					X
Subsidized or Pre-tax Transit Benefits			X		X
Subsidized or Pre-tax Vanpool Benefits		X	X		X
Guaranteed Ride Home	X	X			X
Car share (Free or discounted, internal or through organization membership)	X*			X	X
Bike share membership (Free or Discounted)	X				X
Bike Benefit (Pre-tax parking or mileage reimbursement)		X	X		X
Pre-tax Parking Benefit			X		
Flextime or Alternative Work Schedule Policy				X	
Free Parking for all Employees	X				

\* On a department-by-department basis

- It is typically more cost-effective for employers to provide all downtown employees with a free transit pass than to provide all employees with free parking. Many transit agencies, including Boulder, offer employers the opportunity to purchase “Eco Passes” which give all employees an unlimited pass to ride local transit for free. The price is calculated at an annual rate per employee, with a discount for larger numbers of employees.
- Transportation benefits should be fair and not biased towards those who drive. Several cities, including Boulder, Minneapolis, and Cambridge offer subsidized bicycle parking benefits. Parking benefits should be unbundled in order to be fair to all employees, particularly to those who already choose alternative modes of transportation for their commute. Employers who offer free parking should also offer a comparably priced cash-out option. Burlington is the only City studied that offers free parking to all employees.
- By providing employees with free parking, the City is encouraging single-occupant vehicle trips and inflating the demand for parking. “Based on case studies, employer-paid parking increases commuter parking demand by approximately a third when compared with driver-paid parking.” Conversely, TDM incentives are less useful when employers offer free parking. (Shoup, “The High Cost of Free Parking”.)





# 4

## TDM RECOMMENDATIONS AND ACTION PLAN

### INTRODUCTION

This chapter presents 14 TDM strategies, four of which are considerations for the long-term and ten that are part of a short-term plan (three years or less implementation time). All four strategies for the long-term are new. Of the ten short-term TDM strategies, six are new to the City of Burlington and are described in additional detail. Ongoing capital and administrative improvements are then examined, followed by a description of case studies. The start date for any of the proposed work in the TDM Action Plan would begin in FY17 or later.

In the long-term, the TDM strategies reflect a mix of incentives and disincentives. In the short-term, the Action Plan recommends introducing or improving incentive strategies that will encourage City staff to consider experimenting with sustainable commutes if they do not already. All strategies have an end goal of assisting employees to use non-single occupant vehicle (SOV) modes more easily in their daily work commutes and throughout the day. For the majority of recommended strategies, simplifying administration and monitoring, coupled with financial incentives, will make TDM offerings more palatable, popular, and better utilized by City employees.

It is also important to note that the intent of the recommendations is to maintain a level of flexibility over time as the City and its staff adapt to different forms of commuting. This plan, and the recommendations herein, will also serve as a model to encourage TDM adoption by other downtown businesses. Technological improvements and future partnerships between the Chittenden Area Transportation Management Association (CATMA) and other agencies will also make certain strategies more feasible and economical to replicate at a larger scale.

### TDM Categories

The TDM strategies generally fall into four category types. They are:





-  **Policy**  
These are strategies that involve additions or changes in governance roles, or offer guidelines for administrating employee transportation efforts.
-  **Service**  
These are programs or systems, such as technological applications, that are developed and/or adopted to encourage non-SOV commutes by raising awareness and simplifying use of other modes.
-  **Pricing**  
These strategies use financial incentives and/or disincentives to discourage SOV commutes.
-  **Facility**  
These are physical amenities or design features, such as bicycle racks or showers, that aid use of an active walk or bike commute.

FIGURE 4.1: TDM RECOMMENDATIONS AND ACTION PLAN

	LONG-TERM ACTION PLAN	STAKEHOLDERS / PARTNERS	FISCAL YEAR
1	<b>Charge for Parking:</b> Charge Downtown and South End employees market rate for parking; combined with commute allowance.	City of Burlington, BBA, Go! Burlington	Long-Term
2	<b>Commute Allowance:</b> Provide a pre-tax subsidy that can be used towards a transit pass, a parking pass, or bicycle commuting.	City of Burlington, CATMA, Consumer-Directed Benefits administrator	Long-Term
3	<b>Telework:</b> Enable employees to use telecommunications to work remotely and substitute their physical commute travel.	City of Burlington	Long-Term
4	<b>Downtown TDM Coordinator:</b> Create position that will serve as point of contact with CATMA, including role of Employee Transportation Coordinator (ETC). Assist TMA and Go! Burlington with keeping downtown employees informed of TDM benefits. Monitor employee TDM activity/usage.	City of Burlington, CATMA, BBA, Go! Burlington	Long-Term
	SHORT-TERM AND ONGOING RECOMMENDATIONS	STAKEHOLDERS / PARTNERS	FISCAL YEAR
5	<b>Universal/Unlimited Transit:</b> Negotiated reduced rate (via CATMA membership), easy to load funds, choice between transit + 4 parking “tokens” per month OR monthly parking pass.	City of Burlington, CATMA, CCTA	Target Year 2018
6	<b>Parking Cash-Out:</b> Allows employees to have a choice of a parking space or to receive a cash incentive to use a non-SOV commute.	City of Burlington, Burlington Business Association (BBA), Go! Burlington	Target Year 2017-2018
7	<b>City TDM Coordinator in Human Resources Department:</b> Serve as point of contact with CATMA, including role of ETC. Assist TMA and Go! Burlington with keeping City employees informed of the TDM benefits. Monitor employee TDM activity/usage.	City of Burlington, CATMA, Go! Burlington	Target Year 2016-2017
8	<b>Citywide TDM Offerings Through the General Fund:</b> Administer Transportation subsidies and programs, including employee CATMA memberships, at a Citywide level for all employees, from the General Fund	City of Burlington	Target Year 2017
9	<b>Flextime Policy:</b> Allows the employer/employee to agree to a modified work schedule in order to avoid peak traffic or accommodate a non-SOV commute.	City of Burlington	Target Year 2016-2017
10	<b>Website with Log-in Feature:</b> Allow employees to track their commute, get information on transportation benefits, carpool, route-finder	City of Burlington, CATMA, Go! Chittenden County	Existing through CATMA, Improvements Target Year 2016-2017
11	<b>City Green Bikeshare Program:</b> A bicycle sharing system is a service in which bicycles are made available for shared use to individuals (City staff and business colleagues) on a short term basis.	City of Burlington	Existing TDM Program through the City of Burlington
12	<b>Bike Parking, Locker, and Shower Facilities:</b> Allow employees to use active transportation modes by providing a place to store a bike during the day and change into work attire after commuting	City of Burlington	Existing TDM Program through the City of Burlington
13	<b>Car Share VT Business Membership:</b> Provides employees access to vehicles for work trips throughout the day. Employees may also set up their own account for personal trips.	City of Burlington, CATMA, Car Share VT	Existing TDM Program through individual City departments
14	<b>CATMA Membership:</b> Provides guaranteed ride home, transportation education, Bike/Walk programs/events, negotiated transportation service rates, and incentives to use sustainable transportation modes.	City of Burlington, CATMA	Existing TDM Program

Why do City of Burlington employees choose drive-alone commutes?

The recommendations are aimed at achieving the goals of the project and are designed to address common reasons City employees cited for choosing drive-alone commutes. The TDM Action Plan strategies are tailored to address those challenges, and propose a suite of methods that would encourage or make possible a non-SOV commute.

The following were cited reasons for a SOV commute, expressed by City of Burlington employees from the TDM focus groups and in the 2012 CATMA employee survey:

“

- Parking is free
- Transit passes cost the department (non-General Fund) more than a parking pass.
- Need a car before, during, or after work for personal reasons (e.g., childcare)
- Need flexible transportation before, during, or after work for business reasons
- Driving is quicker
- Don’t want to depend on others
- Lack of transit facilities

- Lack of bike/pedestrian facilities
- No direct transit service
- Lack of shower/locker facilities (Downtown)
- Working hours not conducive to sustainable modes
- Transit Stigma
- Lack of awareness of TDM offerings
- Need to register at various places for various TDM services
- TDM is not the default option for employees

”


The initial TDM strategies that rose to the top were those that directly addressed the highest number of common reasons for drive-alone commuting. Following further conversations with the Advisory Committee, the TDM team added additional programs that committee members felt were important to include, particularly ongoing capital and administrative strategies.



LONGER TERM STRATEGIES

Four new longer term TDM strategies arose from this study. They are longer term because they require more capital and technological investment. Additionally, they require a level of political will for the City to begin charging employees for parking. The following section provides further detail on each of the four strategies. *Note: They are not presented in order of priority.*

**TDM Category:**



**Pricing**

**Primary Goals**

- Reduce Traffic
- Reduce Commuter Parking Demand
- Reduce Carbon Emissions and VMT
- Create an Attractive Eco-Minded City

Charge for Parking

**Charge market rates for employee parking in Downtown and the South End to encourage commuters to reduce SOV commute trips and reduce parking demand. This Action Plan recommends combining this TDM strategy with a commute allowance.**

The Action Plan recommends charging employees on an incremental (monthly or daily) basis for use of public parking spaces in the Downtown and in the South End. The fees should be set at the market value of the parking space. It is also important to note that this Action Plan recommends combining this pricing strategy with a commute allowance incentive to help offset costs and allow employees flexibility in how to allocate their transportation funds. The Action Plan proposes charging for parking as a long-term solution once City employees become more familiar with the suite of transportation offerings available and are more accustomed to using sustainable travel modes. Garage parking is not used by up to one-third of pass-holding employees, and this strategy will open those spots for other commuters. This strategy is also consistent with the other cities studied in that none of those cities provides free parking to all of their employees.

Recent studies have shown that benefits for TDM strategies such as public transportation, walking, and cycling, seem to work best when car parking is not free.<sup>1</sup> The 2007 BBA/CATMA report shows that parking habits change when the employees pay market-rate for parking. Those who do pay

for their own parking overwhelmingly choose garage parking (44%) over meters (12%). Over 55% of employers in downtown Burlington do not contribute their employees’ parking.

To encourage the utilization of non-SOV commute trips and/or remote lots by City employees, parking fees should be charged in the Lakeview garage and the public parking in the South End lots. South End employees (Burlington Electric Department, Public Works, Parks & Recreation) currently park for free on City-owned surface lots, and these lots are at or over capacity. Charging for parking will reduce demand in the lots. A direct market value can be calculated using the square footage value of land and maintenance costs of the lot.

To remain consistent with the existing union contract, this strategy should be considered in tandem with providing free parking for employees through the provision of a satellite parking lot (such as the 115 Lakeside Lot or a proposed intercept facility) with frequent and reliable shuttle service to employment destinations during peak commute hours. The Action Plan does acknowledge that although this option maintains a free parking option, it does add additional time onto employee’s commutes by requiring them to park at a remote lot and take a shuttle bus to work in order to maintain the free benefit. When negotiating future Union contracts, the City should work to promote sustainable transportation options, reduce SOV trips, and maintain flexibility in its requirements.

To make a parking fee more palatable to City employees, the Action Plan recommends pairing it with a Commute Allowance, which provides employees with a certain allotment of funds which they could choose to use on the parking fees, on a different form of transportation, or could pocket the allowance by parking for free in the satellite lots.

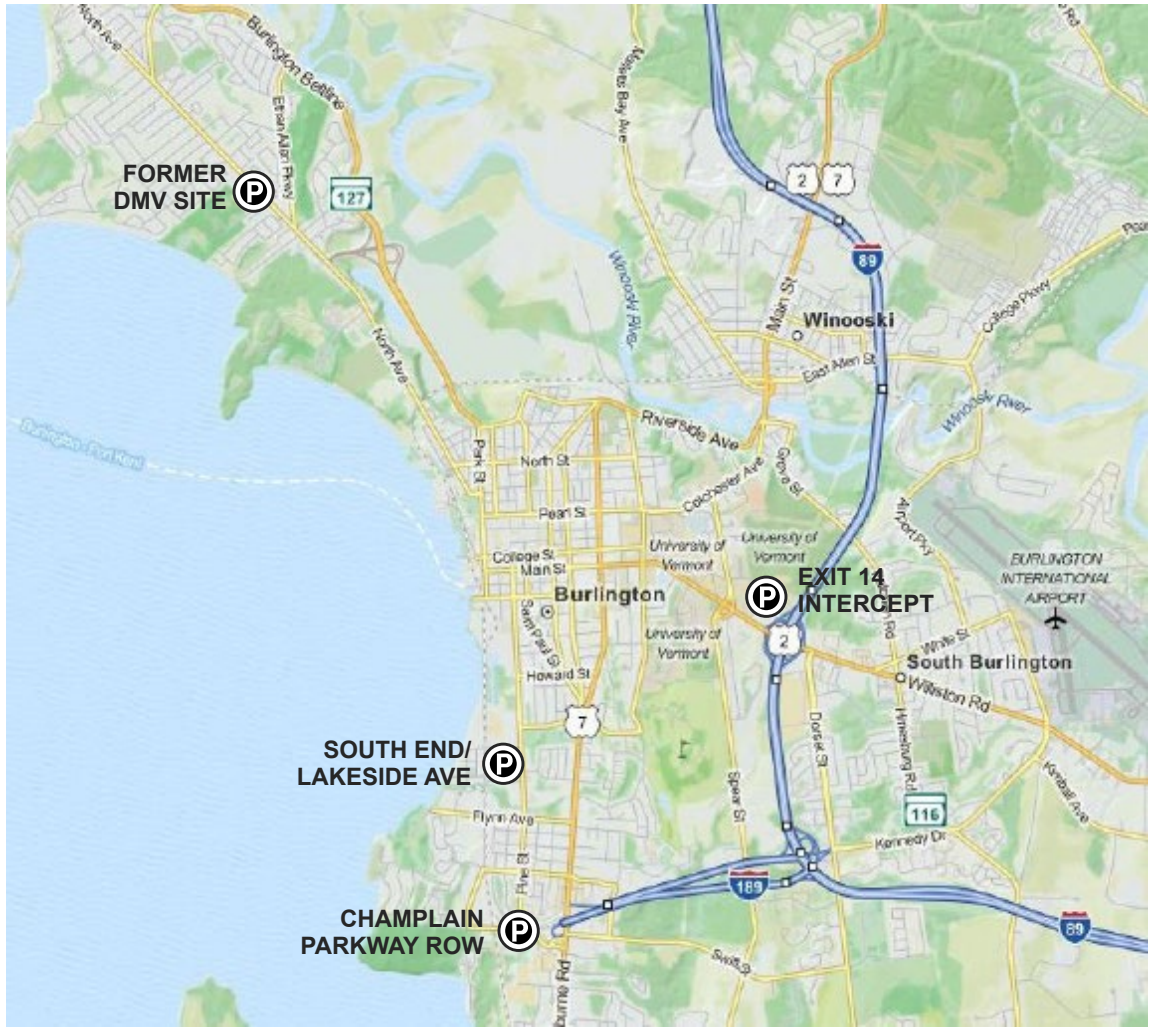
Potential satellite or intercept lots that have been evaluated to varying degrees over the years are shown to the right in Figure 4.2.

Examples of Leading Cities

A downtown Baltimore shuttle connects over 1,200 parking spaces near the Baltimore Ravens stadium to various employment sites across the downtown. Commuters pay \$50 a month for use of this satellite parking and the shuttle service (carpools pay just \$20 a month).

To reduce traffic and air pollution downtown, the City of Chattanooga financed and constructed two public parking garages, one on either side of their downtown, and offers a free shuttle service into the downtown from these garages for both employees and visitors. The electric-powered shuttles are funded by revenue from the parking garages, and run every 5 minutes all day.<sup>2</sup>

FIGURE 4.2: POTENTIAL SATELLITE/INTERCEPT PARKING LOTS



TDM Category:



Pricing

Primary Goals

- Reduce Traffic
- Reduce Commuter Parking Demand
- Reduce Carbon Emissions and VMT
- Create an Attractive Eco-Minded City

Commute Allowance

Establish a pre-tax transportation subsidy that can be used towards transit pass, parking pass, or bicycle commute.

Similar in strategy to a parking cash-out program, a commute allowance program creates fairness and makes TDM a default consideration so that all employees are given a choice as to how they use their transportation subsidy. Commuters can choose to use this money towards parking or towards another travel mode. The rationale is that commute subsidies should not be unfairly biased towards employees who choose to drive and park.

Based on U.S. Tax Code Section 132(a), transportation benefits qualify as an employee benefit that can be excluded from taxable gross income. Therefore, employers can incentivize their staff to participate in taking transit and using vanpooling, or paying market-rate towards parking, by using pre-tax dollars towards their commute costs. The current federal rates allow up to \$130 per month for transit passes and vanpooling, \$245 per month towards parking, and \$20 per month for bicycling commutes for qualified pre-tax transportation benefits. A commute allowance would be a fixed amount that the employee puts towards any transportation benefit.

- Pre-tax subsidy. Can be used towards transit pass, parking pass, or bicycle commute.
- Need the technology to have a single card for parking and transit
- Desirable goal

By setting a fixed amount of commute dollars for each employee every month, the City will have more control over the amount of spending that is used towards transportation benefits. By discouraging employees from parking on a daily basis, the City can lease out more spaces in the Lakeview Garage at market rate. The additional revenue can then be used towards implementing other TDM programs, such as the costs of administering the commute allowance program.

If employees must drive for work reasons, they should be reimbursed at the same rate for driving as for using other modes (such as bus or bike) in order to encourage sustainable modes.

Examples of Leading Cities

Several cities studied in the TDM Best Practices (Boulder, Minneapolis, and Cambridge) offer subsidized transportation benefits for non-SOV commutes, such as bicycling and bicycle parking. City of Boulder employees are reimbursed for work-related trips at the federal rate, whether they drive private vehicles or ride their own bikes.

Cambridge, MA allows employees to set aside pre-tax dollars for transit and reimburses City employees up to 65% of the cost of a monthly subway T-pass, with a maximum cap of \$120 per month. They also offer up to \$20 per month subsidy for bicycle commuting.

Telework

Establish a telework policy that enables employees to use telecommunications (such as telephone, email, web conference, and shared network sites) to work remotely and substitute their physical commute travel. In addition to necessary equipment (such as laptops and smartphones), the presence of a secure remote system and reliable high speed internet are also crucial in order to make teleworking feasible for City employees.

Teleworking can reduce energy consumption and reduce traffic and demand for parking, while improving employee satisfaction and productivity. It is especially beneficial for those who have long commutes to work.

There are three main components to telework feasibility:


- **People:** Telework may not be appropriate for all job categories and functions. It also varies depending on employee’s home conditions, such as a conducive space for working or high speed internet. Some roles are better suited for working remotely because they involve a lot of computer work, and do not require significant “face-time” or physical presence. Each department will need to determine the criteria to be used to evaluate whether or not employees qualify for a teleworking schedule.

- **Technology:** There will be needed equipment, support, and infrastructure in place in order to roll out an easy-to-access and secure teleworking system. The City and its IT department will need to ensure that their server, their internet, software licenses, and other mobile features are compatible with employees who need remote access.
- **Process:** The City will need to establish a system for establishing and reviewing the telecommuting policy on a regular basis and to ensure that the infrastructure in place is meeting the needs of the employees and the department.

Examples of Leading Cities

- The City of Portland, Oregon permits employees to have a routine or ad hoc telework schedule if they have approval from their supervisor and the Bureau Director, and is authorized to under the terms of the City’s written Telework Agreement.<sup>3</sup> It is up to the Commission in charge of the bureau to determine telework eligibility on a case-by-case basis and approve any working at home arrangement. The agreement defines the parameters of the telework parameters (e.g., equipment, software, and location.) The City’s IT provides City-owned equipment and software for teleworking to be used for City business only. The City is not responsible for reimbursing any additional expenses that result from the employee choosing to telework.

TDM Category



Policy


Primary Goals

- Reduce Traffic
- Reduce Commuter Parking Demand
- Reduce Carbon Emissions and VMT
- Create an Attractive Eco-Minded City

- In St. Paul, Minnesota, City employees may telework on a regularly scheduled basis at the discretion of their Department or Office management. Both the City employee and their supervisor enter a written Telecommuting Agreement that clearly defines the tasks and conditions of the telecommuting arrangement. The criteria for eligibility is based on:
  1. The needs of the job, work group, and City
  2. The employee’s past and present performance levels
  3. The business benefit to the City as confirmed by management.<sup>4</sup>



TDM Category



Policy

Primary Goals

- Promote TDM Strategies to Employees of Downtown Businesses as well as City Employees
- Reduce Commuter Parking Demand Throughout the Downtown
- Promote Active Lifestyle
- Create an Attractive Eco-Minded City

**Downtown TDM Coordinator**

**Establish the position of a Downtown TDM Coordinator who would be responsible for keeping employees of both the City and downtown businesses informed of their transportation benefits, as well as assisting with monitoring employee TDM activity and usage on a consistent basis. This position may be through CATMA, an expanded Downtown Improvement District (DID), Go! Burlington (oversight committee of the Downtown Parking Management District Plan), or the City and will play a critical role in expanding these TDM strategies beyond City employees.**

**Discussion**

Once City employees become more familiar with the TDM strategies discussed in this report, it is hoped that other downtown businesses will begin to adopt these strategies. Wider use of these strategies will offer economies of scale that reduce costs for everyone involved, increase the likelihood of carpool and vanpool matching, increase the visibility of TDM generally, and reduce the demand for commuter parking throughout the downtown.

Critical to this expansion of TDM will be educating these downtown employees about their options and how to access them. This outreach effort will require a part-time or full-time position that is responsible for interacting with downtown employers and informing them of the TDM options available to their employees. The Downtown TDM Coordinator would also serve as a point person for employees with TDM questions.

There are a number of options for who would employ the Downtown TDM Coordinator. CATMA’s 3-year vision is to have Employee Transportation Coordinators (ETC) that serve geographic areas, e.g. a Downtown ETC, a South End ETC, an Essex-Williston ETC, and this person may be able to meet the needs of the downtown businesses. It is also possible that the Downtown TDM Coordinator would be associated with the

Downtown Improvement District or with Go! Burlington. Some cities employ an ETC to help coordinate and promote TDM strategies with area businesses, but, given the small size of Burlington’s government, the City may not have the resources to employ someone who is responsible for TDM throughout the entire downtown.

The duties and responsibilities of the Downtown TDM Coordinator would be to:

- Coordinate and assist TMA with development and implementation of employee outreach and promotional activities, campaigns, and strategies to publicize and boost TDM program participation.
- Collaborate with TMA to organize and attend or participate in events and marketing activity that encourage walking, biking, or transit commutes. This includes public relations and media duties as relating to TDM.
- Work with area businesses to develop TDM benefits that are fair, transparent, and financially sound.
- Collect feedback and update TDM benefits as necessary to ensure that the resources are still relevant and beneficial.

**Examples of Leading Cities**

**Boulder, CO**

The City staffs ETCs who serve as a company representative that promote and support transportation options within a company. The City of Boulder fills the ETC role by giving city staff (typically those with roles in bike and transportation planning) and human resources the resources, time, and budget to work on ETC projects outside of their usual job.<sup>5</sup>

**Raleigh, NC**

The City of Raleigh has a dedicated TDM Coordinator who provides outreach and assists the City, and other employers and businesses, to identify strategies that would help change employee commuting habits while balancing their transportation budgets.

**Cost of Implementation**

Based on a search of similar job descriptions in other university towns and on Indeed.com<sup>6</sup>, TDM Coordinator full-time positions in Vermont pay an average salary of \$35,000-\$50,000 per year, depending on scale of role and responsibilities.<sup>7</sup> This cost may be less if a Downtown ETC or current CATMA employee is able to fulfill the role or if only a part-time position is required.

NEW IMMEDIATE TO SHORT-TERM TDM STRATEGIES

Six new or improved immediate to short-term TDM strategies arose from this study. The following section provides further detail on each of the strategies. They are short-term strategies because they are incentive or service-driven strategies that can feasibly be implemented in the next five years. *Note: they are not presented in order of priority.*

**Goal Year(s)**

2017

**TDM Category**

Service

Pricing

**Primary Goals**

- Reduce Traffic
- Reduce Commuter Parking Demand
- Reduce Carbon Emissions and VMT
- Create an Attractive Eco-Minded City

Universal Transit Pass or Unlimited Access Transit Program

**Establish a Universal Transit Pass or an Unlimited Access Transit Program to provide employees with convenient and free access to transit simply by showing the bus driver their pass (or ID) and swiping their pass (or ID) through the fare box reader. In the short-term, City employees could be offered a choice between transit with four parking “tokens” per month or a monthly parking pass. The goal is to increase transit ridership by making the program more convenient with one pass versus obtaining 10-ride or monthly passes.**

Discussion

While the current CCTA transit passes are free for City staff, some employees expressed concerns during the focus groups about inefficiency in continually having to request new 10-ride or monthly passes on an as-needed or monthly basis. An automatic opt-in system would lower any hurdles for employees to obtain monthly passes. For departments that do not fund the transit passes from the General Fund, many transit passes cost the department more out of their budget (ranges from \$12 to \$150) than the monthly parking pass (\$20), which discourages department heads and staff from promoting this offering. Also, in the current system there is no way to track the usage of the employee transit passes, and the City

isn’t receiving a discount on the purchase of these passes.

CATMA maintains an agreement with CCTA to offer its members the opportunity to participate in its Unlimited Access Transit Program at a 28% discounted rate via a Paper Pass or ID card. Employees would swipe the pass or ID as they board and each usage is tracked. CATMA receives a monthly invoice and report for employees’ usage, which might be organized by department if needed. The ID card format would include a magnetic strip and a photo with various privileges (transit, parking, building access). This system also enables CATMA to track transit use over time, so the City can evaluate how successful the transit program is.

A Universal Transit Pass Program is a similar program that provides unlimited rides on local or regional transit routes at a subsidized rate, often paid entirely by the employer, school or developer. Transit agencies may team up with universities, employers, neighborhoods or TMAs to provide a universal transit program. The pass is a flat rate and provided to all eligible employees, regardless of whether the employee actually rides transit. Employees may use the transit pass for all work, as well as personal, trips.

In addition to reducing the existing and future number of car trips and freeing up parking for customers, there are many benefits to having a

Universal Transit Pass system or Unlimited Access Transit Program for both City employees and CCTA:

For City employees:

- Rewards existing transit riders and encourages new ridership.
- Creates a culture and commitment to improving the quality of life in the community.
- Provides a pre-tax transportation benefit that helps attract new recruitment and retain existing employees.
- Can potentially double as an employee ID.

For CCTA and transit operators:

- Increases ridership for CCTA, which leads to improved transit service, a predictable level of revenue and support of the region’s transit system.

Since CATMA currently provides an Unlimited Access Transit Program for its other members, it would be simplest for the City to start with this program. If there is widespread adoption of transit use, it may be more cost effective to move to a Universal Transit Pass Program at some point in the future. This option will need to be reevaluated as transit use grows. CATMA has found that its current members pay less overall when they pay per ride than if they paid a flat fee.

In order to help employees transition to using transit on a more regular basis, it is important that parking remains available to transit com-

muters for those rare times when they will need it. This strategy recommends, for the short-term, that downtown employees can receive “tokens” or have a reimbursement system to allow up to four days of parking per month.

Examples of Leading Cities

Madison, WI

The Metro Commute Card is an annual unlimited ride pass, with which the only cost associated is the per ride fee of \$1.25 (a 75 cents base fare savings per ride). Employees swipe their card through the fare box each time they board a Metro bus. Each card is tracked per employee by a serial number. Every month, participating businesses receive an invoice showing the number of rides and cost per serial number. Cards can be easily deactivated. There are no minimum requirements in terms of usage or participants.<sup>8</sup>

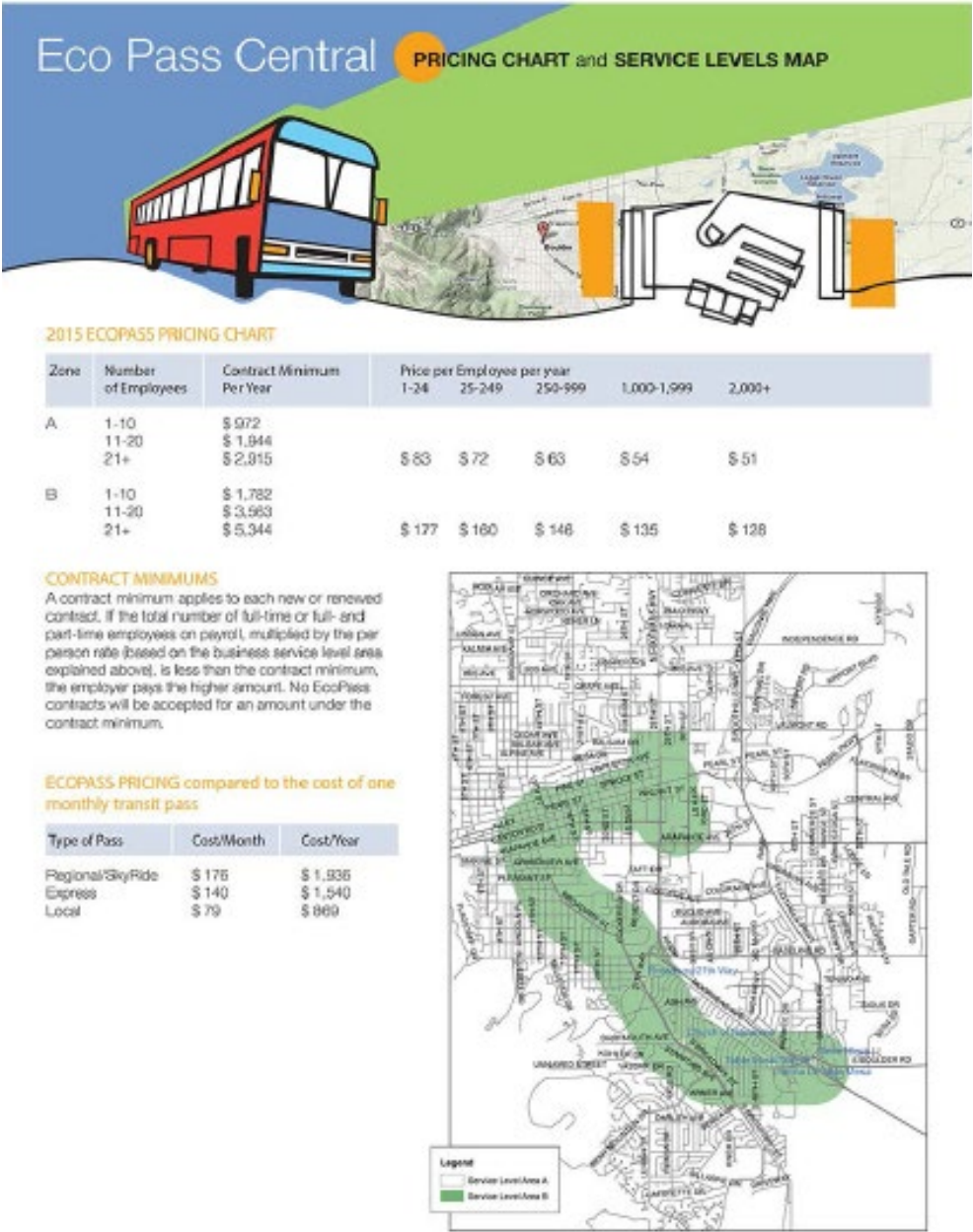
Boulder, CO

Boulder, Colorado has a long-time and successful EcoPass program that is currently undergoing a feasibility study to expand it countywide. EcoPass is an annual Regional Transportation District (RTD) transit pass for unlimited regional, express, local bus and light rail service throughout the Denver and Boulder regions. The program is managed and funded under the Central Area General Improvement District (CAGID) in downtown Boulder, with additional funds from Boulder’s downtown parking benefit district.<sup>9</sup>

Boulder PID pays a flat fee for each employee



FIGURE 4.3: BOULDER ECO PASS PRICING CHART



rebate on EcoPasses for two years with their commitment to participate in the Employee Transportation Coordinator (ETC) Network. A regular monthly fare is \$156. This bulk rate program reduces pass cost to \$51-\$125/per employee-year. (See Figure 4.3) Results indicate the downtown transit mode rate at ~24%.

In Boulder, the Ecopass is considered a benefit for employees, paid for 100% by the City for all City Departments, all full-time employees. GoBoulder has a \$5.5-6 million annual budget. They fund Boulder Transportation Connections to do on-the-ground work, outreach and implementation of programs.<sup>10</sup>

Cost of Implementation

The Unlimited Access Transit Pass would provide a 28% discount per ride, and a Universal Transit Pass, which would be distributed in bulk to all City full-time employees, could be purchased at a negotiated reduced rate with CCTA. CATMA offers this program to its members with administration, monitoring, and reporting.

The financial benefits to the City will be through a reduction in parking demand due to employees utilizing a convenient transit pass program, and eligibility for a reduction in transit fare. Further analyses of financial benefits should be coordinated with the City and employer’s parking costs. The program costs can be separated out into two categories: Infrastructure and administration, which includes management and monitoring.

- **Infrastructure:** The majority of City employees do not have IDs. University of Vermont CatCard office provides IDs for the Burlington Police and Fire Departments. IDs could be produced for all City employees at 25 cents per ID, in addition to a set up fee of \$50 and \$1/per employee-month administration charge (approximately \$8,000 annual cost). In the future, this fee may be reduced in conjunction with CATMA’s planned membership expansion. Initially this ID would be set up with the privilege of riding any transit route simply by swiping ID. The cost of the ID card may be justified if it is used for additional privileges (e.g., building access, dining, bike share). The City should begin by using paper passes to provide unlimited transit access. The paper passes are free, do not have an ongoing administrative cost, and provide the same CATMA member 28% discount.
- **Utilization of Service:** It is estimated the City has approximately 325 employees who potentially could use local transit, and approximately 190 on LINK and commuter routes for a total of 515 total employees who could utilize transit services for at least a portion of their commute trips.
- **Passes:** The City provided 354 bus passes during the period of July 2013-June 2014 for a total of \$10,200. Approximately three-quarters of the passes were for 10-ride passes and one-quarter were for 31-day passes. CCTA offers CATMA member organizations a 28%

- discount on all rides. This would amount to a savings of \$2,856 on the \$10,200 the City spent. However, the goal of the Unlimited Access program is to increase ridership, which would increase costs to the City. Assuming that trip types, e.g. local, commute, link, maintain their current relative frequency, transit ridership can increase 40 percent, and the City’s costs will remain approximately what they are today.
- The City will also need to decide if employees can use transit anytime or just for work related activities. Providing free transit anytime would promote transit use and would help with the City’s mission of recruiting talented professionals. It would also be complicated to enforce a policy of using the transit pass only for work activities. For these reasons, it is recommended that the employees be allowed to use the transit pass for personal trips as well as work trips.
  - In January 2013, the CCTA Employee Transit Pass Pilot Project launched with the participation of Dealer.com, Burton Snowboards, and VEIC.<sup>11</sup> Every employee at these businesses was given a bus pass that could be used at anytime, weekday or weekend, in an effort to expose employees to riding the bus and promote their use of transit. Based on current ridership at these pilot businesses, projections of average annual cost are as follows: Dealer.com \$18,000; VEIC \$10,300; and Burton \$3,200.<sup>12</sup>

**Goal Year(s)**

2017

**TDM Category**



**Pricing**

**Primary Goals**

- Reduce Traffic
- Reduce Commuter Parking Demand
- Reduce Carbon Emissions and VMT
- Create an Attractive Eco-Minded City

Parking Cash-Out

**Establish a parking cash-out program that allows employees to have a choice between using a parking space or receiving a cash incentive if they choose a non-SOV commute.**

Discussion

Parking cash-out allows the City to subsidize all employee commute modes equally. It also creates an incentive for commuters to take transit, carpool, or walk/bike to work. For example, if the market-value rate of the parking space in the Lakeview Garage is \$75 per month, a parking cash-out allowance could be \$50 per month. In this case, the City will receive an additional \$25 per month per participant: \$75 from leasing an additional space less the \$50 parking cash out.

The exact amount of the allowance at either location may be determined over time. If the City finds that participation in the cash-out program is low, it may want to increase the allowance to encourage more people to sign up. However, increasing the allowance will also decrease the City’s per space income, so the City should be careful to achieve the correct balance. The parking cash-out would be given to employees on a monthly basis if they use a non-SOV commute method. The City should allow employees that take the cash-out to park at work a few times per week since there may be times where an SOV commute is the only option. Driving up to four times per month would be a good limit to start with, but it can be adjusted as needed best minimize SOV trips.

The amount of cash that employees receive from a parking cash-out benefit would not be subject to tax, due to amendments in the federal Transportation Equity Act for the 21st Century (TEA-21) that fixes the tax implications for parking cash-out income within the Internal Revenue Code.

In the short-term, a parking cash-out program may be a more palatable program for City employees than charging for parking because they continue to have a choice between free parking or use of another form of commute. However, with this program, those who choose to participate are rewarded financially. The parking cash-out program works best for employees who do not have a frequent need to drive for work. This benefit particularly helps those who live near work or accessible transit, hourly employees who have more regular hours, as well as lower income employees who are less likely to drive-alone.

Studies indicate that on average, 12% of eligible employees will take a cash-out offer, with participation increasing if there are other non-SOV methods to commute to work.<sup>13</sup>

Examples of Leading Cities

State of California

Parking Cash-Out is a law for all businesses with over 50 employees in the State of California who also provide subsidized parking.<sup>14</sup> Many cities require employers to provide proof of compliance at the time they renew their business licenses or pay their annual business taxes.

Austin, TX

Austin, Texas adopted a parking cash-out program for their City employees, allowing them to continue parking for free one day a week. In the pilot program, the city did not lease out city-owned employee spaces, but did save \$900 per month on spaces that the city was leasing for employees in another area.<sup>15</sup>

Cost of Implementation

Since parking cash out became law in California in 1993, there have been many studies on its cost and effectiveness. A 1997 study by Don Shoup found that the administration costs for a parking cash-out program were low, about two minutes per employee per month.<sup>16</sup> For the City of Burlington, this could amount to less than 50 hours of administrative time per year. The cost for City staff time could be covered by the additional revenue from leasing out spaces.

The City of Austin conducted a pilot parking cash-out program in 2012 with 378 employees, funded with \$40,000 from the parking management budget, including administration, marketing, and ongoing measurement and analysis of the pilot program.

It is difficult to predict the City’s exact costs of a cash-out program because it will depend on the cash-out amount, how many employees choose to participate, and how many of those employees currently receive a garage parking pass. Given the limited data at this point, for planning purposes it is reasonable to assume that 5-20% of the 650

employees will opt for the cash-out program. Depending on how many garage spaces are opened up as a result, a \$50 cash-out program could range from an annual income of about \$2,000 (from leasing spaces to the public) to an annual expense of about \$70,000 (to pay for the cash-out requests). A \$20 cash-out program could range from an annual income of about \$8,000 to an annual expense of about \$26,000.

Transit Versus Parking Cash-Out

Providing unlimited access to transit and providing a parking cash-out allowance are both useful benefits that will encourage employees to make use of sustainable transportation options. However, providing both benefits may be too expensive for the City. An option to overcome this problem, and still provide employees with a choice, is to limit the number of transit rides an employee can take each month and still be eligible for the cash-out program. This way, an employee can always choose to take transit if it is a good option and will be rewarded for choosing a sustainable commute option if they do not take transit.

The Action Plan recommends providing a \$50 parking cash-out to employees who park four or less times per month and take four or fewer transit rides per month. These numbers may need to be adjusted to include the maximum number of employees at a rate that the City can afford. The City may decide to start with a lower cash-out amount or more restrictive limits on parking and transit at the beginning of the program and then increase these numbers as the program progresses.



Target Year(s)

2016 - 2017

TDM Category

Policy

Primary Goals

- Reduce Commuter Parking Demand
- Promote Active Lifestyle
- Create an Attractive Eco-Minded City

**City TDM Coordinator in Human Resources Department**

**Establish a TDM Coordinator for the City who would be either an existing human resources staff person or an additional staff hire who will be empowered and given dedicated capacity, support, and resources to perform TDM administrative duties. The TDM Coordinator or ETC would serve as the point of contact with CATMA. She or he would be responsible for assisting the TMA with keeping employees informed of their transportation benefits through the City and through CATMA, as well as assisting with monitoring employee TDM activity and usage on a consistent basis throughout the year.**

**Discussion**

Employee policies are a significant factor in people’s commuting decisions. The 2012 CATMA survey respondents highlighted on-site transportation information and flex-time as two key programs that would influence their transportation choices. Employees also identified their workplace as their primary source for learning and understanding their transportation and TDM options, suggesting that an internal outreach component is integral to the success of implementing a TDM program.

Many of the City’s programs require employees to register for various services in order to partake in the TDM offerings. The current multistep process is an obstacle and many employees are simply unfamiliar with the full spectrum of TDM benefits that are available. Therefore, it is important to effectively communicate all TDM options to employees with some form of education when they are hired, with continual reminders throughout the year. A TDM Coordinator would be someone whose primary role is to provide these services to City Employees. The TDM Coordinator position should be part of the Human Resources Department (HR) to ensure that TDM benefits are on par with other employee benefits. Alternatively, this position could be filled by someone from CATMA, and the City would provide an Employee Transportation Coordinator (ETC) within HR to serve as a liaison between CATMA

and in City<sup>17</sup>. CATMA estimates that the ETC’s time commitment would be between 1 to 3 hours per month. Either the TDM Coordinator or the ETC can serve as the spokesperson for the City at meetings and events, as well as the day-to-day TDM resources manager for all City employees.

The duties and responsibilities of the TDM Coordinator/ETC would be to:

- Coordinate and assist TMA with development and implementation of City employee outreach and promotional activities, campaigns, and strategies to publicize and boost TDM program participation.
- Collaborate with TMA to organize and attend or participate in events and marketing activity that encourage walking, biking, or transit commutes. This includes public relations and media duties as relating to TDM.
- Work with the accounting and finance departments to develop TDM benefits that are fair, transparent, and financially sound.
- Collect feedback and update TDM benefits as necessary to ensure that the resources are still relevant and beneficial.
- If and when a TDM Plan is in place, the TDM Coordinator/ETC is responsible for assisting the TMA in monitoring the efficacy of the TDM plan periodically over time and making adjustments to the plan needed to achieve trip reduction targets.

**Cost of Implementation**

Based on a search of similar job descriptions in other university towns and on Indeed.com<sup>18</sup>, TDM Coordinator full-time positions in Vermont pay an average salary of \$35,000-\$50,000 per year, depending on scale of role and responsibilities.<sup>19</sup> The costs may be substantially less if CATMA serves as this TDM coordinator and the City only provides an ETC within HR. An existing HR staff person should perform TDM Coordinator duties at first to minimize startup costs and avoid the time required for a new job search. As the role expands, the City will need to evaluate when to hire a more full time person, shift responsibilities to CATMA, or partner with other entities such as Go! Burlington or an expanded DID.

Goal Year(s)

2017

TDM Category



Policy

Primary Goals

- Reduce Commuter Parking Demand
- Promote Active Lifestyle
- Create an Attractive Eco-Minded City

**Provide Citywide TDM Offerings through the General Fund**

The City of Burlington, as an employer, should offer new and enhanced transportation programs at a citywide level for all full-time employees who receive benefits. These programs should be accounted for in the General Fund budget on an annual basis.

**Discussion**

Currently, the City of Burlington’s departments are funded three ways: 1) through the General Fund; 2) through alternate means; or 3) a combination of the two. In departments that do not receive funding from the General Fund, these transportation subsidies can have a direct impact on their operating budget and fiscal decision-making. Managers in those departments may feel pressure to reduce usage of the available transportation offerings. This Action Plan recommends eliminating the pressures and decisions from a department-level basis.

The TDM Action Plan proposes that transportation subsidies be offered to all full-time permanent employees and funded centrally from the General Fund, similar to healthcare and retirement benefits. TDM benefits should be listed alongside medical and retirement benefits in relevant brochures and pamphlets. This fosters greater fairness and transparency in the distribution and encouragement of transportation

subsidies and usage. Additionally, by having the City administer TDM efforts centrally, it avoids each department from having to pay a separate usage fee for certain membership services, such as CarShare Vermont.

**Cost of Implementation**

The cost would vary depending on the extent of the incentives and subsidies that would be added to the City’s TDM program. In 2015, six City departments receive funding from alternate sources, which amounts to 290 total employees. The potential additional cost would be from the added usage of transit passes and parking cash-out by more employees, which would be spread throughout the City’s overall budget, as opposed to each department’s budget.

However, many existing TDM subsidies would remain constant. All employees already receive CATMA membership benefits and bike share usage. There will also be some cost savings to having one CSVT business account instead of multiple membership and application fees spread throughout different departments. Additionally, committing to CATMA membership would allow the City to receive discounts on some programs such as transit, CSVT, and off-site parking shuttles, and provide opportunities to collaborate with the Hill institutions and other businesses on transportation and parking solutions.

**Flextime Policy**

Establish an employee flextime policy that allows the employer/employee to agree to a modified work schedule in order to avoid peak traffic or accommodate a non-SOV commute.

**Discussion**

A Flextime Policy can help reduce commute times, improve parking and transit systems, enhance work efficiency, improve employee morale and job satisfaction, and remove potential barriers to employment. The TDM Action Plan proposes that the City support department heads and managers in establishing flexible work schedules that allow both the department and their employees to utilize flexible schedules in order to address the needs of their jobs.

The Flextime Policy may be accomplished in two ways:

- **Flexible Work Schedule:** The manager and employee may modify the starting and ending times of an employee’s workday, but still ensure that the needs of Burlington citizens are addressed in a timely manner. This flexible work schedule may be utilized to accommodate non-SOV commutes or to avoid peak travel.

An example of a flexible work schedule is a manager may authorize an employee to work 7am to 3:30pm instead of 8am to 4:30pm in order to avoid peak traffic.
- **Alternative Work Schedule:** The manager and employee may modify the standard schedule, such as working a full weekly schedule in a fewer number of days, on a pre-scheduled, fixed, and continues basis.

For example, an employee may work four 10-hour days in order to balance personal needs while meeting the needs of the department. Approval for a flexible work schedule must be obtained by the Department Head and the HR Director and, with reasonable notice, Department Heads have the right to return an employee to a standard schedule.

It is important to recognize that not all City employees will be able to utilize a flextime policy given the nature of their work. However, there are real benefits for all staff, such as higher retention rates and reduced parking demand, by allowing some employees—whose roles allow them to—take advantage of a flexible schedule.

In all cases of a flexible work schedule, managers must be able to verify the hours worked by an employee. The City of Burlington must continue to follow federal laws that regulate work hours on a weekly basis when developing flexible work schedules. The Fair Labor Standards Act (FLSA) defines that the maximum number of hours an employee can work, without incurring an overtime obligation, as 40 hours over a consecutive workweek of 7 consecutive 24-hour periods.

Goal Year(s)

2016-2017

TDM Category



Policy

Primary Goals

- Reduce Traffic
- Reduce Commuter Parking Demand
- Reduce Carbon Emissions and VMT
- Create an Attractive Eco-Minded City

**Examples of Leading Cities**

**Boulder, CO**

The State of Colorado offers a Work-Life alternative work arrangement for employees and their managers to accommodate work-life balance while continue to carry out essential business.<sup>20</sup>

**Madison, WI**

The City of Madison offers employees the opportunity to work a flexible schedule that is compatible with the needs of their department. Employees may consult with their direct supervisor and department head to set up a schedule that meets both staff and department needs.<sup>21</sup>

**Cost of Implementation**

Following initial administrative hours needed to refine and add flextime policy in the City’s employee handbook, a flextime policy should not add any cost to the City or to staff. Instead, studies have shown that a flextime schedule can increase employee satisfaction and productivity. From a transportation perspective, staff may benefit from reduced commute times by avoiding peak traffic hours and be more likely to use sustainable commutes, which would potentially free up additional public parking spaces.

**Website with Log-In Feature**

**Create a website with a log-in feature for employees to track their commute, get information on transportation benefits, find a carpool, and use a route-finder. To avoid duplication in efforts, this website should be located at one address and then portions of the website can be managed by various agencies or organizations, based on mode and type of activity.**

**Discussion**

A one-stop website for all TDM-related information would help easily inform residents and employees in the City of Burlington of the suite of commute options and benefits. This website can also inform employers of the benefits of TDM and provide a toolkit for businesses and developers to provide incentives for using sustainable commute modes and disincentives for drive-alone commutes. The City should also maintain a one-stop website link on their human resources/ intranet site as well. For example, the City of Burlington employment page (<http://www.burlingtonvt.gov/HR/Commuting-Options>) has commute resources for employees.

The Chittenden County Regional Planning Commission (CCRPC) has already implemented the Go! Chittenden County website, which is a site set up for individuals/residents and businesses to obtain transportation information, with quick links to all of the region’s transportation providers and advocates websites. The new CATMA website provides comprehensive TDM program information, news, resources, tools and campaigns specifically for its members and their employees, while making services visible to potential participants. It has a login feature for its members that can be used to track commutes and get benefits, among other things. The TDM website can be hosted by the City, CCRPC, or CATMA, but should include the basic features:

**Goal Year(s)**

2016 - 2017

**TDM Category**



**Service**

**Primary Goals**

- Reduce Commuter Parking Demand
- Promote Active Lifestyle
- Create an Attractive Eco-Minded City

News

- **Events:** Information and links to past and upcoming TDM-related events, including open streets events, organized bicycle rides, walking tours, and bike riding and tune-up workshops.
- **News Blog:** Have guest writers contribute short articles on any aspect of commutes in Burlington and Chittenden County, such as on tips on taking transit, safety issues, announcing new bike facilities, or profiling city staff who use non-SOV commutes to work regularly.
- **Twitter Feed:** Have a running feed on the website that features tweets on events, road closures, transit service changes, and bike and pedestrian activity around Burlington and Chittenden County.

Resources

- **Maps and Routes:** Include embedded maps that illustrate where there are designated bike and pedestrian facilities (e.g., bike lanes, shared use paths, sidewalks), and transit routes and stops. At transit stops, identify any amenities at that facility, such as a bus shelter or bench seating. Bicycle and walking maps should also include information on topography and whether a specific segment is particularly steep.
- **Where’s My Bus Map:** One major obstacle that deters employees from taking transit is

not knowing where their bus is and when it will arrive. At times there is a disconnect between the scheduled bus times and actual run time. A real-time bus tracking system would help riders better anticipate when to leave home or work to catch the bus on time. The website should include, at the basic level, a map showing where buses are in the route system. A more sophisticated version is to implement a website/app that allows riders to choose bus stops on their smartphones and immediately locate the next busses that will be arriving at a nearby stop and heading to their preferred destination. Currently, Google Transit is an available resource.

- **Transportation Calculator:** Make it easy for employees to estimate the time and costs of commuting via different modes, and compare it with a drive-alone commute. For example, while the cost of traveling by transit may be slower, highlight the costs of gas, insurance, maintenance, and purchasing a vehicle compared to taking the bus. Existing resources that can be embedded or linked to include Car-Share Vermont’s “Be Car Conscious” ([www.carconscious.org](http://www.carconscious.org)), which helps commuters better understand the personal costs of owning and driving a vehicle, and CATMA’s new commuter profile, which helps users calculate fuel savings, vehicle miles avoided, and CO2 avoided based on their commutes.

- **Bicycle Parking & Locking:** Inform cyclists on where they can park their bike throughout Burlington and Chittenden County, how to properly secure their bike, and also what to do if their bike gets stolen. CATMA is currently working on a countywide map project that will identify bus stops, CSVT pods, and bike amenity locations.
- **Online Forms and Information Request:** Forms to participate in TDM or to request more information about employee TDM benefits should be available online and questions should be submitted easily via the website. Currently, the CATMA website provides trip planning and commute assistance via phone or email requests.

Feedback

- **Issues & Improvements:** Have an online map portal that allows users to geographically report any unsafe street conditions or request improvements such as adding a bike rack, a bus shelter, or propose a car-share pod.
- **Sign up:** Allow users to opt-in or sign-up on the website to receive news and updates by email, which is already available to CATMA members.

To avoid duplication in efforts, the main TDM website should be located at one address and then portions of the website can be managed by various agencies or organizations, based on mode and type of activity. This can be managed between CATMA and the ETC for consistency.

Examples of Leading Cities

Boulder, CO

Boulder operates their Go Boulder website (<https://bouldercolorado.gov/goboulder>) where there is one home site that contains links to information on sustainable travel methods. The website also includes transit and bike facility maps, interactive maps, as well as more in depth information on the future transportation planning strategies for Boulder and the region.

Upper Valley, VT and NH

Advance Transit in the Upper Valley (Hanover, Enfield, and Lebanon, NH and Hartford, VT) utilizes a real-time bus tracking map that uses two-way radios and a private Motorola wireless network. The advantage of this set up is that there is no monthly data plan and contracting company that manages the radio hardware and repeater. The radios are programmed to connect to a repeater and transmit coordinate data to the Advance Transit server, which then estimates the arrival time for every downstream bus stop. When a user goes online for the map, the browser will ping the server for the latest bus coordinates.

Cost of Implementation

Given that the Go! Chittenden County website already exists, and with CATMA’s new website, the City does not need to spend the initial start-up costs of building and initial deployment of the website. Depending on the amount of features the City and County want to add, it could cost



anywhere from \$600 for a “website tune-up” to \$50,000 to add more embedded features and interactive information.

Additionally, there would be a monthly hosting fee for the server space and adding updates. Depending on the new features added, the total cost for monthly hosting and maintenance would average between \$300 and \$500 per month. These figures are based on RSG’s experience with building, deploying, hosting, and maintaining information-sharing websites for other cities, counties, and metropolitan planning organizations.

The Action Plan also recommends collaboration with CCTA to dedicate, maintain, and contract a bus-tracking system in order to provide potential riders with real-time information and encourage ridership. To implement a very basic bus-tracking system, a GPS-enabled prepaid phone can be placed in each bus and linked to an Instamapper (IM) software which can gather the data, interpret the route file, and place the location on a website. The costs include:

- Dedicated two-way radios in the buses – \$200 to \$300 per bus per year<sup>22</sup>
- Maintenance of radio software – \$1200 for server space to track the fleet
- Contractor/consultant fees - \$5000 per year for consultant/contractor communications maintenance fees.

**EXISTING TDM STRATEGIES TO MAINTAIN**

The City of Burlington has invested in several transportation programs and facility improvements to encourage employees to use non-SOV commutes. The TDM Action Plan recommends ongoing commitment to providing these transportation offerings to all City employees, and making improvements to locker and shower facilities, particularly in downtown buildings.

**Bike Share**  
**TDM Category**



Since 2014 City employees have had access to an internal bike sharing program which allows employees to borrow a bike at no cost to use during the workday. Unlike typical citywide bicycle sharing systems, which allow people to borrow a bike from point “A” and return it at point “B”, the City Green Bikeshare Program requires that employees return bikes to the same location they were acquired from because there is not a redistribution system in place.

It is important that the City identify and establish appropriate personnel to administer and manage the bike share fleet, which may be through a future TDM coordinator/ETC role within human resources, or as part of the Department of Public Works (DPW) and their management of the City’s fleet of transportation vehicles.

The City used funds from BlueCross BlueShield Vermont’s wellness program to kick-start the City Green Bikeshare program. For 10 new bikes and accessories, along with three years of maintenance service and parts, and launch events and promotional material, the cost totaled \$15,200. The ongoing costs will be to replace any bikes as needed over time (\$850 per bike and accessories) and to continue encouraging bike share usage through events and promotional materials (\$700 per year).

**Bike Parking, Locker, and Shower Facilities**  
**TDM Category**



Secure bicycle lockers or bicycle rooms encourage employees to ride to work by providing a safe and protected place for their bicycles while they are at work. Related to an active commute are work-site amenities that facilitate bicycling or walking to work, such as on-site showers and lockers where employers can store a change of clothing at work. All existing and new City staff should be informed of the location of existing shower facilities.

At minimum, indoor bike racks should be added to each City building so that employees know their bicycles are secure throughout the day and are in a sheltered space throughout the year. There are currently indoor storage spaces in the DPW and City Hall buildings. New wall units are relatively space-efficient methods of storing bike indoors and cost approximately \$50 for a wall rack that supports two bicycles.

Car-Share

TDM Category



Car-sharing is where people rent cars for short periods of time, often by the hour. They are attractive to City employees who need occasional use of a vehicle, as well as others who would like occasional access to a vehicle of a different type than they use day-to-day. There are currently four CarShare Vermont (CSVV) pods in downtown Burlington, one pod in the South End next to Lakeside Ave, and two adjacent to Callahan Park (a three-minute walk from Burlington Parks & Recreation.)

Currently each department funds membership to CSVV separately, paying \$40 per month as a department employer, as well as \$30 per application fee for any new employee members to CSVV. Instead, the City should become a CSVV member at the municipal level, as opposed to the department level, which would encourage all employees to participate and use non-SOV commuting, reduce confusion on car-share benefits, and eliminate the need to duplicate business membership fees.

Additionally, Burlington Electric Department (BED) has expressed interest in “loaning” a number of its electric vehicles for use by city staff during the business day for work purposes. This may be a program that is managed by BED staff and implemented using a similar Outlook calendar check-out system as the current bike share program.

CATMA Membership

TDM Category



The City of Burlington should sustain their membership at CATMA to demonstrate their leadership and commitment to TDM, along with the institutions and new County members. Membership allows all full-time employees to enroll and participate in a comprehensive suite of CATMA turn-key programs, incentives and affiliated services. Employees can utilize up to eight Guaranteed Ride Home rides/year (worth up to \$60 per ride), transportation education, communications and workshops, and participate in Bike/Walk programs and events. TMA benefits include gained efficiencies and economies of scale: for example, CATMA maintains an agreement with CCTA, thereby enabling their members to receive substantial negotiated fare rates and programs that encourage greater transit ridership. CATMA launched a new website that allows members to create their personal online profile for tracking their commute, viewing their travel impact and eligibility to enter contests and drawings. The website provides easy navigation and simple streamlined content on benefits and programs.

Membership also includes program analyses, reporting of participation and costs, and a Committee seat.

The current annual cost of CATMA membership is \$20 per employee. With 650 full-time City employees with benefits, this translates to \$13,000. CATMA provided the City with substantial subsidized memberships in FY14 and FY15.

ONGOING CAPITAL AND ADMINISTRATIVE IMPROVEMENTS

In order to foster a valuable and comprehensive TDM network, the City of Burlington must continue to make capital and administrative enhancements that will serve the underlying goals of this project. Physical, operational, and administrative improvements are essential to the success of a comprehensive TDM Action Plan.



Increase and Improve Bicycle and Pedestrian Facilities

Primary Goals

- **Promote Active Lifestyle:** Encourage employees to choose walking or bicycling for at least a portion of their commute by addressing concerns for missing or uncomfortable bicycle and pedestrian links.
- **Create an Attractive Eco-Minded City:** Build upon the vision of an active walkable and bike-able city in order to appeal to those seeking an active lifestyle in an environmentally pristine setting.
- **Reduce Carbon Emissions and Vehicle Miles Traveled (VMT):** By increasing the number of people who walk or bike to work, fewer employees are making single occupancy vehicle trips, which reduces overall carbon emissions and VMT.

Recommendation

As part of PlanBTV, a desired planning outcome is to provide a sustainable transportation and accessibility system and emphasize healthier options over the SOV. The City of Burlington should continue to maintain and enhance a comprehensive network of safe, accessible, and continuous sidewalks, paths, and trails to encourage walking and biking. Part of the success for this strategy is to include education and training to help less experienced pedestrian and bicycle commuters navigate safe routes and methods for getting to and from work. One program that Minneapolis uses is a bike rental program that allows novice winter cyclists to rent winter-friendly bikes from local dealers in order to “try before they buy.”<sup>23</sup> In addition, it is important to provide convenient and secure bike parking or storage facilities at each City work location.

Improve Transit Ridership

Primary Goals

- **Reduce Traffic:** Increase ridership by having a more reliable and extensive transit system to reduce the total number of single occupancy vehicles on the road.
- **Reduce Commuter Parking Demand:** By encouraging more employees to use transit, the demand for commuter parking also decreases, which allows the City to lease out more existing public parking spaces at market rate and foster more sustainable parking behavior in the longer term.
- **Create an Attractive Eco-Minded City:** An efficient and comprehensive transit system boosts Burlington’s status as a city that is committed to providing sustainable transportation for its residents, workers, and visitors.

Recommendation

The City should support projects that increase transit ridership. These include making transit a more reliable, efficient, and comfortable way to commute by increasing its frequency, lengthening its routes and schedule, and providing clear and real-time bus location information. Add comfortable bus shelters with schedules and tracking information at popular bus stops so that riders know when to expect the next bus and are shielded from the elements while waiting. All buses should continue to provide bike racks to accommodate multi-modal commutes.

Monitoring

Primary Goals

- **Reduce Carbon Emissions and VMT:** Monitoring the successes of the City’s TDM strategies and their impacts on energy and greenhouse gas reduction is a crucial piece of understanding and achieving the sustainability goals of PlanBTV and Burlington’s Climate Action Plan.
- **Create an Attractive Eco-Minded City:** By monitoring the activity of the TDM programs, Burlington can highlight its achievements in reducing carbon emissions and VMT to strengthen the City’s position as a leader in multi-modal transportation and clean energy.

Recommendation

Ensure that the TDM programs are meeting targets and goals of the Climate Action Plan by reducing employee VMT through usage of the non-SOV modes and working strategies. Ongoing monitoring and a data-driven assessment helps the City understand shifts in employee commute behavior, gauge employee sentiment, identify usage rates of the various programs, and recognize the success of specific TDM policies and services. An important component to monitoring is also understanding patterns and usage *prior* to added TDM options in order to understand how current conditions function. Methods for monitoring the success of TDM programs may include:

- Comprehensive TDM program participation counts
- Cost reports that integrate parking pass and transit pass usage
- CATMA annual survey





**Downtown TDM Administration**

Concurrent with the development of this TDM Action Plan, the City of Burlington is completing a Downtown Parking and Transportation Management Plan, which recommends creating a Parking and Transportation Management District (PMD) that would focus on the provision of parking and transportation services, including TDM.

**Primary Goals**

- **Reduce Traffic:** A single governing entity that continually focuses on the downtown TDM and parking management system—in partnership with the TMA—will be able to understand the transportation needs of employees, visitors, businesses, and residents, and help balance the demands to reduce traffic and promote sustainable modes of travel.
- **Reduce Commuter Parking Demand:** By administering TDM strategies in coordination with parking management in the downtown district, pricing and incentives can be adjusted holistically to maximize the efficient use of existing parking supply, create vacancies in prime parking spaces, and encourage employees—who would otherwise occupy spaces for entire workdays—to use sustainable commutes.
- **Create an Attractive Eco-Minded City:** By having an entity that oversees downtown parking and TDM, Burlington is emphasizing the importance of transportation and its effect on the vitality of the downtown district. This will strengthen the City’s position as an appealing multi-modal city with a vibrant downtown.

**Recommendation**

Put into place a comprehensive governance structure that can manage Burlington’s downtown and walk, bike, and bus transportation “infrastructure” in a coordinated, efficient, and sustainable manner. This should be a joint partnership between CATMA, Go! Burlington (oversight committee of the Downtown Parking Management District Plan), BBA, and the DPW Assistant Director. Go! Burlington, BBA, and DPW will plan for the needs and goals of the Downtown Improvement District (DID), including improving the parking system and other operational and facility enhancements. TDM efforts should be coordinated between Go! Burlington, BBA, DPW, and CATMA, who serves as a service delivery agent for the management TDM services for downtown employees. As a matter of efficiency, one person, such as the TDM Coordinator or a DID employee, should have the responsibility of coordinating these efforts.

**CASE STUDIES OF MEASURABLE GOALS**

The TDM team reached out to other cities around the country to understand the various methods used to measure the success of a TDM strategy.<sup>24</sup> These methods and goals can be used as a resource for Burlington as the City develops procedures to measure the effectiveness of its own TDM programs and strategies. These measurable goals may also be used to determine the value of ongoing financial support.

**Overall General Program Evaluation**

Many cities have a methodology for overall TDM program evaluation, rather than direct benchmarks for each specific strategy. This section details the methodological findings used by other cities.

**Climate and VMT Reduction Goals**

**Boulder**

Boulder evaluates their goals based on emissions reduction. The City’s Climate Commitment uses scientific research to set measurable objects to reduce all emissions by 80% by 2050, maintaining 1994 VMT levels of 2.4 million miles.<sup>25</sup> Initially, Boulder used growing population trends and transportation infrastructure capacity to set target estimates for their measurement goals. The City’s measurement goals have since evolved from meeting transportation needs to reducing emissions. Boulder is unique in that the City is bounded physically by environmental preservation requirements and has not made major expansions to their roads in 20 years. With population and employment growth, the City needed to accommodate more people through non-vehicular modes within the existing infrastructure. With growing success of TDM options, they made the City’s Climate Commitment in 2004 to meet environmental goals in addition to accommodating for population growth. With the emissions goal in mind, the City calculated the VMT reduction needed and has been actively supporting other forms of transportation. Residents of Boulder also

recently voted in favor of an energy tax, which taxes higher energy consumers more, and the revenues go towards green initiatives.<sup>26</sup>

**Washington, DC**

The Commuter Connections Program of the Metropolitan Washington Council of Government (COG) supports the region's efforts to conform to federal transportation and clean air mandates.<sup>27</sup> The TDM strategies and actions are part of the region's Transportation Emission Reduction Measures (TERMs), which are intended to offset increases in nitrogen oxide and volatile organic compound (VOC) emissions from mobile sources. All are intended to reduce the number of vehicle trips and vehicle miles traveled (VMT).

As part of the Long-Range Transportation Plan for the National Capital Region 2014 (CLRP), the goals are to conform with standards from the 1990 Clean Air Act Amendments, which approves budgets for 66.5 tons/day of Volatile Organic Compounds (VOC) and 146.1 tons/day of Nitrogen Oxides (NOx). The results of the travel demand forecasting, emissions calculations, and commute surveys is to provide a basis for the conformity of (CLRP) and five-year transportation incentive program (TIP).<sup>28</sup>

The Commuter Connections' program uses surveys and calculation factors to determine program impacts, which include:

- **Placement rate:** percent of commuters who shift to non-vehicular modes
- **Vehicle trip reduction (VTR) factor:** Average daily trips reduced for each commuter placed
- **Average commute trip distance**
- **Proportion of rideshare and transit users:** Commuters that drive alone to the location where they meet their carpool, vanpool, bus or train.

Using these factors, the program uses the following methodology to calculate program impacts:

- Estimate commuter population "base" for the program (e.g., all commuters, GRH applicants, ride-share matching applicants, kiosk users, Employer Outreach employees, etc.)
- Calculate placement rate: Percentage of commuters in the population base who made a travel change as a result of the program
- Estimate the number of new transportation mode placements: Multiply placement rate by the population base for the evaluation period
- Calculate the vehicle trip reduction (VTR) factor for new placements: Average daily vehicle trips reduced per placement
- Estimate vehicle trips reduced: Multiply number of placements by the VTR factor

- Estimate vehicle miles traveled (VMT) reduced: Multiply number of vehicle trips reduced by average commute distance
- Adjust vehicle trips and VMT for access mode: Discount vehicle trips reduced and VMT reduced to account for commuters who drive alone to meet rideshare modes and transit at park-and-rides and other parking facilities
- Estimate NOx, VOC and PM2.5 emissions reduced: Multiply adjusted vehicle trips and VMT reduced by emissions factors consistent with the regional planning process
- Estimate the energy and commuter cost savings: Multiply VMT reduced by fuel efficiency and vehicle operating cost factors
- Estimate cost effectiveness: Divide program or TERM costs by the program impact measures<sup>29</sup>

**Surveys**

**Minneapolis and St. Paul**

Metro Transit does not rely on VMT reduction goals because there are too many factors that may skew measurement impacts (e.g., tire pressure, how many people in the car, weight of the car, etc.), and the current technology is not sophisticated enough to be accurate. Since the region has two major cities, Minneapolis and St. Paul, with climates that are not ideal for fuel burning, the region does not have standard emissions factors. Instead, Metro Transit studies pollution indicators at high frequency intersections that have recently had an intervention. By narrowing in on a specific area that has recently had an intervention, pre and post evaluations can gauge the effectiveness of the intervention, eliminating other causal factors.<sup>30</sup>

Metro Transit's regional database collects participation rates in new programs. They use these participation rates to gauge the effectiveness of promotion and outreach efforts. They can also use these rates to estimate the environmental and fiscal impacts of the programs. For example, with the carpool matching program, the cities gather data using number of participants, standard trip distance information for the region, as well as assumptions on the frequency of travel in a carpool (assumed three times per week), to calculate that the program reduces 24,846,000 vehicle miles traveled, although the region does not have a set emissions standard.<sup>31</sup>

Metro Transit also relies on the State of Commute Survey, which measures how people commute and traffic status. The survey is conducted annually and measures public attitudes on transportation over time. The region would like supplement survey data with information from GIS based technology, but they have minimum funding. The system uses smart cards, but it only provides information for when someone gets on a bus, not when they get off, or their trip distance.<sup>32</sup>

**Boulder**

Boulder collects data through surveys and through technology. The City has two forms of surveys: the Modal Shift Report, and the Boulder Valley Employee Survey for Transportation (BVES).<sup>33</sup> The Modal Shift Report surveys travel patterns and mode selection, and is designed to provide information on effectiveness of City programs aimed at reducing SOV and info on travel patterns. For the Modal Shift Report, over a thousand households in the Boulder Valley are asked to keep a travel log for one randomly assigned day. The BVES is a three-page, 44 question survey that asks randomly selected employees questions aimed to find information such as modal split of work commute, characteristics of work commute, trips made during the work day, employee parking, use of transit, employer encouraged sustainable modes, and child transportation issues. The Travel Diary, based on data, measures approximate VMT per adult Boulder Valley resident, based on SOV and MOV trips.

Boulder also uses different forms of technology to gain measurements and is developing more advanced forms. Currently, they use AirSage cellular data to analyze and model patterns to understand where and when people commute to work.<sup>34</sup> They also have counters at the entrance of parking garages and other key locations such as bike paths. These counters function as motion sensors that use microwave radiation and loops that detect metal going over them.<sup>35</sup>

The City of Boulder is also in the early stages of developing an app for smartphones that will track comprehensive data. Boulder residents would volunteer to be a data provider by running this application in a testing phase on their smartphones. The application tracks all participant movements and polls for questions at the end of the day (e.g., “It looks like you took 5 trips today, and based on the speed of phone travelling, you were using these methods of travel.”).<sup>36</sup> Important data measurements for TDM program consideration include:

- Single Occupancy Vehicle (SOV) trips vs. Multiple Occupancy Vehicle (MOV) trips
- Modal splits of work commute (rate of people that bike, drive alone, transit, etc.)
- Modal shifts of work commute (change in those rates over time)
- Average distance and duration of work commute;
- Vehicle occupancy

- Transit usage rates
- Eco-pass usage rates
- % allowed to telework
- % that do telework<sup>37</sup>

**Denver**

The Denver Regional Council of Governments (DRCOG) conducts an annual TDM Program Pool, or “TDM Pool” that funds \$2 million every two years for small-scale TDM applications from local jurisdictions, TMAs, and non-profits. Majority of the projects are for outreach efforts. Applicants must detail the expected quantifiable impacts based on anticipated program participation rates. The DRCOG also issues pre- and post-surveys to employees where the program has been implemented in order to evaluate the success of each project. A project that has positive evaluations is more likely to be funded again in future years.<sup>38</sup>

**Valley Metro, Phoenix**

The regional transit system for the Phoenix area conducts phone interviews with 500 to 600 people each year, each interview lasting about 12 minutes. The survey assesses participation in and reactions to specific programs. The survey also asks general questions about transportation usage to track trends over each year. Some questions include how people commute to work, the distance of their commute, if participants have changed modes of transportation, and why they have made the change.<sup>39</sup>

**Atlanta, GA**

Programmatic Surveys: telephone surveys of 4,000 randomly selected commuters, random survey of 385 employer representatives, panel analysis of recipients of Commuter Rewards, and more.

Calculated placement rates using the percentage of active participants shifting to sustainable modes. Multiplying the number of active participants by placement rates provides an estimate of total commuters placed in non-vehicular modes.

VTR factors measured reduced trips traveled daily. Multiplying this by the average commute distance for people in a program gives you VMTR.<sup>40</sup>

**South Florida Commuter Services (SFCS), Miami/Ft. Lauderdale**

SFCS tracks the number of employees that participate in employer TDM programs, as well as the benefits that each employer provides. Participants are contacted 30-60 days after they initially sign-up for SFCS services to determine use of services. Surveys are also sent out twice a year to gather feedback from participants. This data is used to create a trip reduction analysis for the Florida DOT. They also track calls to their information line, website hits, and the number of returned rideshare applications. SFCS evaluates its PR events by tracking the number of guests at events as well as feedback received from guests at these events. The 2004 annual budget of SCFS was \$2,425,000.



Using these data and other sources, the following are some of the performance measurements used in evaluation:

- Share of commuters aware of brand
- Profiles of TDM elements for each employer
- Number of employers with telework and compressed work week programs
- Number of employees teleworking or working a compressed work week
- Number of calls received
- Mode shift from drive alone
- Mode shift from non-vehicular modes
- Number of vanpool trips and actual vans
- Customer turnover
- Percent of non-SOV going back to SOV

Evaluation in 2004 of the SFCS programs show:

- Placement as measured by rideshare arrangement formed is 14 percent for all users, 19 percent for online users, and 12 percent for non-online users.
- Overall customer satisfaction had a rating of 7.1 to 6.8 (out of 10, with 10 being highest) for years 1999 to 2004.
- 57,660,000 miles of vehicle travel were eliminated in 2004 at the cost of \$1.09 per trip and \$0.04 for each mile reduced.
- There are over 13,000 people registered in the Guaranteed Ride Home database and only 749 rides were provided in 2004.
- Of the 23,000 registered commuters in the rideshare database, approximately 69 percent use a sustainable mode of commuting once per week. This compares to just 19 percent of the general public.
- There are 89 vans in operation, accounting for 774 vanpoolers.<sup>41</sup>

**Policy Strategies**

**Minneapolis**

Minneapolis’ Metro Transit has a Regional TDM Database that has data on most of the City’s TDM efforts. Metro Transit maintains records of registration of carpools and vanpools in their database as well as the participation in their programs.<sup>42</sup>

For marketing efforts, the TMO had a Summit-U individualized market program that tested the effectiveness of its policies. Measurement methods included a pre- and post-neighborhood-wide phone survey, participant surveys, bicycle/pedestrian counts, and discussion with partners. Importantly, the TMO also selected a control group to monitor more carefully if changes in mode share and vehicle trips were due to the individualized marketing program or other confounding externalities.

Metro Transit works with regional TMOs to collect data on programs, usually participation rates, to measure the effectiveness of outreach efforts such as the Commuter Challenge.<sup>43</sup>

**Employee Transportation Coordinator**

**Boulder**

In Boulder, they have Employee Transportation Coordinators (ETCs) who are company representatives that promote and support transportation options within a company. The ETC for Boulder’s City government is funded through parking revenue paid by employees of the City organization and this person conducts employee orientation and educates employees on what transportation options they have available to them.<sup>44</sup>

**Flextime**

Boulder uses the Boulder Valley Employee Survey for Transportation to measure flextime metrics. Measurements include the percent of employers who offer flextime (31% in 2011) and the usage rate with these employers (79%).<sup>45</sup>

Service Strategy

TDM Website

The Denver Regional Council of Governments (DRCOG) uses WayToGo, a free online car-pool database that provides real-time ridesharing, ride-matching services, and a log-in feature (<http://www.waytogo.org/>).<sup>46</sup> DRCOG evaluates the success of the website through participation rates in the services that it facilitates. To increase website usage, they are pushing to make it more user-friendly. Recently, DRCOG is also trying to increase its marketing efforts for the website and the services that it promotes.<sup>47</sup>

Universal Transit Pass

Boulder

Boulder County conducted a countywide EcoPass Feasibility Study (<http://www.bouldercounty.org/doc/transportation/bcecopassstudy2014.pdf>) that projected cost and participation estimates assuming if all of City employees were given EcoPasses.<sup>48</sup> To determine these estimates, the city looked at current ridership numbers per route and the current percentage of people with EcoPasses on those routes. EcoPasses are embedded with

smart cards that track this ridership information. This data is then used to project what effect an increased availability of EcoPasses would have on the transit system.<sup>49</sup> Estimates included:

- 22% increase in annual boardings
- \$476,758 increase in program costs to support increased ridership
- 8 million Annual VMT Saved (kg)
- 3 million GHG Emissions Saved
- 3.8% Transit Mode Share Change
- 60,000 New Transit Pass-Holders

The report also mentioned additional benefits including increased transit accessibility, increased access to jobs, and reduction in the housing plus transportation index.<sup>50</sup>

Pricing Strategy

Parking Cash Out

Boulder

City of Boulder employees currently must pay to park, so this payment alone discourages employees from driving to work. The City is looking into offering a cash out program additionally, further incentivizing employees to use different modes of transportation. In the past, there has not been the technology to ensure that employees are not actually using parking spaces. Now, counting sensors can determine whether or not employees are using the spaces or not.<sup>51</sup>

(Endnotes)

1 Virginia Tech Study. [http://www.ncctr.usf.edu/wp-content/uploads/2014/07/JPT17.2\\_Hamre.pdf](http://www.ncctr.usf.edu/wp-content/uploads/2014/07/JPT17.2_Hamre.pdf). 2014.

2 Parking and Transportation Demand Management. <http://www.mapc.org/resources/parking-toolkit/strategies-topic/parking-tdm>

3 City of Portland Human Resources. Teleworking Policy. <http://www.portlandonline.com/shared/cfm/image.cfm?id=105168>

4 City of Saint Paul, Minnesota. Telecommuting Guidelines. <http://www.stpaul.gov/index.aspx?NID=1120>

5 Employee Transportation Coordinator, City of Boulder CO. <https://bouldercolorado.gov/goboulder/employee-transportation-coordinator>

6 TDM Coordinator Salary in Vermont. <http://www.indeed.com/salary?q1=TDM+Coordinator&l1=Vermont>

7 Project Coordinator. <http://www.uvm.edu/-transctr/pdf/CATMAProject%20Coord%20SB%20FY14.pdf>

8 Metro Commute Card. <http://www.cityofmadison.com/metro/fares/commutecard.cfm>

9 Countywide EcoPass Feasibility Study 2014, Summary of Existing EcoPass Programs in Boulder County. <http://www.bouldercounty.org/doc/transportation/bcecopassstudy2014.pdf> pp. 23-24

10 Phone Interview with GoBoulder, Senior Transportation Planner on 4/17

11 2013-September-6, Memorandum from Burlington City Green Team to Mayor re: Employee TDM Program Proposal

12 2014-October, CCTA Employee Transit Pass Pilot Summary

13 Shoup, The High Cost of Free Parking. 1992, 1997.

14 California's Parking Cash-Out Program. [http://www.arb.ca.gov/planning/tsaq/cashout/cashout\\_guide\\_0809.pdf](http://www.arb.ca.gov/planning/tsaq/cashout/cashout_guide_0809.pdf)

15 City of Austin, TX: <http://www.austintexas.gov/edims/pio/document.cfm?id=181560>

16 Employer Questions and Answers. [http://www.bestworkplaces.org/pdf/ParkingCashout\\_07.pdf](http://www.bestworkplaces.org/pdf/ParkingCashout_07.pdf) p. 12

17 CATMA's ETC Network. [http://catmavt.org/index.php?option=com\\_content&view=article&id=197&Itemid=140](http://catmavt.org/index.php?option=com_content&view=article&id=197&Itemid=140)

18 TDM Coordinator Salary in Vermont. <http://www.indeed.com/salary?q1=TDM+Coordinator&l1=Vermont>

19 Project Coordinator. <http://www.uvm.edu/-transctr/pdf/CATMAProject%20Coord%20SB%20FY14.pdf>

20 State of Colorado Work-Life Program. August 17, 2011. [https://www.colorado.gov/pacific/sites/default/files/Work-life%20program\\_2.pdf](https://www.colorado.gov/pacific/sites/default/files/Work-life%20program_2.pdf)

21 Mayoral Administrative Procedure. Memoranda 2-35 Flexible Work Schedules. <http://www.cityofmadison.com/mayor/apm>

22 Corvallis Transit System. <http://www.corvallistransit.com/rtt/public/>

23 Martucci, Brian. Why Minneapolis Is One of America's Best Winter Biking Cities. <http://gizmodo.com/why-minneapolis-is-one-of-americas-best-winter-biking-c-1573185188>. May 8, 2014.

24 Boulder, CO was the most responsive of all best practice cities that the team reached out to. Emails and phone conversations with: GoBoulder, DRCOG, Downtown & University Hill Management Division and Parking Services, and Boulder Transportation Connections. MetroTansit, which serves the Minneapolis and St. Paul area also sent a report to the TDM team and gave a phone interview. The TDM team did not receive responses from: Madison Area Transportation Planning board, Madison Rideshare program, Charles River TMA, Cambridge EZRide shuttle.

25 City of Boulder's Transportation Master Plan. <https://www-static.bouldercolorado.gov/docs/transportation-master-plan-tmp-2014-1-201408271459.pdf> section 3-4

26 Phone Interview with GoBoulder, Senior Transportation Planner on 4/17

27 Commuter Connections Program, Washington, DC. <http://www.metrocouncil.org/METC/files/de/deb229ec-03f4-482c-a346-d19a46456a06.pdf>. pp. 34-36

28 Financially Constrained Long-Range Transportation plan For the National Capital Region (CLRP) 2014. <http://www.mwcog.org/clrp/resources/2014/2014AQCReport-Full.pdf> pp. iii

29 Commuter Connections Program, Washington, DC. <http://www.metrocouncil.org/METC/files/de/deb229ec-03f4-482c-a346-d19a46456a06.pdf>. pp. 34-36

30 Phone Interview with Commuter Programs at Metro Transit, on 4/15

31 Minneapolis and St. Paul. <http://www.metrocouncil.org/METC/files/de/deb229ec-03f4-482c-a346-d19a46456a06.pdf> pp. 12

32 Phone Interview with Theresa Cain, Commuter Programs at Metro Transit, on 4/15

33 Boulder Transportation Use Measurements. <https://bouldercolorado.gov/transportation/transportation-use-measurements>

34 AirSage Commute Patterns Data. <http://www.airsage.com/Population-Analytics/Home-Work-Matrix>

35 Phone Interview with GoBoulder, Senior Transportation Planner, on 4/17

36 Phone Interview with GoBoulder, Senior Transportation Planner on 4/17

37 Transportation Report on Progress 2012. <https://www-static.bouldercolorado.gov/docs/transportation-report-on-progress-2012-1-201305291118.pdf>

38 Phone interview with Transportation Planner at DRCOG on 4/24. She is involved with the TDM Pool.

39 Valley Metro, Phoenix, AZ: <http://www.metrocouncil.org/METC/files/de/deb229ec-03f4-482c-a346-d19a46456a06.pdf>. pp. 33-34

40 Atlanta Regional TDM Program, Atlanta, GA. <http://www.metrocouncil.org/METC/files/de/deb229ec-03f4-482c-a346-d19a46456a06.pdf> pp. 38-39

41 South Florida Commuter Services (SFCs), Miami/Ft. Lauderdale, FL. <http://www.metrocouncil.org/METC/files/de/deb229ec-03f4-482c-a346-d19a46456a06.pdf> pp. 39-40

42 Minneapolis and St. Paul. <http://www.metrocouncil.org/METC/files/de/deb229ec-03f4-482c-a346-d19a46456a06.pdf> pp. 12

43 St. Paul Smart Trips Transportation Management Organization. <http://www.metrocouncil.org/METC/files/de/deb229ec-03f4-482c-a346-d19a46456a06.pdf> pp. 16

44 Employee Transportation Coordinator (ETC) Network. <https://bouldercolorado.gov/goboulder/employee-transportation-coordinator>

45 Boulder Valley Employer Survey for Transportation Report of Results 2012. <https://www-static.bouldercolorado.gov/docs/2011-boulder-valley-employee-survey-for-transportation-report-of-results-1-201305291119.pdf> pp. 43

46 WayToGo. <http://www.waytogo.org/>

47 Phone interview with Transportation Planner at DRCOG on 4/24.

48 Countywide EcoPass Feasibility Study 2014, Executive Summary. <http://www.bouldercounty.org/doc/transportation/bccopassstudy2014.pdf> pp. 2

49 Phone Interview with GoBoulder, Senior Transportation Planner on 4/17

50 Countywide EcoPass Feasibility Study 2014, Benefit Analysis: City of Boulder. <http://www.bouldercounty.org/doc/transportation/bccopassstudy2014.pdf> pp. 20-22

51 Phone Interview with GoBoulder, Senior Transportation Planner on 4/17

# Appendix A

## PRIOR BURLINGTON TDM MEASURES & INITIATIVES

### 1996

#### Burlington Area Tri-Center Transit Study (Burlington, South Burlington, Winooski)

#### Vtrans and CCRPC

Study evaluated transit alternatives for improving the flow of people between the three city centers.

### 2001

#### Burlington Transportation & Parking Council (T&PC)

TMA Subcommittee – first meeting 9/11/2001 (Chapin Spencer, Dan Bradley, Chris Bishop, Bob Penniman). Group to explore the possibility of forming a Downtown Burlington TMA.

- Opportunity to pool resources and better coordinate collective transportation infrastructure to enhance
- personal mobility and economic climate in congested areas.
- Issues: Declining involvement of private sector in T&PC

### DECEMBER 2005

Chittenden County TDM Education, Outreach & Support Program/ prepared by URS for CCMPO

[http://www.ccrpcvt.org/library/TDM/TDM\\_plan\\_final.pdf](http://www.ccrpcvt.org/library/TDM/TDM_plan_final.pdf)

### JANUARY 2007

#### Mayor's Transportation Group

Notes on file indicate need to form a downtown TMA.

### JULY 2007

#### Appointment of Burlington Environmental & Energy Coordinating Committee (Mayor Kiss)

Members include representatives from the City Council, various city depts., citizens, nonprofits, and university affiliates. City's Legacy Project provide staff support to this Committee. Group charged with investigating ways to reduce emissions related to global warming and other harmful pollutants. During a period of time, this group studied transportation with specific look at car use/efficiency, commercial freight, transit, walking and biking. Suggestions included continue to strengthen and advance educational outreach, incentive and recognition programs that promote walking,



biking and car efficiency efforts. As noted in Climate Action Plan, Burlington government should promote these modes including the Way To Go program and continue to work in conjunction with its various partners dedicated to these effort

**FALL 2007**

**CATMA/BBA Downtown Burlington Employee Transportation Survey**

Reference: Downtown Burlington Employee Transportation Survey Report/ June 2008

Prepared for CCMPO by CATMA and BBA

**2008**

**Burlington’s First Greenhouse Gas Inventory**

**AUGUST 2009**

**CATMA, City staff meeting on “Overview of CATMA”**

**JANUARY 1, 2010 – DECEMBER 31, 2010**

**One Year TDM Pilot with CATMA/City of Burlington**

- For core downtown employees (216 staff)
- City funded this pilot w/HUD Grant (US Dept Housing & Urban Development)

**Challenge: A long-term funding source.**

**OCTOBER 2010**

TRB 19th National Rural Public & Intercity Bus Transportation Conference

**MARCH 2011**

**Adopted Moving Forward Together: Transportation Plan for the City of Burlington**

Mention of forming Downtown TMA, expanding CATMA’s effective model.

**OCTOBER 2011**

**RSG Plan BTV Transportation Study**

**JUNE 2012**

**Employee Commute Program (Burlington Current Efforts)**

In an effort to reduce the amount of mileage driven every year by its employees, the City of Burlington Sustainability Action Team (BSAT)

develop a commute reduction program that will likely include incentives for staff to use alternative modes of transportation, car and ride sharing programs, as well as flexible work schedules. Discussion with CATMA and CarShare Vermont for finding ways to partner in this effort.

**2013**

**Plan BTV Adopted**

It is mentioned in several places, the successful and sustainable CATMA model and need for a Burlington TMA.

**2013**

**Update of Legacy Action Plan Originally Adopted in 2000 by City Council**

**2013**

**Update of Climate Action Plan**

**JUNE 2013**

**ECOS Plan (Environment, Community, Opportunity & Sustainability) Adopted**

<http://www.ecosproject.com/>

CCRPC’s Regional Planning and Transportation Plan, with which municipal plans must be in alignment.

**NOVEMBER 13, 2013**

**BBA Parking Summit w/ Nelson Nygaard**

**MARCH 31, 2014**

**Burlington Municipal Development Plan Adopted**

<http://www.burlingtonvt.gov/PZ/Municipal-Development-Plan>

**FY14 (JULY 1, 2013-JUNE 30, 2014)**

**CATMA/ City of Burlington (all staff, ~650) Associate Membership Pilot**

Funded by TCSP Grant (Transportation Community System Preservation) and City contribution

**FY15 (JULY 1, 2014-JUNE 30, 2015)**

**CATMA/ City of Burlington (all staff, ~650) Associate Membership Pilot**

Funded by TCSP Grant (Transportation Community System Preservation) and City contribution

- Downtown Improvement District
- Downtown Designation originally received on 1/6/99 for Church St Marketplace area
- Expanded Downtown District in March 2004 & 2007


Popular incentives to reduce drive-alone commutes were:

- Providing a universal transit/parking pass combined with employee ID card
- Rewarding people for driving less or not using their parking pass
- Providing a parking pass that tracked usage rather than an unlimited parking pass
- Providing a carpool matching service for permanent partners or one-time partners
- Encouraging flexible work times to allow for bus unreliability, trouble finding parking, avoiding congestion, and working more hours on fewer days
- Encouraging the use of City-owned fuel-efficient vehicles because they reduce harmful emissions and reduce liability for employees

- Unpopular incentives were:

- Charging people market rate for parking
- Charging non-downtown employees for parking
- Providing departments with a reduced number of parking passes to be distributed to staff as needed

Town	Cases
Burlington	4
South Burlington	3
Colchester	1
Ferrisburg	1
Jericho	1
Milton	1
Plainfield	1
Shelburne	1
Waterbury	1



## Burlington Transportation Demand Management Focus Groups

**TELL US ABOUT YOURSELF**

**1. What City or Town do you live in?**

City/Town \_\_\_\_\_

If City of Burlington, which neighborhood? \_\_\_\_\_

**2. How many people currently live in your household? Please include yourself:**

How many 18 and older:  How many under 18:

**3. How many motor vehicles does your household operate?**

*Please include all motor vehicles that your household regularly uses during the week, include cars, trucks, SUVs, vans, etc., and motorcycles (whether owned, leased, or a company vehicle).*

\_\_\_\_\_ motorized vehicles

**4. How long have you been at your current job?**

☐ 0 to 2 years      ☐ 5 to 7 years  
☐ 3 to 5 years      ☐ 7 to 10 years  
☐ More than 10 years

**5. What time do you usually leave home in the morning?**

•

☐ Check here if it frequently varies

**6. What time do you usually leave work?**

•

☐ Check here if it frequently varies

**7. Do you have the type of job that could be done at home?**

☐ No      ☐ Yes

**TRANSPORTATION USE**

	Drive alone	Motorcycle	Carpool	Carpool	Vanpool	CITA Bus	Taxi	Bike	Walk
<b>1. Which transportation option do you use most often?</b>	1	2	3	4	5	6	7	8	9
<b>2. Which other transportation option(s) have you used in the past month? (circle all that apply)</b>	1	2	3	4	5	6	7	8	9
<b>3. What type of transportation do you use in the winter? (circle all that apply)</b>	1	2	3	4	5	6	7	8	9

FIGURE B.3: FOCUS GROUP – PRIMARY  
COMMUTE MODE

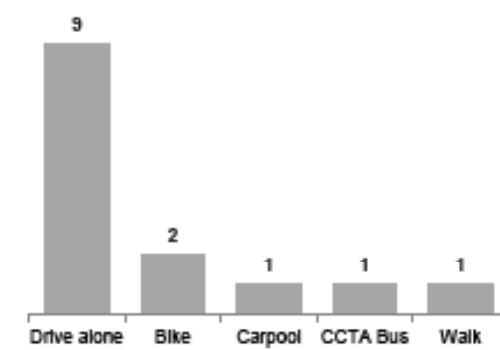
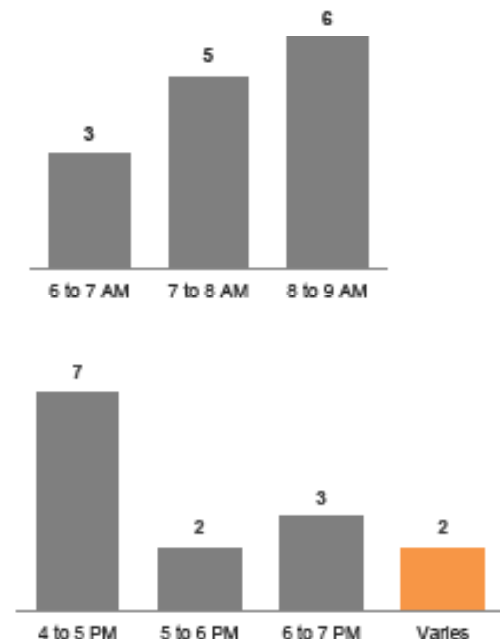


FIGURE B.5: FOCUS GROUP – COMMUTE TIMES



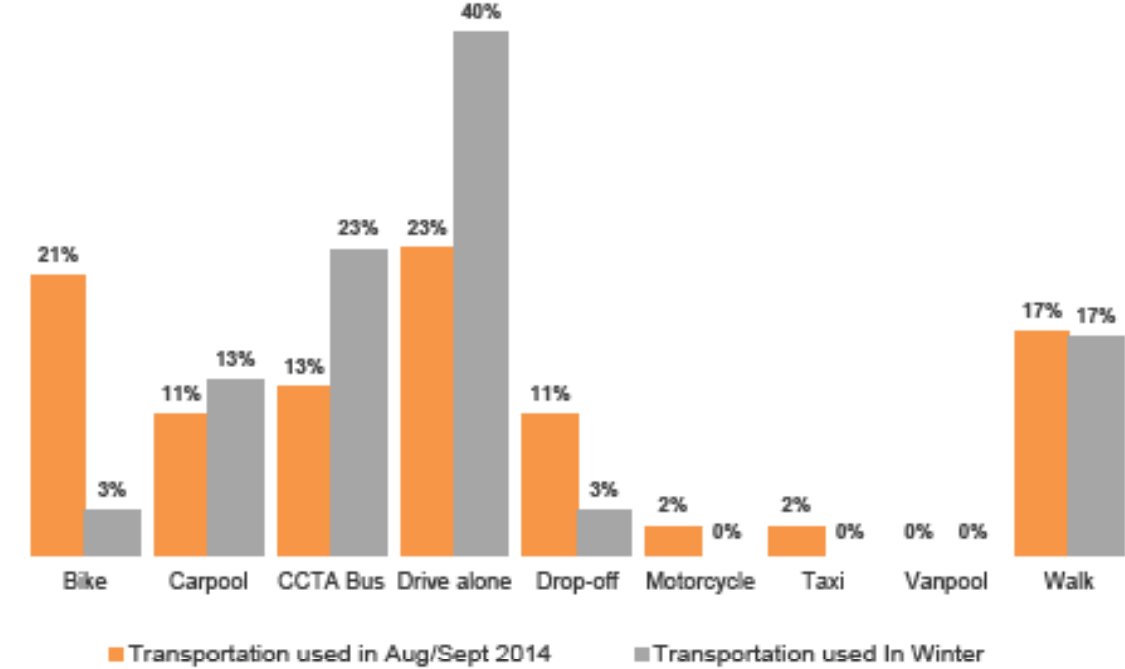
**BURLINGTON TDM FOCUS GROUP FINDINGS**

On September 19, 2014, the City of Burlington convened a group of 14 employees at two focus groups to better understand the commuting considerations and TDM incentives that would benefit City employees. The focus groups were led by members from the consultant team and provided valuable qualitative information to supplement the study.

Three out of the 14 City employees worked in South End office locations (Burlington Electric Department); the rest worked downtown. All employees filled out a brief survey at the start of the focus groups, shown in Figure B.1. The participants commuted from a range of home locations and all had at least one vehicle in their household.

The following is a summary of the information gleaned from the focus groups.

FIGURE B.4: FOCUS GROUP – OTHER COMMUTE MODE



**Commute considerations**

City of Burlington employees currently use a variety of commute options and many of the participants noted their desire to use single occupancy vehicles (SOV) less. The majority of participants (64%) rely on drive-alone commutes as their primary journey to work mode, with cycling being the second most common primary commute mode. When looking broadly at all forms of transportation used in the previous month (August and September), cycling was still the second highest, followed by walking. Not surprisingly, drive-alone commutes rose sharply in winter months, cycling decreased, and transit ridership experienced a moderate increase.

Morning commutes were generally more consistent than evening commutes, with most people arriving at work between 7 AM and 9 AM. Nearly a third of the participants felt it was possible to work from home occasionally, but not on a consistent basis.

Common obstacles to carpooling, biking, and taking transit that were identified during the focus groups include:

- Evening meetings,
- Child-related or other types of responsibilities before and after work,
- The additional time required to ride a bus,
- Unreliable bus schedules and timing,
- Lack of bus stops near home,
- Lack of carpool partners (or awareness of potential carpoolers) living nearby,
- Inconsistent work schedules,
- Lack of safe bikeable infrastructure.



FIGURE B.6: FOCUS GROUP – VARIED COMMUTES

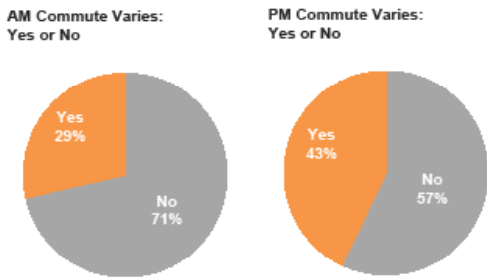
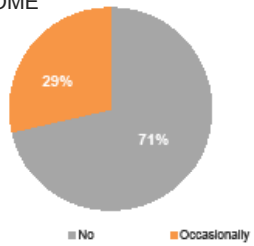


FIGURE B.7: FOCUS GROUP – WORK FROM HOME



Burlington Parking Meter, Creative Commons Image courtesy of Matt Lancashire on Flickr

### Mode choice during working hours

- **Walk and bike:** During working hours, many people try to walk to meetings or bike when possible, but participants often felt that there was not enough time to walk or bicycle to their meetings.
- **City vehicles:** Some employees also use City vehicles, which are typically more fuel efficient. Many employees, such as police, fire, and electric line workers, need the ability to respond immediately to a situation, so they always take their own vehicle.

### Paying for Parking

When asked about the current parking subsidies provided to City employees, all but one of the focus group participants expressed opposition to the idea of requiring employees to pay the full price for parking. The majority of participants anticipate considerable employee backlash to the idea of paying for parking and confirmed the following reasons for why this policy change would be seen as unfair:

- There is available space to park on-site for the non-downtown employees (e.g. Police, Fire, Electric, Public Works), so it does not make sense to begin charging in those locations.
- Charging only downtown employees and not others would be unfair.
- Many participants are forced to drive because they live beyond walking distance from a bus stop or because they had after hours work-related commitments.
- Although employees often do not park in the Lakeview Garage because they took the bus, biked, or parked closer to their office on street, they noted the need to have the option to use the garage in case they could not find a free, on-street space or were forced to drive on a particular day.
- It was thought to be too complicated for each department to have a limited number of parking passes and to hand these out to employees on an as-needed basis.

During this discussion, there were two comments in support of charging employees the full rate for parking:

- One participant noted that transit use went up when gas prices went up, so financial deterrents to driving are the best incentive available.
- One person commented that the City did *Way to Go* week and almost no one participated. This person stated that, if the City is serious about meeting its greenhouse gas emissions targets, it needs to do more than just tell people that not driving is a nice thing to do. Others have noted that the City is typically one of the top contenders for *Way to Go* week.

### Awareness of TDM Options

Across the focus group participants, there was mixed awareness of current TDM options available to them. Many participants did not know about the City’s CATMA membership and its benefits, such as the Guaranteed Ride Home (GRH) program or incentives offered for not driving, e.g. gift certificates. Many participants were also unaware of Go! Vermont programs like carpool matching including people who said they would like to find a carpool partner.

The following were programs that most participants were aware of:

- **Free transit pass:** All of the focus group participants were aware of the free (to them) public transit passes and participants who used transit said the process of getting the transit pass cards was convenient.
- **Bike share:** Most of the participants were also aware of the City’s new bike share program.
- **Flextime:** Some of the participant had experimented with varying schedules such as four 10-hour days or variable start/end times to avoid traffic. These respondents noted that it works well where it was implemented, but many people noted having responsibilities that needed to be met at a specific time and place, and there was no one to cover for them if they were not in the office. One participant noted that the City is a customer-focused organization and needs to be able to respond to customer needs five days a week.

There was consensus that the City could do a better job communicating current TDM offerings. People usually do not keep or read emails that have this type of information. The suggestion of a personalized website or intranet portal was very positively received, but even a website with current links was noted to be a big step forward. The City recently hired a Chief Innovation Officer, and this person may be in a position to improve the TDM-related information technology functions.



Focus group participants were aware of the transit passes available for use on CCTA buses.

Potential TDM Strategies

A recurring sentiment raised by the focus group participants was that carrots (i.e. personal/financial incentives) would be much more popular than sticks (i.e. financial disincentives) in encouraging enhanced TDM use. All of the focus group participants agreed that personal incentives would be a more effective approach to reduce single occupant vehicle trips than appeals to improve the environment or the opportunity to save money for the City as a whole. These personal incentives could be financed through a combination of general fund revenue and through elimination of system inefficiencies (e.g. selling additional market-rate parking passes in the Lakeview Garage to the private market).

The personal incentives discussed by the focus group participants included the following:

- **Parking Cards:** Options to reduce driving include providing a garage punch card rather than an unlimited parking pass, reimbursing people for parking not used each month, and providing other rewards for not driving/driving less.
- **Universal Transit Pass:** The option for a universal, free transit pass was received as very favorable among participants as it would eliminate the need to continually request 10-ride or monthly passes from the City. Participants supported the idea of integrating this transit pass with a parking pass and their employee identification card.
- **Taxi:** An improved City-wide taxi system or online ridesharing system (e.g. Uber, Lyft) was suggested as a potential improvement to help people meet tight work-related travel deadlines without needing to rely on their personal vehicle. uberX officially launched their ride for hire service in Burlington on October 9, 2014, allowing local drivers to serve as taxi drivers using their own vehicles.
- **Carpool:** Carpool matching and one-off carpool matching services were seen to be helpful to reduce SOV travel.
- **Education:** Education programs would also be helpful so that people would not feel lost trying to navigate the TDM system.
- **Commute Heroes:** Emphasizing employees who currently use sustainable commute modes was also noted as beneficial since it makes commuting more real and gives potential users a point of contact.

BURLINGTON TDM FOCUS GROUP GUIDE – CITY OF BURLINGTON EMPLOYEES

Objectives and Approach:

- Understand how the City staff perceive the ease of their commute options to work in downtown
- Understand how City employees (at different locations) may change their travel behavior based on changes to their transportation benefits package
- Identify factors that should be prioritized to result in the greatest reduction of drive-alone commutes
- Obtain feedback on how best to encourage usage of alternative modes of transportation among employees.

In order to achieve these objectives, the TDM team will conduct two (2) 90-minute focus groups, with 10 to 15 participants in each group. These focus groups would occur over the course of one day, on Friday, September 19. The focus groups will be conducted at two facilities, Conference Room 12 in City Hall and at a conference room in BED, so that there is representation from both downtown employees and those in the South End and Pine Street areas. Participants will receive lunch or afternoon coffee/snacks for their time, in addition to \$15 gift cards from Muddy Waters.

The four focus groups include:

- City of Burlington employees that work in downtown buildings
- City of Burlington employees that primarily work in South End and Pine Street buildings

Logistics Summary

GROUP	DATE	TIME	LOCATION
City of Burlington Employees (South End)	September 19	Noon to 1:30 PM	BED Conference Room
City of Burlington Employees (Downtown)	September 19	3:00 to 4:30 PM	CR 12, City Hall

The Downtown City Employees group will be held in Conference Room 12 at City Hall. The South End and Pine Street City Employees focus group will be in held in the conference room at BED.

Participants will be asked to check-in and will be provided with lunch (noon group) or refreshments (afternoon group). All focus groups will be audio-recorded for later reviewing.

**Incentives Budget**

The total incentives budget will be \$650 for the two focus groups.

- Lunch and Beverages (approx. \$11-12 per person x 15 ppl) + (\$15 gift card x 15 people) = \$400
- Snacks and Beverages (approx. \$25) + (\$15 gift card x 15 people) = \$250

**Sign-in and Pre-Focus Group Survey**

- **Purpose:** To prepare each participant with the topics and questions that they will be asked.
- **Approach:** Each participant will be greeted by a member of the consultant team and asked to sign-in and answer a few questions on a sheet of paper. After answering the questions, the participant will be handed a 1 page document of focus group questions to review and a list of TDM strategies on the back side.

- **Pre-Focus Group Questions:**

- Hometown/neighborhood
- Number of adults/children in their household, number of vehicles
- How long they have worked at current job location, typical work hours
- Primary means of commute, commute time, and any changes seasonally

**Introductions (15 min.)**

- **Ground Rules:** Focus Group leader will first explain how the next hour will proceed.
  - Session will last approximately 1 hour and is broken up in 3 parts: Introductions, Commute considerations, and Potential TDM Strategies.
  - We (the TDM study team) are collecting information gathered at the focus groups and value the opinions expressed by participants of their commute experience.
  - The TDM study is focused on understanding ways that can help City employees and as well as those who work in downtown Burlington.
  - This information is valuable as part of the TDM study, which is sponsored by the CCRPC annual work program and a grant from the High Meadows Fund. Representatives from the Regional Planning Commission and the City will be reviewing this session to observe your insights.

- I (the moderator) am from an independent consulting firm (RSG) that is conducting the TDM study and appreciate all honest responses, regardless if you have positive or negative things to say about your commute and potential future strategies based on any questions I ask.
- The session is being recorded by audio only, so participants should try to speak clearly and one at a time.

- **Personal Introductions:** Go around in a circle and tell us about yourselves.

- Name, Town/neighborhood live in, Employer/Business
- Please describe your typical commute, work hours, and route, any parking costs?
- Do you ever use alternative modes, such as transit, walk/bike, telecommute, car share, car or vanpool?

**Commute Considerations (25 min)**

- Transportation Decisions

- What do you consider when deciding how to get to work?
- What sources, if any, did you look into or use in deciding on how to get to work? Technology sources (e.g. Radio, smart-phone, Google Traffic, real-time bus app, weather, email alerts) and employer re-

sources.

- For those of you who primarily drive to work, what are the main reasons why you drive?
- How does your household budget commuting (including vehicular) expenses?
- **General Awareness:** What do you know about the efforts around the city to encourage people to try other ways, besides driving solo, to get to work?
  - CATMA (Emergency Ride Home, E-news, Bike-Walk Rewards, Restaurant Drawings, on-site educational events)
  - Go! Chittenden County
  - Way to Go! Vermont and Vermont Bike Challenge– events, and prizes
  - Support to help employees carpool or vanpool
  - CarShare Vermont – free personal membership if you join as a City staff member
  - Free transit passes
  - Bike share
  - Showers, bike racks
  - Off-site parking and shuttle



Potential TDM Strategies (40 min)

Now, I will present a few strategies that other cities similar to Burlington have come up with to help their employees choose alternate modes. They are also listed on the sheet of paper you received. After each set of strategies is presented, I'd like to hear your feedback on how these may or may not encourage you to make changes to your commute and how it might affect your daily trips. Some strategies are already in place here in Burlington and we want get your thoughts on those as well.

Services

- **Universal Transit Pass:** Automatically refills, use for all buses
- **Emergency Ride Home:** Guaranteed cab ride home up to \$60 a ride and 6 times a year
- **Car/Vanpool matching:** Online portal to help pair you up with others who have a similar commute.
- **Transportation information:** Info sharing websites, apps with real-time travel information
- **Car Share:** Access to cars when you need them in downtown Burlington
- **Bike loan or Bike Share:** Access to a bike when you need to make a short trip around downtown Burlington.

Pricing

- **Commuter incentives/subsidies:** Transportation allowance, reduced transit fares, incentives for walking or bicycling, commuter tax benefit (payroll deduction)
- **Parking Cash-Out Program:** Employees are paid to not drive. How much would get you to not drive to work?
- **Carpool/Vanpool Incentives:** Priority parking or discounted parking for registered car/van-poolers.
- **Market-rate parking fees:** Parking fees charged directly to employees. Offer daily parking charges for occasional drivers, instead of monthly parking passes.

Design

- **Bus shelters:** More comfortable bus waiting areas, with real-time transit information
- **Safe bike parking:** Bike rooms or secure indoor bike racks where employees can lock up their bikes.
- **Shower and locker facilities:** Showers and lockers available near work so that employees can freshen up after a bike ride to work.
- **Increase park and ride facilities:** Offer free or discounted parking, paired with transit/shuttles, to encourage employees to ride transit into downtown.

Policies

- **On-site TDM coordinator:** Have a designated person that is available to answer questions and distribute information on TDM programs.
- **Flextime, compressed work weeks, telework:** Offer flexible schedules that allow employees to work from home or to commute to work fewer days per week.
- **Join an area-based TMA:** Become a member in a transportation management association (TMA) to collaborate on trip reduction strategies, regardless of the size of business.
- **Hold special events:** Bike to work day/week; Try Transit Week; Car-free Day to encourage people to try alternative commutes, offer prize incentives.

Wrap Up (5 min)

- Do you think we've covered the main issues you face when deciding how to commute to work?
- Do you have any final comments about what might be successful in encouraging people to reduce their drive-alone trips to work?

Thank you and conclusion (5 min)

- Thank you for your participation today. We rely on your feedback to make this study useful.
- Next steps for the project: Summarize what we heard in a report in October. We will be presenting a preliminary TDM strategy plan to the city in mid-December, and a final plan in February 2015.

CITY OF BURLINGTON SOUTH END EMPLOYEE FEEDBACK  
COMPLETE NOTES

Welcome & Introductions

Jennifer Green from the City of Burlington introduced the project and goals, including reducing single occupancy vehicles and greenhouse gas emissions as well as reducing the parking costs to the City. The goal for this meeting was to find out what was and was not working for City employees and what they are willing to do to reduce drive alone trips.

David Saladino from RSG explained how the focus groups would proceed. Each participant introduced him/herself and stated where he/she lived and their typical commute choices. A variety of home cities: two from South Burlington, one from Waterbury, one about a half mile from the building.

Commute Considerations

BED and North Avenue police stations have adequate parking for staff, but little or no extra room for visitors. People paying parking tickets sometimes must park illegally at the station. Obstacles to choosing alternative commute methods include:

- **Bus Transit:** No bus service near home, the bus is too time consuming, and the bus is not always on time. Being on time to work is critical; the bus cannot be relied upon for that. Evening meetings also make it difficult to take the bus. One person loves the bus when he can take it. He needs to plan his whole day around the bus. It does take longer but it is more relaxing. He can do work on the bus rather than focus on driving. In the past, there was a problem with the Link transfer at Cherry St: if one of the busses was late he missed his connection. Now a hard stop on Pine Street has fixed this. People mentioned the circulator bus in Washington DC. It works because of its regularity and reliability. If the bus is not reliable, then it becomes better to pay for parking than rely on the bus. People would like to bus, but the extra time required taking the bus, the fact that the bus was not reliable, and a lack of bus service in some places discouraged them.
- **Carpool:** Some people used to car pool but a changing schedule made it not practical.
- **Flexibility:** Childcare was a big issue. Dropping kids off/picking them up to/from work and being able to get them from daycare in an emergency.
- **Bike:** People would like to bike, but there is not a safe route to bike to work.

Mode Choice During Working Hours

Some people, such as police and fire, must be able to respond immediately, so they cannot be without their cars. Firefighters take the engine to the grocery store so that they can leave for a fire if need be.

- **Car share:** BED has electric and hybrid cars that can be used during the day that are underutilized. Some people are in the habit of taking their own cars/trucks; others are great at utilizing company cars. Staff noted that there is reduced personal liability when taking a company car than a personal car because liability issues follow the vehicle not the driver.
- **Bike share:** People were aware of the bike share and noted that some of their coworkers are using it.
- **Walking:** People will walk to meetings when they have time, but they often do not have time.

The police used to drive many packages around to different locations. Now they use enforcement officers who are out anyway to deliver the packages. This is not TDM exactly, but does save on trips. It was noted that since they have already made an effort to reduce trips, the police will not receive credit for this innovation with any future incentives.

Paying for parking

The group had a mixed response to the idea of paying for parking. Three of four participants felt staff would be upset if they were forced to pay for parking, especially at a site like BED where there is adequate parking right now. It would be a significant labor issue involving contract negotiations and it could affect on-call, emergency response workers since they need to park on site.

One participant promoted paying for parking and noted that it has worked at UVM. Few people participated in Way to Go week at her office, so what can they do to encourage giving up SOV? The City cannot meet GHG goals just by saying, “this is a nice thing to do.” One person commented that he would consider different commute options if parking cost him something.

**Awareness of TDM options**

There was mixed awareness of current TDM offerings. CATMA membership was not well understood by city staff in the South End.

- **Transit and bike share:** They were aware of the free transit passes and bike share.
- **Flex work schedule:** People had also tried different work schedules such as four 10-hours days or arriving/leaving at off hours to avoid traffic. One person commented that he felt that the four 10-hour days were working well where they had been implemented.
- **Vanpool:** Someone who had used a vanpool years ago was not aware of a way to start one now.
- **Emergency Ride Home:** One person had used the emergency ride home, but he needed to beyond the mileage allowance. The taxi dropped him off at the Waterbury exit and he was forced to walk to the state complex. It was not a positive experience.

It was noted that the City is a customer service focused organization, so it needs someone to be available whenever the City is open. This can make the four 10-hour days or flexible hours difficult when no one else is available to cover the time.

**Potential TDM Strategies**

There was widespread support for a universal transit pass. Staff could use a company vehicle or bike share during the day, and City vehicles can be parked anywhere. This would allow for a system where people would be able to try out transit and find a method that works for them.

- **Taxi:** Someone noted that the City needs a better taxi system. He has friends in another city who use Uber regularly and were able to get rid of one of their cars. It works well because it is convenient and reliable, and no cash is exchanged. This might work in Burlington.
- **Carpooling:** One issue with carpooling was that people could not commit to carpooling every day. A type of one-off carpool connector service would be great so that people do not feel obligated to do it every day.
- **Education:** More education was viewed favorably, making navigating transit and biking less intimidating. It could be done during the wellness training. It might help sway people who are considering buying a car to not buy the car. One participant stated that people of a certain age have already decided what they are going to do, but education might be helpful to younger people. An educa-

tion campaign might also inspire someone to try bike/transit because it looks like fun. Using a fun app that recommends transit solutions might be a good way to make alternative modes fun.

- **Online portal:** A personalized portal that included financial information, benefits, etc. as well as personal commute data was well liked. There would need to be education on how to use it. Staff gets many emails telling them useful things, but few people actually look at the email or remember what it said. There was some skepticism as to whether IT could make this portal.

**Other Comments**

- **Transit heroes:** Some people (including a cyclist) think there is still stigma around alternative commute options, e.g. biking in poor conditions equates to having a DUI. Transit heroes help break down this image and present a familiar face for non-SOV modes.
- **Past incentives:** A participant mentioned that the city tried an incentive program for not driving 6-9 years ago, but there was not much demand for the program.
- **Union employees:** It was also noted that most people who will be affected are union employees, so it will be important to keep the unions in mind.
- **Gas pricing:** Someone who had worked in transit in the past noted that transit ridership went up when gas prices went up, and increasing gas prices were more effective than the transit companies ridership programs.



## CITY OF BURLINGTON DOWNTOWN EMPLOYEE FEEDBACK COMPLETE NOTES

### Welcome & Introductions

Jennifer Green from the City of Burlington introduced the project and goals, including reducing single occupancy vehicles and greenhouse gas emissions as well as reducing the parking costs to the City. The goal for this meeting was to find out what was and was not working for City employees and what they are willing to do to reduce drive alone trips.

David Saladino from RSG explained how the focus groups would proceed. Each participant introduced him/herself and stated where he/she lived and their typical commute choices. A variety of home cities: farthest away was Plainfield (100 miles round trip), many in town bordering Burlington or bordering downtown core. In addition, some farther out (Jericho, Ferrisburgh, Milton).

### Commute Considerations

People had various reasons for driving alone; the most common was a night meeting or needing to leave early. One person has a dog with her that is not allowed on the bus. One person carried his children's sports equipment in his car. One participant pointed out that she must be at the office a certain time, so she needs to know that she has a spot available. She cannot be late because the bus was late or she had trouble finding a parking space.

Community Justice Center (CEDO) employees decided to give up their garage parking passes because it would give their department more money for other activities. Besides them and the committed cyclist, all the downtown employees had a Lakeview pass, although many tried to use it as little as possible.

- **Bus transit:** There were a number of obstacles to taking the bus. Two people said that busses made them carsick, although one person still opted for the bus when possible. Evening meetings or the need to haul equipment, e.g. projectors, makes riding the bus impractical. Transfers made the bus impractical. The bus dropped off at the same time work started, so the employee would be late if she took the bus. It was suggested that her work start time should be flexible to accommodate the bus, but some people expressed doubts that their manger would be flexible.

- **Parking garage:** A number of people drive past their office before they reach the Lakeview Garage, so they try to park in an unmetered spot closer to work. If they cannot find a spot, they will opt for the garage. In this way, they still need the garage pass even if they do not use it often.
- **Carpool:** Multiple people carpooled with a spouse when possible but often had work commitments that meant their schedules did not match up. Others said they would like to carpool, but have not found someone whose schedule matches theirs.
- **Bike:** Many people preferred to bike in when the weather was amenable. One person biked almost every day and took the bus when the weather was too harsh. One participant said she biked more in the summer because she was not comfortable biking in the dark.
- **Flexibility:** One person, a police detective, must be able to respond immediately, so she used her City assigned car to commute usually.

### Mode Choice During Working Hours

- **Car share:** People were aware of CarShare, however some thought it was expensive for personal use. It did provide an option for not taking your car to work.

### Paying for parking

- **People pointed out that City staff would feel resentful if they are squeezed out of free parking. Some thought that any benefit of forcing employees to pay for their own parking would be lost in the resentment it creates.**
- **Employee benefit:** One person pointed out that she was touched by the City giving her free parking at work. At a time when she did not qualify for benefits, she felt like it was the one nice thing the City was doing for her. A participant said she would consider leaving if she did not know she had a spot in the garage paid for.
- **Fairness:** Someone else said that City employees in other parts of the City receive free parking, so it would not be fair for them to have to pay. Department heads still receive free parking so it will be unequal. There should be a citywide system.
- **Driving for work:** It was also pointed out that people who live far from work or who have evening meetings might not be able to find viable alternative commute options. They are forced to drive, in some cases for work reasons.

**Awareness of TDM options**

- **Free transit pass:** Everyone was aware that they could receive free bus passes. The bus passes are paid for by the department, so some employees are hesitant to use the bus passes since it reduces their department’s budget. This issue is more apparent in departments like CEDO and the Airport that are responsible for their own budgets and do not receive money from the general fund. They thought the City should pay for the passes.
- **Transit pass vs. parking pass:** Currently, the City and not the individual department, pays for the parking passes so that department heads are not incentivized to discourage staff from getting a parking pass. However, they are incentivized to discourage someone from getting free bus passes. Someone else noted that HR encouraged him to get a 31-day pass even though that would be more expensive than getting the 10-ride punch card. The City needs to be clear on what it is recommending. A universal transit pass would fix this.
- **Carpool:** Some people said they would like to carpool but did not know where to find matches. Other people knew about the carpool matching service.
- **Disorganized communication:** It was pointed out that there are too many things to keep track of and that the City does a poor job communicating commute options.
- **Commuting portal:** People liked the idea of a personalized commute portal next to other employment information. Someone said that they would be content with a web page with current links. One person pointed out that this had existed for wellness but it was taken down.
- **Emergency ride home:** Many people were unaware of this benefit. Participants thought this was helpful in cases where one needs to leave work early or if one is unexpectedly forced to stay at work late and misses the last bus home.
- **CATMA:** Most people did not know what it meant to be a member of CATMA or how to sign up.

**Potential TDM Strategies**

The more popular idea would be to incentivize people to not drive. One participant said that she was not very motivated to do things because they were good for the City, e.g. give up her pass so that the City could have more revenue. She needed a personal carrot. Many people felt that using carrots rather than sticks was the right approach. Some felt that there was already a negative connotation towards not using alternative transportation methods. There was no need to breed resentment towards the City with stick to disincentivize parking.

Several ideas came up for reducing the amount of parking pass use.

- **Limited parking passes:** Employees would need to request parking passes if they needed to drive. One person said it would be tough to do with his schedule.
- **Parking punch card:** Staff could be given a punch card for the garage so that they would only be paying for the times they park in the garage. Their cards might have fewer than 20 punches, so they would need to find alternative transportation some days.
- **Bike incentives:** One person said that he was motivated to bike more because of the small CATMA incentive.
- **Parking cash-out:** The City could reward people for not using all of their parking punches.
- **Universal transit pass:** A smart commute card used for transit and parking would make this easier to keep track of. It could be paid for by increased revenues generated by selling additional parking passes. Everyone liked the idea of a universal transit pass. They preferred that it include parking and transit. Ideally, it should include CarShare too. It could also double as a photo ID card.
- **ID cards:** Airport and Police have ID cards already; they do not match. They have varying levels of security required.

Paying for future TDM incentives was discussed. Some thought that the cost could come out of reducing waste such as better management of the parking garages or over subscribing them at the right level.

# Appendix C

## TDM & PARKING BEST PRACTICES REVIEW

This section details the TDM and parking strategies of four innovative and successful communities comparable in size and climate to Burlington. The four cities evaluated are: Boulder, Colorado; Minneapolis, Minnesota; Madison, Wisconsin; and Cambridge, Massachusetts. These were four cities that were cited by Steering Committee members as successful and comparable places to Burlington. Like Burlington, all of these cities feature:

- An active downtown,
- A four season climate that experiences snow,
- A relatively young demographic within close proximity to a college campus,
- Have goals to improve transportation through a multimodal system.





BEST PRACTICE 1: BOULDER, COLORADO

City background and statistics

The City of Boulder is located at the base of the Rocky Mountain foothills and is slightly more than 1.5 times the size of Burlington, though the average population density is very similar to that of Burlington. At the heart of Downtown Boulder is the Pearl Street Mall, a four-block outdoor pedestrian mall similar to Church Street in Burlington, with parking on the periphery of the mall to encourage a more walkable and vibrant outdoor street life.

BOULDER, COLORADO	
City Population / Metro Area Population	97,385 / 294,567
Land Area / Water Area	24.7 sq mi / 1.0 sq mi
Population Density	3,947 per sq mi
Central Business District Land Area	49 blocks
Total Downtown Parking Spaces	Over 4,000 spaces (6 parking structures, 5 parking lots, and on-street metered)
Means of Transportation to Work	<ul style="list-style-type: none"><li>36% Drive alone</li><li>34% Public Transportation</li><li>15% Walked and/or Biked</li></ul>

Parking and TDM Governance Structure

The Central Area General Improvement District (CAGID) and the City of Boulder’s Commercial District Division and Parking Services was established in 1970 and they are responsible for the parking operations and related services for downtown. Starting in 1988, the Downtown Management Commission oversees both the CAGID and the Pearl Street Mall. Together, the district analyzes the most cost-effective mix of adding new parking or programs for transportation alternatives. In addition, Boulder Transportation Connections (BTC) is a membership organization comprised of businesses, residents, and city leaders that serves as the area-wide transportation management organization to provide businesses and organizations with information on bike, bus, carpool/vanpool, telework, and other programs to help reduce driving. GO Boulder is the planning team for the City’s Transportation Division.

Transportation goals

Boulder’s transportation goals for the 2014 Transportation Master Plan (TMP) are:

- An integrated, multimodal transportation system emphasizing the role of the pedestrian mode as the primary mode of travel.
- A transportation system supportive of community goals
- Sufficient, timely, and equitable financial mechanisms for transportation planning
- A transportation system supportive of desired land use patterns and functional, attractive urban design

GO Boulder’s goals are to reduce VMT, SOV travel, and GHG and maximize sustainable transportation options.

In order to reduce additional traffic and better control the existing parking supply, the city reduced subsidies for downtown parking and applied TDM strategies to better support the parking and transportation operations for its 49-block downtown business improvement district. The following are TDM programs and services that Boulder has implemented to meet their transportation goals:



TDM: Services

- **Real-time ridesharing and ride-matching services:** My Way to Go is a free online carpool database, as part of a partnership with the Denver Regional Council of Governments (DRCOG).
- **Guaranteed Ride Home (GRH) program:** All business EcoPass cardholders, registered vanpool members, registered carpoolers, and participants in Bike to Work Day are eligible for the GRH program. This includes all standard City of Boulder employees who are eligible for EcoPasses.
- **Carpool Matching:** There are several online resources for real-time ridesharing and ride-matching services. My Way to Go provides a free online carpool database for the greater Denver region and Zimride offers a ridesharing application to serve CU, Boulder, Boulder County, NIST, and NOAA. SmartTrips carpool matching serves those commuting from the Northern Front range.



### TDM: Pricing

- **Vanpool Benefits:** Employer provided voluntary benefit that allows employees to pay up to \$230 per month pre-tax towards their transportation expenses. Boulder Transportation Connections (BTC) contributes \$100 for the first month of a new vanpool; the remainder is funded by user fees. GO Boulder now offers a new vanpool subsidy; \$20 per rider per month for any Boulder employee or resident using a vanpool.
- **EcoPass:** EcoPasses are a demand-side transit-subsidy paid for by the private sector. In Boulder, they are annual transit passes that provide for unlimited ridership on RTD services. The pass is tax deductible to employers and tax free for up to \$120/month for employees. In the City of Boulder, parking revenue is used to purchase the Eco Passes for all downtown employees through a master contract with RTD. In RTD's Eco Pass program, the employer must purchase the pass for all full time employees to get the discount of the program. Within the City of Boulder, all management and non-union employees who work 20 hours or more are eligible to receive an Eco Pass entitling the pass holder to free, unlimited use of the RTD system throughout the Denver Metro area. The passes are obtainable through the City's Human Resources Department and cost \$25 to replace.
- **Neighborhood EcoPass:** A collection of residences can also participate in the EcoPass program as long as they are a contiguous group of residences (houses, condos, apartments, etc.). There must be a minimum of 10 units or more (but no maximum size limits) for a neighborhood and all full-time household members are eligible to participate in the neighborhood EcoPass program.
- **Discounted Transit EcoPass:** CAGID provides all downtown employees with an unlimited transit use Eco-Pass, regardless of whether the employee actually rides transit. Since they are purchased in bulk, the district is able to pay a low flat rate of \$125 per person per year. Any downtown employer can participate in the subsidized Eco-Pass program to provide unlimited transit use for their employees. Pricing is determined by two factors: Location of business (Outer Suburban or Major Transit Center) and Employee Count (more employees, the lower the pricing per employee). Employers can receive discounts and reimbursements on their EcoPass contracts for the first two years if they have a designated staff person participate in the ETC network. Downtown employees automatically get an Eco Pass from CAGID, but any business outside of CAGID can participate voluntarily in RTD's Eco Pass Program.

### • Market-rate Parking Garage and Lot Pricing:

- Garage: \$1.25 per hour, \$2.50 per hour after 4 hours. Free on Saturdays, Sundays, and holidays. \$1140 per year.
- Meters/Pay Stations: \$1.25 per hour, time limits vary. Free on Sunday and holidays. \$700 per year.

- **Discounted Parking:** Pre-paid cash pass for garage parking offers 10% discount and express lane for entry/exit. Businesses can choose to purchase discounted garage validation in half hour (\$100 for 200 stamps) or one hour (\$75 for 100 stamps) increments. Businesses can also purchase 12-minute meter tokens for their customers (\$9.50 for 50 tokens) or employees (\$12.50 for 50 tokens).

- **Vehicle or Bicycle Usage Reimbursement:** City of Boulder employees may be reimbursed for work-related private vehicle or bicycle usage at the federal rate (currently \$0.56 per mile as of August 2014), at the department head discretion.



### TDM: Design and Land Use

- **Bicycle facilities:** Boulder has over 350 miles of on-street lanes, designated routes, and multiuse paths. Transit stations provide free bicycle storage lockers. All Boulder and RTD regional buses are equipped with bike racks. Boulder has about 60 miles of off street paved multi-use paths connected with 79 underpasses as well.
- **On-Street Parking:** Converted downtown parallel parking to diagonal parking spaces to create more metered curbside parking.



### TDM: Policies and Programs

- **ETC Network:** Boulder Transportation Connections organizes an Employee Transportation Coordinator (ETC) network.
- **Marketing and Outreach:** Community Cycles (a local non-profit cycling advocacy organization) and BTC also organizes Walk+Bike Month events and the Clean Air Challenge in addition to general alternative mode marketing and outreach.
- **Flextime:** BTC provides assistance in developing telework and flexible working policies for individual employers

Sources

- City of Boulder (2014), Transportation Master Plan.
- City of Boulder, <https://bouldercolorado.gov>
- ACS and Census 2010
- Green Planning Action, <http://www.greenplanningaction.org>, Case Study – Boulder.
- Boulder Parking Services, [http://gisweb.ci.boulder.co.us/pds\\_parking/](http://gisweb.ci.boulder.co.us/pds_parking/)
- Boulder Transportation Connections, <http://www.bouldertc.org>
- Streetsblog USA. Transport U: CU-Boulder Catches the Bus to Savings <http://usa.streetsblog.org/2013/04/24/transport-u-cu-boulder-catches-the-bus-to-savings/>
- City of Boulder, Human Resources Benefits, <https://bouldercolorado.gov/human-resources/benefits-guide>

Funding Summary

The Denver Regional Council of Governments (DRCOG) and Colorado Department of Transportation (CDOT) currently fund TDM entirely through the region’s Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds. According to a study by Cambridge Systematics in 2010, this figure amounted to 12% - or just over \$3 million –of CMAQ funds allocated to TDM activities in FY2009. Below is the TDM funding summary by source and amount for CAGID in 2002. The total funding amount was \$4,699,419.

- Taxation (TIF tax): \$775,293
- Short term and long term fees: \$2,228,264
- Meter revenue: \$1,026,820
- Meterhood and Tokens: \$106,777
- Interest: \$70,751
- Rental Income: \$380,766
- Mobility Center Grant: \$84,969
- Miscellaneous: \$25,779

CU-Boulder manages its own TDM programs that include free city bus passes, car-sharing, free bike rentals, free university-run shuttles, and a guaranteed ride home program, which costs roughly \$5 million to operate annually and is administered by two full-time staff.

BEST PRACTICE 2: MINNEAPOLIS, MINNESOTA

City background and statistics

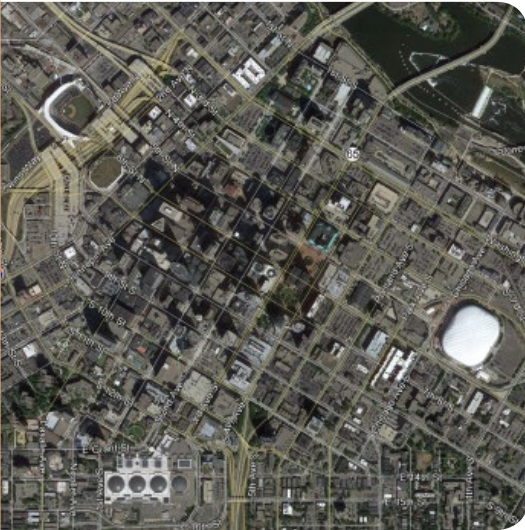
MINNEAPOLIS, MINNESOTA	
City Population / Metro Area Population	382,578 / 3,459,146
Land Area / Water Area	58 sq mi
Population Density	6,603 per sq mi
Central Business District Land Area	1 sq mi
City Parking Spaces	There are 17 parking garages (ramps) and lots with an average of 1,057 parking spaces per lot. In addition, there are over 7,000 metered spaces around the city.
Means of Transportation to Work	<ul style="list-style-type: none"><li>• 62% Drove Alone</li><li>• 14% Public Transportation</li><li>• 10% Walked/Bike</li></ul>

Parking and TDM Governance Structure

The Metropolitan Council of the Twin Cities is a federally-designated MPO of the Minneapolis-St. Paul metropolitan area and also serves as the transit operator for the region. The Council sponsors many of the regional TDM programs and helps fund the work of local Transportation Management Organization (TMO) partners. Most of the TDM programs are financed through Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds. The State of Minnesota, Metropolitan Council, local governments, and MetroTransit operating funds provide a 20 percent local match to the CMAQ funds from the federal government.

Metro Transit is an operating division of the Metropolitan Council that serves as the transportation resource for buses, light rail, and commuter trains. They received 58 percent (\$1.595 million) of the region’s CMAQ TDM funds in 2008. Additionally, there are four TMOs in the Minneapolis metro area:

- **494 Commuter Services:** A joint powers organization established in 1986 to address concerns over increasing traffic congestion along the I-494 Corridor through improving transportation options.





- **St. Paul Smart Trips:** A 501(c)(3) nonprofit organization that collaborates with individuals, organizations, and government agencies to improve access and mobility for travel in and around St. Paul.
- **Commute Solutions (Anoka County TMO):** Established in 2004 and funded by federal CMAQ grants, with a 20 percent local match) to achieve reductions in traffic congestion, improve mobility and air quality, and educate employers and employees about transportation options throughout Anoka County.
- **Commuter Connection (Downtown Minneapolis TMO):** A 501(c)4, Commuter Connection is a nonprofit private-public partnership between the downtown business community and the City of Minneapolis that advocates and promotes sustainable transit and transportation systems for downtown Minneapolis.

**Transportation goals**

The 2030 Metropolitan Council’s transportation policy plan features the following transportation demand management goals:

- Increase the people-moving throughput of the system;
- Manage and optimize the existing system, to the greatest extent possible;
- Manage future demand;
- Increase trip reliability; and
- Minimize travel time.



**TDM: Services**

- **Ridesharing Database:** MetroTransit maintains a database and online portal of carpool attempts and matches. The assumption is that 5 percent of carpool matches made in the online database actually begin ridesharing.
- **Subsidized Vanpooling Program:** MTS Van-GO! is regional service that is dependent on local TDM providers and administered and funded largely through the Metropolitan Council, CMAQ, and passenger fares (40%) and maintained by a third party contractor. Drivers are offered a \$100 cash incentive for the first six months of continuous

service and then \$100 annually thereafter. Other incentives include: Full leased van provided by Van-Go! with a \$1 million insurance policy for personal liability, full maintenance coverage, roadside assistance, fuel card program, a 55 percent subsidy from the Metropolitan Council for passengers. Growth has been consistent since the program inception in 2000.

- **Cyclopath:** Online bike route finder that helps users identify the fastest and/or friendliest bike route from one location to another within the greater Minneapolis metro area.
- **Go-To Card:** Universal transit card that offers two different types of values: Stored value (up to \$400) and/or Multi-day passes at 7-day, 10-ride, and 31-day increments. Multi-day passes range from \$59 to \$113.50 depending on fare value of the route taken.
- **Guaranteed Ride Home:** Eligible for people who commute to work or school by bus, train, carpool, vanpool, bicycle, or walking a minimum of three times a week and have registered through the Regional Guaranteed Ride Home Registration. Participants receive two coupons worth \$25 every six months for emergency cab, bus, or train fare.
- **Hour Car and ZipCar:** HourCar is part of a nonprofit carsharing program by the Neighborhood Energy Connection and all of their vehicles are conveniently located near bus routes, bus stops, and equipped with bike racks. ZipCar is a national car sharing service that is available to any member that registers and the cars are located throughout downtown and on the UMN campus.
- **Nice Ride Bike Share:** A nonprofit bike share system that allows users to purchase \$65 annual memberships or day-long (\$6) or 30-day passes (\$15). There is a \$10 discount for students.





Source: 494 Commuter Services



### TDM: Pricing

- **Discounted Metropass:** Companies and organizations can enroll in Metropass and subsidize transit passes for employees as a pre-tax benefit. The discounted rate is \$76 for unlimited access to all regional buses and trains, compared to \$113.50 for the regular 31-day Go-To-Card pass. All regular full-time and part-time employees of the City of Minneapolis are eligible to enroll for this discounted Metropass.
- **Pre-Tax Transportation Benefit Plan:** All regular full-time and part-time City of Minneapolis employees are eligible to pay commuting expenses with pre-tax dollars. This program is administered through WageWorks and eligible employees may make changes to their deductions or participation on a month by month basis at the beginning of each month. Any funds remaining at the end of each calendar year are rolled to the next year, but must be claimed within six months after an employee leaves the City. Forfeitures are used by the City to pay for future administration fees.
  - **Qualified Parking:** Eligible employees are allowed to set aside up to \$245 per month for qualified parking expenses. This includes both vehicular and bicycle parking expenses. Qualified parking is defined as parking at or near your workplace or at a location from which you commute to work. Qualified parking expenses include the costs of daily parking and monthly parking contracts.
  - **Commuter Vanpool:** Eligible employees are allowed to set aside up to \$245 per month to pay for commuter vanpool expenses.
- **Market Rate On-Street Parking:** Rates range from \$0.25 to \$2.50 per hour with anywhere from a 1 to 10 hour time limit depending on location.
- **Market Rate Garage/Ramp Parking Pricing:** Downtown garage prices vary depending on location, but many are \$3 or \$4 for the first hour, then a fixed rate of \$8 to \$16 for the next 12 hours. Some garages have early bird rates and also fixed surcharge pricing during event times. Monthly garage rates range from \$55 outside of downtown to \$140 or as high as \$255 per month for underground garage parking downtown.



- **Discounted Carpool Garage Parking:** Many of the downtown garages offer discounted monthly parking for carpoolers at a rate of \$99 per month. Carpool drivers receive one parking pass to identify that they have a valid permit approved from MetroTransit and park in designated parking spaces and lots.
- **ParkMe:** Discounted parking and rewards to use real-time online parking application to reserve a parking space ahead of time.

### TDM: Design and Land Use

- **Park and Ride Facilities:** Integrating park and ride facilities with highway bus shoulders, where transit vehicles can use the shoulders as a bus-only travel lane.
- **High-capacity transit and managed lanes:** The Minneapolis area currently has two highways with priced managed lanes that operate during morning and evening peak traffic hours on weekdays. This has helped reduce congestion without having to add more infrastructure capacity. Transit riders continue to benefit from a less congested commute. In addition, state law requires half of any revenue above operation and maintenance expenses to go towards transit and building new station facilities and park-and-ride lots.
- **Grand Rounds National Scenic Byway:** Extensive 50-mile network of parkways connects downtown Minneapolis to urban parks, lakes, and other recreational areas. Underutilized railroad right-of-ways were acquired in 1980's to develop a non-motorized multiuse path.



### TDM: Policies and Programs

- **Commuter Challenge:** MetroTransit advertises and funds a commuter challenge every year over a three-month period (April through June) to encourage pledgers to try transit, bike, walk, or ridershare.
- **Bike2Benefits:** Participants register to become members and track a minimum of eight roundtrip bike and transit commutes over the course of eight weeks. Four levels of prizes are available from a random drawing, ranging from fourth prize \$50 gift certificates to one \$500 grand prize gift certificate.



Source: Metro Transit Minneapolis

Sources

- USDOT, FHWA, and Volpe. “Developing a Regional Approach to Transportation Demand Management and Nonmotorized Transportation: Best Practice Case Studies.” June 2013.
- ParkMe Minneapolis, <http://www.parkme.com/minneapolis-parking>
- U.S. Census Bureau. 2010 Census Summary File.
- MetroTransit, <https://www.metrotransit.org/about-metro-transit>
- Metropolitan Council: TDM Evaluation and Implementation Study. Urbantrans. August 2010. <http://www.metrocouncil.org/Transportation/Publications-And-Resources/TDMStudy-pdf.aspx>
- Cyclopath, <http://cyclopath.org/>
- City of Minneapolis Human Resources, Transportation Benefits. <http://www.ci.minneapolis.mn.us/hr/benefits/trans/WCMS1P-113620>

Funding Summary

Below is the TDM funding summary by organization and amount for 2008/2009. The total funding amount was \$3,269,240.

• Metro Transit	\$ 1,595,000
• Van-GO! Administration	\$ 50,240
• St Paul Smart Trips TMO	\$ 402,000
• Summit-U program	\$ 134,000
• Other programs	\$ 268,000
• Downtown Minneapolis TMO	\$ 330,000
• Anoka County TMO	\$ 160,000
• 494 Commuter Services	\$ 330,000

BEST PRACTICE 3: MADISON, WISCONSIN

City background and statistics

<b>MADISON, WISCONSIN</b>	
City Population / Metro Area Population	233,209 / 568,593
Land Area	77.87 square miles
Population Density	3,037 per square mile
Central Business District Land Area	1 square mile
Downtown Parking Spaces	<ul style="list-style-type: none"><li>• More than 5,000 City public parking spaces, including 1,300 on-street metered and 4,000 in lots and garages</li></ul>
Means of Transportation to Work	<ul style="list-style-type: none"><li>• 64% Drove alone</li><li>• 8.3% Public Transportation</li><li>• 18.4% Walked/Biked</li></ul>

Parking and TDM Governance Structure

The Madison Area Transportation Planning Board (TPB) is the Metropolitan Planning Organization (MPO) for the Madison metropolitan planning area. They are responsible for transportation planning and decision making, as well as organizing the transportation projects for state, county and local units of government for inclusion in the Transportation Improvement Program (TIP).

Transportation goals

Madison saw the shift in a younger generation that wanted an urban lifestyle and live in a denser environment that allowed them to walk, bike, or use transit to get around. As part of their 2012 Downtown Plan, one of Madison’s key visioning goals is to increase transportation choices, with the following specific recommendations:

- |   |   |
|---|---|
| • Enhance inter-city connections                        | • Develop a new Downtown circulator                       |
| • Establish two multi-modal transportation centers      | • Improve Wayfinding                                      |
| • Extend East Campus Mall to connect to Monona Bay      | • Explore conversions of some one-way streets to two-way. |
| • Create a mid-block walkway parallel to Langdon Street |   |







TDM: Services

- **Madison B-cycle:** This bike sharing system has 39 stations with 350 bikes throughout downtown Madison and on the University of Wisconsin Madison campus. Membership increased from 475 in 2011 to 2,912 in 2013, with a total of 94,402 miles biked in 2012.
- **Bike Madison:** Bike Madison is an online, up-to-date bike route tool that helps cyclists plan their trip and easily find bicycle facilities throughout Madison. It features a bike map, guide, bike registration, news and events, and other cycling education resources.
- **Community Car:** This is a car-sharing program with 13 vehicle locations and 13 vehicles that has drawn over 1,200 drivers in 2013.
- **Rideshare, Etc. Online:** A free carpool matching service sponsored the Madison Area Transportation Planning Board and the Wisconsin DOT to help commuters easily find other transportation options based on their specific circumstance.
- **Guaranteed Ride Home:** Participants who register with the Rideshare, Etc. Program or are part of the Metro Pass Program are provided vouchers for up to \$75 per ride, maximum six rides per year to use a cab in case an emergency arises and commuters cannot return home by car or other forms of transportation.
- **State Vanpool Rideshare Program:** Each outlying area that serves Madison has a van number and a designated coordinator who provides information on van routes, pick-up and drop-off times, and driver information.
- **City Cars Pool Fleet:** The City of Madison makes available a pool of City vehicles available at a variety of locations throughout the City for employees who may be required to travel during the course of the day. By checking out a City vehicle for this travel, employees do not need use their personal vehicles to commute to work and are encouraged to carpool or use public transportation instead.



TDM: Pricing

- **Downtown Parking Inventory:**
  - Downtown Madison has eight parking garages and lots. The median daily parking rate for downtown parking spaces is \$9, which is lower than other comparable Mid-west cities such as Milwaukee (\$12), Minneapolis (\$9.50) and Chicago (\$35).
  - The average occupancy rates between 10am and 2pm ranges from 42% to 73%.
- **Metro Pass Program:** College campuses and employee groups, including small businesses, can be eligible for a discounted transit pass.
  - The City of Madison provides all non-represented employees with free unlimited ride passes on Metro Transit, valid for an entire calendar year. The bus pass allows City employees to ride on Madison Metro anytime for free. Employees must show their City of Madison ID Card at the City Treasurer's office to receive their bus pass at no charge.
  - All area businesses and organizations can also provide an annual Commute Card that allows employees to contribute up to \$130 per month pre-tax to their Commuter Choice fund. The Commute Card reduces the per ride cost from \$2 to \$1.25 for an unlimited number of rides. Each rider is tracked by a unique serial number and it is up to each individual business how they want to administer the program internally.



TDM: Design and Land Use

- **Expansion of Ride Lots:** The state is working to add more park and ride lots as well as transit commuting partnerships that serve the commuters who use these lots. These lots are free, located near off-ramps to major highways, and many have overnight parking in designated spaces, with secure bike racks, shelters, and lighting.
- **Bike Routes:** In 2013, Madison had 116 miles of bike routes with an additional 112 miles of bike lanes, 46 miles of bike paths, and 7 miles of curbed bike lanes.



Sources

- 2013 State of the Downtown Report. [http://www.downtownmadison.org/media/2013\\_State\\_of\\_the\\_Downtown\\_Report.pdf](http://www.downtownmadison.org/media/2013_State_of_the_Downtown_Report.pdf)
- Madison Area MPO, <http://www.madisonareampo.org>
- Madison Area MPO Transportation Improvement Program, 2014 - 2018. [http://www.madisonareampo.org/planning/documents/TIP\\_2014\\_2018\\_Final\\_Web.pdf](http://www.madisonareampo.org/planning/documents/TIP_2014_2018_Final_Web.pdf)
- Bike Madison, <http://www.cityofmadison.com/bikeMadison/planTrip/routes.cfm>
- Mayoral Administrative Procedure Memoranda 2-35 Flexible Work Schedules, <http://www.cityofmadison.com/mayor/apm/>
- City of Madison Human Resources, <http://www.cityofmadison.com/HR/documents/EmplBenefitsNonRep.pdf>



TDM: Policies and Programs

- **Flexible Work Schedules:** The City of Madison offers employees the opportunity to work a flexible schedule that is compatible with the needs of their department. As part of Mayoral Administrative Procedure Memoranda 2-35, interested and eligible employees may consult with their direct supervisor and department head to set a flexible work schedule or an alternative work schedule that meets both the needs of the department and the specific employee. Examples include four ten-hour days or a regular workweek that includes a weekend day.

Funding Summary

Below is the transportation funding summary for Madison area projects for which federal funds were obligated in 2013. They are sorted by project type and amount. The total funding amount for non-roadway infrastructure projects was \$17,011,000, largely due to Metro Transit Federal Capital Grants for new buses and associated equipment enhancements and maintenance.

- |  |              |
|--|--------------|
| • Bike/Ped Facility Improvements:            | \$6,752,000  |
| • WRTS Education and Encouragement Program:  | \$154,000    |
| • Ridesharing coordinator and promotion:     | \$93,000     |
| • MPO Planning activities:                   | \$87,000     |
| • Transit Planning Study:                    | \$368,000    |
| • New low-floor buses and related equipment: | \$9,557,000  |
| • Street/Roadway Projects:                   | \$69,811,000 |

BEST PRACTICE 4: CAMBRIDGE, MASSACHUSETTS

City background and statistics

CAMBRIDGE, MASSACHUSETTS	
City Population / Metro Area Population	105,162 / 4,590,000
Land Area / Water Area	6.43 sq mile / 0.70 sq mile
Population Density	16,354 per square mile
Central Business District Land Area	0.05 square miles
Means of Transportation to Work	<ul style="list-style-type: none"><li>• 29% Drove Alone</li><li>• 27% Public Transportation</li><li>• 31% Walked/Biked</li></ul>

Parking and TDM Governance Structure

The Community Development Department has four programmatic divisions (community planning, housing, economic development, environmental planning, and transportation planning). The Charles River TMA (CRTMA) is the TMA for local businesses in Cambridge, including the City as one of its members. It combines its resources and charges annual membership dues, with optional dues for the EZRide Shuttle membership. The City of Cambridge comprises of 34 Departments and 13 public schools.

Transportation goals

Cambridge’s Parking and Transportation Demand Management (PTDM) Ordinance, adopted in 1998 and made permanent in 2006, is a model for TDM improvements applicable for developers. Its goals were to:

- Improve mobility and access
- Reduce congestion and air pollution
- Increase safety by promoting walking, bicycling, public transit, and other sustainable modes.



The City, as well as many businesses with 250 or more employees, must meet the mode-share and other requirements set by the Massachusetts Ridehshare Regulation, which requires businesses to develop plans and set goals for reducing by 25 percent the number of times commuters drive alone to work or school. As part of this process, the City needs to:

- Survey current commute patterns
- Identify available commuting options
- Set goals for reducing drive-alone trips
- Offer options and incentives for reducing drive-alone trips
- Review how commute patterns change as a result.



**TDM: Services**

- **EZRide Shuttle:** The shuttle connects between Commuter Rail, Red Line, Green Line to major employers and MIT. The shuttle is free for all CRTMA members with proof of ID, and also available to the public for \$2 adults and \$1 for children 12 to 17, college students (MIT students are free), senior citizens, and persons with disability. All EZRide shuttles are equipped with the same bike racks as the T.
- **Emergency Ride Home:** The CRTMA provides a ERH program to all of their members except a select few companies which choose to provide an in-house program for their employees. To qualify, the member-company employee must use public transportation, carpool, vanpool, bike, or walk at least three days per week. The ERH applies to personal illness, family illness, emergencies, and unscheduled or unplanned overtime. It does not apply to weather delays, MBTA or other transit disruptions, or construction disruptions.
- **NuRide Carpool matching:** Funded by the state and local government, MassRIDES and MassDOT partnered with NuRide to create an online portal for residents throughout Massachusetts to find carpoolers, record their walk, bike, telecommute, carpool, vanpool, or transit trips on NuRide, and redeem points for restaurant coupons, retailer discounts, and tickets to shows and attractions at no cost. Anyone can participate.

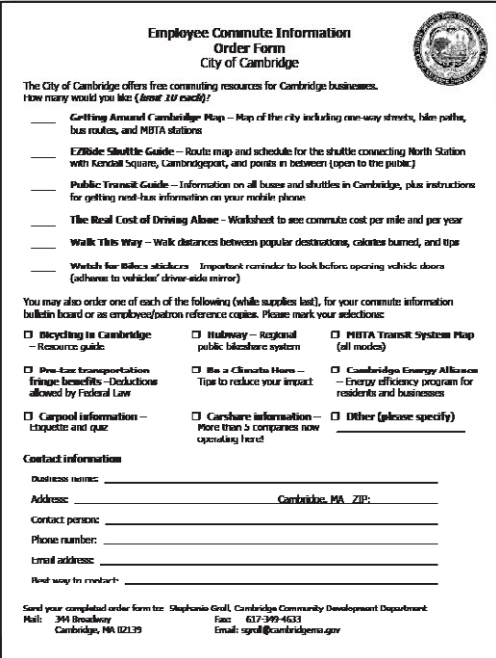


**TDM: Pricing**

- **Transportation information:** CRTMA members get emails with Kendall construction updates and MBTA information.
- **Bikeshare:** The City offers free Hubway bikeshare memberships for all its non-union employees. Additional loaner bikes are available in multiple departments to promote bike commuting.
- **Transit Subsidy:** For City employees, the City reimburses 65% of the cost of a monthly T-pass, with a maximum cap of \$120 per month for non-union employees. Union employees receive a variety of subsidy levels. Employees also may set aside federal pre-tax dollars for use towards transit. A monthly MBTA bus pass costs \$50; a monthly LinkPass costs \$75. A single Charlie Ticket or cash faire for a bus ride is \$2.10 and rapid transit is \$2.65. Those who use CharelieCards receive approximately 20 to 25% reductions depending on trip type.
- **Pre-tax vanpool costs:** City employees may set aside federal pre-tax dollars for use towards their vanpool costs.
- **Market-rate parking fees:** Parking fees are charged directly to employees or patrons. Daily parking charges are available for occasional drivers, instead of monthly parking pass.
- **Pre-Tax Bicycle Fringe Benefit:** Administered through Commuter Check, businesses and employers can offer a subsidy of up to \$20 per month of expenses related to bicycle commuting. Commuters would submit receipts for reimbursement and the benefit may be combined with transit and parking benefits, although not with both the transit and vanpool benefits.
- **Hubway Bike Membership:** The City of Cambridge provides an annual corporate membership costs \$50 for all non-union employees that sign up for Hubway. City employees do not have to pay anything towards the membership and the City also pays for their usage fees. The annual membership includes unlimited trips of up to 30 minutes and the City receives annual reports with statistics on how well the memberships are utilized. An annual membership otherwise costs \$85.
- **ZipCar:** Members of the CRTMA can sign up for a ZipCar membership for \$25 per year, compared to a regular membership price of \$60.







City of Cambridge provides local businesses with free commuting resources.



TDM: Design and Land Use

- **Bus shelter:** The City and Massachusetts Bay Transit Agency (MBTA) provides bus shelters at busy locations to encourage people to use buses. All bus shelters are owned and maintained by Cemusa through an agreement with MBTA and the City. Locations were determined by identifying the busiest bus stops, environmental justice areas, near senior housing, hospitals, and other locations where shelter is a critical benefit.
- **Bicycle parking:** The City of Cambridge requires a minimum of one bike space per 10 required car spaces at every facility.
- **Shower/lockers:** Showers and clothing lockers are available in multiple City departments to promote bike commuting.



TDM: Policies and Programs

- **Bicycle workshops:** The City holds regular bicycle skills education programs, including Women-powered Cycling; Bicycle Maintenance; Basic Skills training; and On-Bike Skills Training.
- **Events:** The City holds monthly walk/ride day events to promote sustainable transportation. In addition, the City is a Corporate Member in the Corporate Challenge hosted by the Green Streets Initiative.
- **Employee Lunchtime/Afternoon Walks:** The City encourages regularly scheduled 15 minute lunchtime or afternoon mini walks for their employees.
- **Cambridge Municipal Code - PTDM ordinance:** Requires any developer who builds or expands a parking facility with five or more spaces to implement at least three TDM measures. For projects that add 20 or more spaces, developers must commit to a 10% reduction in drive-alone trips for workers and residents in the development (compared to 1990 Census Data figures) and the TDM measures are monitored annually by a PDTM planning officer.

- **Employee Commute mode-share requirement:** Every two years, the City of Cambridge is required to submit a Department of Environmental Protection Rideshare Regulation Update Report, which includes administration and results of an employee commuter survey. The City must meet the mode-share and other requirements set by the state Rideshare Regulation.
- **Cambridge zoning ordinance:** imposes a parking maximum, in addition to reduced parking minimum.

Funding Summary

CRTMA is funded through membership dues, private sector partners share the cost of the shuttle service, shuttle fares, and shuttle sponsorship. In the past, the CRTMA has enjoyed CMAQ funding to seed the organization in the 1990s, to add a position in the early 2000s, and to pilot EZRide shuttle from 2002-2006. The funding breakdown is:

- 82% of their funding is shuttle
- 8% membership dues
- 8% shuttle sponsorship
- 2% other sources.

The consultant team reached out to CRTMA on several occasions to better understand specific funding dollars but was unable to obtain information from them.

Sources

- CitySmart, <http://www.cambridgema.gov/CDD/Transportation/CitySmart.aspx>
- Cambridge Transit Strategic Planning, [http://www.cambridgema.gov/-/media/Files/CDD/Transportation/Transit/Cambridge%20Transit%20Strategic%20Plan%20Interim%20Report\\_20140203.ashx](http://www.cambridgema.gov/-/media/Files/CDD/Transportation/Transit/Cambridge%20Transit%20Strategic%20Plan%20Interim%20Report_20140203.ashx)
- Charles River TMA, <http://crtma.square-space.com/>
- Massachusetts Executive Office of Energy and Environmental Affairs Ride-share Program, <http://www.mass.gov/eea/agencies/massdep/air/programs/the-massachusetts-rideshare-program.html>
- CitySmart for City Employees: <http://www.cambridgema.gov/cdd/transportation/citysmart/citysmartforcityemployees.aspx>.
- Hubway Corporate Members, <http://www.thehubway.com>
- CRMTA Executive Director, Jim Gascoigne.

