

2019-2024 UPDATE

JOINT INSTITUTIONAL PARKING MANAGEMENT PLAN



**CHAMPLAIN
COLLEGE**



The University of Vermont

THE
University of Vermont
MEDICAL CENTER



SUBMITTED:

MAY 9, 2019

PREPARED FOR:

CITY OF BURLINGTON PLANNING & ZONING

SUBMITTED BY:

CHITTENDEN AREA TRANSPORTATION MANAGEMENT ASSOCIATION

IN COOPERATION WITH:

CHAMPLAIN COLLEGE, UNIVERSITY OF VERMONT MEDICAL CENTER, AND UNIVERSITY OF VERMONT

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Andrea Hamre, PhD, CATMA Transportation Analyst, led the updated analysis and preparation of this plan.

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LIST OF ABBREVIATIONS

CATS	Campus Area Transportation System
CC	Champlain College
CCRPC	Chittenden County Regional Planning Commission
CATMA	Chittenden Area Transportation Management Association
GFA	Gross Floor Area
GMT	Green Mountain Transit
GRH	Guaranteed Ride Home
GSF	Gross square footage
ICC	Institutional Core Campus
JIPMP	Joint Institutional Parking Management Plan
SOV	Single occupancy vehicle
TDM	Transportation demand management
TMA	Transportation Management Association
TSM	Transportation systems management
UVM	University of Vermont
UVM MC	University of Vermont Medical Center

1.0 EXECUTIVE SUMMARY

1.1 JOINT INSTITUTIONAL PARKING MANAGEMENT PLAN (JIPMP) PURPOSE

An Institutional Parking Management Plan:

- Recognizes the need to manage parking demand and resources holistically and creatively, employing transportation demand management (TDM) practices as well as supplying adequate parking facilities
- Helps ensure city streets and neighborhoods are not unfairly burdened by parking demands from large institutions
- Follows the guidelines of Comprehensive Development Ordinance Article 8, Part 3

A Joint Institutional Parking Management Plan (JIPMP):

- Recognizes the efficiencies gained when several neighboring institutions share resources and collaboratively participate in parking and travel demand management programs

This 2019-2024 Plan Update:

- Reviews past, current, and future parking demand and supply
- Identifies potential parking shortfalls based on future development plans
- Reviews collaborative solutions to address potential parking needs

1.2 2019–2024 JIPMP UPDATE CONTENTS AND ASSUMPTIONS

The JIPMP reviews current and future conditions for CATMA and each of the partner institutions in a separate chapter:

- Chittenden Area Transportation Management Association (CATMA) – Chapter 2
- Champlain College (CC) – Chapter 3
- University of Vermont (UVM) – Chapter 4
- UVM Medical Center (UVM MC) – Chapter 5

Each institution's chapter reviews current and future conditions, including:

- Current parking supply and demand
- Planned future projects and related parking impacts
- Current and future TDM and parking practices
- Summary of conditions, joint facilities, and practices managed by CATMA

The summary of current parking supply:

- Includes on-site parking garages and lots

- Includes off-site parking garages and lots used specifically for off-site parking (often paired with shuttle or transit service)
- Excludes off-site buildings and parking associated with those buildings
- Excludes on-street parking

The estimation of current peak parking demand:

- Assumes the peak time of use based on institutional data and previous experience
- Uses the surveyed peak share on campus of constituents (by type) on site
- Uses the number of parking permit waivers issued for first-year residential students
- Uses the surveyed primary mode share of constituents (by type)
- Incorporates visitor spaces and fleet vehicles

The estimates of future parking demand and supply:

- Incorporate projected changes to employment and enrollment data
- Incorporate expected parking supply changes based on known projects
- Hold peak share on campus, first year parking waiver, and mode share levels constant

The summary of parking supply required by ordinance:

- Estimates the supply required at each institution based on multiple uses (e.g. # of student residential beds, hospital beds, square foot of academic or administrative buildings)
- Uses two methods for CC and UVM parking supply calculations: Gross Floor Area (GFA), and a Composite (based on the number of beds instead of residential floor area, along with GFA for non-residential facilities)

1.3 CHITTENDEN AREA TRANSPORTATION MANAGEMENT ASSOCIATION (CATMA) AND THE HILL INSTITUTIONS

CATMA's founding institutional members, Champlain College (CC), University of Vermont (UVM), and University of Vermont Medical Center (UVM MC) (commonly referred to as the Hill institutions), established a joint mission to plan and manage safe, convenient and economical parking, and transportation in ways that better coordinate land use and reduce environmental impacts on the community.

The Hill institutions employ 12,362 individuals within the City of Burlington, and enroll 15,520 students who attend classes within the City of Burlington. Table 1-1 summarizes the number of employees and students across the founding member institutions, as required under Section 8.3.3 (A) of the Burlington Comprehensive Development Ordinance (CDO).¹

¹ For the full text of the Burlington Comprehensive Development Ordinance, including Article 8: Parking, see <https://www.burlingtonvt.gov/PZ/CDO>.

TABLE 1-1: HILL INSTITUTION EMPLOYMENT AND ENROLLEMENT

CATMA Founding Members	Employees	Students	Total
CC	880	2,174	3,054
UVM	4,186	13,346	17,532
UVM MC	7,296		7,296
Total	12,362	15,520	27,882

Sources: Employment and enrollment totals are provided by institutional staff.

Notes: Employment and enrollment totals are from the fall of 2018. Employment totals include contracted employees. UVM MC employment includes 6,229 full-time, part-time, and per diem staff at the main campus, One South Prospect, and downtown Burlington, as well as 1,067 non-paid staff at the main campus, and include evening and night shift employees, who are excluded from peak parking demand estimates. Out of the 6,229 UVM MC full-time, part-time, and per diem staff, a total of 177 work in downtown Burlington. A total of 6,073 UVM MC full-time, part-time, per diem, and non-paid staff have day shifts (or unidentified shifts presumed to occur during the day) and work on the main campus or One South Prospect, and are included in the peak parking demand estimates. Enrollment totals include students attending classes on the Burlington campus.

Table 1-2 provides a summary of values across three different parking demand data sources for CC, UVM, and UVM MC. As expected, permit levels are consistently higher than observed occupancy across all three institutions; not all permits are used daily. While survey-based parking demand estimates for CC and UVM suggest demand is exceeding supply, lot counts indicate occupancy (observed demand) typically does not exceed capacity.

TABLE 1-2: SUMMARY OF DATA SOURCES FOR CURRENT PARKING DEMAND ON THE HILL

	CC	UVM	UVM MC	Total
Permits	943	5,846	7,636	14,441
Surveys				
Demand	737	5,004	2,790	8,531
Supply	710	4,590	3,746	9,046
Net Spaces	-27	-414	956	515
Percent Full	104%	109%	74%	94%
Lot Counts				
Demand	610	4,260	2,225	7,095
Supply	707	4,590	2,505	7,802
Net Spaces	123	330	280	733
Percent Full	86%	93%	89%	91%

Sources: Permits are provided by institutional staff and based upon the number of permits issued in the fall of 2018. Survey totals are estimated using the 2016 and 2018 CATMA Student and Employee Transportation Surveys. Lot counts are based upon counts conducted by RSG (CC and UVM MC) in the fall of 2018 and by UVM staff in the winter of 2019.

Notes: Permit totals are based on the combined number of permits issued to all users eligible for campus parking permits. Net spaces are based on supply minus demand. Percent full is based on the quotient of demand over supply. Survey demand is estimated based on the number of users, peak share of users on campus, and a demand generator (auto ownership for residential students, and primary mode share for commuter students and employees). Peak period for surveys is weekdays 11:30am-1:30pm for residential students, and 12pm-1pm for commuter students and employees; peak period for lot counts is approximately 11am-1pm. Lot count totals are based on observed occupancy (demand) equaling the difference between capacity (supply) and empty spaces. For CC, the empty space count includes ADA,

and special use spaces such as visitor, reserved, and service vehicle spaces. For UVM, the empty space count excludes ADA and special use spaces.

It is acknowledged that some on-street parking occurs. Based upon data collected in the 2016 and 2018 CATMA Student and Employee Transportation Surveys, it is estimated that – during the peak period – CC and UVM students use 262 on-street parking spaces (116 spaces within two blocks of campus and 146 spaces more than two blocks from campus). Meanwhile, it is estimated that – during the peak period – CC, UVM, and UVM MC employees use 112 on-street parking spaces. This leads to an estimated total of 374 on-street parking spaces used by students and employees during the peak period, as presented in Table 1-3, which amounts to 4.4% of the total estimated peak parking demand of 8,531 spaces across students and employees (see Table 1-2).

Broken down across institutions and user groups, an estimated 16% of CC student peak parking demand goes to on-street spaces (64 out of a total of 404 estimated spaces), while an estimated 8% of UVM student peak parking demand goes to on-street spaces (198 out of a total of 2,472 estimated spaces). Meanwhile, an estimated 4% of CC employee peak parking demand goes to on-street spaces (12 out of a total 312 estimated spaces), while an estimated 4% of UVM employee peak parking demand goes to on-street spaces (85 out of a total of 2,113 total estimated spaces) and an estimated 0.6% of UVM MC employee peak parking demand goes to on-street spaces (16 out of an estimated 2,790 total estimated spaces).

TABLE 1-3: ESTIMATED ON-STREET PARKING SPACES FOR STUDENTS AND EMPLOYEES AMONG CC, UVM, AND UVM MC DURING THE PEAK PERIOD

CC Students	Within 2 Blocks	More Than 2 Blocks	# Street Spaces
Residential students	6	7	13
Commuter students	41	10	51
Subtotal	47	17	64
UVM Students	Within 2 Blocks	More Than 2 Blocks	# Street Spaces
Residential students	6	23	28
Commuter students	63	107	170
Subtotal	69	129	198
Employees			
CC			12
UVM			85
UVM MC			16
Subtotal			112
Grand Total			374

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student and Employee Transportation Surveys.

Notes: Number of on-street spaces is based upon the share of estimated parking for each user group as well as survey information collected about the location of parking for each user group. Estimated parking demand is based upon the primary mode share (drive alone + half the carpool share). Parking location information is collected for users who drive alone or carpool to campus. Peak period is 11:30am-1:30pm for residential students and 12pm-1pm for commuter students and employees.

1.4 CHAMPLAIN COLLEGE UPDATE

CC recently implemented two significant parking management policy updates. A fee for all residential parking permits was introduced in 2016, and a restriction on first-year parking permits (with limited exceptions) was introduced in 2018.

As described in Table 1-2, CC has an estimated 2019 deficit of 27 spaces based upon survey data (see Table 3-16), which is 190 spaces better than the 217 space deficit projected for 2019 in the 2014-2019 JIPMP 5-Year Update and 210 spaces better than the 237 space deficit in the recalculated projection for 2019. CC has an estimated 2019 net surplus of 123 spaces based upon lot counts. The current parking capacity of 710 spaces is a reduction in parking capacity from the 2014 level of 764, and is less than the level projected in the 2014-2019 JIPMP 5-Year Update of 750. Total estimated parking demand for 2024 based upon survey data exceeds future supply by 61 spaces (see Table 3-24). This amounts to an increased deficit of 34 spaces compared to the estimated current deficit of 27 spaces. The deficit should be monitored, and CC should work with CATMA and the City to pursue additional TDM measures. If parking should be necessary, additional off-site leases could be secured. The magnitude of the deficit does not warrant any specific recommendations. The observed parking demand should be used as an annual measure to identify whether demand is starting to overwhelm the available parking supply. The strict permit policy that Champlain has implemented allows for a very effective tool to monitor actual parking demand as well as minimize off-campus parking impacts.

TABLE 1-4: CC PARKING SUPPLY AND PEAK DEMAND (PROJECTIONS AND CURRENT ESTIMATE, 2019-2024)

	Parking Supply	Parking Demand	Net Spaces
2019 (Projection)	750	967	-217
2019 (Recalculated Projection)	750	987	-237
2019 (Current Estimate)	710	737	-27
2024 (Projection)	685	746	-61

Sources: 2019 Projection was calculated by RSG Staff using assumed peak shares on campus, and was reported in the 2014-2019 JIPMP. 2019 Recalculated Projection was calculated by CATMA Staff and utilizes 2014 and 2016 CATMA Student and Employee Transportation Surveys for peak share on campus and mode share values. 2019 Current Estimate and 2024 Projection were calculated by CATMA Staff using the 2016 and 2018 CATMA Student and Employee Transportation Surveys.

Notes: CATMA Staff conducted a recalculated projection of 2019 levels using the estimated totals in each user category as well as 2014 and 2016 CATMA Student and Employee Transportation Survey Data. Specifically, the 2014 survey was the source except for the commuter student mode shares, which were sourced from the 2016 survey, as the 2014 survey did not collect a primary mode for commuter students.

1.5 UNIVERSITY OF VERMONT UPDATE

As described in Table 1-2, UVM has a current estimated deficit of 414 spaces based upon survey data, which amounts to a difference of 1,162 spaces compared to the 748 space surplus projected for 2019 in the 2014-2019 JIPMP 5-Year Update and a difference of 508 spaces compared to the recalculated projected surplus of 94 spaces (see Table 1-5). Of note, once UVM recovers an estimated 195 spaces from construction in July 2019, the parking supply will increase from 4,590 to 4,785 and the deficit will reduce from 414 to 219 spaces. UVM has an

estimated surplus of 488 based upon lot counts. The current parking capacity of 4,590 spaces is comparable to the 2014 parking capacity of 4,593, and also similar to the 4,571 projected in the 2014-2019 JIPMP 5-Year Update (see Table 4-11). Total estimated parking demand for 2024 based upon survey data is estimated to be 5,003, exceeding the estimated future supply of 4,534 (which takes into account the 195 spaces recovered after construction as well as the estimated loss of 251 spaces due to demolition and other building inventory adjustments) by 469 spaces. This amounts to an increased deficit of 55 spaces compared to the estimated current deficit of 414 spaces, and increased deficit of 250 spaces compared to the estimated deficit of 219 once 195 spaces are recovered from construction in July 2019. UVM will address this expected deficit through a variety of strategies described in Chapter 4.

TABLE 1-5: UVM PARKING SUPPLY AND PEAK DEMAND (PROJECTIONS AND CURRENT ESTIMATE, 2019-2024)

	Parking Supply	Parking Demand	Net Spaces
2019 (Projection)	4,571	3,823	748
2019 (Recalculated Projection)	4,571	4,477	94
2019 (Current Estimate)	4,590	5,004	-414
2024 (Projection)	4,534	5,003	-469

Sources: 2019 Projection was calculated by RSG Staff using assumed peak shares on campus, and was reported in the 2014-2019 JIPMP. 2019 Recalculated Projection was calculated by CATMA Staff and utilizes 2014 and 2016 CATMA Student and Employee Transportation Surveys for peak share on campus and mode share values. 2019 Current Estimate and 2024 Projection were calculated by CATMA Staff using the 2016 and 2018 CATMA Student and Employee Transportation Surveys.

Notes: CATMA Staff conducted a recalculated projection of 2019 levels using the estimated totals in each user category as well as 2014 and 2016 CATMA Student and Employee Transportation Survey Data. Specifically, the 2014 survey was the source except for the commuter student mode shares, which were sourced from the 2016 survey, as the 2014 survey did not collect a primary mode for commuter students.

1.6 UNIVERSITY OF VERMONT MEDICAL CENTER UPDATE

As described in Table 1-2, UVM MC has an estimated 2019 surplus of 956 spaces based upon survey data, which is 808 spaces more than the projected surplus of 148 spaces reported in the 2014-2019 JIPMP 5-Year Update and 268 more than the recalculated projected surplus of 688 spaces. UVM MC has an estimated surplus of 280 spaces based upon lot counts. The current parking capacity of 3,746 spaces (all UVM MC Hill campuses combined, including One South Prospect) is 247 more than the 3,499 projected in the 2014-2019 JIPMP 5-Year Update.

TABLE 1-6: UVM MC PARKING SUPPLY AND PEAK DEMAND (PROJECTIONS AND CURRENT ESTIMATE, 2019-2024)

	Parking Supply	Parking Demand	Net Spaces
2019 (Projection)	3,499	3,351	148
2019 (Recalculated Projection)	3,499	2,811	688
2019 (Current Estimate)	3,746	2,790	956
2024 (Projection)	3,254	2,471	783

Sources: 2019 Projection was calculated by RSG Staff and reported in the 2014-2019 JIPMP. 2019 Recalculated Projection was calculated by CATMA Staff and utilizes CATMA Employee Transportation Surveys for peak share on campus and mode share values. 2019 Current Estimate and 2024 Projection were calculated by CATMA Staff using the 2016 and 2018 CATMA Employee Transportation Surveys.

Notes: CATMA Staff conducted a recalculated projection of 2019 levels using the estimated totals in each user category as well as the 2014 CATMA Employee Transportation Survey Data.

2.0 CHITTENDEN AREA TRANSPORTATION MANAGEMENT ASSOCIATION (CATMA)

This chapter is comprised of five sections and covers the contents required under Article 8 of the Burlington Comprehensive Development Ordinance (CDO) for institutional parking management plans. The first section summarizes the employment and enrollment totals for CATMA's founding institutional members. The second section provides organizational information (including CATMA's history, goals, membership, leadership, and personnel). The third section details CATMA's programs. The fourth section describes CATMA Student and Employee Transportation Surveys and reports student and employee trends in automobile reliance across CC, UVM, and UVM MC. It also describes the parking demand calculations used in Chapters 3-5. The fifth section summarizes Part 1 of Article 8 of the CDO for CC, UVM, and UVM MC.



2.1 EMPLOYMENT AND ENROLLMENT (SEC. 8.3.3 (A))

CATMA's founding institutional members, Champlain College (CC), University of Vermont (UVM), and University of Vermont Medical Center (UVM MC) (commonly referred to as the Hill institutions), employ 12,362 individuals within the City of Burlington, and enroll 15,520 students who attend classes within the City of Burlington. Table 2-1 (see also Table 1-1) summarizes the number of employees and students at the Hill institutions.

TABLE 2-1: HILL INSTITUTION EMPLOYMENT AND ENROLLMENT VISITS

CATMA Founding Members	Employees	Students	Total
CC	880	2,174	3,054
UVM	4,186	13,346	17,532
UVM MC	7,296		7,296
Total	12,362	15,520	27,882

Sources: Employment and enrollment totals are provided by institutional staff.

Notes: Employment and enrollment totals are from the fall of 2018. Employment totals include contracted employees. UVM MC employment includes 6,229 full-time, part-time, and per diem staff at the main campus, One South Prospect, and downtown Burlington, as well as 1,067 non-paid staff at the main campus, and include evening and night shift employees, who are excluded from peak parking demand estimates. Out of the 6,229 UVM MC full-time, part-time, and per diem staff, a total of 177 work in downtown Burlington. A total of 6,073 UVM MC full-time, part-time, per diem, and non-paid staff have day shifts (or unidentified shifts presumed to occur during the day) and work on the main campus or One South Prospect, and are included in the peak parking demand estimates. Enrollment totals include students attending classes on the Burlington campus.

The CC employee total (880) is higher than the projected total reported (625) in the 2014-2019 JIPMP 5-Year Update, while the student total (2,174) is lower than the projected total (2,400); the current combined total number of CC users (3,054) is 29 higher than the projected total (3,025, see Table 10 of the 2014-2019 JIPMP 5-Year Update). Meanwhile, the UVM employee total (4,186) is higher than the projected total (3,917) reported in the 2014-2019 JIPMP 5-Year

Update, and the student total (13,346) is also higher than the projected total (12,043); the current combined total number of UVM users (17,532) is 1,572 higher than the projected total (15,960, see Table 24 and 26 of the 2014-2019 JIPMP 5-Year Update). The UVM MC employee total of 6,073 for full-time, part-time, per diem, and non-paid staff on the main campus and One South Prospect with day shifts (see Notes for Table 1-1 and Table 2-1) is 495 more than the 5,578 projected total reported in the 2014-2019 JIPMP 5-Year Update (see Tables 17 and 18 of the 2014-2019 JIPMP 5-Year Update).

2.2 CATMA ORGANIZATIONAL HISTORY, GOALS, MEMBERSHIP, LEADERSHIP, AND PERSONNEL (SEC. 8.3.3 (D))

CATMA History

The Chittenden Area Transportation Management Association (CATMA) is a private, membership-based, non-profit organization (formerly the Campus Area Transportation Management Association). Established in 1992, CATMA's founding institutional members established a joint mission to plan and manage safe, convenient and economical parking, and transportation in ways that better coordinate land use and reduce environmental impacts on the community.

CATMA Goals

CATMA has adopted the following organizational goals:

- Establish long-term transportation policies and leadership
- Provide strategic and long-term planning for multimodal transportation and parking developments in conjunction with the Members' shared land use planning
- Plan, develop and expand comprehensive multimodal transportation systems management (TSM) programs, incorporating TDM strategies
- Plan, develop, own, and manage multimodal transportation systems and parking facilities

CATMA's Board Resolution

The CATMA institutions have always been committed to a TDM strategy that moves as much parking off the Hill as possible. CATMA, on behalf of its founding institutions, continues to pursue parking facilities to the south, north, and east, which would be served by GMT bus service or shared shuttles to the Hill.

CATMA Membership

Founding Institutional Members: Champlain College (CC), University of Vermont (UVM), and University of Vermont Medical Center (UVM MC) (commonly referred to as the Hill institutions).

Associate Members: Chittenden County Regional Planning Commission, the City of Burlington (as an employer), Farrell Properties, Redstone Lofts, Redstone Apartments, Seventh Generation, Vermont Housing Finance Agency, YMCA, and Spinner Place.

The following individuals comprise the CATMA Board of Directors, Executive Planning Committee, Operations Committee, Advisory Committee, and staff.

CATMA Leadership and Personnel

CATMA Board of Directors

- Dawn LeBaron, Vice President of Hospital Services, UVM MC
- Shelley Navari, Vice President of Finance and Treasurer, CC
- Joe Speidel, Director of Local Government and Community Relations, UVM

CATMA Executive Planning Committee

- Nic Anderson, Director of Transportation, CC
- Dave Keelty, Director of Facilities Planning and Development, UVM MC
- Lani Ravin, Associate Planner, UVM

CATMA Operations Committee

- Nic Anderson, Director of Transportation, CC
- Jim Barr, Director for Transportation, Parking and Sustainable Transportation Services, UVM
- Jack Conry, Director of Security, Safety and Parking, UVM MC
- John King, Parking Enforcement Manager, City of Burlington

CATMA Advisory Committee

- Nic Anderson, Director of Transportation, CC
- Abby Bleything, Sustainable Transportation Coordinator, UVM
- Bryan Davis, Senior Planner, CCRPC
- Jennifer Green, Sustainability Coordinator, Burlington Electric Department
- Steve Gronlund, Human Resources Manager, VHFA
- Chris Lyon, Manager of Mission Impact, Seventh Generation
- Charlie Zea, Security Manager, UVM MC

CATMA Staff

- Sandy Thibault, Executive Director
- Katie Martin, Program and Marketing Manager
- Andrea Hamre, Transportation Analyst

2.3 CATMA PROGRAMS

CATMA employs comprehensive TDM strategies with the goal of reducing single occupancy vehicle (SOV) travel at the Hill institutions. Table 2-2 and the following discussion summarize CATMA's TDM programs and services for the Hill institutions.

TABLE 2-2: CATMA'S COMPREHENSIVE TDM STRATEGIES

Program	CC	UVM	UVM MC	Total
Bike/Walk Reward Program				
Enrollees	79	663	622	1,364
Current Participation	22	179	152	353
Total Awards	77	619	469	1,165
Bikeshare Discount	50% off Annual Membership			
Carpool Incentives	✓	✓	✓	
Carpool Matching Registrants	33	172	456	661
CarShare VT Campus Program Members	81	254		335
Education, Outreach and Worksite Commuter Events/Fairs	✓	✓	✓	
Flex-time policies	✓	✓	✓	
Guaranteed Ride Home				
Employee Enrollees	193	1,155	1,162	2,510
Employee Uses (Cost)				71 (\$2,848)
Student Enrollees	210			
Off-site/Satellite Parking	175 spaces		1,190 spaces	
Walkways & Bikeways	✓	✓	✓	
Staggered Scheduling (Employees & Students)	✓	✓	✓	
Shuttle Service	✓	✓	✓	
Shuttle Real-Time Tracking	✓	✓		
Employee & Student Transportation Surveys	✓	✓	✓	
Telecommute	✓	✓	✓	
Transit Programs (Annual Trips)	Unlimited Access (41,800)	Unlimited Access (301,000)	Discounted Passes	See Table 2-3
Promotion of Intercity Bus & Rail	✓	✓	✓	

Bike/Walk Reward Program

CATMA's Bike/Walk Reward Program was launched in May 2001 as an incentive for people to bike or walk to and from work. Employees who commit to biking/walking regularly are rewarded with gift cards to local downtown shops. Participants are required to bike or walk to and from 24 days within a 60-day period and must log the dates they bike or walk online through their Commuter Profiles. Once participants log 24 commutes, they receive a \$15 gift card of their choice to City Market, Merrill's Roxy Cinema or SKIRACK. For every additional commute logged during the 60-day period a participant's name is added to a quarterly drawing. Bike/Walk participants, along with everyone registered in the Guaranteed Ride Home Program, are also entered into quarterly drawings for gift certificates to downtown Burlington restaurants.

Since its inception, the program has contributed \$300,000 in gift cards and boosts our local economy. The program, which started with 17 participants in 2001, now has over 1,500 registrants. CATMA's Bike/Walk Reward Program has been recognized in a variety of venues, including winning awards from the Association of Commuter Transportation and playing a role in the Bicycle Friendly designations of our members from the League of American Bicyclists.

Subsidized Transit Programs

The Hill institutions use two of CATMA's transit subsidy programs² – Unlimited Access (CC and UVM), and discounted passes (UVM MC).³ Since January 2003, CATMA and GMT (previously CCTA) have partnered to deliver an Unlimited Access Program. This program provides CATMA members with unlimited access on GMT'S public transit services using institutional IDs. UVM joined the program in 2003, and CC joined in 2006. New CATMA members are eligible to join the Unlimited Access Program. CATMA's Unlimited Access Program differs from other similar programs in that CATMA pays GMT a negotiated rate per ride rather than a flat fee per employee or student. CATMA and its members collaborate with GMT on developing marketing campaigns to promote this program, including on-site commuter events and working with student groups. CATMA's Unlimited Access Program has led to an increase in available parking spaces for both CC and UVM, and an increase in federal dollars to GMT.

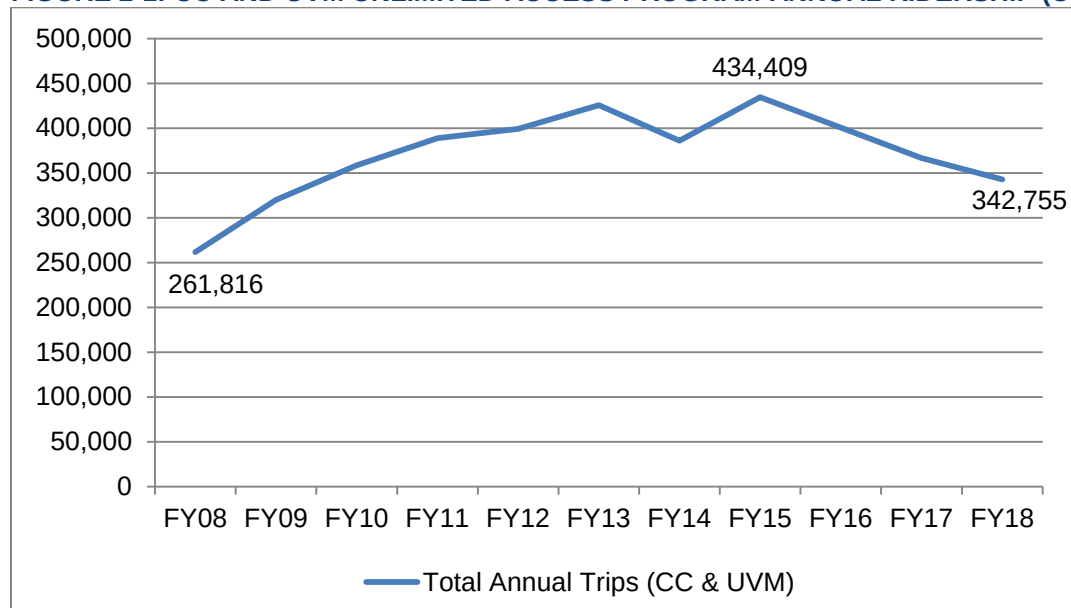
Figure 2-1 presents Unlimited Access Program total annual trips for CC and UVM over the past decade. The FY18 level of 342,755 total annual trips is 30.9% above the FY08 level, but 21.1% below the peak level of 434,409 total annual trips in FY15. Table 2-3 presents additional

² See CATMA's website (catmavt.org) for information about additional transit subsidy programs (Employee Transit Pass and Bulk Pass purchases) used by non-Hill CATMA Members.

³ UVM MC does not currently participate in the Unlimited Access Program, but does offer their employees a 50% subsidy on all local GMT routes and 25% subsidy on all GMT Commuter and LINK routes; employees may purchase these discounted monthly passes or 10-ride tickets directly through payroll deductions. UVM MC employees are also eligible for discounted ferry passes.

information about annual trips, costs, and changes in ridership for CC and UVM Unlimited Access Program use over the past decade.⁴

FIGURE 2-1: CC AND UVM UNLIMITED ACCESS PROGRAM ANNUAL RIDERSHIP (CC AND UVM)



Source: Calculated by CATMA Staff using GMT Monthly Ridership Reports.

Notes: A GMT strike occurred between March 17 and April 4, 2014. In 2016, GMT ridership decreased by 10% system-wide. CATMA Express Shuttle ceased operations in 2009. Totals include GMT local and LINK routes and exclude shuttles.

TABLE 2-3: UNLIMITED ACCESS PROGRAM ANNUAL RIDERSHIP AND COSTS (CC AND UVM)

Year	Annual Trips Local	Annual Trips LINK	Annual Trips Local and LINK	Total Cost of Service
FY08	237,365	24,451	261,816	\$287,183.78
FY09	287,429	32,370	319,799	\$348,635.34
FY10	328,713	29,854	358,567	\$379,792.44
FY11	351,560	37,410	388,970	\$417,143.39
FY12	356,882	42,414	399,296	\$430,329.61
FY13	377,758	47,954	425,712	\$463,368.05
FY14	335,600	50,417	386,017	\$428,621.82
FY15	386,462	48,409	434,409	\$468,891.46
FY16	358,264	42,351	400,615	\$431,520.51
FY17	323,206	43,304	366,510	\$401,464.24
FY18	301,825	40,930	342,755	\$376,090.34

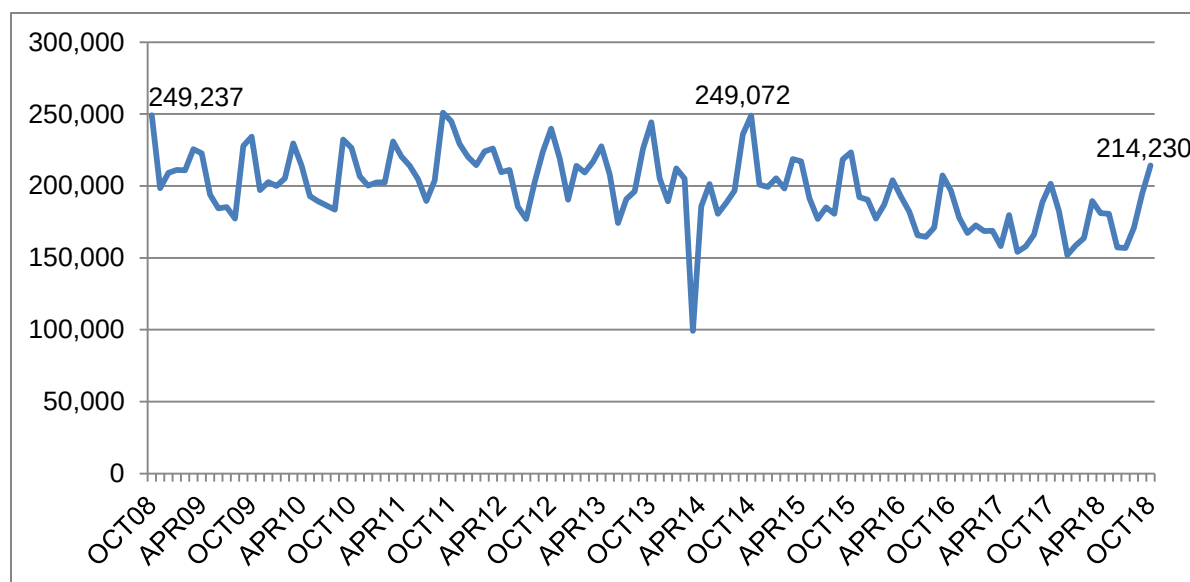
Source: Calculated by CATMA Staff using GMT Monthly Ridership Reports.

⁴ Normalizing total annual trips based upon population levels (employment and enrollment for CC and UVM) would enable a comparison of per capita ridership over time. CATMA plans to provide this information in future JIPMP reports.

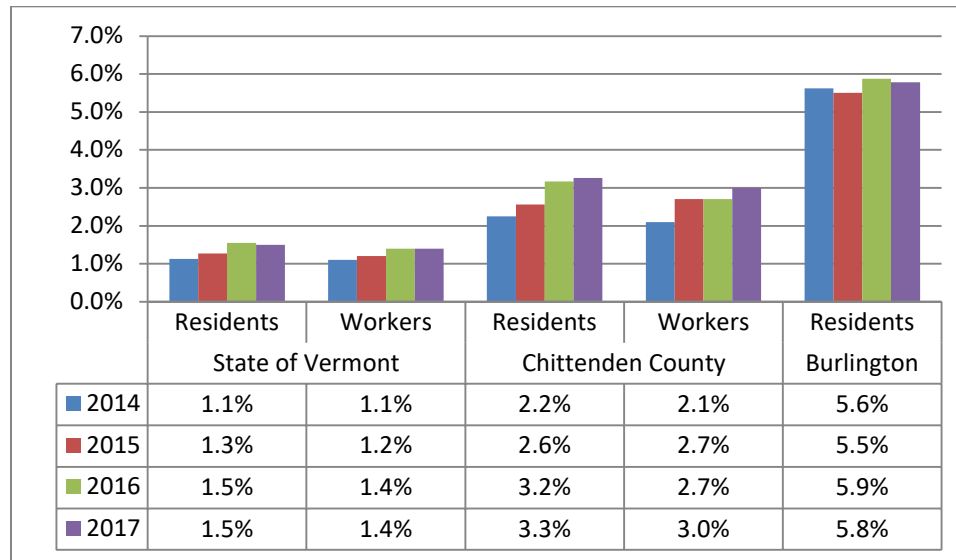
Total annual trips with the Unlimited Access Program have declined in recent years (see Figure 2-1 and Table 2-3). This is similar to the recent decline in overall ridership levels for the GMT system as a whole. However, while the Unlimited Access program for CC and UVM experienced steady growth between FY08 and FY13, GMT ridership as a whole was relatively level during that time period. As a result, the 214,230 passenger trips for the GMT system as a whole recorded in October 2018 is 14% below both the October 2014 level of 249,072 passenger trips and the October 2008 level of 249,237 passenger trips. Figure 2-2 presents monthly ridership levels for the GMT system between October 2008 and October 2018.

While ridership levels have declined in recent years for both the Unlimited Access Program for CC and UVM as well as the GMT system as a whole (see Figure 2-1 and Figure 2-2), transit commuting has actually increased in the State of Vermont and Chittenden County. Figure 2-3 presents the share of residents and workers commuting to work by transit in Vermont, Chittenden County, and the City of Burlington between 2014 and 2018.

FIGURE 2-2: GMT SYSTEM HISTORICAL RIDERSHIP (MONTHLY DATA)



Source: National Transit Database (January, 2019 data release).

FIGURE 2-3 TRANSIT COMMUTE MODE SHARE FOR RESIDENTS AND WORKERS IN THE CITY OF BURLINGTON, CHITTENDEN COUNTY, AND THE STATE OF VERMONT

Sources: Calculated by CATMA Staff using the American Community Survey 1-Year Estimates (Table K200801 for Residents, Table S0804 for Workers).

Notes: Percentages represent the share of workers reporting public transportation as their “principal mode of travel”; total includes workers who worked at home. 1-Year Estimates are unavailable for workers in the City of Burlington due to small population size.

Carpool Incentives and Matching Services

CATMA transitioned its carpool matching service to the statewide Go! Vermont carpool and rewards platform in late 2018. CATMA continues to provide support to its members who are interested in carpooling through the commuter assistance line.

Employees at CATMA membership who commit to carpooling at least twice a week on a regular basis are eligible for their Guaranteed Ride Home Program. Carpoolers are also entered into quarterly drawings for gift certificates to local restaurants.

Guaranteed Ride Home Program (GRH)

Employees registered with CATMA who regularly carpool, vanpool, bike, walk, or take the bus are eligible to receive free GRH rides. CATMA customizes the GRH program to meet employer needs, such as accommodations for those parking off-site.

One of the obstacles for those considering non-SOV modes of commuting is how they will get home in an emergency. Employees who commit to sustainable commutes receive an ID number when they create their online commuter profile which is used to access the GRH ride. If an emergency arises on a day an employee commutes with a sustainable mode, they simply call Green Cab directly and make arrangements for a ride home. The program covers up to \$150 of the fare for each ride. There is no money required out of the member's pocket, unless the fare is over \$150. Participants are allowed to use the guaranteed ride home up to eight times in a twelve-month period. Over 2,500 employees are currently registered in CATMA's Guaranteed Ride Home Program.

The GRH program is also provided to CC residential students. For those students bringing a car to campus (all of whom are required to park at 115 Lakeside Ave off-site lot), they are automatically enrolled and receive a “privilege” on their student ID to access the GRH program on a semester-to-semester basis. They are allowed to use the program anytime for a ride between the Main Campus and 115 Lakeside Ave when the shuttles are not operating. The institutions reimburse CATMA for all taxi rides taken by their students.

Quarterly Restaurant Drawings

Employees registered with CATMA as sustainable commuter are automatically entered into its quarterly drawings for local restaurant gift certificates.

Education, Outreach and Marketing

CATMA continues to strengthen and enhance its outreach and educational efforts at its member institutions, which include year round on-site commuter events in strategic venues (Human Resource Benefit Fairs, Nurses Knowledge Fair, New Faculty Orientation, Fall Student Fairs, bike commuter workshops, various spring/fall campaigns and contests). The goal of the events is to educate, create awareness, and assist employees and students with mobility options and understand how their travel choices benefit themselves, the institution, and the community.

CATMA's website provides a variety of educational resources, including a sustainable transportation map, updates on current conditions, news and events and tools. It serves as a one-stop shop!

CATMA continues to strengthen its communications, marketing, and information to encourage and support behavior change. The following highlight its primary initiatives:

- Conduct robust and targeted marketing campaigns
- Disseminate timely and current information
- Implement commuter/transportation kiosks at member worksites
- Implement display screens at member worksites
- Issue quarterly newsletters
- Communicate actively on social media.

Best Workplace for Commuters (BWC)

CATMA, its institutions and members continue to receive national recognition as a designated “Best Workplaces for Commuters.”

BWC is an innovative program that provides qualified employers with national recognition and an elite designation for offering outstanding commuter benefits. This National Standard of Excellence in commuter benefits is managed by the Center for Urban Transportation Research at the University of South Florida.



BWC's meet a variety of high standards relating to commuter benefits and TDM offerings as well as membership and participation with a Transportation Management Association (TMA) and their offerings of TDM programs.

BWC demonstrates that alternatives to drive alone commuting, such as transit, carpools, and teleworking are economically beneficial, yielding value to workers, employers, and our environment.

CATMA Associations and Partnerships

CATMA maintains strong partnerships with local, state, and national transportation industry leadership organizations, such as Association of Commuter Transportation, BWC, Vermont Agency of Transportation, and Chittenden County Regional Planning Commission (CCRPC), as well as with the Upper Valley TMA.

They also provide support and maintain partnerships with local and regional service providers, such as GMT and CarShare Vermont, as well as local and state advocacy groups such as Local Motion, Burlington Bike/Walk Council and Transportation For Vermont Coalition.

CarShare Vermont

CarShare Vermont, a nonprofit organization, launched its carsharing service in Burlington in December 2008. UVM and Champlain College were early supporters and originally purchased four cars for its fleet. In October 2011, they released vehicle ownership to CarShare Vermont. The schools now sponsor memberships for a set number of qualifying students and staff.

Two pod locations are on the UVM campus, one at Champlain College and another close by at Champlain's new residential property at 194 St. Paul St. CarShare Vermont's fleet offers a mix of vehicles to meet the diverse needs (carsharevt.org/locations/) of the members. 16 vehicles are located in 16 distinct "pods" throughout Burlington and Winooski. In April 2019, CarShare Vermont hopes to add its first 100% electric vehicle in downtown Burlington, as well as an additional hybrid vehicle, bringing its fleet size to 18. All trips originate and end at the same pod location.

CarShare Vermont gives members affordable and easy access to a network of reliable vehicles that can be reserved 24/7 for as little as 30 minutes or as long as needed. CarShare Vermont is a key part of a multimodal transportation system that aims to reduce dependence on vehicles. Since its inception, it has achieved remarkable results with regard to reducing vehicle miles traveled (VMT) and vehicle ownership rates. On average, its members reduce the amount they drive by 2 million miles per year, resulting in over 800 tons of CO₂ saved annually. Additionally, about 60% of CarShare members report selling or opting not to purchase a vehicle, and 87% of members belong to zero or one vehicle households. This means that for every vehicle CarShare Vermont puts on the road, 15 are removed.

In 2018, CarShare Vermont reported 950 members, including residents, students, and employees of local businesses. Collectively, members logged over 9,000 trips and each vehicle was used an average of 6 hours per day. In the 2017-2018 academic year, 227 students and staff of UVM were members of CarShare Vermont and 73 from Champlain College. Campus

members accounted for 33% of CarShare VT's total membership and similarly generated one-third of vehicle use. Since 2011, UVM and Champlain College have subsidized CarShare Vermont memberships for a limited number of their affiliates (carsharevt.org/memberships/campus/). CarShare Vermont enables many campus affiliates to live and work on campus without bringing a personal vehicle, reducing parking demand, congestion, and pollution.

CarShare Vermont conducts extensive outreach at the two campuses and devotes significant marketing resources to promote the program. Its staff and volunteers participate in dozens of events each year, including tabling at new student orientations, resource fairs, family weekends, festivals, conferences, and class presentations. Flyers and posters are distributed around both campuses, and materials are distributed in orientation packets. Additionally, CarShare Vermont regularly hosts interns from both schools throughout the school year.

Greenride Bikeshare

Greenride Bikeshare launched in April 2018 as the greater Burlington region's first public bikeshare system. Bikeshare is ideal for short point-to-point, 30 minute trips or less, and is designed to complement and enhance existing transportation options in our area by providing connections to bus service and serving as an affordable transportation option. The program currently includes 100 7-speed bikes at 17 hub locations in Burlington, South Burlington, and Winooski. More information may be found at greenridebikeshare.com.

CATMA played an instrumental role, along with local sponsors and partners, in bringing bikeshare to the region. Currently, CATMA institutions and members receive a 50% discount on their annual memberships for employees and students.

- Total CATMA/Campus Members = 417 (71% of total active members in system)
- Total CATMA/Campus Trips = 3,136 (35.5% of total system trips)
- Average trip distance of CATMA/Campus Members = 1.2 miles
- Average trip duration of CATMA/Campus Members = 12 min

Employee Transportation Coordinator (ETC) Network

CATMA created and launched a regional Employee Transportation Coordinator Network in Fall 2013 for Chittenden County. An ETC is a typical strategy of TMAs. The ETC is a designated employee at a work or residential site who is the point of contact at their worksite for transportation information.

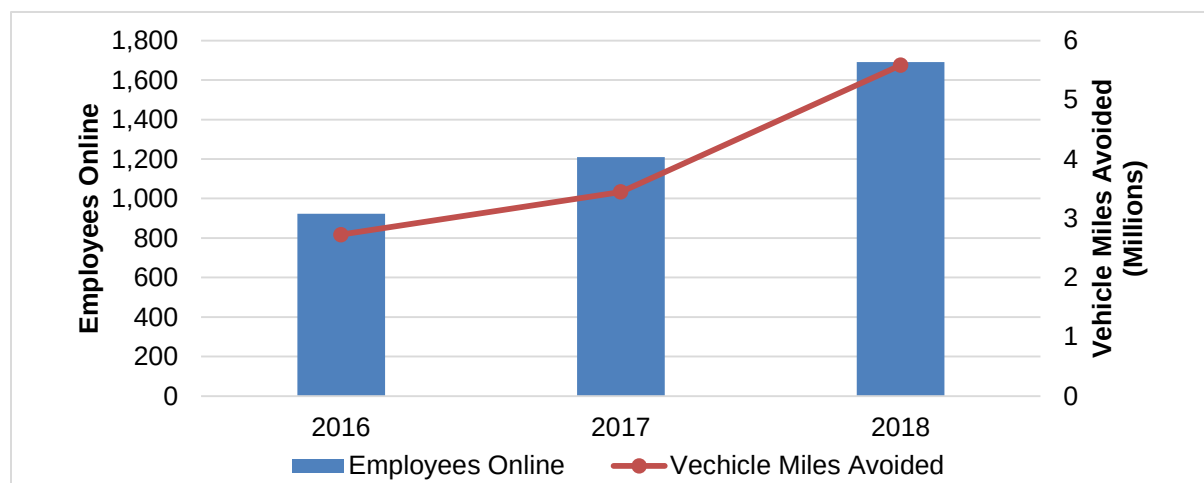
CATMA organizes and hosts ETC events twice a year (spring and fall) and provides ETC's with frequent communications relative to transportation in the region. The Network provides support, resources and a forum for businesses who are interested in opportunities to address and solve transportation challenges at their worksite and in the community in a collaborative manner. This initiative initially received support from a Transportation Community & System Preservation grant and over the past few years has received support from the CCRPC UPWP. Currently, the

Network has over 60+ members, including businesses, municipalities, and developers. For more information on the Network, its participants and events, visit catmavt.org/etcnetwork.

CATMA's Overall Impact

CATMA has been tracking its overall impact in terms of vehicle miles avoided since 2016. As shown in Figure 2-4, CATMA's increasing enrollment over the last several years has helped to avoid a significant number of vehicle miles. When converted to fuel savings, CATMA's impact in 2018 equals nearly half a million dollars and prevented over 4 million tons of CO² emissions from entering the atmosphere.

FIGURE 2-4: CATMA EMPLOYEE ENROLLMENT AND VEHICLE MILES AVOIDED (2016-2018)



Source: Calculated by CATMA Staff using the CATMA Employee Profile Database.

CATMA continues to strengthen and increase its presence in the region and state, serving as the point of contact for employers and developers seeking expertise and experience with comprehensive TDM programming. TDM strategies address parking and traffic congestion, improve employee recruitment, productivity and morale, and enhances business development in the region. Sharing resources and collaborating on transportation solutions is critical to the sustainability and improvement of our transportation network.

CATMA assumes an active role in local, regional, and international committees and associations that specialize in sustainable commute options and solutions to enhance the transportation system. These include: the CCRPC Transportation Advisory Committee and ECOS Transportation Subcommittee, the Lake Champlain Regional Chamber of Commerce, Vermont Transportation Efficiency Network, Transportation For Vermont Coalition, and Burlington Walk/Bike Council. Engagement with these partners facilitates their role in exploring and influencing transportation improvements.

CATMA provides a comprehensive commuter profile tool that enables members to capture the true impact of their commutes and informs commuters of their own impact relative to overall CO₂, VMT reductions and fuel savings. They continue to explore, design, and implement program enhancements to leverage existing programs and offer more value to members,

employees, students, and residents. In spring 2018, CATMA partnered with CCRPC, CC, and UVM to launch Phase I of the Greenride Bikeshare regional program. Regional partners are currently collaborating to enhance the bikeshare system with electric assist bikes and electric scooters in a future phase.

With a small staff, an active Board of Directors and Committee members, excellent partnerships, a motivated community, and over 26 years of experience administering effective and efficient TDM program, CATMA continues to be dedicated to its mission of jointly planning and managing safe, convenient, and economical parking and transportation in ways that better coordinate land use and reduce environmental impacts.

2.4 CATMA EMPLOYEE AND STUDENT TRANSPORTATION SURVEYS

CATMA collects information to assess its TDM programs through employee and student surveys, conducted annually through 2010 (beginning in 2000 for employees and 2003 for students), and biennially thereafter. Table 2-4 summarizes information about the sampling and design of CATMA surveys, and highlights key differences between the 2016 and 2018 surveys.

The following discussion and subsequent chapters primarily use the 2016 CATMA Employee and Student surveys as the source for peak % on campus and mode share values for parking demand estimates. While the 2018 surveys were collected more recently and have larger sample sizes, they were also highly condensed and modified. Specifically, the 2018 surveys did not collect information about primary commute mode, work status (full-time/part-time), number of days on campus, or arrival and departure information (with sufficient specificity to isolate the peak period). CATMA plans to update its surveys so that future versions collect this information, and also survey employees and students at the same time of year.⁵

TABLE 2-4: SUMMARY OF CATMA EMPLOYEE AND STUDENT SURVEY SAMPLING AND DESIGN

	Hill Employees	CC and UVM Students
Sample Time Period	Fall	Spring
Sample Dates	2016: October 12-November 11 2018: October 16-November 14	2016: March 30-April 13 2018: March 6-April 16
Sample Method	Paper (2000-2014) Email (2016-2018)	Paper (2003-2014) Email (2016-2018)
Sample Frame	All employees	All on-campus students
Sample Size	2016 CC: 199 UVM: 1,212 UVM MC: 1,795 Total: 3,206	2016 CC: 430 UVM: 2,077 Total: 2,507
	2018 CC: 216 UVM: 1,642 UVM MC: 2,330 Total: 4,188	2018 CC: 492 UVM: 2,997 Total: 3,489

⁵ Conducting future employee and student surveys at the same time will eliminate seasonal variation between the two datasets that may impact travel behavior.

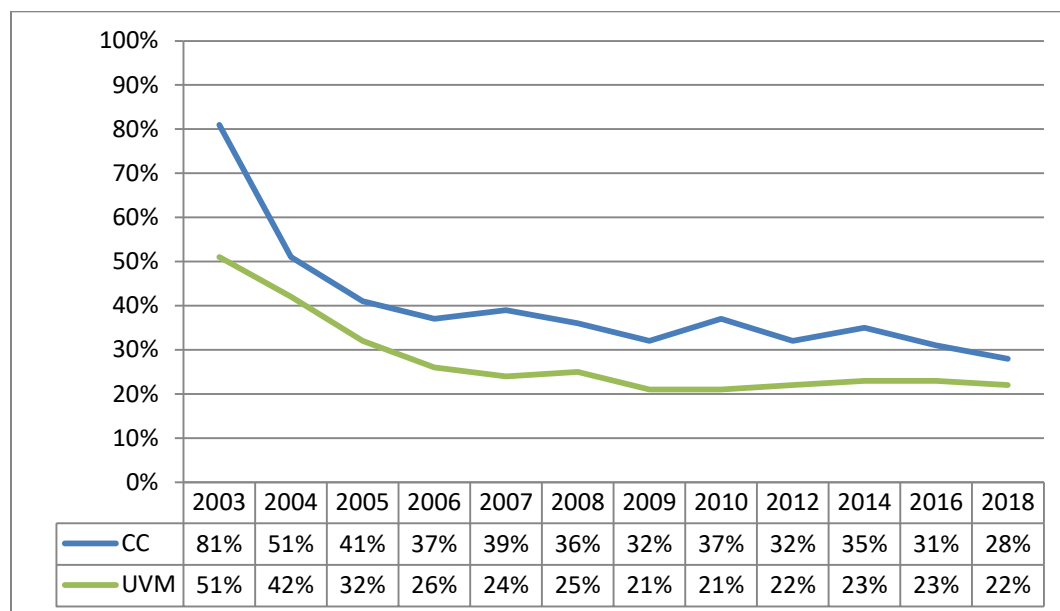
	Hill Employees	CC and UVM Students
Response Rate⁶	2016 CC: 199/820=24% UVM: 1,212/4,582=26% UVM MC: 1,795/7,570=24% Total: 3,206/12,972=25%	2016 CC: 430/2,116=20% UVM: 2,077/13,688=15% Total: 2,507/15,804=16%
	2018 CC: 216/808=27% UVM: 1,642/4,840=34% UVM MC: 2,330/8,274=28% Total: 4,188/13,922=30%	2018 CC: 492/2,068=24% UVM: 2,997/14,189=21% Total: 3,489/16,257=21%
Primary Travel Mode	2016: How do you generally commute to work?	2016: Which method do you consider the primary way you travel to and from main campus?
	2018: Not Collected	2018: Not Collected
Travel Modes Used During a Week	2016: What other ways do you get to work?	2016: In a typical week how do you travel to and from the main campus?
	2018: During the past week (7 days), how many days did you use each of the following modes to travel from your residence to work?	2018: During the past week (7 days), how many days did you use each of the following modes to travel from your residence to places on-campus?
Work Status	2016: Do you work full-time or part-time?	
	2018: Not Collected	
Days on Campus	2016: In a typical week, which days to you travel to campus? How many days per week do you commute to work?	2016: In a typical week, which days do you generally travel to the college/university?
	2018: Not Collected	2018: Not Collected
Arrival and Departures	2016: Sufficient Specificity (12:00pm to 12:59pm)	2016: Residents: Sufficient Specificity (11:30am to 1:30pm) Commuters: Sufficient Specificity (12:00pm to 12:59pm)
	2018: Insufficient Specificity (After 9am, Before 3pm)	2018: Not Collected

Trends in Student Automobile Reliance

Vehicle ownership and commute mode share are two key travel behavior indicators. As discussed below in Figures 2-5 through 2-7, these indicators suggest automobile reliance has generally declined among CC and UVM students since 2003, with the exception of a recent increase in the share of students living within a half mile of campus driving alone and carpooling to campus over the course of the week (see Figure 2-7).

Student travel surveys have collected consistent information about vehicle ownership since 2003. The share of residential students with a personal vehicle has declined 65% at CC since 2003, and 57% at UVM, as presented in Figure 2-5.

⁶ Employee response rates are based on all Champlain College, UVM, and UVM MC campuses (including locations off the Hill).

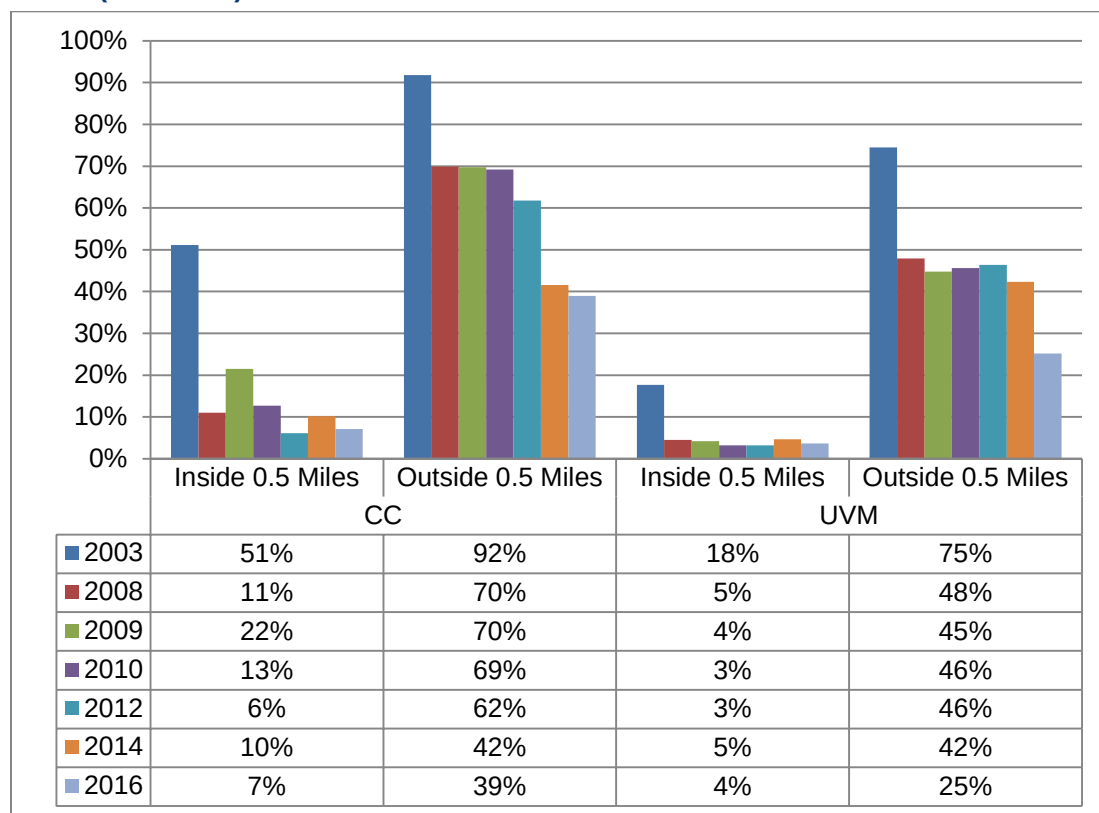
FIGURE 2-5: SHARE OF RESIDENTIAL STUDENTS WITH PERSONAL VEHICLES (2003-2018)

Source: Calculated by CATMA Staff using the 2003-2018 CATMA Student Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

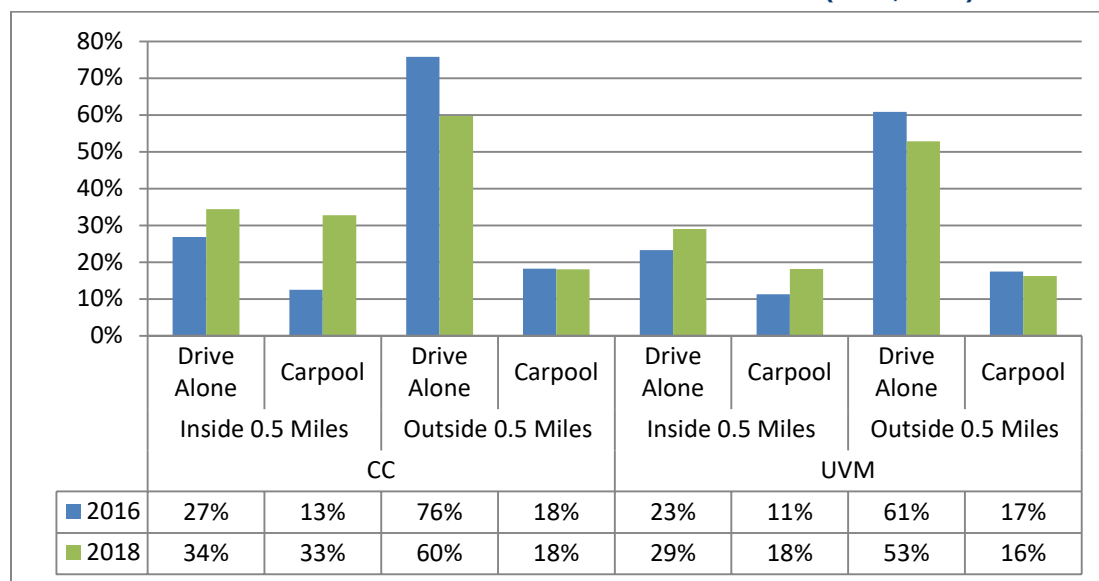
Student travel surveys collected information about the primary commute mode between 2003 and 2016. The share of commuting students using driving alone as their primary mode to campus has declined at both CC and UVM since 2003, as presented in Figure 2-6. At CC, the share of students primarily relying on driving alone who live within a half mile of campus declined 86% between 2003 and 2016, from 51% to 7%. For students living more than a half mile from campus, there was a 58% decline. At UVM, the share of students relying on driving alone who live within a half mile of campus declined 78% between 2003 and 2016, from 18% to 4%. For students living more than a half mile from campus, there was a 67% decline. Use of alternatives to driving is typically inversely related to distance, so the higher reliance on driving alone among commuter students living more than a half mile from campus is expected.

While the 2018 survey did not collect primary commute mode information, both the 2016 and 2018 surveys did collect information about travel modes used during a week (see Table 2-4). Figure 2-7 presents the share of commuter students who reported any driving alone or carpooling over the course of the week for 2016 and 2018. The 2016 percentages for driving alone presented in Figure 2-7 are higher than those reported in Figure 2-6 because they include both those who relied on driving alone as their primary mode as well as those for whom driving alone was not their primary mode. The share of students living within a half mile of campus reporting any driving alone to campus has increased at both CC and UVM, while the share driving alone has decreased at both CC and UVM for students living more than a half mile from campus, as presented in Figure 2-7. Meanwhile, carpooling over the course of the week increased for students living within a half mile of campus at both CC and UVM between 2016 and 2018, but remained relatively level for students at both schools living more than a half mile from campus.

FIGURE 2-6: SHARE OF COMMUTER STUDENTS WITH DRIVE ALONE AS PRIMARY COMMUTE MODE (2003-2016)

Source: Calculated by CATMA Staff using the 2003-2016 CATMA Student Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

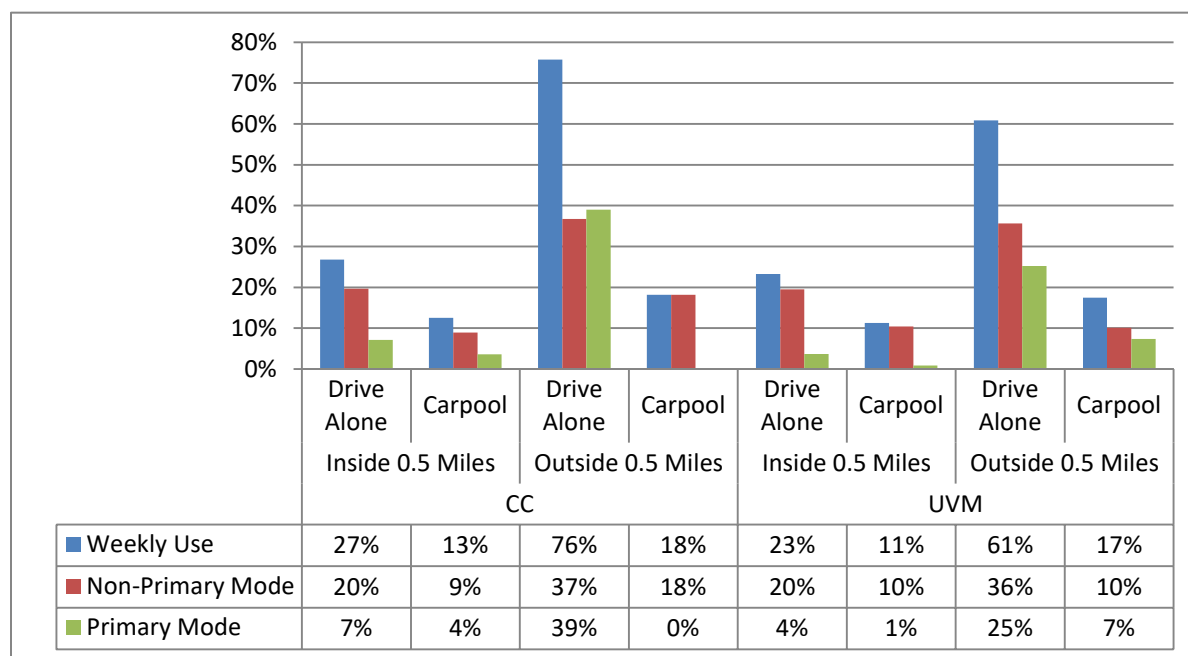
FIGURE 2-7: SHARE OF COMMUTER STUDENTS REPORTING DRIVING ALONE AND CARPOOLING TO CAMPUS OVER THE COURSE OF THE WEEK (2016, 2018)

Source: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

As summarized in Figure 2-8, most of the commuter students living within a half mile of campus, at both CC and UVM, who drive alone over the course of a week do not rely on driving alone as their primary mode. Specifically, in 2016, 27% of CC commuter students living within a half mile of campus reported any driving alone during the week, including 7% who relied on driving alone as their primary mode. Similarly, in 2016, 23% of UVM commuter students living within a half mile of campus drove alone during the week, including 4% who relied on driving alone as their primary mode. For commuter students living more than a half mile from campus, a slightly higher share rely on driving alone as their primary mode at CC (39% versus 37%) while a lower share rely on driving alone as their primary mode at UVM (25% versus 36%). The same holds for carpooling; most of the commuter students living within a half mile of campus, at both CC and UVM, who carpool over the course of a week do not rely on carpooling as their primary mode.

FIGURE 2-8: USE OF DRIVING ALONE AND CARPOOLING AS PRIMARY MODE VERSUS NON-PRIMARY MODE FOR COMMUTER STUDENTS (2016)



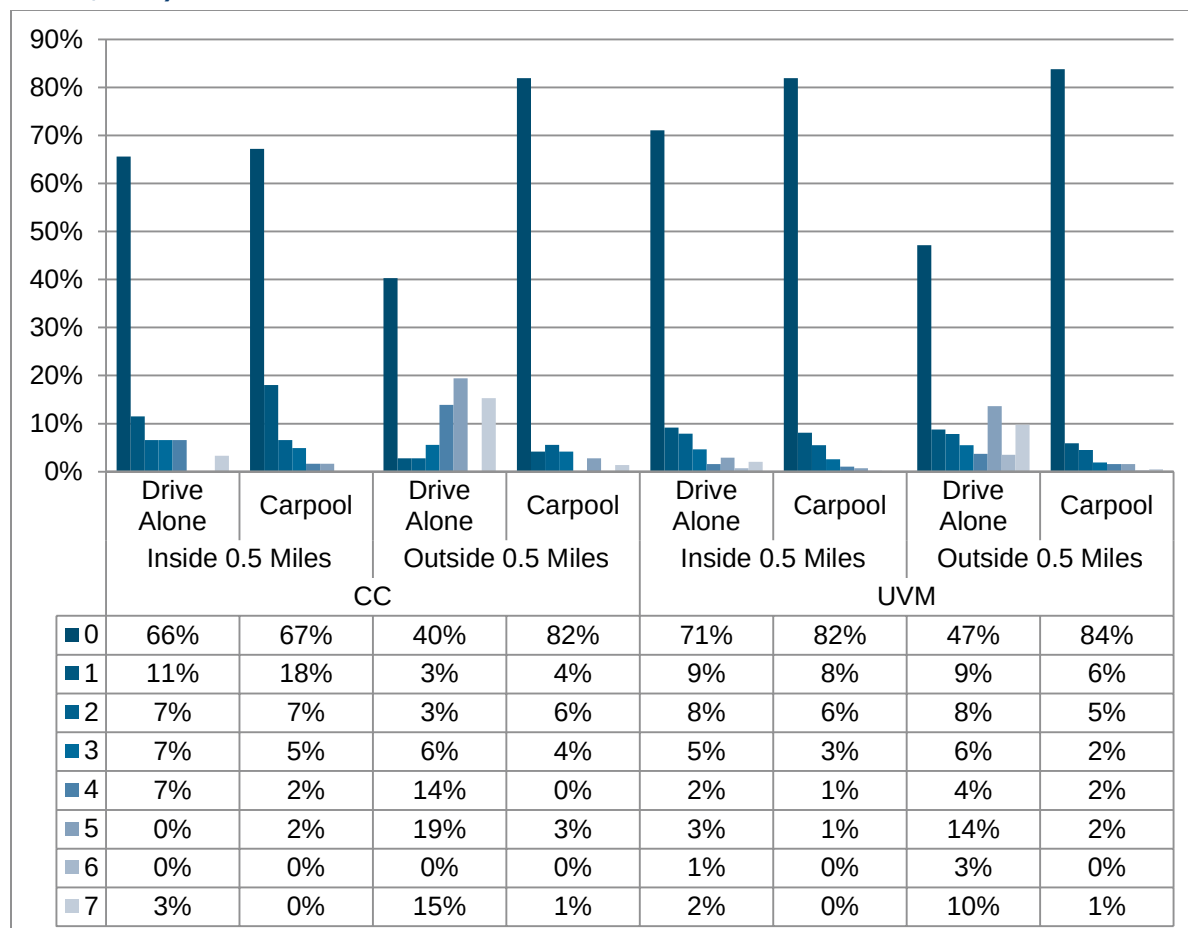
Source: Calculated by CATMA Staff using the 2016 CATMA Student Transportation Survey.

Note: Percentages are rounded to the nearest integer.

Figure 2-9 elaborates on the information for 2018 presented in Figure 2-7 by detailing the number of days per week commuter students reported driving alone and carpooling to campus. Of the 34% of CC students living within a half mile of campus reporting any driving alone over the course of a week, 11% drive alone one day per week, 21% drive two-four days per week, and 3% drive seven days per week. Meanwhile, of the 29% of UVM students living within a half mile of campus reporting any driving alone over the course of a week, 9% drive alone one day per week, 15% drive two-four days per week, 4% drive five-six days per week, and 2% drive seven days per week. With regard to carpooling, of the 33% of CC students living within a half mile of campus reporting any carpooling over the course of a week, 18% carpool one day per

week, 13% carpool two-four days per week, and 2% carpool five days per week. For the 18% of UVM students living within a half mile of campus reporting any carpooling over the course of a week, 8% carpool one day per week, 9% carpool two-four days per week, and 1% carpool five days per week.

FIGURE 2-9: SHARE OF COMMUTER STUDENTS DRIVING ALONE AND CARPOOLING (DAYS PER WEEK, 2018)



Source: Calculated by CATMA Staff using the 2018 CATMA Student Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

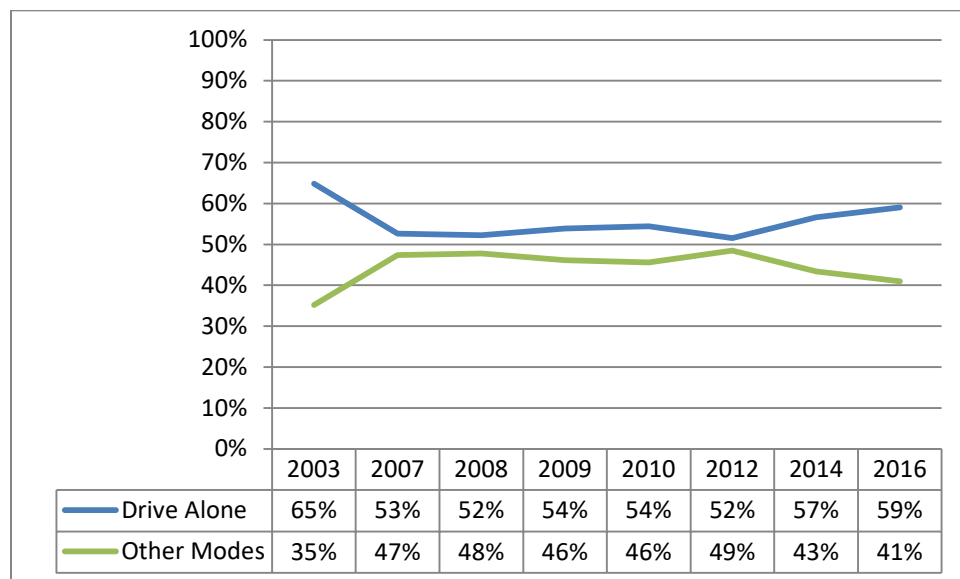
Trends in Employee Automobile Reliance

Employee travel surveys have collected consistent information about commute mode share since 2000; unlike the student surveys, information about vehicle ownership among employees has not been collected. As discussed in Figures 2-10 and 2-11, these indicators suggest automobile reliance among employees on the Hill has declined since 2000, with the exception of a recent increase in the share of UVM employees driving alone during the week.

Figure 2-10 presents trends in the primary commute mode for employees of CC, UVM, and UVM MC, across the Hill campus locations. The share of employees driving alone to the Hill campuses has consistently remained below 60% over the past decade. The lowest drive alone

rate (52%, in both 2008 and 2012) represents a 20% reduction from the 2003 level of 65%. In 2016, the most recent year a primary commute mode was collected, 59% of employees drove alone to Hill campuses, representing a 9% reduction from the 2003 drive alone rate of 65% and a 13% increase from the 2012 low of 52%.

FIGURE 2-10: PRIMARY COMMUTE MODE FOR ALL CATMA HILL INSTITUTION EMPLOYEES

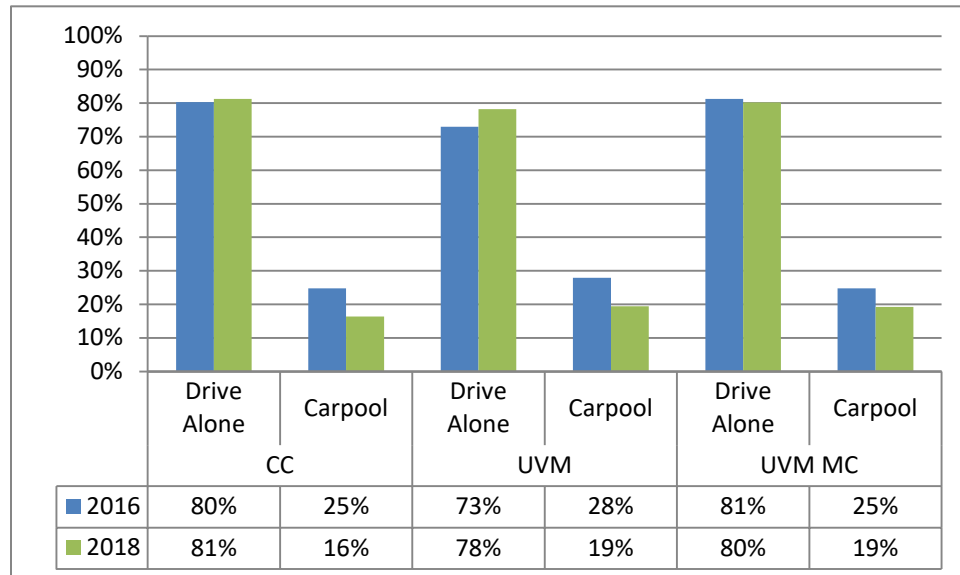


Sources: Calculated by CATMA Staff using the 2003-2016 CATMA Employee Transportation Surveys.

Note: Percentages are rounded to the nearest integer. Combined percentages for CC, UVM, UVM MC, including UVM MC main campus and One South Prospect and Champlain Mill (2003-2009).

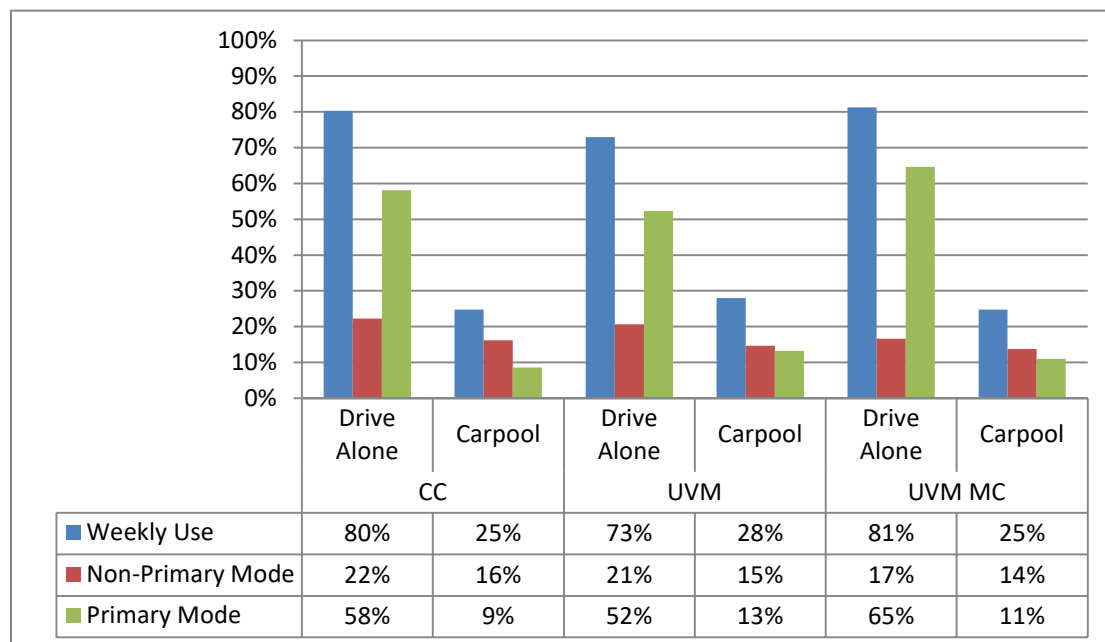
While the 2018 survey did not collect primary commute mode information, both the 2016 and 2018 surveys did collect information about travel modes used during a week (see Table 2-4). Similar to the information in Figure 2-7 for students, Figure 2-11 presents the share of employees who reported any driving alone or carpooling over the course of the week for 2016 and 2018. The share of employees driving alone over the course of the week has increased 7% at UVM between 2016 and 2018, but remained relatively level at CC and UVM MC. Meanwhile, the use of carpooling during the week has declined among employees across all three institutions.

As summarized in Figure 2-12, most employees at the Hill institutions who drive alone over the course of a week rely on driving alone as their primary mode. Meanwhile, significantly fewer employees report carpooling during the week (about a quarter across the Hill institutions), and carpooling is often a non-primary mode. The share of employees reporting driving alone and carpooling is similar at CC and UVM MC, while there is a slightly lower share reporting driving alone and higher share reporting carpooling at UVM.

FIGURE 2-11: SHARE OF EMPLOYEES REPORTING DRIVING ALONE AND CARPOOLING TO CAMPUS OVER THE COURSE OF THE WEEK (2016, 2018)

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Employee Transportation Surveys.

Notes: Percentages are rounded to the nearest integer. Tabulations for full-time and part-time workers have been combined; the 2018 survey did not collect full-time/part-time work status (see [Table TABLE 2-4](#)).

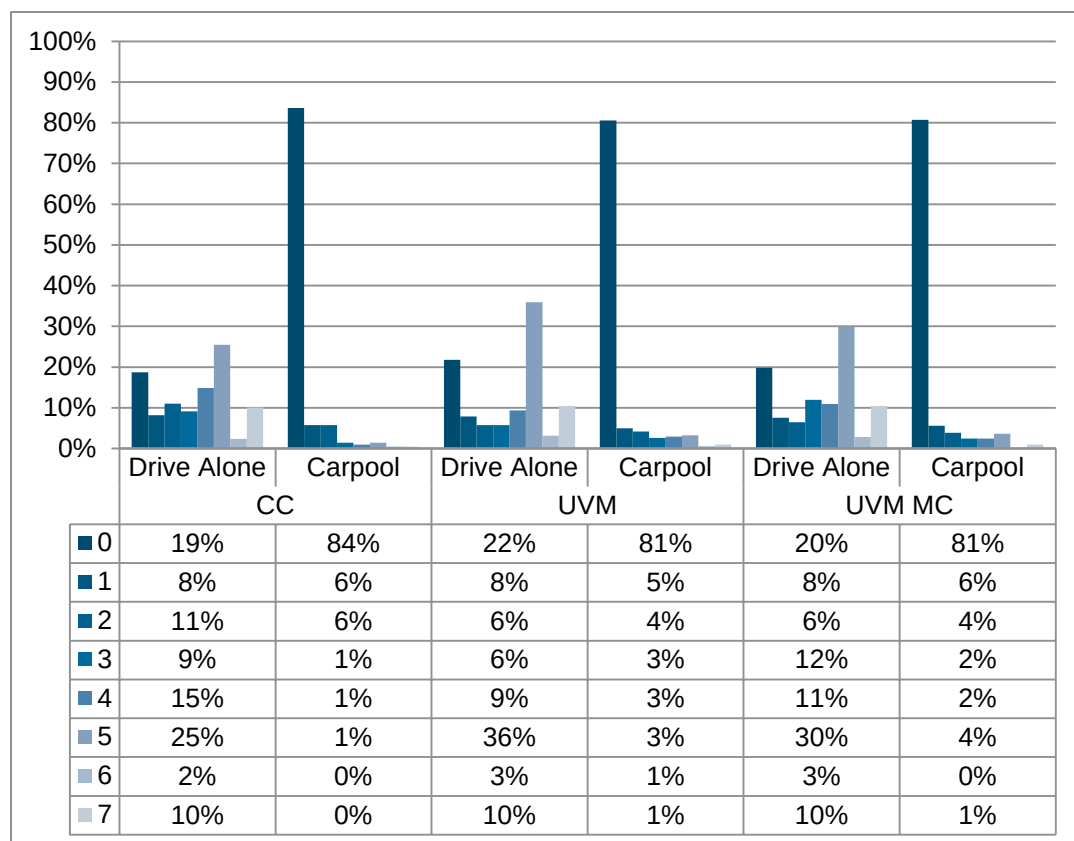
FIGURE 2-12: USE OF DRIVING ALONE AND CARPOOLING AS PRIMARY MODE VERSUS NON-PRIMARY MODE FOR EMPLOYEES (2016)

Source: Calculated by CATMA Staff using the 2016 CATMA Employee Transportation Survey.

Notes: Percentages are rounded to the nearest integer. Tabulations for full-time and part-time workers have been combined; the 2018 survey did not collect full-time/part-time work status (see [Table 2-4](#)).

Figure 2-13 elaborates on the information for 2018 presented in Figure 2-11 by detailing the number of days per week employees reported driving alone and carpooling to campus. Of the 81% of CC employees who drive alone during the week, 8% drive alone one day per week, 35% drive alone two-four days per week, 25% drive five days per week, and 12% drive six-seven days per week. Of the 78% of UVM employees who drive alone during the week, 8% drive alone one day per week, 21% drive alone two-four days per week, 36% drive alone five days per week, and 13% drive alone six-seven days per week. Of the 80% of UVM MC employees who drive alone during the week, 8% drive alone one day per week, 29% drive alone two-four days per week, 30% drive alone five days per week, and 13% drive alone six-seven days per week. Across the Hill institutions, employees who carpool during the week tend to carpool one-three days per week.

FIGURE 2-13: SHARE OF EMPLOYEES DRIVING ALONE AND CARPOOLING (DAYS PER WEEK, 2018)



Source: Calculated by CATMA Staff using the 2018 CATMA Employee Transportation Survey.

Notes: Percentages are rounded to the nearest integer. Tabulations for full-time and part-time workers have been combined; the 2018 survey did not collect full-time/part-time work status (see Table 2-4).

Parking Demand Calculations

The following chapters present three different types of data relevant to understanding the parking demand across the Hill institutions:

- 1) vehicle permit counts by location and/or user type

- 2) vehicle use (ownership and commute travel mode) reported in CATMA Student and Employee Transportation Surveys
- 3) and vehicle counts at parking lots

Each of these types of data contribute to an appreciation of the demand for parking, but each also has limitations. Vehicle permit counts provide information about user groups and parking locations, but are not reliable by themselves as permits are not necessarily used daily (typically, more permits are issued than are regularly used). The CATMA surveys solicit all students and employees attending classes and working on the Hill, but are vulnerable to errors in reporting and low response rates and sample populations. Vehicle counts at parking lots provide the most directly observed demand for parking, but do not provide detailed information about user groups.

Table 2-5 provides a summary of values across these three different data sources for CC, UVM, and UVM MC (see also Table 1-2). As expected, permit levels are consistently higher than observed occupancy across all three institutions; not all permits are used daily. While the parking demand estimates for CC and UVM based upon CATMA surveys suggest a net deficit in spaces, lot counts indicate occupancy (observed demand) typically does not exceed capacity.

TABLE 2-5: SUMMARY OF DATA SOURCES FOR CURRENT PARKING DEMAND ON THE HILL

	CC	UVM	UVM MC	Total
Permits	943	5,846	7,636	14,441
Surveys				
Demand	737	5,004	2,790	8,531
Supply	710	4,590	3,746	9,046
Net Spaces	-27	-414	956	515
Percent Full	104%	109%	74%	94%
Lot Counts				
Demand	610	4,260	2,225	7,095
Supply	707	4,590	2,505	7,802
Net Spaces	123	330	280	733
Percent Full	86%	93%	89%	91%

Sources: Permits are provided by institutional staff and based upon the number of permits issued in the fall of 2018. Survey totals are estimated using the 2016 and 2018 CATMA Student and Employee Transportation Surveys. Lot counts are based upon counts conducted by RSG (CC and UVM MC) in the fall of 2018 and by UVM staff in the winter of 2019.

Notes: Percentages are rounded to the nearest integer. Permit totals are based on the combined number of permits issued to all users eligible for campus parking permits. Net spaces are based on supply minus demand. Percent full is based on the quotient of demand over supply. Survey demand is estimated based on the number of users, peak share of users on campus, and a demand generator (auto ownership for residential students, and primary mode share for commuter students and employees). Peak period for surveys is weekdays 11:30am-1:30pm for residential students, and 12pm-1pm for commuter students and employees; peak period for lot counts is approximately 11am-1pm. Lot count totals are based on observed occupancy (demand) equaling the difference between capacity (supply) and empty spaces. For CC, the empty space count includes ADA, and special use spaces such as visitor, reserved, and service vehicle spaces. For UVM, the empty space count excludes ADA and special use spaces.

In this JIPMP, an effort is made to cross-reference the parking demand values to the greatest extent possible, and to point out, where possible, differences in the demand estimates generated by these varying sources. In addition, we acknowledge where projections for 2019 from the previous 2014-2019 JIPMP 5-Year Update vary from current estimates.

The tables for estimated parking demand have been updated to clearly distinguish first-year residential students from all other residential students, as they have unique parking restrictions imposed by both CC and UVM; prior JIPMPs estimated parking demand for residential students without distinguishing between first-year residential students and non-first-year residential students.⁷ In the following chapters, the estimated demand using survey data is based upon the following formula:

$$\text{Number of Users} \times \text{Share of Users on Campus at Peak Period} \times \text{Demand Generator} = \text{Estimated Parking Demand}$$

The number of users in each category is provided by institutional staff.

The share of users on campus at peak is based upon:

- 1) residential students: share of students on campus in the 11:30am-1:30pm time frame (2016 CATMA Student Transportation Survey)
- 2) commuter students: share of students on campus in the 12pm-1pm time frame (2016 CATMA Student Transportation Survey)
- 3) employees: share of students on campus in the 12pm-1pm time frame (2016 CATMA Employee Transportation Survey)

The demand generator is based upon:

- 1) residential first-year students: the share of students with parking permit waivers (source: institutional staff)
- 2) residential non-first-year students: the share of students with a personal vehicle (2018 CATMA Student Transportation Survey)
- 3) commuter students: the combined share of students using driving alone or carpooling (drive alone share + 0.5*carpool share) as primary commute modes to campus (2016 CATMA Student Transportation Survey)
- 4) employees: the combined share of employees using driving alone or carpooling (drive alone share + 0.5*carpool share) as primary commute modes to campus (2016 CATMA Employee Transportation Survey)

On-street Parking

It is acknowledged that some on-street parking occurs. The CATMA Student Transportation Surveys collect information about where students who bring a vehicle to campus park. This information is collected from residential students with a personal vehicle as well as commuter

⁷ The 2014-2019 JIPMP Table 24 reported 11,781 total UVM students for 2013 and 12,043 total UVM students for 2019, but included a total of 9,288 students in the parking demand calculations presented in Table 25 and 9,527 in the parking demand calculations in Table 26. The difference appears to be due to the exclusion of all first-year students. To improve clarity, this current JIPMP delineates first-year residential students and assigns them separate vehicle ownership levels from other residential students; a small number of first-year residential students are allowed parking waivers at both CC and UVM.

students who drive alone or carpool. The CATMA Employee Transportation Surveys collect information about where employees who bring a vehicle to campus (drive alone or carpool) park. An estimate of on-street parking during the peak period is calculated by multiplying the estimated parking demand for each user group times the share of users within each group reporting the use of on-street parking, as summarized in the following formula:

$$\begin{aligned} &\text{Number of Users} \times \text{Share of Users on Campus at Peak Period} \times \text{Demand Generator} \\ &\quad \times \text{Share of Users Parking On-Street} \\ &= \text{Estimated On-Street Parking Demand} \end{aligned}$$

Table 2-6 presents the share of CC and UVM student parking occurring on-street. While no CC residential first-year students used on-street parking in 2016, the combined share was 13.9% in 2018. Meanwhile, the combined share of UVM residential first-year students using on-street parking has decreased from 11.6% to 4.8%. Parking within two blocks of campus increased at CC among residential first-years, commuters living within a half mile of campus, and commuters living more than a half mile from campus (but decreased among non-first-year residential students).

TABLE 2-6: SHARE OF CC AND UVM STUDENTS USING ON-STREET PARKING (2016, 2018)

CC								
	Residential (1st Year)		Residential (All Others)		Commuters Inside 0.5 Miles		Commuters Outside 0.5 Miles	
	W/in 2 Blocks	Over 2 Blocks	W/in 2 Blocks	Over 2 Blocks	W/in 2 Blocks	Over 2 Blocks	W/in 2 Blocks	Over 2 Blocks
2016	0.0%	0.0%	3.5%	0.0%	25.0%	0.0%	7.4%	3.7%
2018	5.6%	8.3%	1.9%	1.9%	52.9%	8.8%	22.9%	6.3%
UVM								
	Residential (1st Year)		Residential (All Others)		Commuters Inside 0.5 Miles		Commuters Outside 0.5 Miles	
	W/in 2 Blocks	Over 2 Blocks	W/in 2 Blocks	Over 2 Blocks	W/in 2 Blocks	Over 2 Blocks	W/in 2 Blocks	Over 2 Blocks
2016	7.7%	3.9%	1.9%	0.5%	8.0%	3.7%	5.1%	7.1%
2018	1.5%	3.3%	0.4%	1.8%	10.8%	4.5%	4.5%	9.0%

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student Transportation Surveys.

Notes: Percentages are rounded to the nearest tenth of a percent.

Based upon data collected in the 2016 and 2018 CATMA Student and Employee Transportation Surveys, it is estimated that – during the peak period – 374 on-street parking spaces are used by CC, UVM, and UVM students and employees during the peak period, as presented in Table 2-7 (see also Table 1-3). This amounts to 4.4% of the total estimated peak parking demand of 8,531 spaces across students and employees (see Table 1-2).

Broken down across institutions and user groups, an estimated 16% of CC student peak parking demand goes to on-street spaces (64 out of a total of 404 estimated spaces), while an estimated 8% of UVM student peak parking demand goes to on-street spaces (198 out of a total of 2,472 estimated spaces). Meanwhile, an estimated 4% of CC employee peak parking demand goes to on-street spaces (12 out of a total 312 estimated spaces), while an estimated

4% of UVM employee peak parking demand goes to on-street spaces (85 out of a total of 2,113 total estimated spaces) and an estimated 0.6% of UVM MC employee peak parking demand goes to on-street spaces (16 out of an estimated 2,790 total estimated spaces).

TABLE 2-7: ESTIMATED ON-STREET PARKING SPACES FOR STUDENTS AND EMPLOYEES AMONG CC, UVM, AND UVM MC DURING THE PEAK PERIOD

CC Students	Within 2 Blocks	More Than 2 Blocks	# Street Spaces
Residential students	6	7	13
Commuter students	41	10	51
Subtotal	47	17	64
UVM Students	Within 2 Blocks	More Than 2 Blocks	# Street Spaces
Residential students	6	23	28
Commuter students	63	107	170
Subtotal	69	129	198
Employees			
CC			12
UVM			85
UVM MC			16
Subtotal			112
Grand Total			374

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student and Employee Transportation Surveys.

Notes: Number of on-street spaces is based upon the share of estimated parking for each user group as well as survey information collected about the location of parking for each user group. Estimated parking demand is based upon the primary mode share (drive alone + half the carpool share). Parking location information is collected for users who drive alone or carpool to campus. Peak period is 11:30am-1:30pm for residential students and 12pm-1pm for commuter students and employees.

2.5 COMPREHENSIVE DEVELOPMENT ORDINANCE ARTICLE 8 SUMMARY

Article 8 of Burlington's Comprehensive Development Ordinance (CDO) establishes the requirements for off-site parking throughout the city. It also includes parking for bicycles and requirements for institutional parking management plans. Table 2-8 summarizes Sections 8.1.1-8.1.15 of the CDO for each institution, which relates to General Requirements.

TABLE 2-8: SUMMARY OF CDO ARTICLE 8 (CC, UVM, AND UVM MC)

Section of Article 8	CC	UVM	UVM MC
Sec. 8.1.1: Purpose	Acknowledged	Acknowledged	Acknowledged
Sec. 8.1.2: Applicability	Acknowledged	Acknowledged	Acknowledged
Sec. 8.1.3: Parking Districts	Shared Use Parking District / Downtown Parking District	Shared Use Parking District	Shared Use Parking District

Section of Article 8	CC	UVM	UVM MC
Sec. 8.1.4: Existing Structures	838,191 SF 1,453 Res. Beds	5,580,372 SF 5,906 Res. Beds	1,698,739 SF 580 In-Patient Beds
Sec. 8.1.5: Existing Structures—Change or Expansion of Use	+38,500 SF +181 Res. Beds	+390,783 SF +500 Res. Beds	+33,863 SF
Sec. 8.1.6: Existing Structures—Exemption in Downtown District	194 St Paul St	N/A	N/A
Sec. 8.1.7: Non-Conforming Residential Structure	N/A	N/A	N/A
Sec. 8.1.8: Minimum Off-Street Parking Requirements	Waiver requested 2019: CDO Rq'd Parking: 1,428 – 1,676 <i>Actual Parking:</i> 500 On-Site 175 Off-Site 2024: CDO Rq'd Parking: 1,596 – 1,844 <i>Estimated Parking:</i> 500 On-Site 175 Off-Site	Waiver requested 2019: CDO Rq'd Parking: 11,161 – 11,342 <i>Actual Parking:</i> 5,410 On-Site 2024: CDO Rq'd Parking: 11,528 – 11,709 <i>Estimated Parking:</i> 4,610 On-Site	Waiver Requested 2019: CDO Rq'd Parking: 3,361 <i>Actual Parking:</i> 2,556 On-Site 1,190 Off-Site 2024: CDO Rq'd Parking: 3,070 <i>Estimated Parking:</i> 2,164 On-Site 1,090 Off-Site
Sec. 8.1.9: Maximum Parking Spaces	2019: 1,785 – 2,095 2024: 1,995 – 2,305	2019: 13,951 – 14,178 2024: 14,410 – 14,636	2019: 4,301 2024: 3,837
Sec. 8.1.10: Off-Street Loading Requirements	Acknowledged	Acknowledged	Acknowledged
Sec. 8.1.11: Parking Dimensional Requirements	Acknowledged	Acknowledged	Acknowledged
Sec. 8.1.12: Limitations, Location, Use of Facilities	Waiver requested	Waiver requested	Waiver requested
Sec. 8.1.13: Parking for Disabled Persons	Acknowledged	Acknowledged	Acknowledged
Sec. 8.1.14: Stacked or Tandem Parking Restrictions	Acknowledged	Acknowledged	Acknowledged
Sec. 8.1.15: Waivers from Parking Requirements/Parking Management Plans	Parking Management Plan presented in Chapter 3	Parking Management Plan presented in Chapter 4	Parking Management Plan presented in Chapter 5

3.0 CHAMPLAIN COLLEGE

3.1 OVERVIEW OF INSTITUTIONAL PARKING MANAGEMENT PLAN

Champlain College has a long and successful history of balancing the growth of the institution and the associated mobility needs that the institution requires to sustain that success. A 1994 Memorandum of Understanding between the City of Burlington and Champlain College ensured that the campus can develop within its boundaries on the condition that it is sensitive to the neighborhood context. In 2003, the campus first introduced the parking management program used today (consisting of zones and permits) to reduce traffic and parking in the neighborhood. Champlain College intends to maintain its parking management program and continues to strategize on moving parking from the campus core to off-site facilities. In recent years, important parking management policy updates have been implemented, including a \$100 fee per semester for all residential parking permits in 2016 (currently \$150 for the satellite lot and \$225 for the special on main campus Zone 5) and a restriction on first-year parking permits in 2018 (with limited exceptions).

Comprehensive Planning

The 2013 Transportation Plan⁸ provides an update to the original 2003 parking program and supports Champlain's 2007 Master Plan. The Transportation Plan was developed through a Campus Transportation Committee of faculty and staff representatives and summarizes current practices and recommends actions for managing parking and transportation on campus. The time horizon for this plan is the full implementation of Campus Master Plan, which is 2020.

Transportation Demand Management Programs (Sec. 8.3.3 (D))

This section covers:

1. **Policies** which restrict or prohibit the bringing of vehicles to the institution for various users or groups of users.
2. **Programs** to encourage the use of public transit, walking, bicycling, and the use of other alternative transportation modes.
3. **Implementation** of a parking permit system to allocate parking throughout the system.

⁸ Champlain transportation plans and reports available here: champlain.edu/current-students/campus-services/transportation-and-parking/about-transportation-office/plans-and-reports

TABLE 3-1: SUMMARY OF CC TDM PROGRAMS

STRATEGIES	AVAILABILITY
Parking management	Yes
TMA Membership	Yes, CATMA
Telecommuting	Some, available in certain departments
Carshare	Yes, CarShare Vermont
Bikeshare	Yes, Greenride Bikeshare
Off-site parking/shuttles	Yes
Public transit subsidies for employees	Yes
Shifting commuter students to residential students	Yes

Note: See also Table 2-2.

Champlain College buildings front on several Burlington city streets with on-street parking. These include Main Street, Summit Street, South Willard Street, St. Paul Street, and Maple Street. The 146 on-street spaces proximate to the core campus are not included within the College's parking inventory; however, the College's parking management program recognizes on-street spaces within the zonal parking permit system the College administers.

Although parking demand estimates show an overall deficit for CC, both currently and into the future, regular parking counts conducted by the College's Transportation and Parking staff indicate a high level of use, but some capacity remains. The Fall 2018 count (Table 3-14) shows an occupancy rate of 86%, slightly above 85th percentile parking management standard.

Champlain's long-term strategy is to minimize non-essential vehicles (vehicles that are not emergency, delivery, provide transportation equity, or related to the Physical Plant) within the core campus to create a pedestrian-forward environment. To accomplish this, Champlain is actively implementing its 2013 Transportation Plan, which puts in to place a new parking system that focuses short-term (4 hours or less) parking in the core while shifting longer-term parking to off-site facilities that are connected to the core via a high-frequency shuttle system.

Policies

Since 2006, Champlain has subscribed to CATMA's Unlimited Access Program to allow Champlain affiliates free access to GMT transit services with their Champlain identification.

CATMA's Guaranteed Ride Home Program is automatically provided to all residential students who obtain a Zone 2 parking permit. Employees and commuter students who obtain the Zone 1 parking permit are eligible to enroll for the program. This program provides free Green Cab taxi rides between satellite lots on Lakeside Avenue and 194 Saint Paul Street or the Main Campus anytime the shuttles are not in service.

Champlain partners with IPARQ, a national parking management company, to facilitate its permit sales and parking fine collections. In metered lots, payments can be made with the on-site kiosks or through the ParkMobile mobile application. The ParkMobile app is used throughout Burlington which allows for automatic payment and has the capability to add additional parking time remotely.

Champlain's Physical Plant Services and associated equipment (vehicles, tools, etc.) are located off of the Main Campus on 40 Sears Lane. Physical Plant employees park their cars at 40 Sears Lane and use the campus' service vehicle fleet throughout the day.

In 2015, the Active Transportation Plan was created as an addendum to the 2013 Transportation Plan. This initiative reinforces the College's commitments to fostering active transportation culture and reducing motorized vehicle use for students, employees, and local visitors.

Most recently, as highlighted above, a fee per semester for all residential parking permits was implemented in 2016 and a restriction on first-year parking permits was implemented in 2018. Both of these policies were specifically intended to manage the College's parking demand.

Bicycle Infrastructure & Parking

Champlain College supports bicycle travel in several ways, including:

- Eligibility to participate in the CATMA Bike/Walk Rewards Program.
- Promotion of Bicycle Benefits program.
- Bike share program through the Greenride system.
- Access to covered bike storage in the CCM building.
- Access to shower facilities on campus to its bicycling constituents.
- Access to bicycle parking in the form of racks⁹.
- Access to bicycle racks on both campus shuttles that run between central campus and Lakeside.
- Access to bicycle pumps and tool stands around campus.
- Participation in on-site bicycle educational workshops coordinated by CATMA in partnership with Local Motion.
- Coordination with Local Motion to assess and improve campus bicycle racks.
- Advocacy with the Burlington Walk/Bike Council to raise bicycling awareness on campus and in the community.

Bicycle and Pedestrian Accessibility

- Improve Americans with Disabilities Act (ADA) accessibility to and on campus.
- Provide connections to all transit stops.
- Work with the City to provide for pedestrian and bicycle access, circulation, and amenities in site planning for specific facilities.

⁹ See map of racks on campus at <http://bit.ly/CCBikeRacks>

Programs

To encourage the use of alternative transportation modes, the College will continue:

- Regulating parking through its parking program.
- Membership in CATMA for access to a comprehensive suite of TDM programs, services, and workshops.
- Influencing commuter mode choice through the Sustain Champlain initiative. Sustain Champlain educates the campus constituency about their environmental impacts which may influence their choices when it comes to driving to campus.
- Working with Local Motion and Burlington Walk/Bike Council to advocate for and encourage non-vehicular modes.
- Promoting the health benefits of bicycling and walking through the award-winning Wellbeing Program for employees.
- As Champlain's facilities have changed over the past five years, so have the shuttle routes and schedules. As of January 2019, the shuttle bus system runs between the CCM Center on Main Campus, 194 Saint Paul Street Apartments, the Miller Center at 175 Lakeside Avenue and 115 Lakeside Avenue (the residential student parking lot).
- The shuttle system is operated in conjunction with Mountain Transit. As a general rule, shuttles run:¹⁰
 - o Weekdays: Monday–Friday, 6:30 AM–11 PM.
 - o Weekends: Saturday–Sunday 10 AM–9 PM.

Implementation

The Champlain College parking program was implemented in 2003 and substantially updated in 2013. The program manages on-site core campus parking, on-street parking, and off-site satellite parking serviced by shuttles to and from the core campus. A total of five parking zones, with four on-site and one off-site as shown in Figure 3-1.

Key elements of Champlain College's parking policy¹¹ are as follows:

- All vehicles (student, faculty, staff, and vendor) must be registered with the Transportation Office and have properly displayed permits. Vehicles must be parked in the zone for which they have been permitted. Beginning in 2018, first-time, first-year residential students (less than two full-time, post High School, college semesters) have not been permitted to bring a vehicle to campus (with rare exceptions made for waivers).

¹⁰ Detailed schedules can be found at champlain.edu/shuttle.

¹¹ Details on Champlain's parking regulations can be found at champlain.edu/current-students/campus-services/transportation-and-parking/parking/general-regulations.

- No employee or student can receive more than one permit per semester. Two cars may be associated with each permit, but only one registered car may be parked in College zones or designated parking areas at any one time and must display the parking permit decal. The parking permit decals are removable and should be swapped between cars depending on which one will be brought to campus that day.
- Parking space is not guaranteed.
- Residential students must park in the Zone 2 (Lakeside) lot. Permits in Zone 2 cost \$150 per semester, and all residential student vehicles must be registered. Residential students are not allowed to park in the metered lots or along any city streets between 8 AM and 4 PM, Monday through Friday. The Champlain shuttle provides free service between the Lakeside Lot and the Champlain campus, including 194 Saint Paul. When the shuttle is not running, students can use the CATMA Guaranteed Ride Home Program for a free cab ride between the Lakeside Lot and campus.
- Champlain College students and employees are prohibited from parking on any Burlington-street that is not specifically zoned for Champlain College affiliates. Students and employees are not considered “public” with regards to parking.
- Visitors to the Admissions Office may park in the Admissions Visitor Parking Lot located at Perry Hall.
- Three short-term lots. Miller Information Commons and Summit Hall have a limit of four hours per day. Skiff Hall has a limit of two hours per day.
- Perry Hall/West Hall, Boardman Hall and Finney Quad are restricted and enforced 24 hours per day, seven days per week. Boardman Hall lot is for those who obtain a Zone 5 permit only. Perry Hall/West Hall lot is for visitors to the Admissions Office only.
- The cost of parking permits by user group are shown in Table 3-2. ALL Zone 1, 3 and 4 permit holders may park in the 175 Lakeside Lot at any time without having to obtain special permission. Evening commuter students, displaying a valid Zone 1 permit, may park in any available zoned lot (except West Hall/Perry Hall, Boardman Hall, Cushing, IDX or Finney Quad) or on-street zoned area after 4 p.m. for free, but the valid Champlain permit must still be displayed at all times.

TABLE 3-2: CC PERMIT FEES (2018 ACADEMIC YEAR)

USER GROUPS		COSTS
Zone 1	Commuter Students and Employees	Free
Zone 2	Residential Students	\$150 per semester
Zone 3	Commuter Students and Employees Only	\$170 per semester for full-time \$75 per semester for part-time
Zone 4	Commuter Students and Employees Only	\$200 per semester for full-time \$90 per semester for part-time
Zone 5	Education majors and other students with specific work requirements	\$225 per semester

FIGURE 3-1: CC PARKING ZONES

CHAMPLAIN COLLEGE

ACADEMIC BUILDINGS/FACILITIES

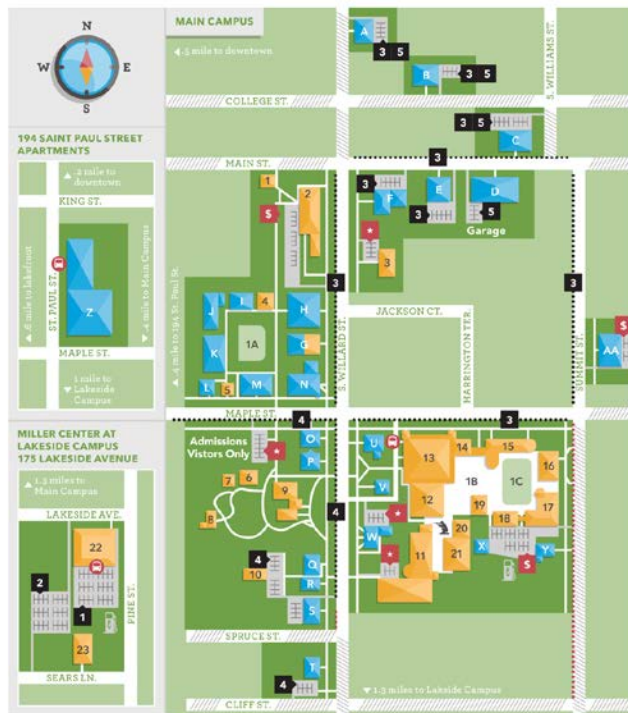
- 1 The Gallery
- 2 Skiff Hall & Skiff Annex
- 3 Durick Hall
- 4 Garden House
- 5 Coolidge House
- 6 West Hall
- 7 Carotaker's Cottage
- 8 Metz Studio Barn
- 9 Welcome & Admission Center at Roger H. Perry Hall
- 10 Rowell Annex
- 11 IDX Student Life Center
- 12 Alumni Auditorium
- 13 Center for Communication & Creative Media
- 14 Hauke Family Campus Center
- 15 S.D. Ireland Family Center for Global Business & Technology
- 16 Aiken Hall
- 17 Miller Information Commons
- 18 Foster Hall
- 19 Wick Hall
- 20 Frogman Hall
- 21 Joyce Learning Center
- 22 The Miller Center at Lakeside Campus
- 23 Physical Plant/Generator

RESIDENTIAL BUILDINGS

- A North House
- B Sanders Hall
- C 396 Main Street
- D Boardman Hall
- E 371 Main Street
- F 158 South Willard Street
- G Whiting Hall/Student Health Center
- H Juniper Hall
- I Adirondack Hall
- J Lakeview Hall
- K Butler Hall
- L 308 Maple Street
- M Valcour Hall
- N McDonald Hall
- O Hill Hall
- P Lyman Hall
- Q Rowell Hall
- R Bankus Hall
- S Jensen Hall
- T South House
- U Badger Hall
- V Cushing Hall
- W Pearl Hall
- X Carriage House
- Y Schillhammer Hall
- Z 194 Saint Paul Street
- AA Summit Hall

COMMON SPACES

- 1A Finney Quad
- 1B Rozendal Courtyard
- 1C Aiken Quad



Parking Legend

- Samuel de Champlain Statue
- Academic Buildings
- Residential Buildings
- Parking Lots (Accessible)
- Campus Shuttles
- Metered Parking
- Restricted Parking
- Zoned Street Parking
- City Residential Permit Only
- No Champlain Parking

Map is not drawn to scale.

PARKING PERMIT ZONES

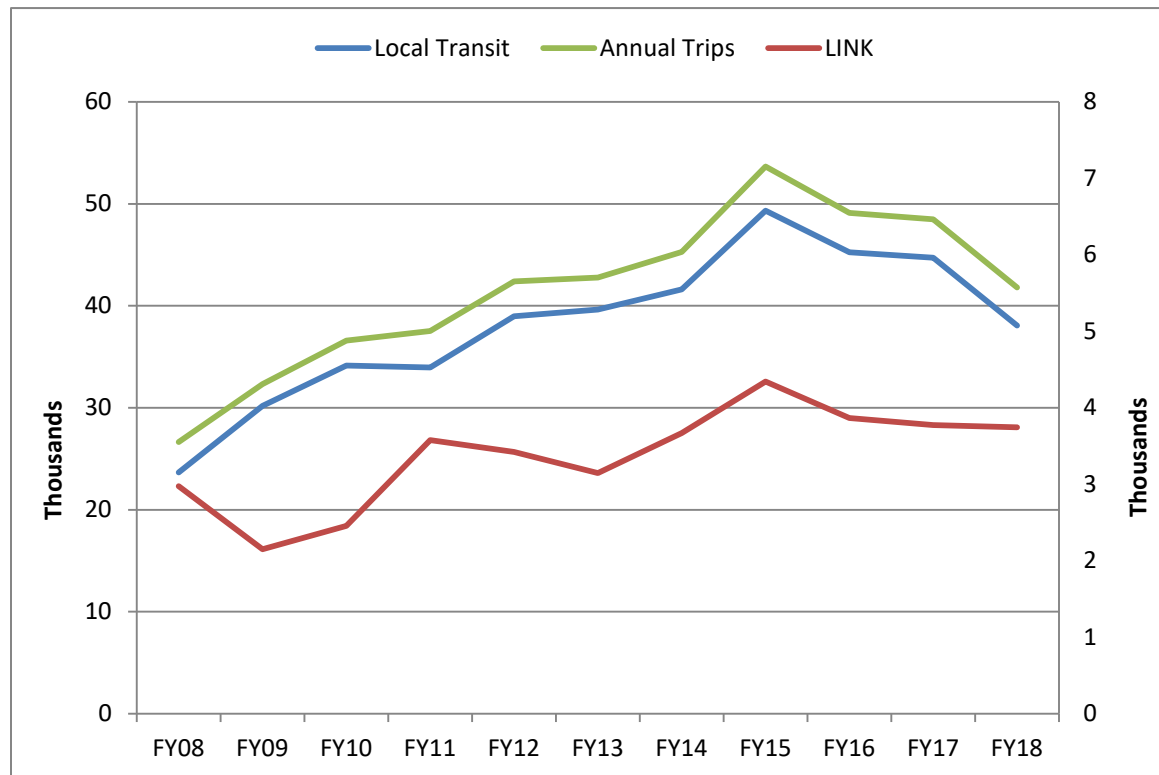
- 1 Commuters (Employees & Students) at 175 Lakeside Avenue
- 2 Residential Students at 115 Lakeside Avenue
- 3 Commuters (Employees & Students)*
- 4 Commuters (Employees & Students)*
- 5 Special Residential Permit Parking 24/7

*On-street parking is open to the general public. Between 8:00 AM-4:00 PM, Monday-Friday, on-street parking is also open to students, staff and faculty who display a valid Zone 3 or 4 permit. Space is not guaranteed.

Student and Employee Travel Trends

Over the past years, Champlain's parking management plan has proven to be effective in mitigating parking demand and encouraging the use of transportation alternatives. As of Fall 2018, the CDO suggests that parking supply for the College should be 1,428. With a policy that requires all Champlain students, employees, and staff obtain a visible parking permit the College has been successfully managing parking demand with a supply of 707 counted spaces, with an observed 86% occupancy rate (see Table 3-14). In 2006, Champlain joined the CATMA Unlimited Access Program, which provides unlimited access on existing GMT public transit services to the College's employees, faculty, students, and staff. The long-term trend of annual trips on local transit and LINK buses are shown in Figure 3-2. Table 3-3 shows the annual ridership trends since FY2008 and the annual costs to provide the Unlimited Access Program.

FIGURE 3-2: CC UNLIMITED ACCESS PROGRAM ANNUAL RIDERSHIP (FY08-FY18)



Source: Calculated by CATMA Staff using GMT Monthly Ridership Reports.

Notes: CATMA Express Shuttle ceased operations in 2009; results only include GMT local and LINK routes, not shuttles.

TABLE 3-3: CC UNLIMITED ACCESS ANNUAL RIDERSHIP (FY08-FY18)

YEAR	LOCAL TRANSIT	LINK	ANNUAL TRIPS	ANNUAL CHANGE	CHAMPLAIN COST FOR SERVICE	AVG. COST PER RIDE
FY08	23,658	2,974	26,632		\$29,508.24	\$1.108
FY09	30,181	2,151	32,332	21.4%	\$33,147.54	\$1.025
FY10	34,134	2,457	36,591	13.2%	\$37,753.56	\$1.032

YEAR	LOCAL TRANSIT	LINK	ANNUAL TRIPS	ANNUAL CHANGE	CHAMPLAIN COST FOR SERVICE	AVG. COST PER RIDE
FY11	33,956	3,579	37,535	2.6%	\$40,474.80	\$1.078
FY12	38,967	3,425	42,392	12.9%	\$44,296.56	\$1.045
FY13	39,643	3,146	42,789	0.9%	\$44,385.30	\$1.037
FY14	41,628	3,669	45,297	5.9%	\$46,959.94	\$1.037
FY15	49,326	4,345	53,671	18.3%	\$55,518.90	\$1.036
FY16	45,251	3,866	49,117	-8.4%	\$51,159.42	\$1.042
FY17	44,720	3,773	48,493	-1.1%	\$50,277.70	\$1.035
FY18	38,069	3,746	41,815	-13.9%	\$43,965.54	\$1.051

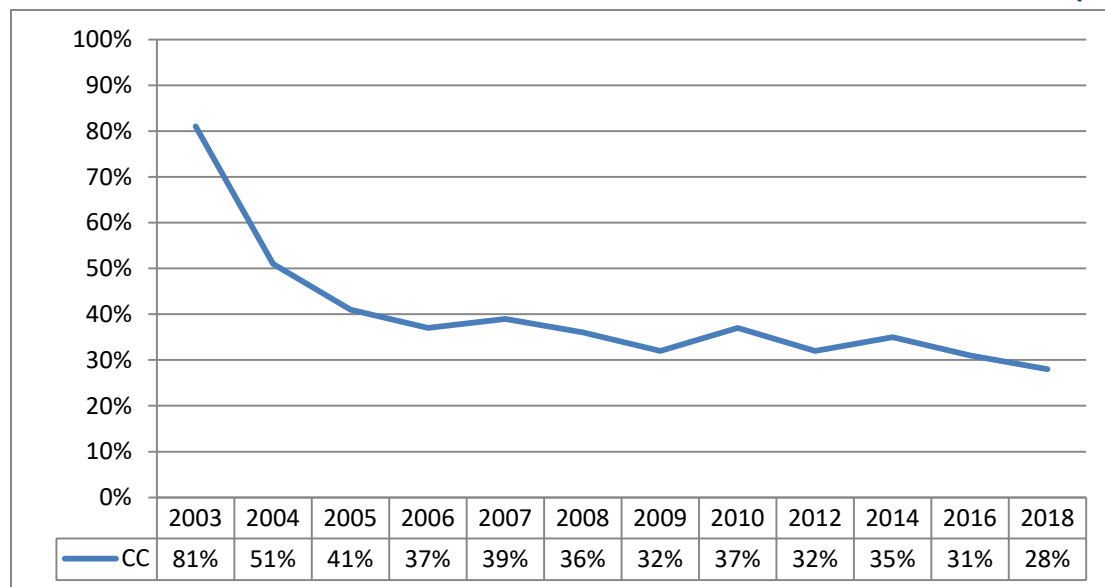
Source: Calculated by CATMA Staff using GMT Monthly Ridership Reports.

Notes: CATMA Express Shuttle ceased operations in 2009; results only include GMT local and LINK routes, not shuttles.

CATMA conducts a biennial survey on the travel behavior of CC students, including their vehicle ownership and primary mode for commuting to and from campus. The surveys target the three student populations: on-campus residents, commuters within a half mile of campus, and commuters more than a half mile to campus. The students self-select their category in the travel survey.

The above-mentioned actions taken by CC and CATMA have provided effective TDM to reduce the parking demand in the core campus and adjacent streets. CATMA survey results, shown below in Figure 3-3 (see also Figure 2-5), indicate that the percentage of residential Champlain students who bring a car to Burlington for the semester has continued to decline; approximately 28% of residential students brought a car in 2018, a 65% decrease from the 2003 level of 81%.

FIGURE 3-3: SHARE OF CC RESIDENTIAL STUDENTS WITH PERSONAL VEHICLES (2003–2018)



Source: Calculated by CATMA Staff using 2003-2018 CATMA Student Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

The share of commuting students using driving alone as their primary mode to campus has declined at CC since 2003, as presented in Figure 3-4 (see also Figure 2-6). At CC, the share of students primarily relying on driving alone who live within a half mile of campus declined 86%

between 2003 and 2016, from 51% to 7%. For students living more than a half mile from campus, there was a 58% decline.

FIGURE 3-4: SHARE OF CC COMMUTER STUDENTS WITH DRIVE ALONE AS PRIMARY COMMUTE MODE (2003-2016)



Source: Calculated by CATMA Staff using 2003-2016 CATMA Student Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

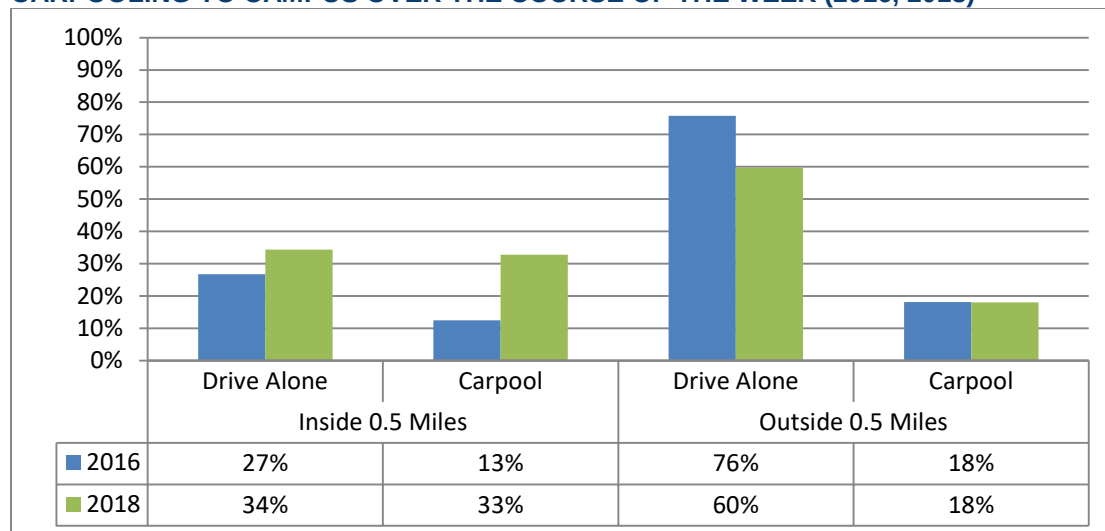
Most of the commuter students living within a half mile of campus who drive alone over the course of a week do not rely on driving alone as their primary mode. Specifically, in 2016, 27% of CC commuter students living within a half mile of campus reported any driving alone during the week, including 7% who relied on driving alone as their primary mode. For commuter students living more than a half mile from campus, a slightly higher share rely on driving alone as their primary mode at CC (39% versus 37%). Most of the commuter students living within a half mile of campus who carpool over the course of a week do not rely on carpooling as their primary mode, and none of the students living more than a half mile from campus rely on carpooling as their primary mode.

Figure 3-5 presents the share of CC commuter students who reported any driving alone or carpooling over the course of the week for 2016 and 2018. The share of students living within a half mile of campus reporting any driving alone and any carpooling to campus has increased at CC, while the share driving alone has decreased for students living more than a half mile from campus.

Most of the commuter students living within a half mile of campus who drive alone over the course of a week do not rely on driving alone as their primary mode. Specifically, in 2016, 27% of CC commuter students living within a half mile of campus reported any driving alone during the week, including 7% who relied on driving alone as their primary mode. For commuter students living more than a half mile from campus, a slightly higher share rely on driving alone as their primary mode at CC (39% versus 37%). Most of the commuter students living within a half mile of campus who carpool over the course of a week do not rely on carpooling as their

primary mode, and none of the students living more than a half mile from campus rely on carpooling as their primary mode.

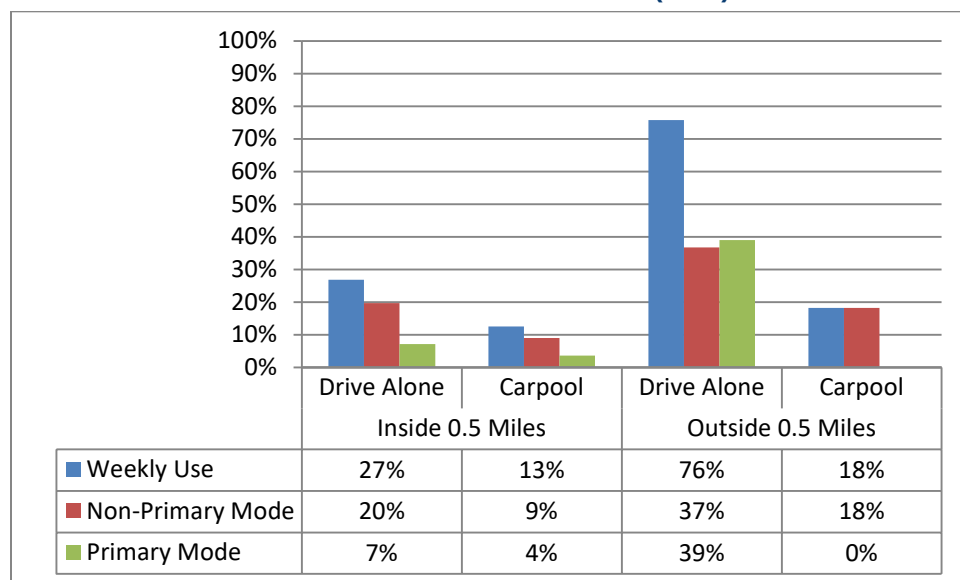
FIGURE 3-5: SHARE OF CC COMMUTER STUDENTS REPORTING DRIVING ALONE AND CARPOOLING TO CAMPUS OVER THE COURSE OF THE WEEK (2016, 2018)



Source: Calculated by CATMA Staff using 2016 and 2018 CATMA Student Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

FIGURE 3-6: USE OF DRIVING ALONE AND CARPOOLING AS PRIMARY MODE VERSUS NON-PRIMARY MODE FOR CC COMMUTER STUDENTS (2016)



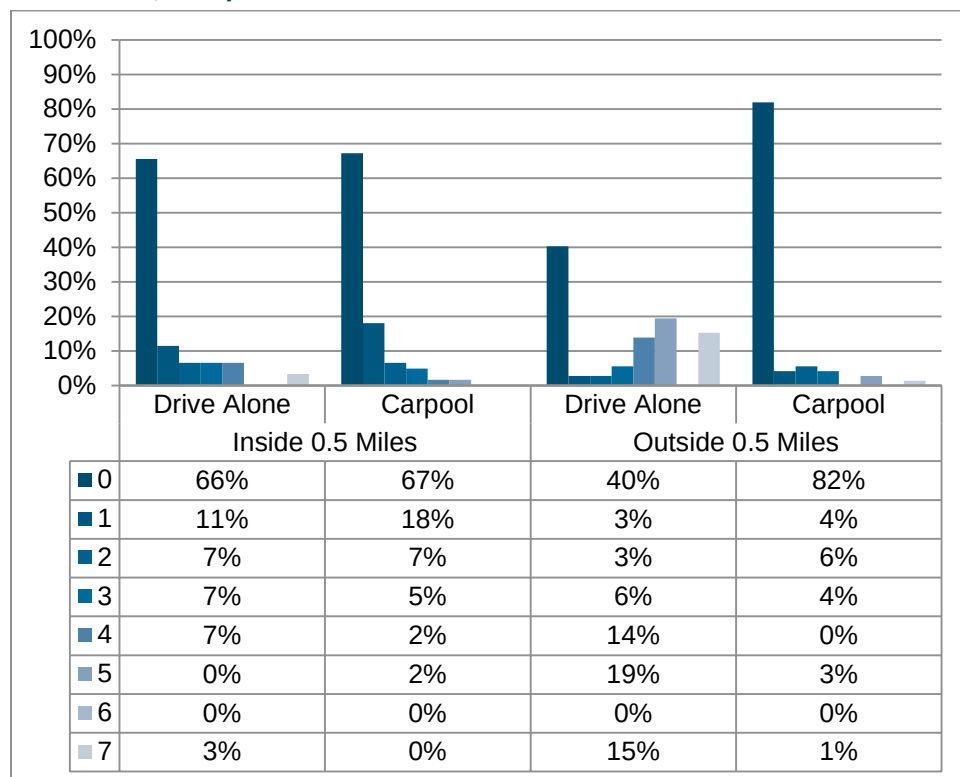
Source: Calculated by CATMA Staff using 2016 CATMA Student Transportation Survey.

Note: Percentages are rounded to the nearest integer.

Figure 3-7 elaborates on the information for 2018 presented in Figure 3-5 by detailing the number of days per week commuter students reported driving alone and carpooling to campus. Of the 34% of CC students living within a half mile of campus reporting any driving alone over the course of a week, 11% drive alone one day per week, 21% drive two-four days per week, and 3% drive seven days per week. With regard to carpooling, of the 33% of CC students living

within a half mile of campus reporting any carpooling over the course of a week, 18% carpool one day per week, 13% carpool two-four days per week, and 2% carpool five days per week.

FIGURE 3-7: SHARE OF CC COMMUTER STUDENTS DRIVING ALONE AND CARPOOLING (DAYS PER WEEK, 2018)



Source: Calculated by CATMA Staff using 2018 CATMA Student Transportation Survey.

Note: Percentages are rounded to the nearest integer.

Table 3-4 presents an estimate of the number of on-street parking spaces used by CC students during the peak period, based upon the share of students reporting use of on-street parking when driving alone or carpooling. In total, an estimated 13 residential students use on-street parking and 51 commuting students use on-street parking. 73% of the estimated demand is within two blocks of campus.

TABLE 3-4: ESTIMATED ON-STREET PARKING AMONG CC STUDENTS DURING PEAK PERIOD (2018)

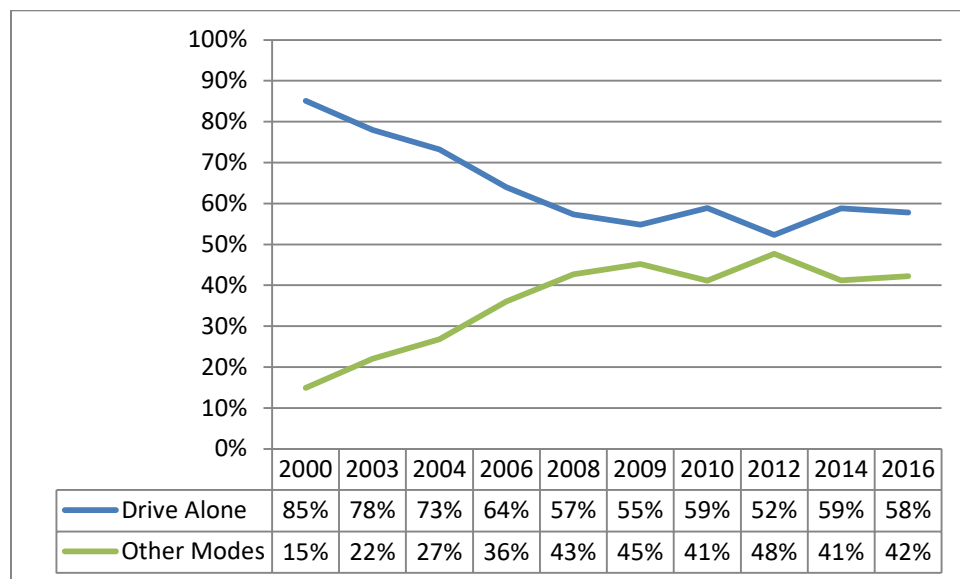
Champlain College	Within 2 Blocks	More Than 2 Blocks	# Street Spaces
Residential students	6	7	13
Commuting students	41	10	51
Total	47	17	64

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student Transportation Surveys.

Notes: Number of on-street spaces is based upon the share of estimated parking for each user group as well as survey information collected about the location of parking for each user group. Estimated parking demand is based upon the primary mode share (drive alone + half the carpool share). Parking location information is collected for users who drive alone or carpool to campus. Peak period is 11:30am-1:30pm for residential students and 12pm-1pm for commuter students.

The share of CC employees driving alone to the Hill campuses has consistently remained below 60% over the past decade. Figure 3-8 presents trends in the primary commute mode for employees of CC. The lowest drive alone rate (52% in 2012) represents a 39% reduction from the 2000 level of 85%. In 2016, the most recent year a primary commute mode was collected, 58% of CC employees drove alone to work, representing a 12% increase from the 2012 low.

FIGURE 3-8: CC EMPLOYEE COMMUTE MODE



Source: Calculated by CATMA Staff using 2000-2016 CATMA Employee Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

Finally, an estimated total of 12 on-street parking spaces are used by CC employees during the peak period (see Table 1-3 and Table 2-7), based upon the share of employees reporting use of on-street parking when driving alone or carpooling (calculated by CATMA Staff using the 2016 and 2018 CATMA Student and Employee Transportation Surveys). In total, an estimated 88% of CC employees who use on-street parking do so without a permit.

3.2 EXISTING CONDITIONS

Employment

In Fall 2018, Champlain College employed a total of 1,106 individuals with 792 of those individuals in Vermont and potentially visiting campus regularly. Additionally, 88 contracted services employees (such as Sodexo food service, cleaners, etc.) were on campus on a regular basis. A combined total of 880 CC employees are eligible for parking permits on the Hill.

TABLE 3-5: CC ON-CAMPUS EMPLOYMENT

ON-CAMPUS EMPLOYMENT	2018 ACADEMIC YEAR
Full-time Employees	377
Part-time Employees	415
Contracted Employees (Cleaners, Sodexo etc.)	88
Total Employees Eligible for Parking Permits	880

TABLE 3-6: CC OFF-CAMPUS EMPLOYMENT

	2018 ACADEMIC YEAR
Full-time Online Employees	2
Part-time Online Employees	244
Dublin and Montreal Campuses	68
Total Off-Campus Champlain Employees	314

Enrollment

Total enrollment at Champlain College at the start of the 2018 academic year was 4,556 students, over half of which was made up by off-campus online students.

TABLE 3-7: CC ON-CAMPUS ENROLLMENT

	2018 ACADEMIC YEAR
Full-time Traditional Undergraduates	2,047
Part-time Traditional Undergraduates	82
Full-time Graduates	9
Part-time Graduates	6
Full-time Undergraduate Continuing Professional Studies	21
Part-time Undergraduate Continuing Professional Studies	9
Total On-Campus	2,174

TABLE 3-8: CC OFF-CAMPUS ENROLLMENT

	2018 ACADEMIC YEAR
Full-time Graduates	624
Part-time Graduates	94
Full-time Undergraduate Continuing Professional Studies	436
Part-time Undergraduate Continuing Professional Studies	1,228
Total Off-Campus	2,382

Parking Districts (Sec. 8.1.3)

The core Champlain College campus is located in a Shared Use Parking District. The new 194 St. Paul Street apartment building is in the Downtown Parking District.

Existing Structures (Sec. 8.1.4)

The formal parking inventory for Champlain is maintained by the College and CATMA and informed by a physical count conducted in 2018. Table 3-9 depicts Champlain's parking inventory by building, primary use, number of residents, and gross square footage (GSF)—characteristics used by this plan to calculate parking supply and demand. The total number of campus parking spaces, 710, is 40 less than was estimated in the 2014-2019 JIPMP 5-Year Update (see estimate of 750 in Table 6 of that document). CC's parking inventory includes 710 spaces, with 175 of those on the leased Lakeside Lot property and 32 leased across two additional locations (371 Main and 158 S. Willard). These leased parking spaces are included in the campus parking inventory because they have been leased specifically to provide additional parking and enable TDM options on campus. CC also leases 40 spaces at the physical plan

located at 40 Sears Lane; these leased spaces are not included in the parking inventory or estimates for parking demand.

TABLE 3-9: CC BUILDING AND PARKING INVENTORY (FALL 2018)

NAME	PRIMARY USE	GSF	RESIDENTIAL BEDS	PARKING SPACES
194 St Paul Street	Residential/Retail (4,455 GSF Retail)	175,000	314	0
308 Maple	Residential	5,223	14	0
396 Main	Residential	8,801	39	20
Adirondack House	Residential	4,631	20	0
Aiken Hall	Administrative/Academic	13,701	0	0
Bader Hall	Residential	8,140	22	0
Bankus Hall	Residential	10,432	50	0
Butler Hall	Residential	26,730	89	0
Carriage House	Residential	2,376	15	0
Center for Communications and Creative Media (formerly Hauke/Alumni)	Administrative/Academic	87,187	0	0
Cushing Hall	Residential	9,095	30	7
Durick Hall	Administrative	4,036	0	3
Foster Hall	Administrative/Academic	7,008	0	0
Freeman Hall	Administrative/Academic	11,992	0	0
Garden House (ARC)	Administrative	4,371	0	0
Goodhue Coolidge House	Administrative/Academic	4,054	0	0
Hill Hall	Residential	9,203	40	0
IDX Student Life Center	Administrative/Athletic/ Dining	49,939	0	5
Jensen Hall	Residential	9,972	41	9
Joyce Learning Center	Academic	20,483	0	0
Juniper	Residential	28,732	90	0
Lakeside Campus (Miller Center at Lakeside)	Administrative	39,552	0	267
Lakeview Hall	Residential	18,033	81	0
Lyman Hall	Residential	8,550	44	0
Boardman Hall	Residential	31,932	59	28
McDonald Hall	Residential	10,922	50	0
Miller Information Commons	Academic	29,860	0	42
North House	Residential	5,402	21	10
Pearl Hall	Residential	10,874	50	0
Perry Caretaker's Cottage	Residential	444	1	0
Perry Carriage Barn	Academic	5,546	0	0
Perry Hall	Administrative/Academic	27,847	0	16
Rowell Annex	Administrative	2,882	0	0
Rowell Hall	Residential	9,954	52	33
Sanders Hall	Residential	9,716	37	8
Schillhammer Hall	Residential	7,836	27	0
SD Ireland Family Center for Global Bus & Tech	Administrative/Academic	24,390	0	0
Skiff Hall	Administrative	12,493	0	15
Skiff	Administrative/Academic	3,354	0	0
South House	Residential	12,608	51	12

NAME	PRIMARY USE	GSF	RESIDENTIAL BEDS	PARKING SPACES
Summit Hall	Residential	15,271	51	28
The Gallery	Academic	633	0	0
Valcour Hall	Residential	30,028	91	0
West House	Administrative	3,718	0	0
Whiting Hall	Residential	9,975	44	0
Wick Hall	Administrative/Academic	5,265	0	0
Subtotal		838,191	1,453	503
<i>Parking Facilities Leased by Champlain College via CATMA</i>				
115 Lakeside Lot (formerly Gilbane)				175
<i>Additional Facilities Leased by Champlain College</i>				
371 Main	Residential (temporary)	13,326	30	21
158 South Willard	Residential (temporary)	10,900	29	11
Total Campus Parking Spaces				710

Notes: None of the parking associated with 194 St Paul is included in Champlain's parking inventory, as approved by the Burlington Development Review Board. GFA and residential beds are included in parking supply and demand calculations. Perry Hall lot is reserved for visitors to the Admissions Office only.

Table 3-10 summarizes properties owned by CC but not included in the parking inventory. The recently completed 194 St Paul Street apartments are a special case—its parking is not included in CC's inventory, but its total residential footprint in terms of area and beds are included in this plan's parking calculations. The decision to exclude the parking at 194 St Paul Street from CC's inventory was approved by the Burlington Development Review Board on May 19, 2014 since none of the parking is associated with student housing. Out of 67 spaces, 53 are public, nine reserved for commercial and Browns Court residential tenants, two given to neighbors who lost on-street parking with the building's construction, one reserved for CC building staff, and two "spare" spaces currently used by contracted staff (e.g. cleaning, maintenance) on an ad-hoc basis.

TABLE 3-10: CC OWNED PROPERTIES NOT INCLUDED IN PARKING INVENTORY

NAME	PRIMARY USE	GSF	RESIDENTIAL # OF BEDS	PARKING SPACES
194 St Paul Street	Residential/Retail	4,445	--	67
390 Maple St	Residential	3,768	--	2
436 Maple St	Residential	4,297	--	2
115 Summit St (President's House)	Residential	3,487	--	2
270 South Willard St (Provost's House)	Residential	7,478	--	2
Total		19,030	--	75

Limitations, Location, Use of Facilities (Sec. 8.1.12)

Off-Site Parking Facilities

Of CC's total 710 parking spaces, 442 are located on off-site facilities (see Table 3-11). In compliance with the CDO, Champlain College has moved approximately half of its parking off-site.¹² On-street parking spaces are not included in the campus inventory. CC began leasing parking spaces at the 115 Lakeside Lot in 2008. The 115 Lakeside Lot currently comprises 175 parking spaces; down from 225 a few years ago. The adjacent Lakeside Campus, or Miller Center, on 175 Lakeside Avenue has an additional 267 spaces.

TABLE 3-11: CC OFF-SITE PARKING LOTS

	PARKING SPACES
Lakeside Campus (Miller Center at Lakeside)	267
115 Lakeside Lot (formerly Gilbane)	175
Total	442

Minimum Off-street Parking Requirements (Sec. 8.1.8)

There is potential for overestimating the number of required parking spaces given the use categories provided in Table 8.1.8-1 of the Ordinance. There is a Special Residential Use for Dormitories as well as a Non-Residential Use for Post-Secondary Schools. The square footage of dining halls and student centers are enumerated within this latter category. However, these uses are heavily patronized by residential students who walk to the building and do not generate a demand for parking, and whose parking demand has already been accounted for (under Special Residential Use for Dormitories). To avoid the task of determining which campus functions might be considered residential and which are non-residential, a composite approach is analyzed.

The two approaches: 1) using the College's GFA applied to the Post-Secondary School category from Table 8.1.8-1 in the Ordinance; or 2) using a composite of the GFA of non-dormitory buildings (applied to Table 8.1.8-1's Post-Secondary School category) and the number of dormitory beds (applied to Table 8.1.8-1's Residential Use-Dormitory category).

Table 3-12 provides the minimum parking required by the Burlington CDO. Calculations for the existing campus use both approaches.

¹² Institutional Core Campus Overlay Districts, Section 4.5.2 states that "parking should be very limited and generally provided offsite." CDO page 4-53. This is emphasized for Champlain College specifically on page 4-54: "this core campus would be expected to be dominantly pedestrian-oriented, with all but the most essential parking provided off-site."

TABLE 3-12: CC MINIMUM OFF-STREET PARKING REQUIREMENTS

EXISTING CAMPUS		CDO PARKING REQUIREMENT
GFA Approach	GFA (2 spaces/1,000 sq ft) = 838,191 sq ft	1,676
	Dormitory Beds (1 space/2 beds) = 1,423	482
Composite Approach	Non-Residential GFA (2 spaces/1,000 sq ft) = 358,311 sq ft	717
Total		1,428

Note: GFA does not include retail space in 194 St Paul.

Maximum Parking Spaces (Sec. 8.1.9)

The CDO defines maximum parking as 125% of the minimum number of spaces using Table 8.1.8-1's Neighborhood District category. All the parking requirements used in Table 3-12 are identical for both the Shared Use and Neighborhood Districts, making the maximum 125% of the calculated requirement would be 1,785 spaces. CC's inventory of 710 (see Table 3-9) is far from approaching this number.

Vehicle Permits

All vehicles at CC must display a valid parking permit. Permits are issued and renewed on a semester basis for both students and employees, except for Zone 1 Employee, Disabled, and Contractor permits which are valid for a year. Residential students are only eligible for a parking permit in the core campus zone (Zone 5) based on demonstrated work¹³ or medical needs and are otherwise required to park at the satellite lot (Zone 2). The Fall 2018 breakdown of permits issued at Champlain College is as follows:

TABLE 3-13: CC VEHICLE PERMIT SUMMARY

ZONE	DESCRIPTION	PERMIT TYPE	PERMITS
Zone 1	Lakeside Campus (Miller Center at Lakeside)	Employee	282
		Commuter Student	168
Zone 2	115 Lakeside Lot	Residential Students	237
Zone 3	371 Main, 396 Main, 158 South Willard, Sanders, and North	Full-time Commuter Student	31
		Part-Time Commuter Student	4
		Full-Time Employee	54
		Part-Time Employee	13
		Full-time Commuter Student	16
Zone 4	Rowell/Jensen and South	Part-time Commuter Student	3
		Full-Time Employee	50
		Part-Time Employee	7
Zone 5	Boardman Hall, 396 Main St, Sanders Hall and North House	Special Residential Parking	28
Disabled	Parking in any Champlain College disabled spaces as well as regular, unrestricted parking spaces		22

¹³ Includes residential students with Education Major or off-campus employment until at least 11:00pm at least once per week.

ZONE	DESCRIPTION	PERMIT TYPE	PERMITS
Contractor			28
		Commuter Students (Full and Part-Time)	222
	Sub-totals	Employee (Full and Part-Time)	406
		Residential Students	265
		TOTAL	943

As mentioned above (see Table 1-2 and page 2-22), not all permits are used on a daily or regular basis, so total number of permits issued may be compared against survey-based estimates of parking demand as well as observed parking demand from lot counts to assess the adequacy of the current parking inventory. This approach is commonly used in parking studies and has historically been the method used in prior versions of the JIPMP.

Parking Demand

Observed Demand

A parking count conducted in the 2018 fall semester tallied the number of parked vehicles and vacant spaces for each parking lot, summarized in Table 3-14 by core campus lots and satellite lots. These counts represent a typical day during peak demand and indicate a surplus of 47 spaces within the core campus, with an additional 76 available spaces in satellite lots for a total surplus of 123 spaces. Peak parking demand generally occurs between the hours of 12:00 and 1:00 pm on a weekday. There are an additional 146 on-street parking spaces adjacent to the College which may be used by some Champlain College affiliates. Due to their public, uncontrollable nature, these are not included in the formal inventory or associated calculations.

TABLE 3-14: CC PARKING LOT CAPACITIES AND EMPTY SPACE COUNT

PEAK DEMAND LOT COUNTS - FALL 2018				
Location	Capacity	Occupied Spaces ¹	Empty Spaces	Percent Full
Core Campus Lots	267	246	47	92%
Satellite Lots	440	364	76	83%
TOTAL	707	610	123	86%

Notes: Peak period is weekdays, 12pm-1pm. Satellite Lots include 115 Lakeside Lot and Lakeside Campus Miller Center.

TABLE 3-15: CC ON-STREET PARKING SPACES (NOT INCLUDED IN PARKING INVENTORY)

PEAK DEMAND LOT COUNTS - FALL 2018				
Location	Capacity	Occupied Spaces ¹	Empty Spaces	Percent Full
On-Street Core Campus	146	146	0	100%

Notes: Peak period is weekdays, 12pm-1pm.

Estimated Demand

As described above in Section 2.4, a method utilizing CATMA Student and Employee Transportation Surveys was developed to estimate current demand and assist in forecasting future parking demand. The calculation is based upon inputs into the following formula:

$$\text{Number of Users} \times \text{Share of Users on Campus at Peak Period} \times \text{Demand Generator} = \text{Estimated Parking Demand}$$

The inputs are based upon information provided by institutional staff as well as responses from CATMA Student and Employee Transportation Surveys. The number of residential beds in Champlain-owned student housing properties serves as an estimate for the number of residential students living on campus (refer to Table 3-9). The total number of commuter students is estimated by subtracting the same number of residential beds from the 2018 total for on-campus student enrollment. The number for commuter students living outside or within a half mile of campus is estimated from the 2018 CATMA Student Transportation Survey.

The survey-based estimated peak parking demand, presented in Table 3-16, suggests CC has a net deficit of 27 parking spaces, which is less than the 217 space deficit projected for 2019 in the 2014-2019 JIPMP 5-Year Update. This equates to a 104% occupancy rate (based upon a parking supply of 710 spaces and an estimated demand for 737 spaces), higher than the 86% occupancy rate based upon parking lot counts (see Table 1-2 and Table 3-14).

TABLE 3-16: CC CURRENT ESTIMATED PEAK PERIOD PARKING DEMAND BY USER GROUP

User Group	Number in Category	Peak % on Campus	Demand Generator	Parking Demand (spaces)
Students				
Residential Students			<i>Auto Ownership</i>	
First Year	599	87.4%	5.5%	29
Non-First-Year	824	93.6%	29.6%	228
Subtotal	1,423			257
Commuting Students			<i>Mode Share</i>	
Commuting students (inside 0.5 miles)	363	80.1%	8.9%	26
Commuting students (outside 0.5 miles)	388	80.0%	38.9%	121
Subtotal	751			147
Employees			<i>Mode Share</i>	
Full-time	377	94.5%	62.7%	223
Part-time	415	29.0%	61.1%	74
Contracted	88	29.0%	61.1%	16
Subtotal	880			312
Other Users				
Visitors				5
Fleet vehicles				16
Total peak parking demand				737
Total parking supply				710
Net spaces				-27

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student and Employee Transportation Surveys, as well as information provided by institutional staff.

Notes: The 2016 CATMA Student and Employee Transportation Surveys are the sources for the share of users on campus at peak, as the 2018 surveys did not collect this information with sufficient specificity (see Table 2-4), with the peak period of 11:30am-1:30pm for residential students and 12pm-1pm for commuter students and employees. The demand generator is based upon the share of residential first year students with parking permit waivers, the share of residential non-first-year students with a personal vehicle (2018 CATMA Student Transportation Survey), and the primary mode share (drive alone share + 0.5* carpool share) for commuter students and employees (2016 CATMA Student Transportation Survey).

3.3 FUTURE PARKING CONDITIONS

Future Population: Students, Staff, Faculty, Visitors (Sec. 8.3.3 (A))

To forecast future numbers of Champlain students and employees, annual enrollment and employment values were averaged for the past three years (2016, 2017, 2018) and assumed steady for the 2019-2024 timeline. Projections for various student and employee categories are summarized in Tables 3-17 to 3-20.

TABLE 3-17: CC PROJECTED ON-CAMPUS EMPLOYMENT (2024)

2024 PROJECTED ACADEMIC YEAR	
Full-time Employees	380
Part-time Employees□	350
Contracted Employees (Cleaners, Sodexo etc.)	100
Total On-Campus Champlain Employees	730
TOTAL Employees Eligible for Parking Permits	830

TABLE 3-18: CC PROJECTED OFF-CAMPUS EMPLOYMENT (2024)

2024 PROJECTED ACADEMIC YEAR	
Full-time Online Employees	380
Part-time Online Employees	350
Dublin and Montreal Campuses	100
Total Off-Campus Champlain Employees	730
TOTAL Champlain Employees	1,030

TABLE 3-19: CC PROJECTED ON-CAMPUS STUDENTS (2024)

2024 PROJECTED ACADEMIC YEAR	
Full-time Traditional Undergraduates	2,150
Part-time Traditional Undergraduates	60
Full-time Graduates	10
Part-time Graduates	0
Full-time Undergraduate Continuing Professional Studies	20
Part-time Undergraduate Continuing Professional Studies	30
TOTAL On-Campus	2,270

TABLE 3-20: CC PROJECTED OFF-CAMPUS STUDENTS (2024)

2024 PROJECTED ACADEMIC YEAR	
Full-time Graduates	690
Part-time Graduates	100
Full-time Undergraduate Continuing Professional Studies	410
Part-time Undergraduate Continuing Professional Studies	1,250
TOTAL Off-Campus	2,450

Future Structures—New or Changes in Use

The parking requirements must not only account for existing structures but also those planned for construction, expansion, or a change in use during the 2019–2024 timeline. The previous 5-year JIPMP identified six administration/academic projects and six residential projects that were anticipated to be completed by 2019. These projects and their current status are shown in Table 3-21.

TABLE 3-21: CC STATUS OF PREVIOUSLY IDENTIFIED PROJECTS

BUILDING PROJECT	COMPLETED?		NOTES
	Yes	No	
Butler Hall (Res-Tri)	✓		The Res-Tri project (Butler, Valcour, and Juniper residences) was completed in Summer 2014
Valcour Hall (Res-Tri)	✓		
194 St Paul St (formerly Eagles Club)	✓		
Ethan Allen Center		✗	No longer planned and property sold
Summit & Maple Res Hall		✗	No longer planned
West Hall/Perry Lawn Res Hall		✗	No longer planned
CCM Project	✓		Completed in Fall 2015
Miller Information Commons Addition		✗	Carried forward to current 5-year Plan
Foster Hall Addition		✗	Carried forward to current 5-year Plan
Information Technology & Sciences Building		✗	Carried forward to current 5-year Plan
Career Center/Durick Hall Addition		✗	No longer planned
IDX Student Life Addition		✗	Carried forward to current 5-year Plan

Projects carried over from the 2014-2019 JIPMP, as well as new projects identified by Champlain staff for the 2019–2024 timeline are presented in Table 3-22. As of this report's writing, none of the planned projects are under construction and it is uncertain as to when they will ultimately be completed.

TABLE 3-22: CC PLANNED PROJECTS

	PRIMARY USE	NEW GSF	RESIDENTIAL # OF BEDS	PARKING SPACES
MIC Addition	Academic	8,000	0	0
Foster Hall Addition	Academic	3,500	0	0
New ITS Building	Academic	27,000	0	0
<i>Changes - Subtotal</i>		38,500	0	0
TOTAL (Existing + Planned)		838,191	1,423	710

Future Minimum Off-Street Parking Requirements (Sec. 8.1.8)

The GFA is unknown for many of the future projects. Therefore, the composite approach is used to define the change in the CDO required minimum parking supply by 2024.

TABLE 3-23: CC OFF-STREET PARKING SUPPLY BASED ON CHANGES BY 2024

CHANGES TO CAMPUS PLANNED BY 2024		PARKING REQUIREMENT CHANGE
Composite Approach	Dormitory Beds (1 space/2 beds) = 181	91
	Non-Residential GFA (2 spaces/1,000 sq ft) = 38,500 sq ft	77
	TOTAL	168

Accounting for Champlain's planned developments, the CDO parking supply requirements for 2024 would fall between 1,596 to 1,844 spaces. This includes a range of 1,428 to 1,676 spaces for the existing campus (as of Fall 2018) with an additional 168 spaces estimated for planned projects to be in use by 2024. For a historical comparison, the previous 2014-2019 JIPMP indicated a supply between 1,726 to 1,925 spaces for the campus in 2019.

Future Parking Demand vs Supply (Sec. 8.3.3 (B))

This section of the study estimates the parking demand effects of the anticipated change in employment, enrollment, and physical land uses on campus by 2024. The projected number of residential beds expected by 2024 is used to estimate future numbers of residential students (refer to Table 3-22). The total number of commuter students is estimated by subtracting the future number residential beds from the 2024 forecast for on-campus student enrollment. The values for peak percentage on campus and auto ownership are held constant from existing campus calculations (see Table 3-16). As was the case for the current estimated parking demand, the estimated future parking demand using survey data is based upon the following formula:

$$\text{Number of Users} \times \text{Share of Users on Campus at Peak Period} \times \text{Demand Generator} = \text{Estimated Parking Demand}$$

As presented in Table 3-24, CC has an estimated future net deficit of 61 spaces. This amounts to an increased deficit of 34 spaces compared to the estimated current deficit of 27 spaces (see Table 3-16). The deficit should be monitored, and CC should work with CATMA and the City to pursue additional TDM measures. If parking should be necessary, additional off-site leases could be secured. The magnitude of the deficit does not warrant any specific recommendations. The observed parking demand should be used as an annual measure to identify whether demand is starting to overwhelm the available parking supply. The strict permit policy that Champlain has implemented allows for a very effective tool to monitor actual parking demand as well as minimize off-campus parking impacts.

TABLE 3-24: CC FUTURE ESTIMATED PEAK PERIOD PARKING DEMAND BY USER GROUP (2024)

User Group	Number in Category	Peak % on Campus	Demand Generator	Parking Demand (spaces)
Students				
Residential Students			<i>Auto Ownership</i>	
First Year	672	87.4%	5.5%	32
Non-First-Year	924	93.6%	29.6%	256
Subtotal	1,596			288
Commuting Students			<i>Mode Share</i>	
Commuting students (inside 0.5 miles)	326	80.1%	8.9%	23
Commuting students (outside 0.5 miles)	348	80.0%	38.9%	108
Subtotal	674			132
Employees			<i>Mode Share</i>	
Full-time	380	94.5%	62.7%	225
Part-time	350	29.0%	61.1%	62
Contracted	100	29.0%	61.1%	18
Subtotal	830			305
Other Users				
Visitors				5
Fleet vehicles				16
Total peak parking demand				746
Total parking supply				685
Net spaces				-61

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student and Employee Transportation Surveys, as well as information provided by institutional staff.

Notes: The 2016 CATMA Student and Employee Transportation Surveys are the sources for the share of users on campus at peak, as the 2018 surveys did not collect this information with sufficient specificity (see Table 2-4), with the peak period of 11:30am-1:30pm for residential students and 12pm-1pm for commuter students and employees. The demand generator is based upon the share of residential first year students with parking permit waivers, the share of residential non-first-year students with a personal vehicle (2018 CATMA Student Transportation Survey), and the primary mode share (drive alone share + 0.5* carpool share) for commuter students and employees (2016 CATMA Student Transportation Survey). Total parking supply includes a planned reduction of 25 leased spaces from 115 Lakeside Ave (see Table 3-9). Holds peak % on campus and the demand generators constant from current levels.

Institutional Vehicle Fleet Management (Sec. 8.3.3 (C))

Champlain College currently has 16 vehicles in its fleet:

- 11 for Physical Plant.
- 2 for Campus Public Safety.
- 3 for Student Activities/Student Government Association.

During working hours, these vehicles are frequently located at the Physical Plant at 40 Sears Lane to pick up supplies or run errands, and otherwise are located on campus.

Parking Demand Reduction

As mentioned above, CC recently implemented two significant parking management policy updates. A fee for all residential parking permits was introduced in 2016, and a restriction on first-year parking permits (with limited exceptions) was introduced in 2018. The survey-based estimated parking deficit should be monitored, and CC should work with CATMA and the City to pursue additional TDM measures. If parking should be necessary, additional off-site leases could be secured. The magnitude of the deficit does not warrant any specific recommendations. The observed parking demand should be used as an annual measure to identify whether demand is starting to overwhelm the available parking supply. The strict permit policy that Champlain has implemented allows for a very effective tool to monitor actual parking demand as well as minimize off-campus parking impacts.

Monitoring, Compliance, and Enforcement (Sec. 8.3.3 (E))

Champlain Transportation's Parking Coordinator patrols lots daily to ensure that all parking regulations are enforced. On-Street patrols of contiguous streets are also performed daily. The Champlain College security staff monitors all campus lots for safety. Safety patrols are made daily to deter vandalism and assist motorists.

Champlain Transportation have been diligent about enforcing regulations. As a result, there is continued improvement in the levels of voluntary compliance as the College community has adapted to the rules and regulations.

While many of the streets adjacent to Champlain College offer unrestricted parking, as designated by the Burlington Department of Public Works, Champlain College imposes additional parking policies related to affiliate parking on these streets. Affiliates are permitted to park on-street in the following areas provided that they have been issued an appropriate parking permit:

- South Willard between Main St. and Spruce St.
- Maple St. between S. Prospect and Summit.
- Summit St. between Main St. and Maple St.
- Main Street between Summit and S. Willard.

The Champlain parking map depicted in Figure 3-1 shows areas where on-street parking is prohibited to Champlain College affiliates regardless of a permit being issued or not. Some of these streets, such as Cliff and Spruce Streets are designated as "Resident Only" parking, while others have "No Parking" restrictions posted. Champlain College patrols these streets daily. Tickets are issued if a vehicle is registered or suspected to be operated by an affiliate of Champlain College.

Beginning in Fall 2006, Champlain partnered with a nationally known ticketing management company called IPARQ. The necessary software was purchased to automate much of the collection function including the ability to turn unpaid tickets over to Student Accounts. Those tickets are now added to student bills making it impossible to avoid paying a valid ticket.

Champlain College has allocated the following resources to enforce and implement the College's parking plan:

- Director of Transportation - dedicates 20% of time on parking management, administration, education, enforcement and appeals; two weeks per semester dedicated to permit sales.
- Student Accounts staff—responsible for adding tickets marked as 'collection transfer' to student bills.
- Contract Parking Officer—responsible for parking enforcement between the hours of 8am and 4pm, Monday through Friday. The parking officer monitors College parking lots and adjacent on-street parking areas, writes tickets, and coordinates towing from Champlain College lots.
- Transportation Committee, comprised of faculty, staff, students, and CATMA, who meet on as needed (typically twice per semester). This Committee is convened and facilitated by the Director of Transportation and is charged with implementing the current Transportation Plan, requesting and responding to feedback from Champlain affiliates, and promoting various transportation opportunities and events.
- A Parking Appeals Committee, comprised of students, faculty and staff meet twice per month to review appeals submitted with regards to parking citations.
- Champlain College devotes approximately \$702,000 annually (in the form of staff salaries, transportation consultant fees, parking lot leases, CATMA dues, transit subsidies, and shuttle operations) to the management of transportation. Revenue collected from parking fines for the 2017-2018 academic year was approximately \$28,502.

Table 3-25 lists the various situations that warrant a parking ticket being issued and the amount of the fine. Parking tickets may be presented in person to the vehicle's owner, placed on the vehicle's windshield, or mailed.

TABLE 3-25: CC PARKING FINES BY INFRACTION AND FREQUENCY

INFRACTION	FINE (1ST OFFENCE)	FINE (SUBSEQUENT)
Permit Not Displayed, Meter Receipt Unreadable	\$10	\$25
Expired or Unpaid Meter	\$25	\$50
Parking on grass/sidewalks, Parking in non-permitted zone or Parking outside white lines	\$25	\$50
Improper permit placement or Permit Not Displayed	\$25	\$50
No Current Permit (not displaying a valid Champlain College permit or visitor permit)	\$50	\$100

INFRACTION	FINE (1ST OFFENCE)	FINE (SUBSEQUENT)
Parking in disabled space, fire lane	\$50	\$100
Use of unauthorized permit	\$100	\$100

Notes: Fines as of August 2018. Towing charges and the Student Accounts Administrative Fee are in addition to these fines. Fines must be paid in full in order to receive a new parking permit, confirm course registration, receive a transcript or be awarded a degree.

TABLE 3-26: CC PARKING TICKET SUMMARY

YEAR/SEMESTER	# OF VALID CITATIONS ISSUED	FUNDS COLLECTED	CUMULATIVE TOTAL SINCE 2004
2006-2007	-	\$57,390	\$113,390
2007-2008	-	\$44,175	\$157,565
2008-2009	-	\$57,195	\$214,760
2009-2010	-	\$42,165	\$256,925
2010-2011	-	\$38,550	\$295,475
2011-2012	-	\$51,065	\$346,540
2012-2013	1,574	\$43,840	\$390,380
2013-2014	1,519	\$41,680	\$432,060
2014-2015	1,069	\$30,600	\$462,660
Summer 2015	111	\$5,585	\$468,245
2015-2016	1,326 (105 warnings)	\$31,475	\$499,720
Summer 2016	32	\$2,300	\$502,020
2016-2017	1,935 (467 warnings)	\$26,481	\$528,501
Summer 2017	156 (46 warnings)	\$995	\$529,496
2017-2018	2,073 (274 warnings)	\$28,502	\$557,998
Summer 2018	261 (44 warnings)	\$2,795	\$560,793

The drop in citations issued and collected between 2013-2014 and 2015-2016 is attributed to increased awareness, communication, and encouragement by the Transportation Office. During those periods, Champlain introduced a new postcard campaign sent in the summer to all students. Champlain also introduced a new “Top 10 Things You Need To Know” web page and one page summary on the back of the parking map, pictured in Figure 3-9. Champlain sincerely believes that these efforts have led to a more educated community, a shift to parking off-site and improved compliance than previous years.

Champlain increased the amount of warnings issued in starting in the 2016-2017 academic year. Warnings have shown to be a good educational tool to ensure compliance. The warnings can lead to the person contacting the office and having an educational discussion which can encourage better behavior.

FIGURE 3-9: CC PARKING CAMPAIGN “THE TOP 10 THINGS YOU NEED TO KNOW”



CHAMPLAIN COLLEGE

TRANSPORTATION // 2016–2017



GET IN TOUCH

TRANSPORTATION OFFICE
transportation@champlain.edu
802.865.8464

375 Maple Street, Rm102
PO Box 670
Burlington, VT 05402

REGULAR OFFICE HOURS
8:30 AM–3:00 PM

It is your responsibility to understand all parking policies. Get the right information at: champlain.edu/parking.

Champlain College Parking

THE TOP 10 THINGS YOU NEED TO KNOW

- 1 PERMIT REQUIRED** ALL Champlain College students and employees must obtain a permit for their cars each semester, regardless of where they park. It's easy and FREE in some cases. champlain.thepermitstore.com
- 2 FREE COMMUTER PARKING** Parking is FREE at 175 Lakeside Avenue for Zone 1 permit holders. Champlain operates a free shuttle service seven days a week from Lakeside Campus to Main Campus. champlain.edu/shuttle
- 3 STUDENT PARKING** Residential students require a Zone 2 permit and are required to park at 115 Lakeside Avenue. Residential students may not park in the metered lots or along ANY city streets between 8:00 AM–4:00 PM, Monday–Friday.
- 4 PARKING PERMITS** When you purchase a parking permit, you are paying for the right to park in one of several zone-specific Champlain lots. On-street parking within your designated zone is not guaranteed.
- 5 SHORT-TERM PARKING** There are two short-term (up to 4 hours) metered lots at Miller Information Commons and Summit Hall. Cars parked in these lots must display a valid Champlain parking permit AND meter receipt.
- 6 SAFETY FIRST** Champlain conducts daily safety patrols in all lots, including Lakeside. Parking regulations are actively enforced to ensure a safe and efficient campus environment.
- 7 ADJACENT STREETS** Champlain College students and employees are prohibited from parking on any Burlington street that is not specifically zoned for Champlain College affiliates. Members of the Champlain Community are not eligible for “public parking.”
- 8 RESTRICTED PARKING** Skiff Hall, Perry Hall, Boardman Hall lots and Finney Quad are restricted and enforced 24 hours per day, seven days per week. Boardman Hall lot is for those who obtain a Zone 5 permit only. Perry Hall lot is for visitors to the Admissions Office only.
- 9 VISITOR PARKING** All visitors should obtain a temporary guest permit prior to arrival on campus. This can be obtained by the Champlain employee hosting the guest using champlain.thepermitstore.com or by emailing transportation@champlain.edu three days prior to the visit.
- 10 GUARANTEED RIDE HOME** All permit holders in Zone 2 are automatically enrolled in CATMA's Guaranteed Ride Home program, which provides for a free taxi when the shuttles are not operating. All Zone 1 permit holders are also eligible to enroll. champlain.edu/CATMA

4.0 UNIVERSITY OF VERMONT

4.1 OVERVIEW OF INSTITUTIONAL PARKING MANAGEMENT PLAN

This chapter of the Joint Institutional Parking Management Plan (JIPMP) documents the parking supply and demand characteristics on the Main Campus of the University of Vermont (UVM) in Burlington. The South Campus (primarily agricultural UVM properties in South Burlington), Colchester Research Campus, and Fort Ethan Allen are not included in this plan.

UVM has a longstanding commitment to reducing traffic congestion and encouraging the use of transportation alternatives on its campus. The University was one of the founding members of CATMA in 1992 and has since repeatedly expressed its vision for a pedestrian campus through different campus plans and programs. Most recently in 2017, UVM finalized its Active Transportation Plan, outlining the University's commitment to improving conditions for pedestrians, bicyclists and other forms of active transportation and recreation to, from, and on campus.

UVM continues to support efforts to reduce parking demand on-campus, encourage the construction of on-campus residential accommodation, and support a high quality shuttle system to move students, employees, and staff around the campus.

Transportation Demand Management Programs (Sec. 8.3.3 (D))

This section covers:

1. **Policies** which restrict or prohibit the bringing of vehicles to the institution for various users or groups of users.
2. **Programs** to encourage the use of public transit, walking, and bicycling.
3. **Implementation** of a parking permit system to allocate parking throughout the system.

TABLE 4-1: SUMMARY OF UVM PARKING MANAGEMENT STRATEGIES

STRATEGIES	UVM AVAILABILITY
Parking management program	Yes
Membership in a Transportation Management Association	Yes, CATMA
Telecommuting program	No formal program; availability in certain departments
Carshare program	Yes. CarShare Vermont
Bike Benefits / Bikeshare	Yes. Greenride
Off-site parking/shuttles	Yes
Public transit subsidies for employees	Yes
Shifting commuter students to residential students	Yes

Policies

Permits and Pricing

UVM manages the day to day operations of parking through a permit allocation system. The permits are priced to regulate demand in core areas. For employees, permits in core areas are twice as expensive as permits in outer areas, as shown in Table 4-2. Figure 4-3 shows the UVM's campus parking map for 2018. Only faculty and staff are allowed to park in the core areas during the daytime (Green permit zone). Not only are those spaces more expensive but they are assigned based on seniority, in cases of limited supply less senior staff may not have the option to purchase certain permits.

Student permit prices are shown in Table 4-3. Residential students in general are discouraged from bringing a car to campus through permit pricing: residential parking permits are roughly three times more expensive than commuter student permits. First-year residential students are generally prohibited from bringing a car to campus (though some exceptions are allowed). In times of limited campus parking, UVM has the right to institute a parking “cap” for residential student permits.

For commuter students, those living within a half mile of any CATS shuttle (boundaries shown in Figure 4-2) are ineligible for daytime campus parking. Commuting students living within the proximate radius are eligible to purchase a Commuter Evening (gold pass) which allows parking outside the hours of 7:00 a.m.–3:30 p.m.¹⁴

Overall, parking fees have remained constant since the last JIPMP.

TABLE 4-2: UVM EMPLOYEE PARKING PERMIT RATES

PERMIT CATEGORY	PERMIT TYPE	FEE
Green	Pre-Tax Payroll Deduction	0.64%
	Affiliate	\$329
	Affiliate 30-day	\$41
White	Pre-Tax Payroll Deduction	0.48%
	Affiliate	\$247
	Affiliate 30-day	\$31
Brown	Pre-Tax Payroll Deduction	0.32%
	Affiliate	\$165
	Affiliate 30-day	\$21
Silver (Off-Site)	Pre-Tax Payroll Deduction	FREE
	Affiliate	FREE
	Affiliate 30-day	FREE
Occasional Use	Permit of 6 – 12 days	FREE
	Brown (Peripheral)	\$2.00
	White (Proximate)	\$3.00
	Green (Main)	\$4.00

¹⁴ Between 2016 and 2018, the boundary for commuter parking permits was adjusted to use the proximate radius method based upon a half mile from any CATS shuttle stop.

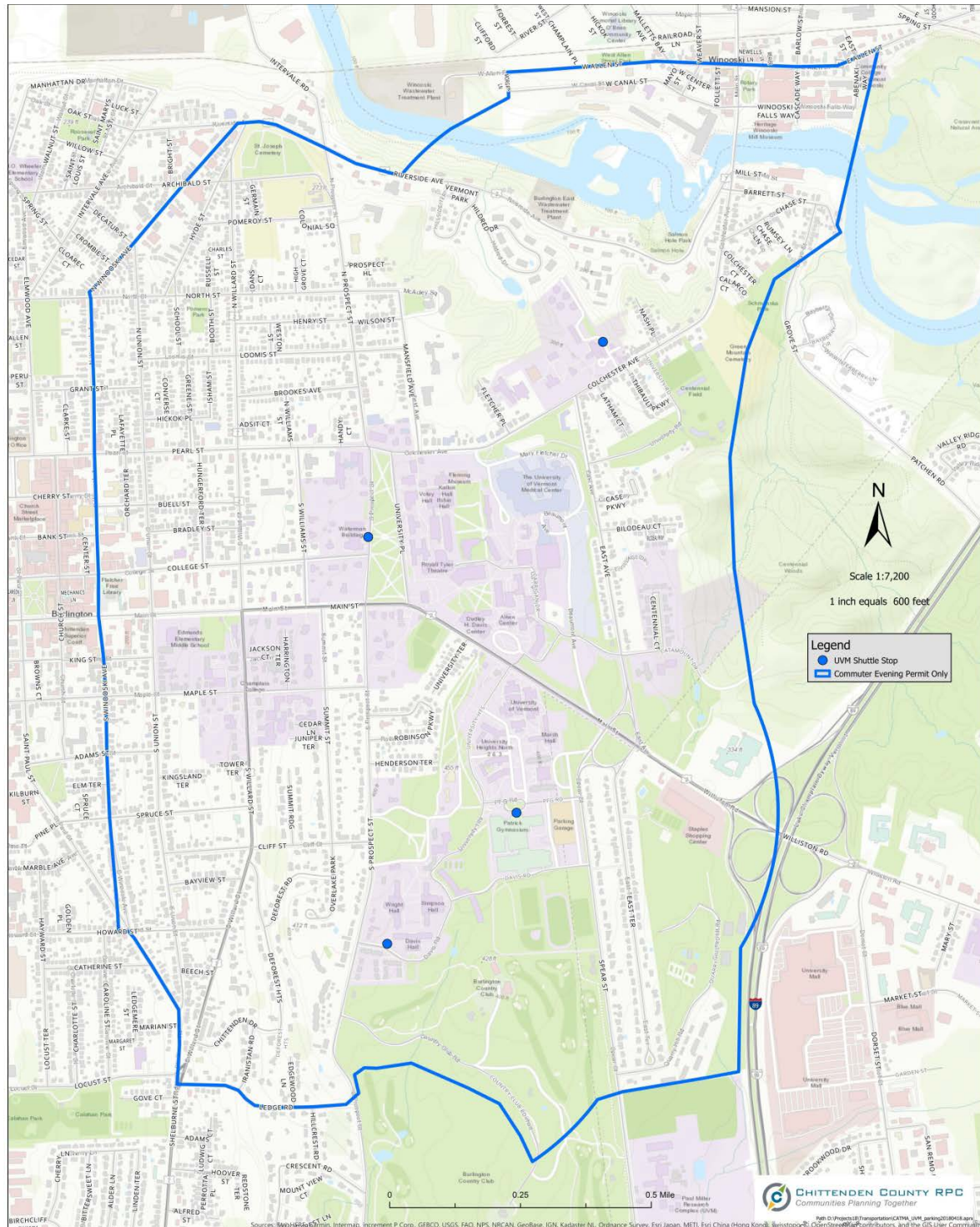
TABLE 4-3: UVM STUDENT PARKING PERMIT RATES

PERMIT CATEGORY	PERMIT TYPE	FEE
Residents	30-day Black, Blue, Purple, and Red	\$55
	Resident Temp – 1 Semester	\$180
	Black, Blue, Purple, and Red	\$330
Commuter and Graduate Students/Medical Students (1 st & 2 nd Year)	30-day Brown	\$19
	30-day Gold	\$12
	Gold – Evening	\$69
	Gold – Evening, 1 Semester	\$45
	Brown – Day & Evening	\$115
	Brown – Day & Evening, 1 Semester	\$73
Medical Students (3 rd and 4 th Year)	Yellow – Day & Evening	\$329
	30-day Yellow	\$27

In addition to designated permit parking areas, visitor parking is available. University employees and students are not allowed to park in visitor areas during restricted hours as posted. In July 2018, UVM moved to a cashless payment system for all visitor and short-term parking. The ParkMobile app is now the only means available for payment on-site at formerly metered parking spaces. Visitors and others requiring short-term parking can also pay with cash, check, UVM CATcard, or credit card at UVM's Transportation and Parking Services customer service area at 38 Fletcher Place.

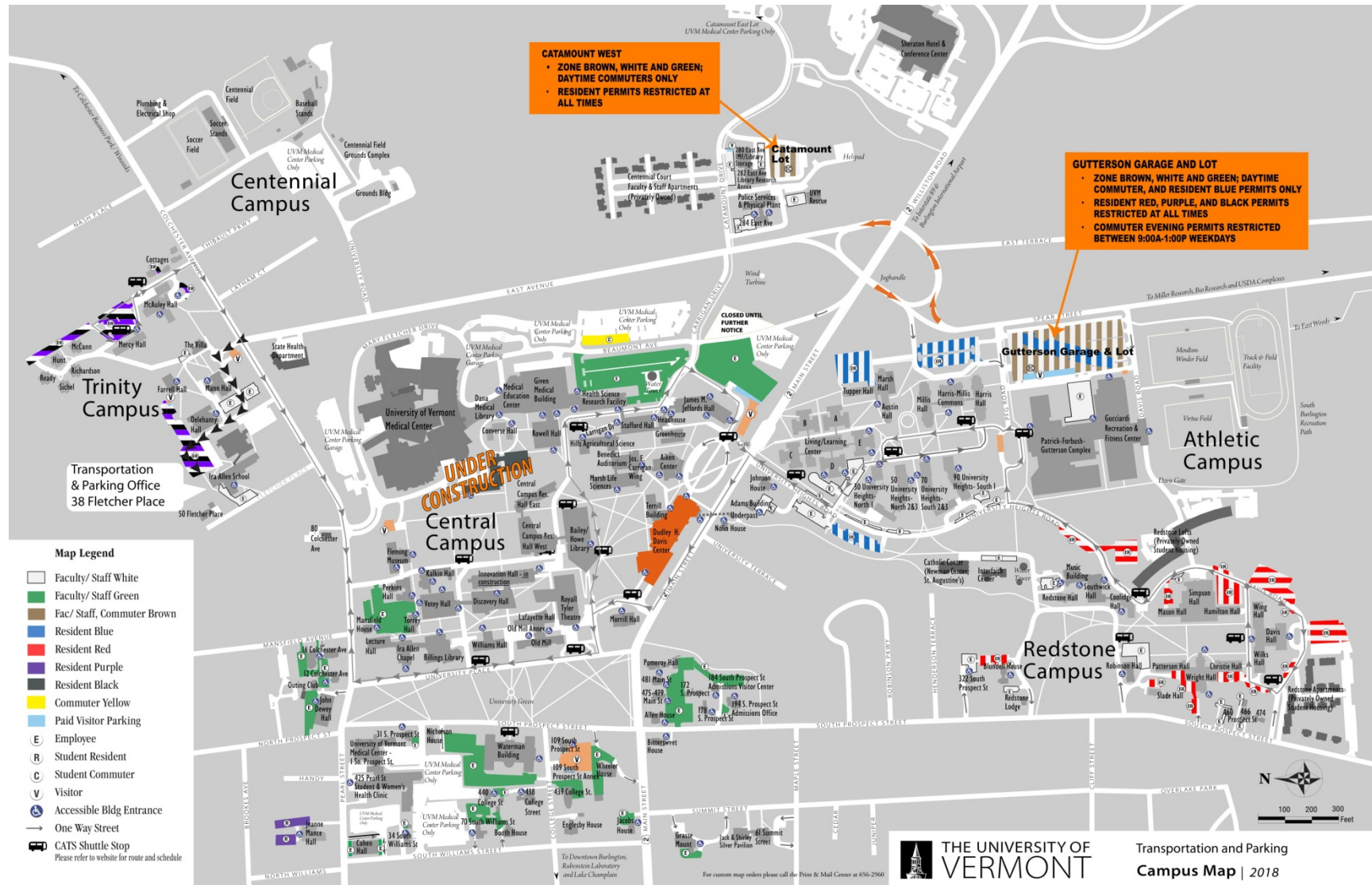
FIGURE 4-1: UVM CAMPUS MAP

FIGURE 4-2: BOUNDARIES FOR UVM STUDENT COMMUTER PARKING PERMIT



Note: Students within the above commuter parking permit are considered to be within a half mile of campus for the purposes of the parking demand estimates using CATMA surveys.

FIGURE 4-3: UVM PARKING MAP (2018)



Programs

To encourage the use of alternative transportation modes, UVM will continue:

- Regulating parking through its parking program.
- Operating the CATS shuttle system to improve circulation within the campus and serve peripheral parking areas.
- Improving the UVM bikeway network and management in accordance with the Active Transportation Plan and remain an active partner in the Greenride program.
- Using and promoting CATMA's menu of programs and services.

UVM's Carpool Program for employees allows participants to purchase permits at discounted rates. A Green Carpool Permit with two or more participants is payroll deducted at the rate of Brown of each participant's base salary; a White Carpool Permit with two or more participants is available free of charge. As of the 2017-2018 permit cycle, there are 74 permitted UVM carpools with 191 participants. All carpoolers are also included in CATMA's Emergency Ride Home Program.

Off-Site Parking and Transit Integration

The bulk of UVM's parking is located along the periphery of campus and is serviced by the Campus Area Transportation System (CATS) shuttle system. UVM's parking program helps to regulate parking demand through market pricing: inner core area parking requires the most expensive permit, while periphery parking is less expensive and off-site parking is free.

CATMA's Unlimited Access Program allows University affiliates free transit rides on GMT with their UVM identification. Nine GMT routes have stops on or proximate to UVM's campus, including:

- #1 Williston.
- #2 Essex.
- #8 City Loop.
- #11 College St. Shuttle.
- #12 UMass/Airport.
- #46 Ft. 116 Commuter.
- #56 Milton Commuter.
- #76 Middlebury LINK Express.
- #96 St. Alban's LINK Express.

In addition to free access to GMT service, all UVM affiliates have free access to the CATS transportation system, which includes larger fixed-route CATS buses as well as a smaller Catsride shuttle that provides a more flexible on-demand service between off-campus UVM

offices and the central UVM campus. The regular service schedules for CATS buses on-campus and off-campus are depicted below.

TABLE 4-4: UVM CATS ON-CAMPUS REGULAR SERVICE SCHEDULE

ROUTES	DAYS	TIMES	RUNS EVERY	BUSES RUNNING
Redstone Express	MON–FRI	7:45am–4:45pm	15 Mins	1
Daytime	MON–FRI	7:30am - 6:30pm	10 Mins	3
Evening	MON–THURS	6:15pm–11:45pm	30 Mins	1
Weekend	SAT–SUN	11:30am–6:30pm	30 Mins	1

TABLE 4-5: UVM CATS OFF-CAMPUS REGULAR SERVICE SCHEDULE

ROUTES	DAYS	TIMES	RUNS EVERY	BUSES RUNNING
Sunday-Thursday	SUN–THURS	6:30pm–midnight	30 Mins	1
Weekend	FRI–SAT	6:30pm–10:00pm	15 Mins	2
Late-night Weekend	FRI–SAT	10:00pm–3:00am	10 Mins	3

Through the University's TDM partnership with CATMA, the University manages several TDM programs and benefits. These include:

CarShare Vermont Campus Program

UVM hosts two CarShare Vermont pods, one along University Place and another at the Redstone Lofts. It offers subsidized CarShare memberships to full-time students, faculty, and staff at UVM to encourage the use of CarShare Vermont and to better serve its constituents. Carsharing complements other modes as it encourages people to commute via a non-car mode while having a vehicle at their disposal during the day.

Bicycle Infrastructure & Parking

UVM is nationally recognized as a Gold-level Bicycle Friendly University as of November 2018, achieving an upgrade from its progression from a bronze level designation. The recognition is in part due to the partnership with Greenride Bikeshare as well as the prevalence and support of bicycle infrastructure on campus and the growth of its Bicycle Education Co-op Center.



UVM affiliates are eligible for a \$25 annual membership for Chittenden County's Greenride Bikeshare program. Although Greenride's bikes are docked, there are several hubs located on or proximate to UVM's campus, including the Howe Library, Waterman, Trinity Campus, Gutterson Garage, and Redstone Lofts.

UVM supports bicycle travel in several ways, including:

- Eligibility to participate in the CATMA Bike/Walk Rewards (Bike/Bucks) Program.
- Promotion of Bicycle Benefits program.
- Bike share program through the Greenride system.
- Access to bicycle parking in the form of racks.

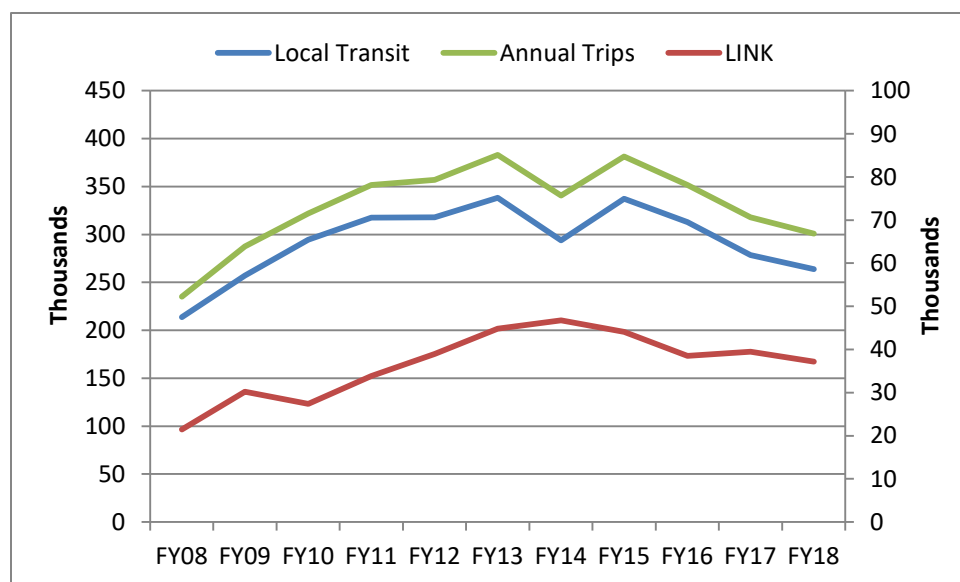
- Coordination with Local Motion to assess and improve campus bicycle racks.

Student and Employee Travel Trends

Over the past years, UVM's parking management has proven to be effective in mitigating parking demand and encouraging the use of transportation alternatives. With a policy that requires all UVM students, employees, and staff obtain a visible parking permit, the University has been successfully managing parking demand with a supply of 4,590 usable spaces and an observed occupancy rate of 93% (see Table 1-2 and Table 2-5).

In 2003, UVM joined the CATMA Unlimited Access Program, which provides unlimited access on existing GMT public transit services to employees, faculty, students, and staff. Trends in annual trips on local transit and LINK buses are shown in Figure 4-4 and Table 4-6.

FIGURE 4-4: UVM UNLIMITED ACCESS PROGRAM ANNUAL RIDERSHIP (FY08-FY18)



Source: Calculated by CATMA Staff based on GMT Monthly Ridership Reports.

Notes: CATMA Express Shuttle ceased operations in 2009; results only include GMT local and LINK routes, not shuttles.

Table 4-6 shows the annual ridership trends since FY2008 and the annual costs to provide the Unlimited Access Program.

TABLE 4-6: UVM UNLIMITED ACCESS ANNUAL RIDERSHIP (FY08-FY18)

YEAR	LOCAL TRANSIT	LINK	ANNUAL TRIPS	ANNUAL CHANGE	UVM COST FOR SERVICE
FY08	213,707	21,477	235,184		\$257,676
FY09	257,248	30,219	287,467	22.20%	\$315,488
FY10	294,579	27,397	321,976	12.00%	\$342,039
FY11	317,604	33,831	351,435	9.10%	\$376,669
FY12	317,915	38,989	356,904	1.60%	\$386,033

YEAR	LOCAL TRANSIT	LINK	ANNUAL TRIPS	ANNUAL CHANGE	UVM COST FOR SERVICE
FY13	338,115	44,808	382,923	7.30%	\$418,983
FY14	293,972	46,748	340,720	-11.00%	\$381,662
FY15	337,202	44,064	381,266	11.90%	\$413,373
FY16	313,013	38,485	351,498	-7.80%	\$380,361
FY17	278,486	39,461	317,947	-9.50%	\$351,187
FY18	263,756	37,184	300,940	-5.30%	\$332,125

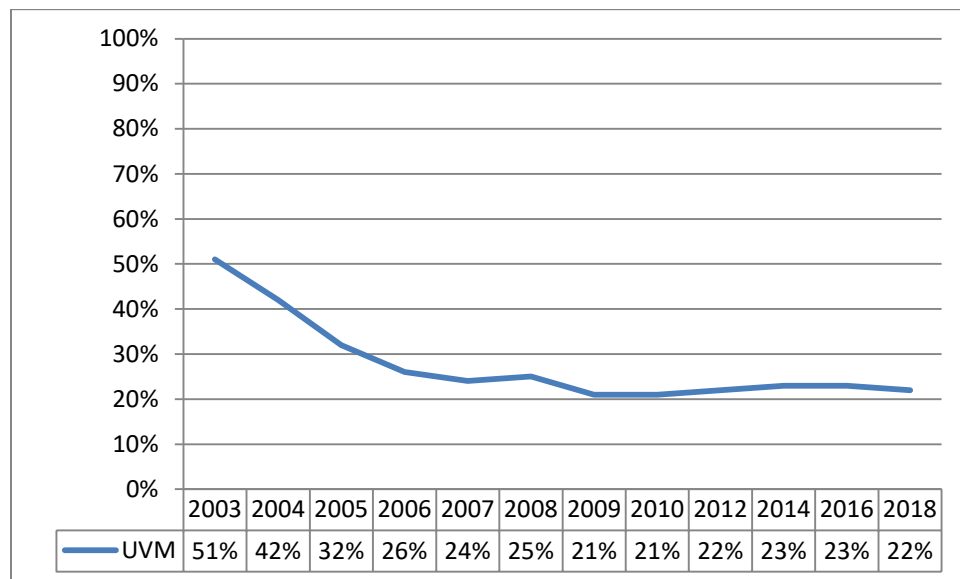
Source: Calculated by CATMA Staff based on GMT Monthly Ridership Reports.

Notes: CATMA Express Shuttle ceased operations in 2009; results only include GMT local and LINK routes, not shuttles.

CATMA surveys UVM students biennially to collect travel behavior information, including vehicle ownership and primary mode for commuting to and from campus. The surveys target the three student populations: on-campus residents, commuters within a half mile of campus, and commuters more than a half mile to campus. The students self-select their category in the travel survey.

CATMA survey results indicate that the percentage of residential UVM students with a personal vehicle has declined; approximately 22% of residential students brought a car in 2018, a 56% decrease from the 2003 level of 51%.

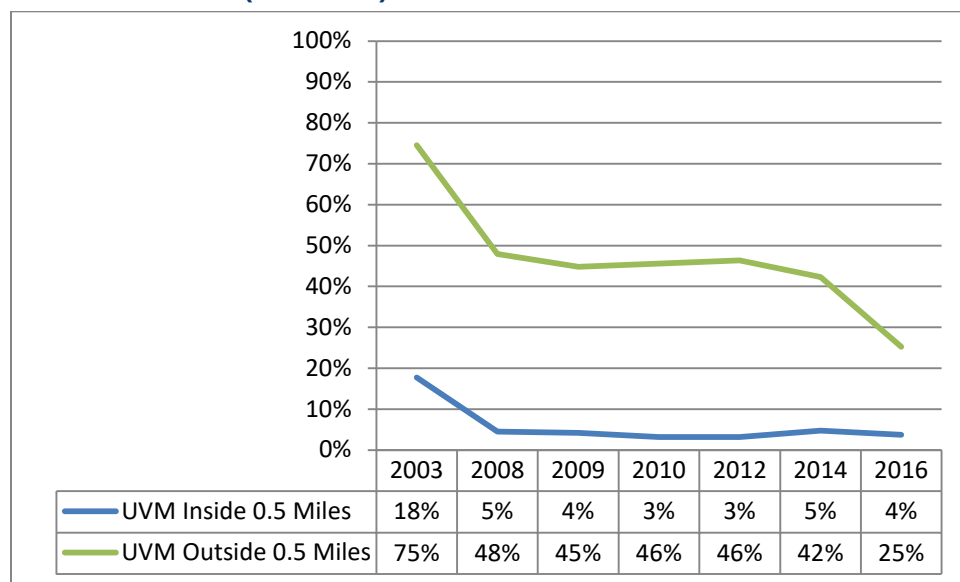
FIGURE 4-5: SHARE OF UVM RESIDENTIAL STUDENTS WITH PERSONAL VEHICLES (2003–2018)



Source: Calculated by CATMA Staff using the 2003-2018 CATMA Student Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

At UVM, the share of students relying on driving alone as their primary mode to campus who live within a half mile of campus declined 78% between 2003 and 2016, from 18% to 4%. For students living more than a half mile from campus, there was a 67% decline (see Figure 4-6).

FIGURE 4-6: SHARE OF UVM COMMUTER STUDENTS WITH DRIVE ALONE AS PRIMARY COMMUTE MODE (2003-2016)

Source: Calculated by CATMA Staff using the 2003-2016 CATMA Student Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

Between 2016 and 2018, the share of students living within a half mile of campus reporting any driving alone to campus over the course of the week increased at UVM, while the share driving alone decreased for students living more than a half mile from campus, as presented in Figure 4-7.¹⁵ Meanwhile, carpooling over the course of the week increased for students living within a half mile of campus between 2016 and 2018, but remained relatively level for students living more than a half mile from campus.

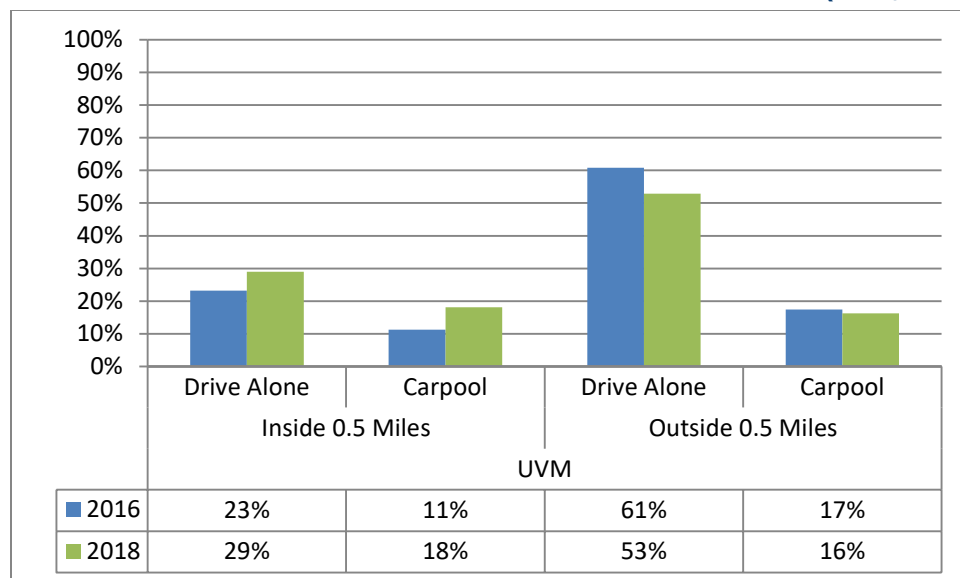
Most of the UVM commuter students living within a half mile of campus who drive alone over the course of a week do not rely on driving alone as their primary mode (see Figure 4-8). Specifically, in 2016, 23% of UVM commuter students living within a half mile of campus drove alone during the week, including 4% who relied on driving alone as their primary mode. For commuter students living more than a half mile from campus a lower share rely on driving alone as their primary mode at (25% versus 36%). The same holds for carpooling; most of the commuter students living within a half mile of campus who carpool over the course of a week do not rely on carpooling as their primary mode.

Figure 4-9 elaborates on the information for 2018 presented in Figure 4-7 by detailing the number of days per week commuter students reported driving alone and carpooling to campus. Of the 29% of UVM students living within a half mile of campus reporting any driving alone over the course of a week, 9% drive alone one day per week, 15% drive two-four days per week, 4% drive five-six days per week, and 2% drive seven days per week. For the 18% of UVM students

¹⁵ Between 2016 and 2018, the boundary for commuter parking permits was adjusted to use a proximate radius based upon CATS Shuttle stops. In practice, this meant that students previously outside the half mile boundary were included. This could help to explain the increase in the share of students living within a half mile of campus reporting any driving alone to campus over the course of the week.

living within a half mile of campus reporting any carpooling over the course of a week, 8% carpool one day per week, 9% carpool two-four days per week, and 1% carpool five days per week.

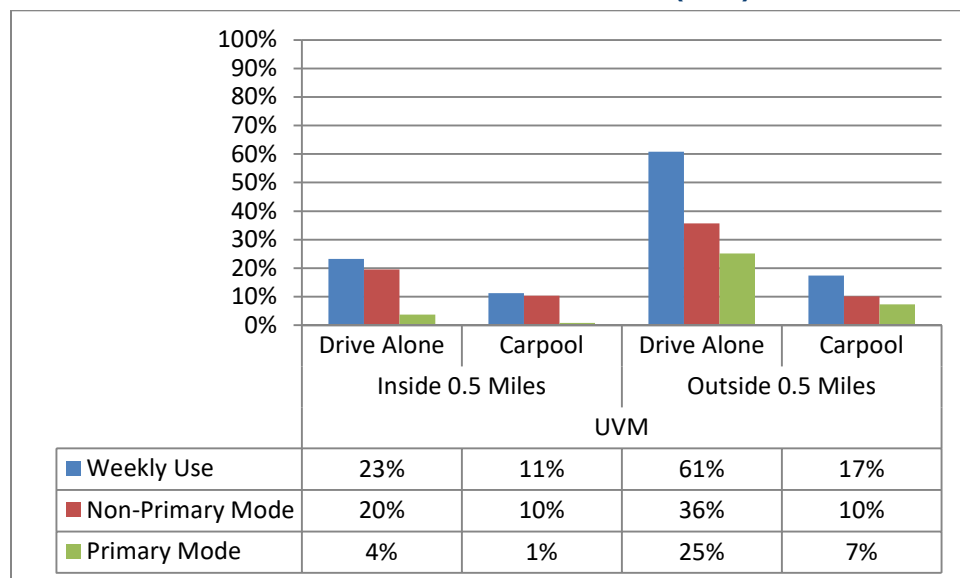
FIGURE 4-7: SHARE OF UVM COMMUTER STUDENTS REPORTING DRIVING ALONE AND CARPOOLING TO CAMPUS OVER THE COURSE OF THE WEEK (2016, 2018)



Source: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student Transportation Surveys.

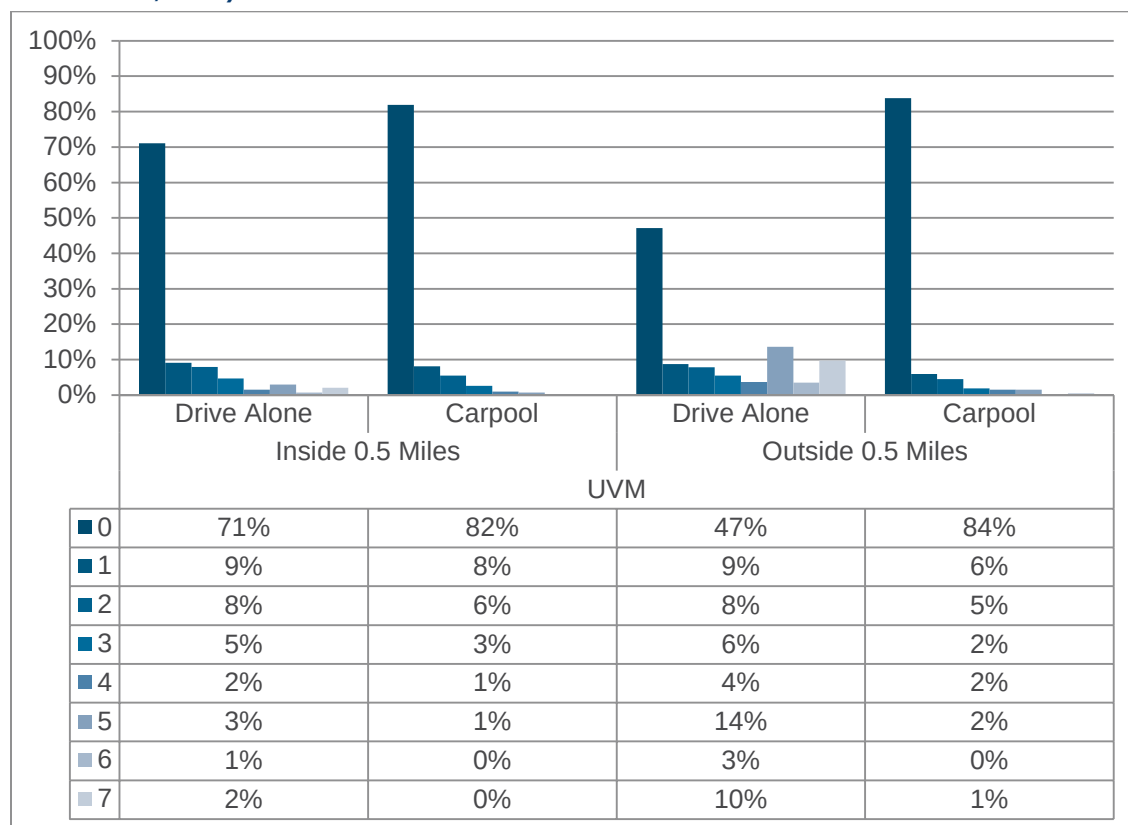
Note: Percentages are rounded to the nearest integer.

FIGURE 4-8: USE OF DRIVING ALONE AND CARPOOLING AS PRIMARY MODE VERSUS NON-PRIMARY MODE FOR UVM COMMUTER STUDENTS (2016)



Source: Calculated by CATMA Staff using the 2016 CATMA Student Transportation Survey.

Note: Percentages are rounded to the nearest integer.

FIGURE 4-9: SHARE OF UVM COMMUTER STUDENTS DRIVING ALONE AND CARPOOLING (DAYS PER WEEK, 2018)

Source: Calculated by CATMA Staff using the 2018 CATMA Student Transportation Survey.

Note: Percentages are rounded to the nearest integer.

Table 4-7 presents an estimate of the number of on-street parking spaces used by UVM students during the peak period, based upon the share of students reporting use of on-street parking when driving alone or carpooling. In total, an estimated 28 residential students use on-street parking and 170 commuting students use on-street parking. 35% of the estimated demand is within two blocks of campus.

TABLE 4-7: ESTIMATED ON-STREET PARKING AMONG UVM STUDENTS DURING PEAK PERIOD (2018)

UVM	Within 2 Blocks	More Than 2 Blocks	# Street Spaces
Residential students	6	23	28
Commuting students	63	107	170
Total	69	129	198

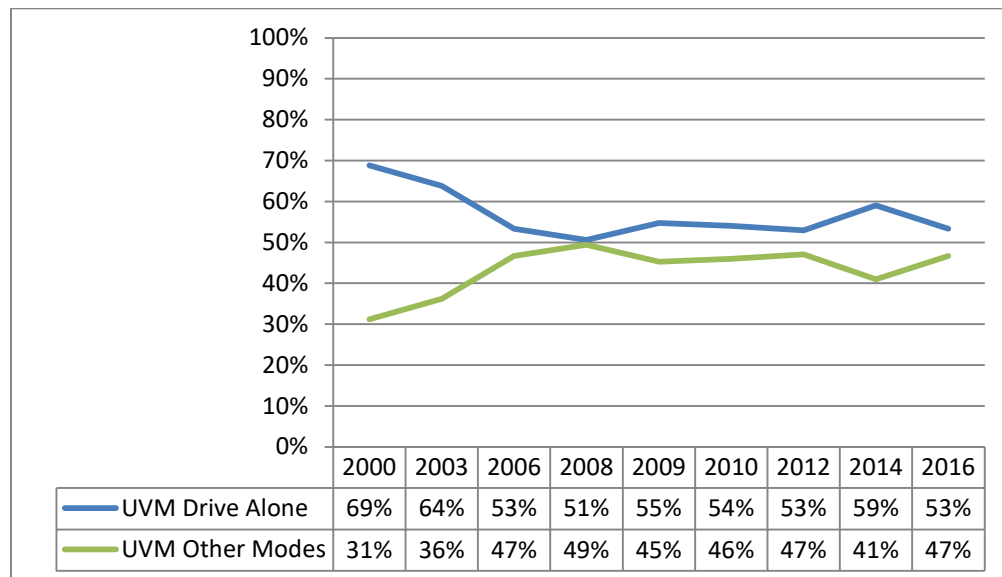
Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student Transportation Surveys.

Notes: Number of on-street spaces is based upon the share of estimated parking for each user group as well as survey information collected about the location of parking for each user group. Estimated parking demand is based upon the primary mode share (drive alone + half the carpool share). Parking location information is collected for users who drive alone or carpool to campus. Peak period is 11:30am-1:30pm for residential students and 12pm-1pm for commuter students.

The share of UVM employees driving alone to the Hill campuses has consistently remained below 60% over the past decade. Figure 4-10 presents trends in the primary commute mode for

employees of CC. The lowest drive alone rate (51% in 2012) represents a 26% reduction from the 2000 level of 69%. In 2016, the most recent year a primary commute mode was collected, 53% of UVM employees drove alone to work, representing a 4% increase from the 2012 low.

FIGURE 4-10: PRIMARY COMMUTE MODE FOR UVM EMPLOYEES



Source: Calculated by CATMA Staff using the 2000-2016 CATMA Employee Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

Finally, an estimated 85 UVM employees use on-street parking during the peak period (calculated by CATMA Staff using the 2018 CATMA Employee Transportation Survey; see Table 1-3 and Table 2-7) based upon the share of employees reporting use of on-street parking when driving alone or carpooling.

4.2 EXISTING CONDITIONS

Employment

In Fall 2018, UVM employed a total of 4,186 part-time and full-time faculty and staff. It should be noted that employment numbers listed in Table 4-8 include clinical professors primarily in the College of Medicine (COM) but do not include COM residents, interns, and clinicians, all of whom are UVM MC employees and included in the UVM MC analysis.

TABLE 4-8: UVM EMPLOYMENT (2018 ACADEMIC YEAR)

	2018 ACADEMIC YEAR
Full-time Staff	2,286
Part-time Staff	166
Full-time Faculty	1,320
Part-time Faculty	414
TOTAL (Employment)	4,186¹⁶

¹⁶ The Employment total in Table 4-8 is 269 more than the projected total for 2019 in the 2014-2019 JIPMP 5-Year Update (see Table 24 of that document).

Enrollment

UVM's total enrollment at the start of the 2018 academic year included 13,346 students across undergraduate, graduate, and non-degree programs.

TABLE 4-9: UVM ENROLLMENT

	2018 ACADEMIC YEAR
Undergraduate	10,612
Graduate and Certificate	1,552
Medical Student	466
Non-Degree Cont. Ed.	716
TOTAL (Enrollment)	13,346¹⁷

Parking Districts (Sec. 8.1.3)

UVM is located in a Shared Use Parking District.

Existing Structures (Sec. 8.1.4)

The Main Campus of UVM consists of the following administrative districts: Athletic, Centennial, Central, Redstone, Trinity, and University Heights.

Table 4-10 summarizes the number of existing buildings and GSF of buildings in these Main Campus districts by use. This inventory does not include sites that UVM ground-leases to third parties, such as Redstone Lofts, Redstone Student Apartments, and Centennial Court Faculty/Staff Apartments.

In total, the Main Campus comprises 197 total buildings, including 27 accessory buildings like sheds, barns, or garages. The total GSF of all building uses on the Main Campus is approximately 5.58 million square feet.

Table 4-10: UVM BUILDING INVENTORY (FALL 2018)

PRIMARY BUILDING USE	ACCESSORY BUILDINGS	TOTAL BUILDING COUNT	GSF	RESIDENTIAL BEDS
Mixed Uses:				
Academic/Admin/Student Support	0	3	242,857	-
Academic/Research	9	71	1,927,295	-
UVM MC/UVM Academic Research	1	7	253,458	-
Administration	6	29	504,130	-
Athletics	6	15	412,054	-
Student Support	3	20	507,818	-
<i>Residential</i>				-
Residential Academic	0	3	110,961	-
Residential Dining	0	4	260,602	-
Residential Central Campus	2	8	212,341	-

¹⁷ The enrollment total in Table 4-9 is 1,303 more than the projected total for 2019 in the 2014-2019 JIPMP 5-Year Update (see Table 24 of that document).

PRIMARY BUILDING USE	ACCESSORY BUILDINGS	TOTAL BUILDING COUNT	GSF	RESIDENTIAL BEDS
Residential Redstone Campus	0	14	409,339	-
Residential Trinity Campus	0	12	147,174	-
Residential University Heights Campus	0	11	592,343	-
Residential Subtotal	2	52	1,732,760	5,906
TOTAL	27	197	5,580,372	5,906

Source: Information provided by institutional staff.

Notes: UVM MC/UVM Academic Research includes Rubenstein Laboratory, located at the Burlington waterfront (14,507 GSF). Residential category does not include Redstone Apartments, Redstone Lofts, or Centennial Court Apartments, which are owned and managed by private entities. Residential dining facilities are located in three buildings south of Main Street; University Heights houses two (81,090 GSF) and Redstone Campus houses one (71,086 GSF).

The 2019 existing UVM conditions are nearly 300,000 more square feet of gross building area with 1,565 more enrolled students and more 269 total faculty staff compared to the 2014-2019 JIPMP base conditions.

Limitations, Location, Use of Facilities (Sec. 8.1.12)

As of January 2019, UVM reported an inventory of 5,410 parking spaces. The inventory is shown in Table 4-11. This inventory includes some spaces which are currently off-line due to construction staging as well as closed due to winter safety around the watertower. Thus the actual physical capacity as of January is slightly lower than this number.

For the purposes of parking management, parking is divided into the following areas: Athletic Commuter, Core Central, Core East, Core North, Core South, Core West, Commuter Lots, Redstone, and Trinity.

UVM currently leases 632 of its spaces out to UVM MC. It is also worth noting here that the number of spaces leased out to UVM MC decreased by 133 spaces within the 2017-2019 timeframe. In addition, 188 spaces have been unavailable

TABLE 4-11: UVM PARKING INVENTORY (JANUARY 2019)

Parking Lot	Parking Lot Capacity	Spaces Leased to UVM MC	Spaces Unavailable Due to Construction	Usable Spaces
Athletic				
Commuter	1,757			1,757
Core Central	57			57
Core East	893	100	99	694
Core North	378		89	289
Core South	191			191
Core West	436	47		389
Commuter Lots	773	485		288
Redstone	614			614
Trinity	311			311
TOTAL Spaces	5,410	632	188	4,590

Source: Information provided by institutional staff.

Notes: A total of 188 spaces have been unavailable in the Jeffords East (part of Core East) and Converse (part of Core North) lots due to construction. These spaces (a total of 195 due to reconfiguration of the lots) are anticipated to become available in July 2019.

Minimum Off-street Parking Requirements (Sec. 8.1.8)

There is potential for overestimating the number of required parking spaces given the use categories provided in Table 8.1.8-1 of the Ordinance. There is a Special Residential Use for Dormitories as well as a Non-Residential Use for Post-Secondary Schools. The square footage of dining halls and student centers are enumerated within this latter category. However, these uses are heavily patronized by residential students who walk to the building and do not generate a demand for parking, and whose parking demand has already been accounted for (under Special Residential Use for Dormitories). To avoid the task of determining which campus functions might be considered residential and which are non-residential, a composite approach is analyzed. The two approaches: 1) using the College's GFA applied to the Post-Secondary School category from Table 8.1.8-1 in the Ordinance; or 2) using a composite of the GFA of non-dormitory buildings (applied to Table 8.1.8-1's Post-Secondary School category), the number of dormitory beds (applied to Table 8.1.8-1's Residential Use-Dormitory category), and the number of recreational facility seats (applied to Table 8.1.8-1's Non-Residential Recreational Facility-Indoor category).

Table 4-12 provides the minimum parking required by the Burlington CDO. Calculations for UVM's existing campus use both approaches.

TABLE 4-12: UVM MINIMUM OFF-STREET PARKING REQUIREMENTS (2019)

EXISTING CAMPUS		PARKING REQUIREMENT
GFA Approach	GFA (2 spaces/1,000 sq ft) = 5,580,372 sq ft	11,161
	Dormitory Beds (1 space/2 beds) = 5,906	2,953
Composite Approach	Non-Residential GFA (2 spaces/1,000 sq ft) = 3,631,816 sq ft	7,264
	Recreational Facility Seats (1 space/4 seats) = 4,500	1,125
Total		11,342

Notes: Gutterson Field House is not included as its parking requirement is based on the number of seats. Recreational facility seats refer to the number of seats provided in Gutterson Field House.

Maximum Parking Spaces (Sec. 8.1.9)

The CDO defines the maximum for parking as the 125% of the minimum number of spaces required for the Neighborhood District. All of the parking requirement categories used in Table 4-12 are identical for both the Shared Use and Neighborhood Districts, making the maximum 125% of the calculated requirement would be 13,951 spaces. UVM's inventory of 5,410 (see Table 4-11) is far from approaching this number.

Vehicle Permits

UVM parking permits are priced to regulate demand in core areas. For employees, the UVM permitting system defines areas as Main (Green Zone), Proximate (White Zone), or Peripheral (Brown Zone). Permits for the lots in the main area are the most expensive, followed by

proximate and then peripheral lots. The permitting system for students is more nuanced and restrictive. UVM's general parking regulations are as follows:

- Only faculty/staff can park in core areas during the daytime.
- Spaces in core areas are assigned based on seniority.
- First-year residential students are generally prohibited from bringing a car to campus (though some exceptions are allowed). Residential students in general are discouraged from bringing a car to campus through permit pricing: residential parking permits are roughly three times more expensive than commuter student permits.
- Students who live within the half mile distance of campus are ineligible for daytime campus parking.

TABLE 4-13: UVM PARKING PERMITS FOR 2017-2018 PERMIT CYCLE

PERMIT TYPE		NUMBER OF PERMITS
Employees		2,667
Students	Residential	1,451
	Commuter	1,157
	Med Students 3rd & 4 th Year	83
Alternative	Carpool (Zone Green)	64 (171 participants)
	Carpool (Zone White)	10 (20 participants)
Occasional Use	Employee	296
	Students	107
	Med Students 3rd & 4 th Year	11
Subtotal occasional use		414
Subtotal frequent use		5,432
TOTAL		5,846

Parking Demand

Observed Demand

A parking count conducted during the peak period in the 2018 fall semester tallied the number of parked vehicles and vacant spaces for each of UVM's parking areas.

TABLE 4-14: UVM PARKING LOT CAPACITIES AND EMPTY SPACE COUNT

PEAK DEMAND LOT COUNTS - FALL 2018				
Location	Capacity	Occupied Spaces ¹	Empty Spaces	Percent Full
Athletic Commuter	1,757	1,648	109	94%
Core Central	57	57	0	100%
Core East	694	624	70	90%
Core North	289	251	38	87%
Core South	191	172	19	90%
Core West	389	357	32	92%
Commuter Lots	288	272	16	94%
Redstone	614	573	41	93%
Trinity	311	306	5	99%
TOTAL	4,590	4,260	330	93%

Source: Information provided by institutional staff.

Notes: Peak period is weekdays, 11am-1pm.

Estimated Demand

As described above in Section 2.4, a method utilizing CATMA Student and Employee Transportation Surveys was developed to estimate current demand and assist in forecasting future parking demand. The calculation is based upon inputs into the following formula:

$$\text{Number of Users} \times \text{Share of Users on Campus at Peak Period} \times \text{Demand Generator} = \text{Estimated Parking Demand}$$

The inputs are based upon information provided by institutional staff as well as responses from CATMA Student and Employee Transportation Surveys. UVM has an current estimated deficit of 414 spaces based upon survey data, which amounts to a difference of 1,162 spaces compared to the 748 space surplus reported in the 2014-2019 JIPMP 5-Year Update and a difference of 508 spaces compared to the recalculated projected surplus of 94 spaces (see Table 1-5). This equates to a 109% occupancy rate (based upon a parking supply of 4,590 and an estimated demand for 2005 spaces), higher than the 93% occupancy rates based upon lot counts (which indicated UVM has an estimated surplus of 330 spaces, see Table 1-2). The current parking capacity of 4,590 spaces is comparable to the 2014 parking capacity of 4,593, and also similar to the 4,571 projected in the 2014-2019 JIPMP 5-Year Update. As mentioned above, UVM expects to recover spaces unavailable due to construction in July 2019 (188 spaces plus 7 additional spaces due to lot reconfiguration for a total of 195 spaces). This will lead to a new parking supply of 4,785 and a remaining estimated deficit of 219 spaces.

TABLE 4-15: UVM CURRENT ESTIMATED PEAK PERIOD PARKING DEMAND BY USER GROUP

User Group	Number in Category	Peak % on Campus	Demand Generator	Parking Demand (spaces)
Students				
Residential Students			<i>Auto Ownership</i>	
First Year	2,512	81.6%	1.7%	34
Non-First-Year	3,394	90.7%	39.0%	1,200
Subtotal	5,906			1,234
Commuting Students			<i>Mode Share</i>	
Commuting students (inside 0.5 miles)	3,174	89.1%	4.1%	116
Commuting students (outside 0.5 miles)	4,266	91.2%	28.8%	1,122
Subtotal	7,440			1,238
Employees			<i>Mode Share</i>	
Full-time	3,606	90.7%	59.0%	1,929
Part-time	580	53.7%	59.0%	184
Subtotal	4,186			2,113
Other Users				
Visitors				185
Fleet vehicles				234
Total peak parking demand				5,004
Total parking supply				4,590
Net spaces				-414

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student and Employee Transportation Surveys, as well as information provided by institutional staff.

Notes: The 2016 CATMA Student and Employee Transportation Surveys are the sources for the share of users on campus at peak, as the 2018 surveys did not collect this information with sufficient specificity (see Table 2-4), with the peak period of 11:30am-1:30pm for residential students and 12pm-1pm for commuter students and employees. The demand generator is based upon the share of residential first year students with parking permit waivers, the share of residential non-first-year students with a personal vehicle (2018 CATMA Student Transportation Survey), and the primary mode share (drive alone share + 0.5* carpool share) for commuter students and employees (2016 CATMA Student Transportation Survey).

4.3 FUTURE PARKING CONDITIONS

Future Population: Students, Staff, Faculty, Visitors (Sec. 8.3.3 (A))

Between 2019 and 2024, both the University's enrollment and employment are anticipated to remain relatively unchanged. Employment is expected to increase marginally from 4,186 at the beginning of the 2018 academic year to 4,205 in 2024. In the same timeframe, enrollment is estimated to decrease slightly from 13,346 students to 13,250.

TABLE 4-16: UVM PROJECTED EMPLOYMENT (2024)

2024 PROJECTED ACADEMIC YEAR	
Full-time Staff	2,300
Part-time Staff	170
Full-time Faculty	1,320
Part-time Faculty	415
TOTAL Employees Eligible for Parking Permits	4,205

TABLE 4-17: UVM PROJECTED ENROLLMENT (2024)

2024 PROJECTED ACADEMIC YEAR	
Undergraduate	10,500
Graduate and Certificate	1,500
Medical Student	450
Non-Degree Cont. Ed.	800
TOTAL Enrollment	13,250

Future Structures—New or Changes in Use

This section addresses planned developments to the UVM campus over the next 5 years that the University's parking supply will have to accommodate. The previous JIPMP identified nine building projects slated to be complete by 2019. These projects and their current status are shown in Table 4-18.

TABLE 4-18: STATUS OF PREVIOUSLY IDENTIFIED UVM BUILDING PROJECTS

BUILDING PROJECT	COMPLETED?		NOTES
	Yes	No	
Multi-Purpose Event Center		×	Carried forward to current 5-year Plan, project will start in spring 2019 and be completed by summer 2021
STEM	✓		Renovations on two existing buildings (Votey and the Innovation) and one new build (Discovery), scheduled to open in May 2019
Kalkin Addition (Ifshin Hall)	✓		Completed in 2018
61 Summit (Alumni House & Silver Pavilion)	✓		Completed in 2016
UVM Rescue Building	✓		Completed in 2017
Billings	✓		Completed in 2018
Housing Master Plan—Phase I	✓		Completed in 2017
Athletic Recreation Center		×	Carried forward to current 5-year Plan as part of the Multi-Purpose Event Center
Virtue Field Outdoor Seating	✓		Phase 1 and 2 complete, Phase 3 carried forward to current 5-year Plan

The 1 South Prospect Building on the corner of Pearl and South Prospect Streets is currently leased to UVM Medical Center (UVM MC) and is expected to transfer back to UVM control sometime around 2024. The building will require extensive rehabilitation and is not considered to be in active use by UVM by 2024.

Table 4-19 summarizes projects carried forward from the previous JIPMP as well as new planned projects identified by UVM staff estimated for completion by 2024. In total, these will result in an estimated loss of 88 spaces.

TABLE 4-19: UVM PLANNED PROJECTS

	PRIMARY USE	CHANGE IN RES BEDS	CHANGE IN GSF	CHANGE IN PARKING SPACES
Tarrant (Multi-Purpose) Event Center	Athletic	-	119,099	-149
New Research Facility for COM	Academic/Research	-	75,000	-107
Torrey/Votey Lot	Academic/Research	-	2,626	-21
Outing Club Relocation	Student Support	-	13,250	5
Gund Institute	Academic/Research	-	14,000	-5
Fleming Museum	Academic/Admin/ Student Support	-	0	10
Interfaith Center Parking Lot	NA	-	0	40
University Road (East Ave. to Compound)	NA	-	0	15
Southwick Hall	Academic/Research	-	0	2
Univ. Heights Rd/Davis Rd (Patrick Cir. to Southwick)	NA	-	0	20
Blundell	Academic/Research	-	0	5
Music Building Recital Hall Addition	Academic/Research	-	4,544	2
ADA Code Compliance	NA	-	0	-20
Future Structured Parking	NA	-	-	TBD
Residential Life Replacement Beds	Residential	500	120,000	95
Library Addition	Academic/Research	-	2,400	1
Central Heating & Cooling Plant	NA			
Cohen Hall/ Taft School	Academic/Research	-	25,000	0
439 College St	Student Support	-	14,864	19
Virtue Field Phase III	Athletic	-	5,000	0
TOTAL Increase		500	390,783	-88

Sources: Information provided by institutional staff.

Notes: Tarrant Event Center value assumes replacement of existing spectator seating at Patrick Gym with same number of spectator seats at new facility. Virtue Field Phase III relates to support functions such as bathrooms, ticketing, concessions, and locker rooms; no change is planned to overall capacity at Virtue Field or supply and demand of parking.

In addition to building and renovation projects, several demolition projects are planned (see Table 4-20), including the Pomeroy Barn and Coolidge Hall. Other changes that will impact UVM's total building inventory include a potential private development that may impact part of Trinity Campus, and potential private redevelopment of Dewey Hall and the area around it. Together, these are expected to result in the loss of 163 spaces.

TABLE 4-20: UVM PLANNED ADJUSTMENTS TO BUILDING INVENTORY

	PRIMARY USE	GSF CHANGE	RES BEDS	PARKING SPACES
Pomeroy Barn & 172 South Prospect	Academic/Research	-6,067	-	15
Coolidge Hall	Residential	-30,510	-147	-10
Back 5 & Cottages (Trinity Campus)	Residential	-64,907	-243	-85
Colchester Ave/ Dewey	Non-UVM	-82,622	-	-83
TOTAL Decrease		-184,106	-390	-163

Taking all projects and demolitions together, Table 4-21 presents the net change in UVM's building inventory for the 2019–2024 period and adds it to the totals for the existing campus to estimate totals for its future campus. The projected 2024 total parking inventory will be 5,166 spaces. Holding constant the 632 spaces leased to UVM MC leads to an estimated 4,534 spaces available for UVM.

TABLE 4-21: SUMMARY OF PROJECTED UVM CAMPUS CHANGES FOR 2024

	RESIDENTIAL BEDS	GSF	PARKING SPACES
Total Increase in GSF	500	390,783	-88
Total Decrease in GSF	-390	-184,106	-163
Net Change	110	206,677	-251
Existing (as of July 2019)	5,906	5,580,372	5,417
TOTAL (Existing + Planned)	6,016	5,787,049	5,166

Notes: Capacity at Redstone Lofts, Redstone Student Apartments, and Centennial Court Faculty/Staff Apartments is not include, as these are owned and operated by third-parties. Refer to Table 4-10 for a summary of the current existing UVM campus.

Future Minimum Off-Street Parking Requirements (Sec. 8.1.8)

The estimated changes to UVM's campus in Table 4-21 are used to calculate minimum parking requirements for UVM's 2024 planned campus per the Burlington CDO. Parking requirements for UVM's planned campus are calculated using the same composite approach applied to the current campus, as presented in Table 4-22.

TABLE 4-22: UVM MINIMUM PARKING REQUIREMENTS FOR PLANNED CAMPUS

	CHANGES TO CAMPUS PLANNED BY 2024	CDO MINIMUM PARKING REQUIREMENT CHANGE
	Dormitory Beds (1 space/2 beds) = 110	55
Composite Approach	Non-Residential GFA (2 spaces/1,000 sq. ft) = 156,029 sq. ft	312
	TOTAL	367

Notes: Tarrant Event Center GFA not included, since no change is planned in the total number of seats.

The Tarrant Event Center will replace Patrick Gym as the primary home of UVM's basketball programs ice hockey and basketball programs, as well as becoming UVM's primary venue for major ceremonial events, speakers, concerts, entertainment, other large gatherings, and recreational activity.

The current capacity at Gutterson is 4,500 seats and the capacity of the Tarrant Center will be 3,000 seats. It is not anticipated that two major events would take place simultaneously in both the new Tarrant Event Center and Gutterson and there will be sufficient time between major events to allow for transition traffic/parking management. A likely scenario would include a hockey game in the Tarrant Event Center and recreation or varsity practice in Gutterson. Based on the projected event scenarios and seating capacities it is projected that there will be no significant impact to parking or traffic patterns in the vicinity of the complex. Parking for special events, which often occur during off-peak hours, is managed by UVM Transportation and Parking Services using special operating procedures.

Overall, given the completion of all planned projects the CDO minimum parking supply for UVM by 2024 would be between 11,528 and 11,709 spaces (depending on method). For reference these estimates are similar to the previous JIPMP, which calculated a minimum requirement of 11,886 to 12,638 for UVM by 2019.

Future Parking Demand and Supply (Sec. 8.3.3 (B))

This section of the study estimates the parking demand effects of the anticipated change in employment, enrollment, and physical land uses on campus by 2024. The projected number of residential beds expected by 2024 is used to estimate future numbers of residential students (refer to Table 4-21). The total number of commuter students is estimated using on-campus student enrollment and subtracting the number of residential beds for 2024. The values for peak percentage on campus and auto ownership are held constant from existing campus calculations (see Table 4-15). As was the case for the current estimated parking demand, the estimated future parking demand using survey data is based upon the following formula:

$$\text{Number of Users} \times \text{Share of Users on Campus at Peak Period} \times \text{Demand Generator} = \text{Estimated Parking Demand}$$

As presented in Table 4-23, UVM has an estimated future net deficit of 469 spaces. This amounts to an increased deficit of only 55 spaces compared to the estimated current deficit of 414 spaces (see Table 4-15), but a 250 space difference from the 219 space deficit that will occur once spaces are recovered from construction in July 2019.

TABLE 4-23: UVM FUTURE ESTIMATED PEAK PERIOD PARKING DEMAND BY USER GROUP (2024)

User Group	Number in Category	Peak % on Campus	Demand Generator	Parking Demand (spaces)
Students				
Residential Students			<i>Auto Ownership</i>	
First Year	2,558	81.6%	1.7%	35
Non-First-Year	3,458	90.7%	39.0%	1,223
Subtotal	6,016			1,258
Commuting Students			<i>Mode Share</i>	
Commuting students (inside 0.5 miles)	3,086	89.1%	4.1%	113
Commuting students (outside 0.5 miles)	4,148	91.2%	28.8%	1,091
Subtotal	7,234			1,204
Employees			<i>Mode Share</i>	
Full-time	3,620	90.7%	59.0%	1,936
Part-time	585	53.7%	59.0%	185
Subtotal	4,205			2,122
Other Users				
Visitors				185
Fleet vehicles				234
Total peak parking demand				5,003
Total parking supply				4,534
Net spaces				-469

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Student and Employee Transportation Surveys, as well as information provided by institutional staff.

Notes: The 2016 CATMA Student and Employee Transportation Surveys are the sources for the share of users on campus at peak, as the 2018 surveys did not collect this information with sufficient specificity (see Table 2-4), with the peak period of 11:30am-1:30pm for residential students and 12pm-1pm for commuter students and employees. The demand generator is based upon the share of residential first year students with parking permit waivers, the share of residential non-first-year students with a personal vehicle (2018 CATMA Student Transportation Survey), and the primary mode share (drive alone share + 0.5* carpool share) for commuter students and employees (2016 CATMA Student Transportation Survey). The parking supply assumes no change in the current lease of 632 spaces to UVM MC. Holds peak % on campus and the demand generators constant from current levels.

Parking Demand Reduction

UVM Transportation and Parking Services has employed Nelson Nygaard as consultant to review its Transportation and Parking Operations with a goal to provide a 10-year Campus Transportation and Parking Master Plan. UVM anticipates a menu of options and recommendations which will assist in better use of existing resources and peer best practices for strategies in reducing single occupancy vehicles coming to Burlington as well as increased use of public and commuter transportation systems. The report is expected to be completed by mid to end of May 2019.

In interim of Nelson Nygaard's report and recommendations, below are several short-term, mid-term and long-term strategies that UVM plans to explore and/or implement to address its current and future parking deficit over the next five years.

Short-Term (1-2 years)

Summer 2019: UVM will regain an estimated 195 spaces that have been unavailable for UVM permits due to utilization by construction crew and equipment. These spaces include Jeffords East (100 spaces) and Converse Lot (95).

Fall 2019: UVM will increase bikeshare access on campus and within the region with implementation of 200 electric assist bikes at 25 hubs.

2019-2020 Academic Year: UVM will offer "Warehouse" parking opportunities for 40 to 80 student residents. These students will receive a discounted permit rate to park at a University owned or leased property outside of Burlington. They are expected to only access their cars for transportation during holiday and semester break periods. These students will be able to access their cars by using free GMT public transportation services thru Unlimited Access and/or bikeshare. They will also be able to obtain a cab ride or rideshare service at their own expense, or use UVM's Safe Ride program to get to their vehicle. UVM will provide a free holiday break and end of semester shuttle service to students who participate in the "Warehouse" program.

2020: UVM plans to provide convenient and accessible moped and motorcycle parking in prominent locations, and plans to strengthen and incentivize carpools by creating carpool-only parking and implement a robust promotional and communication campaign.

2020/2021: UVM plans to implement more bike parking on campus (covered and indoor) to encourage inclement weather cycling.

Mid-Term (2-5 years)

2021: UVM plans to create and publicize an official CATSRIDE last mile service to connect LINK commuters. UVM also plans to explore opportunities to park commuters at off-site lots or park-and-ride facilities (ideally located along existing public transit routes and/or served by university operated shuttle systems).

Long-Term (5-10 years)

UVM plans to reduce parking availability on campus for students and employees by relocating residential students from commuter lots to off campus locations (including University-owned or leased lots) outside of Burlington and providing transportation as needed.

Residential students who do not use their vehicles every day would have transportation either through public transit or scheduled CATSRIDE as available. Rates would be commensurate with the lease rates for the lots or with transportation costs. Meanwhile, residential students who use their vehicles weekly may use public transportation as well as scheduling the CATSRIDE if available.

Ongoing Efforts to Manage Parking Demand

UVM recognizes the need for greater enforcement and reduction in the availability of free, un-managed parking supply if pricing is to be an effective policy to reduce overall parking demand.

UVM is committed to supporting attractive and desirable alternatives to driving, including working with GMT and the City of Burlington to improve transit service, quality, and efficiency to attract ridership.

UVM recognizes that reducing the supply of leased space to other parties (e.g. UVM MC) may be necessary. While the future parking demand estimates hold the number of leased spaces constant, ceasing to lease spaces to UVM MC would eliminate the projected parking deficit.

UVM could also explore increasing the number of leased parking space elsewhere off-site (eg Lakeside Lot) in conjunction with shuttle service.

Finally, UVM may consider increasing parking capacity on campus.

Institutional Vehicle Fleet Management (Sec. 8.3.3 (C))

UVM owns or leases a total of 234 vehicles. Most UVM service vehicles (identified with parking stickers) are kept at their respective department location, and temporary business use placards are provided for service/vendor vehicles as needed during day.

Monitoring, Compliance, and Enforcement (Sec. 8.3.3 (e))

Table 4-24 lists the various situations that warrant a parking ticket being issued and the amount of the fine. UVM Transportation and Parking Services issued 16,440 parking citations in FY2018; almost half (7,342) were for parking on campus without a permit.

TABLE 4-24: PARKING FINES FOR THE 2018-2019 ACADEMIC YEAR

VIOLATION	FINE
Parked overtime at meter/pay station/loading zone	\$25
Permit not displayed	\$30
Parked in a restricted area	\$30
Parked without a valid permit	\$50
Parking in a fire lane/roadway	\$80
Disabled space violation	\$80
Use of unauthorized permit	\$80
Falsifying information	Refer to Police Services
Disregarding traffic signs	Refer to Police Services
Damage, destroy, or illegally activating parking gates	Refer to Police Services
Unauthorized use of, removing, possession of, tampering with or damaging University property managed by Transportation and Parking Services	Refer to Police Services

Notes: Violations for use of unauthorized permit is administered by Police Services.

5.0 UVM MEDICAL CENTER

5.1 OVERVIEW OF INSTITUTIONAL PARKING MANAGEMENT PLAN

The UVM Medical Center (UVM MC) is an academic medical center providing high quality care regional referral services for patients throughout Vermont and Northern New York. UVM MC is a member of the UVM Health Network (UVM HN), which includes facilities in and around Burlington, the Central Vermont Medical Center, Champlain Valley Physicians Hospital, Elizabethtown Community Hospital, Alice Hyde Medical Center, Canton-Potsdam Hospital, Inter-Lakes Health, Home Health & Hospice, (formerly the Visiting Nurse Association of Chittenden and Grand Isle counties), and the UVM Health Network Medical Group. The UVM MC consists of more than 30 patient care sites and 100 outreach clinics, employs over 7,000 people, serves a population of over a million people, and conducts around 750,000 procedures every year.

This chapter of the Joint Institutional Parking Management Plan (JIPMP) focuses on the Burlington Hill District Campuses, which includes the UVM MC Main Campus, 1 South Prospect, and downtown Burlington (112 Colchester Avenue, 128 Lakeside Avenue/Innovation Park, and 95 St Paul Street) facilities.

Transportation Demand Management Programs (Sec. 8.3.3 (D))

UVM MC is a founding member of CATMA. Through this membership, employees are eligible to enroll in a variety of sustainable commuter programs, including transit pass discounts, bike/walk rewards, carpool matching and trip planning services, Greenride Bikeshare discounts, and emergency rides home.

This section covers:

1. **Policies** which restrict or prohibit the bringing of vehicles to the institution for various users or groups of users.
2. **Programs** to encourage the use of public transit, walking and bicycling; To encourage the use of alternative transportation modes, the College will continue:
3. **Implementation** of a parking permit system to allocate parking throughout the system.

TABLE 5-1: SUMMARY OF UVM MC PARKING MANAGEMENT STRATEGIES

STRATEGIES	UVM MC AVAILABILITY
Parking Management Program	Yes
TMA Membership	Yes, CATMA
Telecommuting Program	Encouraged where possible. Telecommuting is available in certain departments, such as Radiology and Pathology. Health Information Services and Transcription staff are permitted to work from home.
Carshare program	Yes, CarShare Vermont via UVM Campus.
Bikeshare	Yes, Greenride at Miller Building and outside the Ambulatory Care Center (ACC) entrance.
Off-site parking/shuttles	Yes
Public transit subsidies for employees	Yes

Policies

Parking Permits and Remote Lots

UVM MC manages on-site parking demand by successfully utilizing off-site, remote lots through an effective shuttle system. During peak demand periods, convenient on-site parking assignments are limited to senior staff, physicians, residents, and those with “Business Needs” or “Medical Needs” permits. Remaining staff are required to park in a satellite lot served by a shuttle or use an alternative transportation mode.

Transit Discounts

UVM Medical Center offers a discount on GMT commuter passes and a discount on local bus passes. UVM Medical Center also offers a discount on ferry tickets for employees who live in New York. A carpool parking incentive (on campus parking permit) are available to employees at the Main Campus, 1 South Prospect Street, and Fanny Allen who have two or more employees who commute to work together.

Programs

To encourage the use of alternative transportation modes, UVM MC conducts the following activities:¹⁸

Guaranteed Ride Home (GRH) Program

As of November 2018, there were 964 institutional employees registered with CATMA or registered in the Guaranteed Ride Home Program.

Public Transit

Since the early 1980s, GMT buses on the Burlington/Essex Route have served UVM Medical Center Main Campus. To facilitate bus access, UVM Medical Center widened the intersection

¹⁸ These programs satisfy most of the items in Article 10 of the July 26, 2000 Planning Commission Decision.

and entrance road from Colchester Ave. and Hospital Dr. to service bus passengers. Since spring 1995, UVM Medical Center has subsidized the cost of GMT bus passes for employees choosing to ride the bus. Transit incentives include:

- UVM Medical Center offers the 50% subsidy on local GMT bus routes and a 25% subsidy on all LINK Express routes.
- UVM Medical Center offers all employees a 25% subsidy on Lake Champlain Ferry passes.
- Passes for both GMT and the Lake Champlain Ferry are sold to employees at the Security offices on the Main Campus and at 1 South Prospect Street. Payroll deduction is available.

TABLE 5-2: UVM MC TRANSIT PASS SUBSIDIES

CURRENT PARTICIPATION	AVERAGE BUS PASSES SOLD PER MONTH
GMT Local Service: Monthly Pass	92
GMT Local Service, Senior/Disabled: Monthly	-
GMT Local Service: 10 Ride Pass	36
GMT Local Service Senior/Disabled: 10 Ride Pass	-
GMT LINK Express: Monthly Pass	1
GMT LINK Express Local Commuter: Monthly Pass	2
GMT LINK Express: 10 Ride Pass	75
GMT LINK Express Local Commuter: 10 Ride Pass	30
Champlain Ferry: Car and Driver Monthly Pass	122
Champlain Ferry: Passenger 10 Ride	23
Champlain Ferry: Motorcycle 20 Ride	-

College Street Shuttle

UVM MC will continue to support the College Street shuttle to connect the downtown offices with the Main Campus. This increase in service benefits both our constituents and staff in their need to travel between campuses.

Off-site Parking Shuttle and Transit Integration

UVM Medical Center provides off-site parking at the Fanny Allen Campus in Colchester, the 115 Lakeside Lot and Technology Park, with regular shuttle service directly to and from the Main Campus. In addition, the Main Campus serves as a transit stop for 10 GMT transit routes.

TABLE 5-3: UVM MCPARKING SHUTTLES - FREQUENCY

SHUTTLE LOCATIONS	AM RUNS	MIDDAY RUNS	PM RUNS	TOTAL RUNS/DAY
Tech Park/Medical Center	21	11	28	60
Lakeside/Medical Center	21	11	28	60
Fanny Allen/Medical Center	21	11	28	60
Catamount/Medical Center	16	14	14	44
Centennial/1 South Prospect	15	0	15	30

The shuttles summarized in Table 5-3 combine to provide 254 shuttles that operate 254 days per year resulting in 64,516 shuttle trips per year. Table 5-4 shows the shuttle pickup locations, the hours of operation, and the quantity, and type of shuttles.

TABLE 5-4: UVM MC PARKING SHUTTLES - TYPES

SHUTTLE LOCATION		ROUTE HOURS, M-F				
Tech Park/Medical Center	4:15 am to 9:20 pm	2 buses 4:15 - 5:00 am	3 buses 5:00 am - 9:00 am	1 van 9:20 am - 2:20 pm	3 buses 2:30 pm - 7:30 pm	2 buses 7:30 pm - 9:20 pm
Lakeside/Medical Center	4:15 am to 9:20 pm	2 buses 4:15 - 5:00 am	3 buses 5:00 am - 9:00 am	1 van 9:20 am - 2:20 pm	3 buses 2:30 pm - 7:30 pm	2 buses 7:30 pm - 9:20 pm
Fanny Allen/Medical Center	4:15 am to 9:20 pm	2 buses 4:15 - 5:00 am	3 buses 5:00 am - 9:00 am	1 van 9:20 am - 2:20 pm	3 buses 2:30 pm - 7:30 pm	2 buses 7:30 pm - 9:20 pm
Catamount/Medical Center	4:15 am to 9:15 pm	1 bus 4:15 am - 5:30 am	2 buses 5:30 am - 8:30 am	1 bus 8:30 am - 2:00 pm	2 buses 2:00 pm - 6:30 pm	1 bus 6:30 pm - 9:15 pm
Centennial/1 South Prospect	6:05 am to 9:35 am & 2:35 am - 6:05pm	1 bus 6:05 am - 9:35 am	1 bus 2:35 am - 6:05 pm	-	-	-

Carpooling

There are approximately 1,000 UVM Medical Center employees registered with CATMA as carpoolers. Carpools with at least two occupants may park on-site in the Medical Center South lot.

Supporting Bicycle Travel

UVM Medical Center supports bicycle travel in several ways, including:

- Incentivizing its constituents to bicycle to work through the CATMA Bike/Walk Rewards Program.
- Investing in the local and regional bicycle networks: for example, UVM Medical Center widened the sidewalk along Colchester Avenue between East Avenue and Mansfield Avenue to interconnect with UVM bike paths. The sidewalk along Beaumont Drive is 10 feet wide to function as a shared use path.
- Providing shower facilities to its bicycling constituents: The Security Department maintains a list of shower locations at the Medical Center Campus that are available for staff use. When security staff receive inquiries about shower locations, they describe the various locations and suggest the one that best meets the employee's needs.
- Providing bicycle parking in the form of racks and making an effort to locate such parking in covered areas. Covered bicycle parking is provided at the McClure and Miller Buildings. There is parking for over 100 bicycles located at several entrances of the

Medical Center Campus. UVM Medical Center makes an effort to locate bicycle parking in covered areas.

- There is a Greenride Bikeshare hub located near the bus stop on ACC/Wick Plaza.
- UVM Medical Center has been designated a Bicycle Friendly Employer by the League of American Bicyclists.

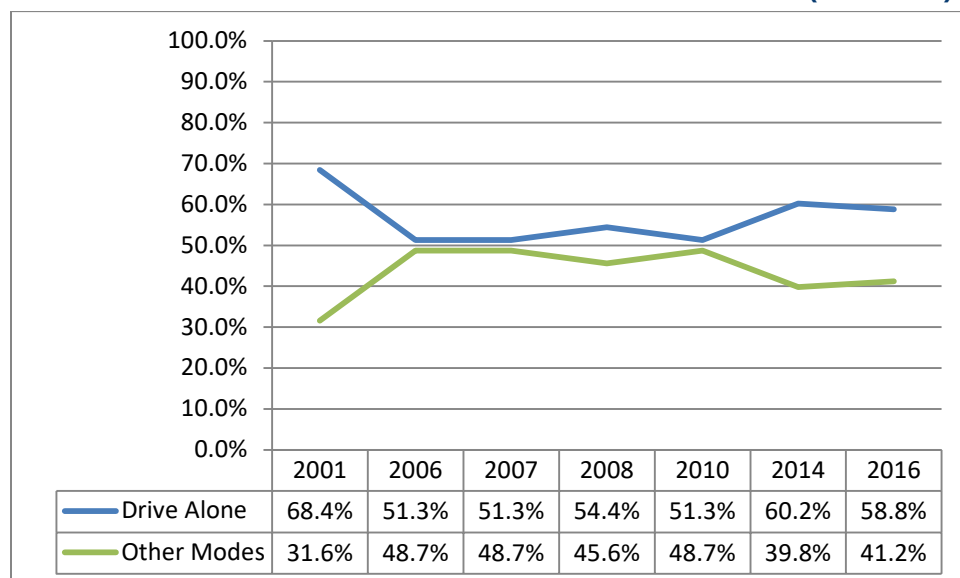
Implementation

Implementation of the parking management plan is conducted through the application of a parking permit system. The UVM Medical Center parking program manages demand for on-site parking through the use of incentives and off-site satellite parking served by shuttles. Key elements of the UVM Medical Center Permitted Parking Policy are as follows:

- All UVM MC staff and affiliates who wish to park their vehicles in a UVM MC controlled parking lot must register their vehicles with the Security Department at the Medical Center Main Campus.
- All vehicles parked at the Medical Center Main Campus or in any Medical Center Campus satellite lot must display a current UVM MC parking permit.
- Vehicles must be parked only in the lot designated by the permit.
- One permit may be issued per person. Only the registered employee may park in their assigned lot; permits may not be loaned.
- A limited number of “Business Needs” permits are available to staff who use their personal vehicles to frequently come and go from the Medical Center Campus for business reasons. The number of business needs permits issued varies based on parking space availability at the Medical Center Campus.
- Affiliates are only allowed to park in the lot while they are working or on official UVM MC business. Parking in the lot to attend school or other non-work related functions is not permitted.

Employee Travel Trends

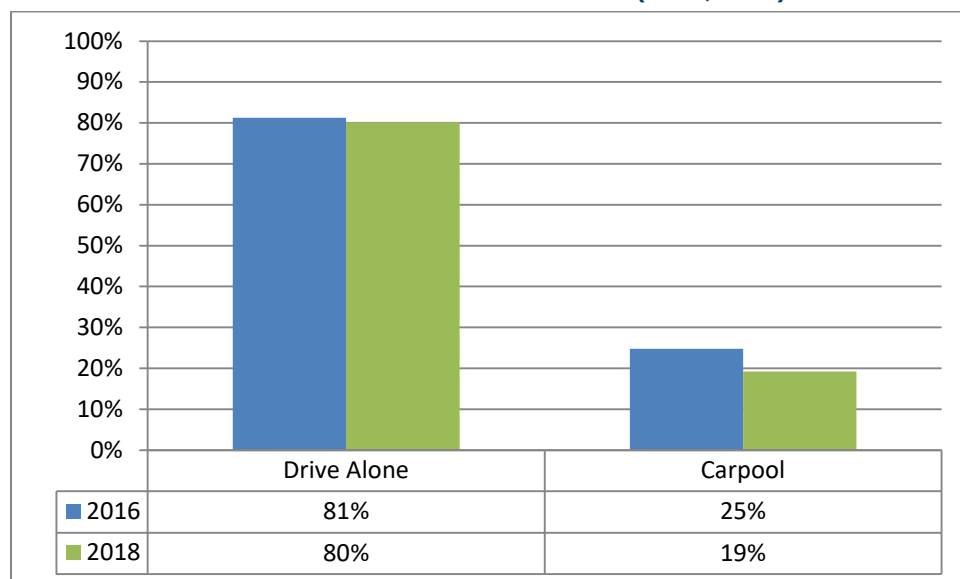
Figure 5-1 shows the surveyed commute travel mode over time. Year to year there are variations between some of the means of commute. The percentage of people biking or walking to work has remained relatively stable averaging 11% and the car driving alone has remained between 50% and 60% since 2006.

FIGURE 5-1: UVM MC EMPLOYEE PRIMARY COMMUTE MODE (2001-2016)

Source: Calculated by CATMA Staff using the 2001-2016 CATMA Employee Transportation Survey.

Note: Percentages are rounded to the nearest integer.

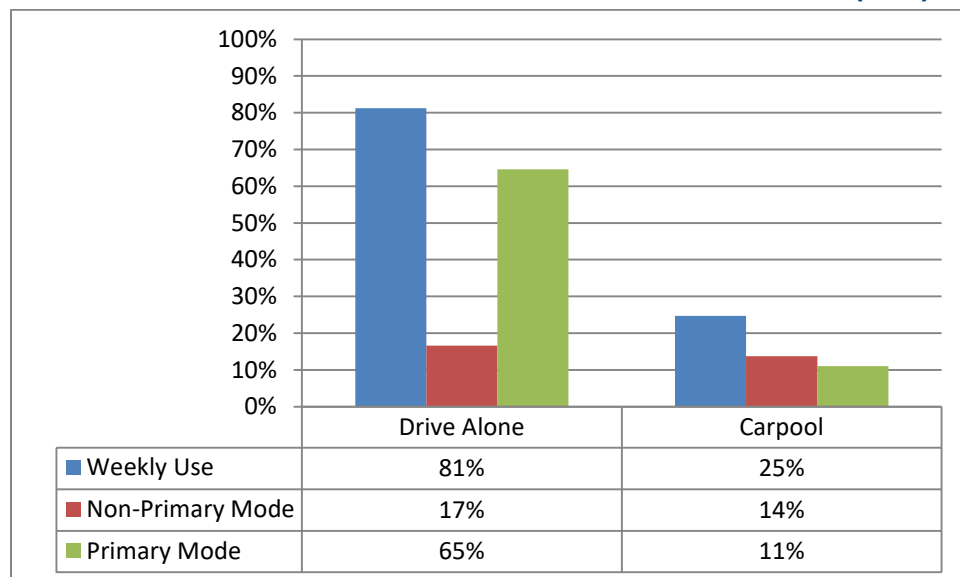
Between 2016 and 2018, the share of UVM MC employees driving to work over the course of the week has remained relatively level, but the share of employees carpooling during the week has declined.

FIGURE 5-2: SHARE OF UVM MC EMPLOYEES REPORTING DRIVING ALONE AND CARPOOLING TO CAMPUS OVER THE COURSE OF THE WEEK (2016, 2018)

Source: Calculated by CATMA Staff using the 2016 and 2018 CATMA Employee Transportation Surveys.

Note: Percentages are rounded to the nearest integer.

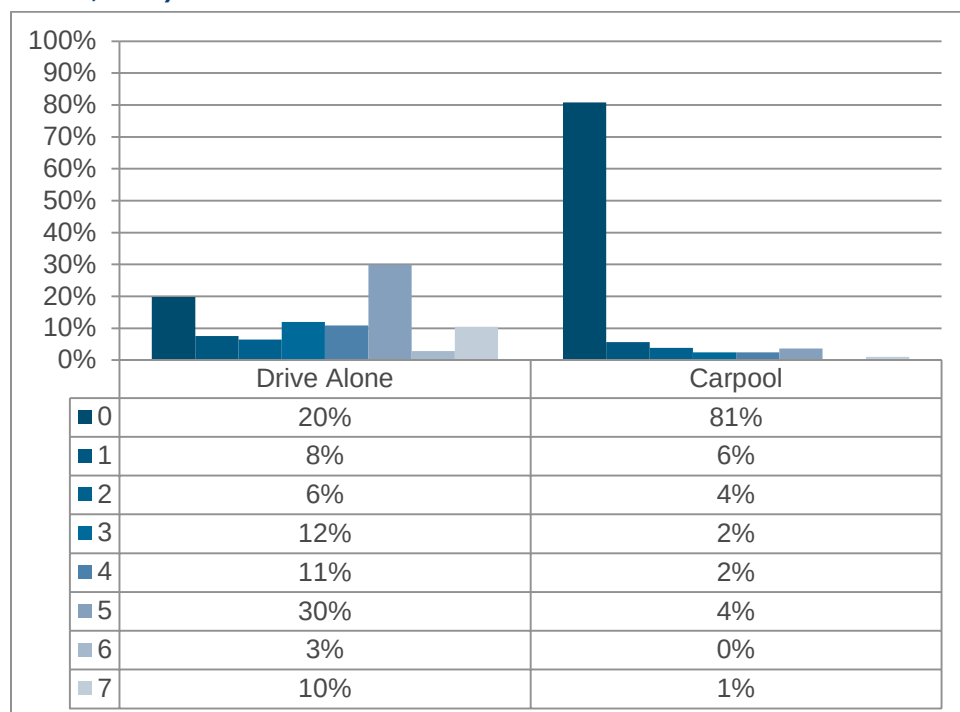
Most UVM MC employees who drive alone over the course of a week rely on driving alone as their primary mode. Meanwhile, significantly fewer UVM MC employees report carpooling during the week, and carpooling is often a non-primary mode.

FIGURE 5-3: UVM MC EMPLOYEE USE OF DRIVING ALONE AND CARPOOLING AS PRIMARY MODE VERSUS NON-PRIMARY MODE FOR UVM MC EMPLOYEES (2016)

Source: Calculated by CATMA Staff using the 2016 CATMA Employee Transportation Survey.

Note: Percentages are rounded to the nearest integer.

Of the 80% of UVM MC employees who drive alone during the week, 8% drive alone one day per week, 29% drive alone two-four days per week, 30% drive alone five days per week, and 13% drive alone six-seven days per week. Employees who carpool during the week tend to carpool one-three days per week.

FIGURE 5-4: UVM MC SHARE OF EMPLOYEES DRIVING ALONE AND CARPOOLING (DAYS PER WEEK, 2018)

Source: Calculated by CATMA Staff using the 2018 CATMA Employee Transportation Survey.

Note: Percentages are rounded to the nearest integer.

Finally, an estimated 16 employees use on-street parking (calculated by CATMA staff, see Table 1-3 and Table 2-7), based upon the share of employees reporting use of on-street parking when driving alone or carpooling.

5.2 EXISTING CONDITIONS

Employment

UVM MC employs a total of 6,229 individuals associated with their Burlington campuses. The majority of these employees are assigned to the MCC or the 1 South Prospect Street Campus, which are both located in the City of Burlington. There are an additional 1,067 non-paid staff, all at the UVM Medical Center Main Campus. The space that UVM MC leases from the University of Vermont for the MCC Campus is included in the UVM MC analysis chapter rather than the UVM chapter.

TABLE 5-5: UVM MC EMPLOYMENT

PAID EMPLOYEES		MAIN CAMPUS	1 SOUTH PROSPECT	DOWNTOWN BURLINGTON
<i>Full-time</i>	Day shift	2,294	440	150
	Evening shift	317	9	0
	Night shift	561	9	0
	FT Un-ID'd shift	743	42	6
Total Full-Time		3,915	500	156
<i>Part-time</i>	Day shift	478	68	8
	Evening shift	79	4	0
	Night shift	67	0	0
	PT Un-ID'd shift	111	14	3
TOTAL (Part-Time)		735	86	11
TOTAL (Per Diem)		752	64	10
TOTAL (Employees by Site)		5,402	650	177

Note: Downtown Burlington numbers include 112 Colchester Ave, 95 St. Paul St, Apple Tree Bay, Courthouse Plaza, Innovation Center, UVM Given Building, and UVM Stafford Building. Unidentified shift employees are most likely day shift.

TABLE 5-6: UVM MC NON-PAID STAFF

NON-PAID STAFF (ALL AT MEDICAL CENTER CAMPUS)	
Community Based Members of the Medical Staff	208
Honorary Members of the Medical Staff	75
Volunteers	784
TOTAL (Non-Paid Staff)	1,067

Note: Honorary Members do not have privileges, but they maintain a relationship with the medical staff and sit on Medical Staff Committees.

Patients

The UVM Medical Center Main Campus is licensed for 580 beds for in-patient care. In practice, the Main Campus has only 500 beds in rotation. 1 South Prospect does not perform in-patient services.

In 2018, UVM Medical Center Main Campus performed 289,335 out-patient procedures, and 1 South Prospect performed 80,090 procedures. In many cases, the same patient will receive more than one procedure on one visit. However, the number of average daily procedures as calculated in Table 5-7 serves as the most accurate approximation for peak patient demand.

TABLE 5-7: UVM MC OUT-PATIENT PROCEDURES AT SELECTED CAMPUSES (2018)

	2018 ANNUAL PROCEDURES	2018 AVERAGE DAILY PROCEDURES
UVM MC Main Campus	289,335	1,113
1 South Prospect	80,090	308

Note: Assumes all procedures are scheduled Monday through Friday.

Parking Districts (Sec. 8.1.3)

The Medical Center Campus and 1 South Prospect are located in the Shared Use Parking District.

Existing Structures (Sec. 8.1.4)

The Medical Center Campus is currently licensed for 580 patient beds or bassinets. Since the number of staffed or occupied beds may vary, the number of licensed beds is used as the basis for this plan since it is a maximum and invariable number that leads to a conservative estimate.

To account for the diverse healthcare functions provided UVM MC, an effort has been made to distinguish between hospital/in-patient uses, educational uses, and other uses (e.g. cafeteria, medical office, administrative office, support space, common areas). While there is not a precise method to distinguish between these uses and the square footage associated with each, a reasonable estimate is made in Table 5-8.

TABLE 5-8: UVM MC APPROXIMATE GSF BY FUNCTION¹⁹

FUNCTION	MAIN CAMPUS GSF	1 SOUTH PROSPECT GSF	DOWNTOWN BURLINGTON GSF
Hospital (in-patient)	786,057	--	--
Educational	35,597	--	--
Other (e.g. cafeteria, medical & administrative office, support space, common areas)	877,085	188,229	1,322
TOTAL	1,698,739	--	--

¹⁹ Gross external dimensions based on FAHC 2019 Campus Building Gross Summary spreadsheet.

The out-patient facilities and medical offices at 1 South Prospect, which UVM Medical Center leases from UVM, comprise 188,229 net square feet. UVM Medical Center also owns 1,322 square feet at 112-114 Colchester Avenue in Burlington, which are included in the calculation of required parking spaces.

Table 5-9 summarizes existing parking spaces, including leased parking facilities that are adjacent to the Medical Center Campus or 1 South Prospect, which are considered as on-site parking. There are currently a total of 2,556 spaces available: 2,052 at the Medical Center Campus and 504 at 1 South Prospect²⁰. On-street parking spaces are not included in the inventory.

TABLE 5-9: UVM MC PARKING INVENTORY (MAIN CAMPUS AND 1 SOUTH PROSPECT)

LOCATION	NUMBER OF SPACES
<i>Medical Center Campus</i>	
ACC Garage	1,224
ACC Loading Dock	21
ER Lot	47
ED Ambulance Bay (loading/unloading)	5
ED Ambulance Parking (unmarked)	4
McClure Parking Garage (15 surface lot spaces)	317
Patrick Loading Dock	9
South Lot (include 6 spaces at Hope Lodge, does not include UVM spaces) (Leased)	425
<i>Subtotal Medical Center Main Campus On-Site</i>	<i>2,052</i>
<i>1 South Prospect</i>	
Lot A (Horseshoe/27 handicap spaces)	47
Lot B (Patient)	178
Lot D (Employee)	197
Pearl Street Lot (Employee)	35
Taft School (Leased)	47
<i>Subtotal 1 South Prospect</i>	<i>504</i>
On-Site Grand Total: Medical Center and 1 South Prospect	2,556

²⁰ University of Vermont employees at 1 South Prospect also use 1 South Prospect parking facilities though they do not work in the physical 1 South Prospect buildings.

The actual number of parking spaces in the Medical Center Campus and 1 South Prospect inventories may fluctuate day to day in response to operational changes. For example, UVM MC elected to take 19 parking spaces out of service in the ACC garage to improve pedestrian access and safety. Yet these spaces might be reinstated if other conditions change.

The Institutional Core Campus (ICC) Overlays described in Section 4.5.2 of the Ordinance acknowledges the different needs of UVM MC compared to other Hill institutions:

“University of Vermont Medical Center Campus (ICC-UVM MC) allows for an increased development scale and intensity than would typically be found in the adjoining and underlying districts to support continued growth and expansion of the state’s academic medical center. As a regional tertiary-level care facility, on-site parking is expected to play a larger role than otherwise would be expected for other institutional campus overlays in order to accommodate the needs of patients and visitors.”²¹

While the actual inventory is dynamic, the maximum number of *permitted* spaces (through the local and state land use development process) at the MCC remains at 2,094 spaces.²²

In addition to the properties that it owns, UVM MC leases building spaces and parking facilities in and around Burlington. Some leased parking spaces are included in the parking inventory because they have been leased specifically to provide additional parking and TDM to UVM MC. These 990 spaces are described in the off-site inventory in Table 5-10.

Other leased space that are separate and operate external to the Medical Center Campus and 1 South Prospect are not included in the parking inventory or in the parking requirement calculations.²³

Limitations, Location, Use of Facilities (Sec. 8.1.12)

Off-Site Parking Facilities

With the exception of Fanny Allen, the off-site parking facilities used by UVM Medical Center are leased from other entities. However, these spaces are critical to intercepting traffic that would otherwise travel to the Medical Center Campus or 1 South Prospect but are not included in the 2,556-space inventory described in Table 5-9. There are 1,190 spaces for off-site parking facilities for the two UVM MC campuses, as shown in Table 5-10.

²¹ Comprehensive Development Ordinance, page 4-56.

²² City and Act 250 permits associated with the Renaissance Project at the MCC.

²³ The landlords of these facilities hold permits specific to their properties and are assumed to be in compliance.

TABLE 5-10: UVM MC OFF-SITE PARKING FACILITIES SERVING THE MEDICAL CENTER CAMPUS AND BURLINGTON OFFICES (2019)

LOCATION	NUMBER OF SPACES
UVM Catamount East (Main Campus employees)	285
UVM Centennial (Main Campus & 1 South Prospect Street employees)	200
UVM Jeffords Lot (West)	100
Fanny Allen Campus (Main Campus & 1 South Prospect Street employees)	155
Technology Park (Main Campus employees)	200
115 Lakeside (Main Campus & 1 South Prospect Street employees)	250
Total Satellite/Off-site Parking	1,190

Note: On-street parking spaces are not included in the inventory.

The total parking supply available for UVM MC Main Campus and 1 South Prospect is 3,746 (based upon the on-site total of 2,556 and the off-site total of 1,190, see Tables 5-9 and 5-10).

Unrelated Off-Site Parking Facilities

Parking spaces used for other UVM MC offices (such as downtown Burlington) are not counted towards the minimum parking requirement or parking demand but are shown in Table 5-11.

TABLE 5-11: UVM MC DOWNTOWN OFF-SITE PARKING SUPPLY (UNRELATED TO MAIN CAMPUS AND SOUTH PROSPECT)

LOCATION	NUMBER OF SPACES
95 St. Paul Street	18
Court House Plaza	24
128 Lakeside Avenue	38
184 Pearl Street	12
195 Colchester Avenue	40
112 Colchester Avenue	8
Total Satellite/Off-site Parking	140

Parking for Disabled Persons (Sec. 8.1.13)

These requirements will be taken into account during the planning and design of individual projects.

UVM MC provides an optional valet parking service for its patients and visitors. This service is available at the main entrance (i.e. ACC) Monday through Friday from 6:00 AM to 5:00 PM. Cars can be retrieved with the valet until 9:00 PM. Use fluctuates daily but on average approximately 45 spaces are available for valet parking in the Medical Center Campus South Parking Lot.

Minimum Off-Street Parking Requirements (Sec. 8.1.8)

Table 5-12 summarizes the City of Burlington CDO parking minimums for the UVM MC.

TABLE 5-12: UVM MC MINIMUM OFF-STREET PARKING REQUIREMENTS (EXISTING)

BUILDINGS (GFA) AND BEDS	ORDINANCE PARKING RATIOS	PARKING REQUIREMENT
Medical Center Campus		
580 Beds	Hospital Use: 2 spaces/bed	1,160
877,085 sq. ft.	Office-Medical: 2 spaces/1,000 sq. ft GFA	1,754
35,597 sq. ft.	School, Post-Secondary: 2 spaces/1,000 sq. ft. GFA	71
Subtotal		2,985
1 South Prospect		
188,229 sq. ft.	Office-Medical: 2 spaces/1,000 sq. ft. GFA	376
Subtotal		376
TOTAL: Medical Center and 1 South Prospect		3,361

Maximum Parking Spaces (Sec. 8.1.9)

The CDO defines the maximum for parking as the 125% of the minimum number of spaces required for the land uses in the Shared Use District. Based on the minimum parking calculated in Table 5-12, the maximum parking allowed would be 4,301 spaces. UVM's inventory of 3,746 (on-site and off-site) is below this number.

Vehicle Permits

The current breakdown of vehicle permits issued by Medical Center is shown in Table 5-13.

TABLE 5-13: UVM MC VEHICLE PERMITS

PARKING LOCATION	COUNT
ACC permits	398
McClure Residents, Nurse practitioners, Phys Assistants, Midwives	640
Physicians (ACC permits)	1,600
Carpools (956 participants)	415
Business Needs	352
115 Lakeside, day shift*	420
115 Lakeside, rotator*	181
Fanny Allen Shuttle Lot*	351
Fanny Allen/Rotators*	141
Centennial/Day*	98
Centennial/Rotators*	35
South Lot	521
UVM Catamount East/Day*	511
UVM Catamount East/Rotators*	160
UVM Jeffords Lot/Day*	175
UVM Jeffords Lot/Rotators*	38
Evening/Night	1,600
TOTAL Permits	7,636

Note: Satellite parking lot re-registration and re-assignment in September 2018.

All employee vehicles must display a current UVM MC parking permit for the parking lot to which they are assigned. The permits are color coded to quickly identify the shift the registered employee is assigned to work and the lot the employee is to park in. The lots are patrolled by the UVM MC Security staff.

At 1 South Prospect St, 85% of all parking involves patient and visitor parking. Employee parking on-site is not routinely available. Only the most senior staff (e.g. all Physicians are allowed to park on-site) and those employees who use their vehicles for business or who carpool (2 persons minimum) is permitted to park on-site on any given day. All other employees must use satellite parking facilities.

The number of permits exceed the number of employees for the following reasons; carpoolers are provided a permit for carpooling and individually, as well as parking for non-employees parking permits to community doctors, retired doctors, students, midwives, physician assistants, UVM staff working on our campus, etc.

Parking Demand

Observed Demand

As a healthcare institution, UVM MC has a different demand profile compared to the educational institutions that peaks between 2:00 PM and 3:30 PM, when day and evening employees overlap during the shift change.

During the Fall of 2018, a typical period of high parking utilization, a parking count was conducted on the UVM MC parking lots and garages. The data is a 3-day snapshot of parking counts for the Medical Center Main Campus and the 1 South Prospect St. There are times during peak parking days when all on-site parking lots are full.

The total parking demand is the number of empty spaces. The total number of parked vehicles as well as vacant spaces were counted for each parking lot and summarized by zone. Tables 5-14 and 5-15 represent the average occupancy of the Fall 2018 counts during both the AM and PM peak demand periods. The average occupancy count noted 163 vacant spaces for the Medical Center Main Campus in AM Peak and 42 vacant spaces for the PM Peak. Further, there were 117 vacant spaces on the 1 South Prospect campus in the AM Peak, and 128 vacant spaces in the PM Peak. Please note these do not include either the loading docks or the emergency parking lot, or the surface lot on the west side of the McClure garage (service vehicle parking).

TABLE 5-14: UVM MC PARKING LOT CAPACITIES AND EMPTY SPACE COUNTS, MAIN CAMPUS

UVM MC PEAK DEMAND LOT COUNTS—FALL 2018 (MAIN CAMPUS)				
AM Peak				
ACC Garage*	1,074	961	113	89%
McClure Garage	302	269	33	89%
South Lot	425	415	10	98%
UVM Centennial Lot	200	193	7	97%
TOTAL for AM Peak	2001	1,838	163	92%

UVM MC PEAK DEMAND LOT COUNTS—FALL 2018 (MAIN CAMPUS)**PM Peak**

ACC Garage	1,224	1,182	42	97%
TOTAL for PM Peak	1,224	1,182	42	97%

Notes: There are a total of 1,224 parking spaces in the ACC garage. 150 of the 1,224 spaces are set aside for evening shift parking. Therefore, only 1,074 parking spaces are available for use before 3:00pm. This empty count fluctuates daily depending on events/activities on campus.

TABLE 5-15: UVM MC PARKING LOT CAPACITIES AND EMPTY SPACE COUNTS, 1 SOUTH PROSPECT

UVM MC PEAK DEMAND LOT COUNTS—FALL 2018 (1 SOUTH PROSPECT ST)

AM Peak	Capacity	Occupied Spaces Peak Demand	Empty Spaces	Percent Full
Lot A	47	27	20	57%
Lot B	178	120	58	67%
Lot D	197	186	11	94%
Pearl Street lot	35	23	12	66%
Taft School lot	47	31	16	66%
Total AM Peak	504	387	117	97%

PM Peak	Capacity	Occupied Spaces Peak Demand	Empty Spaces	Percent Full
Lot A	47	26	21	55%
Lot B	178	111	67	62%
Lot D	197	183	14	93%
Pearl Street lot	35	25	10	71%
Taft School lot	47	31	16	66%
Total PM Peak	504	376	128	75%

Notes: The above data in Tables 5-14 and 5-15 is a 3-day snapshot of parking counts for the Medical Center Main Campus and the 1 South Prospect St. There are times during peak parking days when all on-site parking lots are full.

Estimated Demand

As described above in Section 2.4, a method utilizing CATMA Employee Transportation Surveys was developed to estimate current demand and assist in forecasting future parking demand. The calculation is based upon inputs into the following formula:

$$\text{Number of Users} \times \text{Share of Users on Campus at Peak Period} \times \text{Demand Generator} = \text{Estimated Parking Demand}$$

The inputs are based upon information provided by institutional staff as well as responses from CATMA Student and Employee Transportation Surveys. The results for the Main Campus, shown below in Table 5-16, suggest a current parking surplus of 875 spaces. The results for 1 South Prospect, shown below in Table 5-17, suggest a current parking surplus of 81 spaces.

TABLE 5-16: UVM MC CURRENT ESTIMATED PEAK PERIOD PARKING DEMAND BY USER GROUP (MAIN CAMPUS)

User Group	Number in Category	Peak % on Campus	Demand Generator	Parking Demand (spaces)
Employees			<i>Mode Share</i>	
Full-time	3,037	61.8%	67.6%	1,269
Part-time	589	53.5%	76.6%	241
Per diem & non-paid	1,819	33.0%	76.6%	460
Patients & Visitors			<i>Mode Share</i>	
Out-patients	1,113	25%	90%	250
In-patients	450	100%	15%	68
Visitors	360	13%	90%	41
Other				
Fleet vehicles				38
Total peak parking demand				2,367
On-site parking supply				2,052
Off-site parking supply				1,190
Total parking supply				3,242
Net surplus				875

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Employee Transportation Surveys, as well as information provided by institutional staff.

Notes: Institutional staff provided estimates of the share of per diem and non-paid staff as well as patients and visitors on campus at peak. The demand generator for employees is based upon the primary mode share (drive alone share + 0.5* carpool share), sourced from the 2016 CATMA Student Transportation Survey. Assumes 2/3 of all staff are M-F weekday employees; 1/3 rotate schedule on weekends, on percent peak reduced by 2/5; no reduction for time off work. Assumes half time employee, 1/3 will not be on campus at peak. Assumed peak percent on campus at 33% based on part-time/volunteer status of category; mode share assumed to be same as UVM MC employee. Peak daily number of out-patients is assumed to be the same as the average daily number of out-patient procedures at UVM MC. Assume average out-patient stay is two hours, over an eight hour day; no mode choice data for out-patients; out-patient mode choice is assumed to be 90% drive alone. Assumes 500 active beds at occupancy of 90%. All in-patients assumed to be on site at peak hour; no mode choice data, assume most are not driving themselves, 15% drive alone. Assumes 80% of In-Patients will have a visitor for one hour, equally spread out over an eight hour period. No mode choice data for visitors; mode choice assumed to be 90% drive alone. Assumes that half of the fleet vehicles are in use/not parked at the peak hour.

TABLE 5-17: UVM MC CURRENT ESTIMATED PEAK PERIOD PARKING DEMAND BY USER GROUP (1 SOUTH PROSPECT)

User Group	Number in Category	Peak % on Campus	Demand Generator	Parking Demand (spaces)
Employees			<i>Mode Share</i>	
Full-time	482	82.4%	78.1%	310
Part-time	82	57.1%	63.9%	30
Per diem	64	33.0%	63.9%	13
Patients & Visitors			<i>Mode Share</i>	
Out-patients	308	25%	90%	69
Other				
Fleet Vehicles				0
Total peak parking demand				423
On-site parking supply				504
Off-site parking supply				0
Total parking supply				504
Net surplus				81

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Employee Transportation Surveys, as well as information provided by institutional staff.

Notes: Institutional staff provided estimates of the share of per diem and non-paid staff as well as patients and visitors on campus at peak. The demand generator for employees is based upon the primary mode share (drive alone share + 0.5* carpool share), sourced from the 2016 CATMA Student Transportation Survey. Assumes 2/3 of all staff are M-F weekday employees; 1/3 rotate schedule on weekends, on percent peak reduced by 2/5; no reduction for time off work. Assumes half time employee, 1/3 will not be on campus at peak. Assumed peak percent on campus at 33% based on part-time/volunteer status of category; mode share assumed to be same as UVM MC employee. Peak daily number of out-patients is assumed to be the same as the average daily number of out-patient procedures at UVM MC. Assume average out-patient stay is two hours, over an eight hour day; no mode choice data for out-patients; out-patient mode choice is assumed to be 90% drive alone. Assumes 500 active beds at occupancy of 90%. All in-patients assumed to be on site at peak hour; no mode choice data, assume most are not driving themselves, 15% drive alone. Assumes 80% of In-Patients will have a visitor for one hour, equally spread out over an eight hour period. No mode choice data for visitors; mode choice assumed to be 90% drive alone. Assumes that half of the fleet vehicles are in use/not parked at the peak hour.

5.3 FUTURE PARKING CONDITIONS

Future Structures—New or Changes in Use

UVM Medical Center intends to complete the following projects by 2024. The projects will not result in any change to the number of in-patient beds. The future Hill District campus is expected to increase by 33,863 SF.

TABLE 5-18: UVM MC BUILDING PROJECTS (2019-2024)

PROJECT NAME	FUNCTION	CHANGE IN BUILDING AREA	CAMPUS	EST. COMPLETION
Miller Building	Hospital (in-patient)	+180,000	UVM MC Main Campus	2019
1 South Prospect St	Medical and Administrative Offices	-146,137	1 South Prospect	2024
75 Cherry Street	Administrative Offices	+105,848	Downtown Burlington	2024
Future Burlington Primary Care/ Pediatrics	Medical Offices	+40,000	Downtown Burlington	2024

Future Employment

UVM MC expects there to be no significant change in the total number employed at the Main Campus, while many employees currently working at 1 South Prospect Street will transition to downtown Burlington or other UVM MC campuses. The future 1 South Prospect campus staff for the remaining Psychiatry and Pharmacy services has been estimated proportionally to the existing staff to GSF ratio.

TABLE 5-19: UVM MC FUTURE EMPLOYMENT (2024)

PAID EMPLOYEES		MAIN CAMPUS	1 SOUTH PROSPECT
Full-time	Day shift	2,294	99
	Evening shift	317	2
	Night shift	561	2
	FT Un-ID'd shift	743	10
	TOTAL (Full-Time)	3,915	113
Part-time	Day shift	478	16
	Evening shift	79	1
	Night shift	67	0
	FT Un-ID'd shift	111	4
	TOTAL (Part-Time)	735	21
TOTAL (Per Diem)		752	15
TOTAL (Employees by Site)		5,402	149
TOTAL (Employees)		5,551	

Notes: Downtown Burlington numbers not calculated for full-time unidentified shift employees. Unidentified shift employees are most likely day shift.

No changes to non-paid staff are expected at the UVM Medical Center Main Campus.

Future Patients

No changes to in-patient or out-patient care are expected at the UVM Medical Center Main Campus. Similar to employment, a reduction of out-patient services is expected at 1 South Prospect is estimated based on the proportional change in GSF.

TABLE 5-20: UVM MC FUTURE PATIENT PROCEDURES (2024, MAIN CAMPUS AND 1 SOUTH PROSPECT STREET)

	2024 ANNUAL PROCEDURES (EST.)	2024 AVERAGE DAILY PROCEDURES (EST.)
UVM MC Main Campus	289,335	1,113
1 South Prospect	17,909	69

Notes: Assumes all procedures are scheduled Monday through Friday.

Future Parking Supply

It is assumed that UVM Medical Center will lose a proportional amount of parking supply associated with the removal of most operations from 1 South Prospect Street. The future parking inventory is estimated in Table 5-21.

TABLE 5-21: UVM MC FUTURE PARKING INVENTORY (2024, MAIN CAMPUS AND 1 SOUTH PROSPECT STREET)

LOCATION	NUMBER OF SPACES
<i>Medical Center Campus</i>	
ACC Garage	1,224
ACC Loading Dock	21
ER Lot	47
ED Ambulance Bay (loading/unloading)	5
ED Ambulance Parking (unmarked)	4
McClure Parking Garage (15 surface lot spaces)	317
Patrick Loading Dock	9
South Lot (include 6 spaces at Hope Lodge, does not include UVM spaces)	425
<i>Subtotal Medical Center Main Campus On-Site</i>	<i>2,052</i>
<i>1 South Prospect</i>	
TBD	112
<i>Estimated Subtotal 1 South Prospect</i>	<i>112</i>
On-Site Grand Total: Medical Center and 1 South Prospect	2,164

Future Off-Site Parking Facilities

With the exception of Fanny Allen, the off-site parking facilities used by UVM Medical Center are leased from other entities. UVM has considered ending the lease of the parking inventory at Jeffords to accommodate their own parking demand.

TABLE 5-22: UVM MC FUTURE OFF-SITE PARKING FACILITIES (2024)

LOCATION	NUMBER OF SPACES
UVM Catamount East (Main Campus employees)	285
UVM Centennial (Main Campus & 1 South Prospect Street employees)	200
UVM Jeffords Lot (West)	0
Fanny Allen Campus (Main Campus & 1 South Prospect Street employees)	155
Technology Park (Main Campus employees)	200
115 Lakeside (Main Campus & 1 South Prospect Street employees)	250
Total Satellite/Off-Site Parking	1,090

Parking spaces used for other UVM MC offices (such as downtown Burlington) are not counted towards the minimum parking requirement or parking demand but are shown in Table 5-23.

TABLE 5-23: UVM MC DOWNTOWN OFF-SITE PARKING SUPPLY (2024, UNRELATED TO HILL DISTRICT/MAIN CAMPUS AND 1 SOUTH PROSPECT)

LOCATION	NUMBER OF SPACES
95 St. Paul Street	0
Court House Plaza	0
128 Lakeside Avenue	38
184 Pearl Street	12
195 Colchester Avenue	40
112 Colchester Avenue	8
75 Cherry Street	200
City of Burlington Parking Garage (City Place)	100-300
Future Burlington Primary Care/ Pediatrics	267
Total Downtown Satellite/Off-site Parking	665-865

Future Minimum Off-Street Parking Requirements (Sec. 8.1.8)

Table 5-24 documents the parking requirement per the CDO.

TABLE 5-24: UVM MC FUTURE (2024) HILL DISTRICT PARKING REQUIREMENT

BUILDINGS (GFA) AND BEDS	ORDINANCE PARKING RATIOS	CDO PARKING REQUIREMENTS
Medical Center Campus		
580 Beds	Hospital Use: 2 spaces/bed	1,160
877,085 sq. ft.	Office-Medical: 2 spaces/1,000 sq ft GFA	1,754
35,597 sq. ft.	School, Post-Secondary: 2 spaces/1,000 sq. ft. GFA	71
Subtotal		2,985
1 South Prospect Campus		
42,092 sq. ft.	Office-Medical: 2 spaces/1,000 sq. ft. GFA	85
TOTAL (Medical Center + 1 South Prospect)		3,070

Future Parking Demand

As summarized in Table 5-25, UVM MC will have an estimated surplus of 783 spaces in 2024 across the Main Campus and 1 South Prospect.

TABLE 5-25: UVM MC FUTURE ESTIMATED PEAK PERIOD PARKING DEMAND BY USER GROUP (2024, MAIN CAMPUS AND 1 SOUTH PROSPECT)

User Group	Number in Category	Peak % on Campus	Demand Generator	Parking Demand (spaces)
Employees			<i>Mode Share</i>	
Full-time	3,146	62.6%	69.0%	1,359
Part-time	609	53.6%	75.6%	247
Per diem & non-paid	1,819	33.0%	75.6%	454
Patients & Visitors			<i>Mode Share</i>	
Out-patients	1,182	25%	90%	266
In-patients	441	100%	15%	66
Visitors	353	13%	90%	41
Other				
Fleet Vehicles				38
Total peak parking demand				2,471
On-site parking supply				2,164
Off-site parking supply				1,090
Total parking supply				3,254
Net spaces				783

Sources: Calculated by CATMA Staff using the 2016 and 2018 CATMA Employee Transportation Surveys, as well as information provided by institutional staff.

Notes: Institutional staff provided estimates of the share of per diem and non-paid staff as well as patients and visitors on campus at peak. The demand generator for employees is based upon the primary mode share (drive alone share + 0.5* carpool share), sourced from the 2016 CATMA Student Transportation Survey. Assumes 2/3 of all staff are M-F weekday employees; 1/3 rotate schedule on weekends, on percent peak reduced by 2/5; no reduction for time off work. Assumes half time employee,

1/3 will not be on campus at peak. Assumed peak percent on campus at 33% based on part-time/volunteer status of category; mode share assumed to be same as UVM MC employee. Peak daily number of out-patients is assumed to be the same as the average daily number of out-patient procedures at UVM MC. Assume average out-patient stay is two hours, over an eight hour day; no mode choice data for out-patients; out-patient mode choice is assumed to be 90% drive alone. Assumes 500 active beds at occupancy of 90%. All in-patients assumed to be on site at peak hour; no mode choice data, assume most are not driving themselves, 15% drive alone. Assumes 80% of In-Patients will have a visitor for one hour, equally spread out over an eight hour period. No mode choice data for visitors; mode choice assumed to be 90% drive alone. Assumes that half of the fleet vehicles are in use/not parked at the peak hour. UVM MC holds 150 spaces open for turn-over in the ACC garage so that people can easily find a parking space.

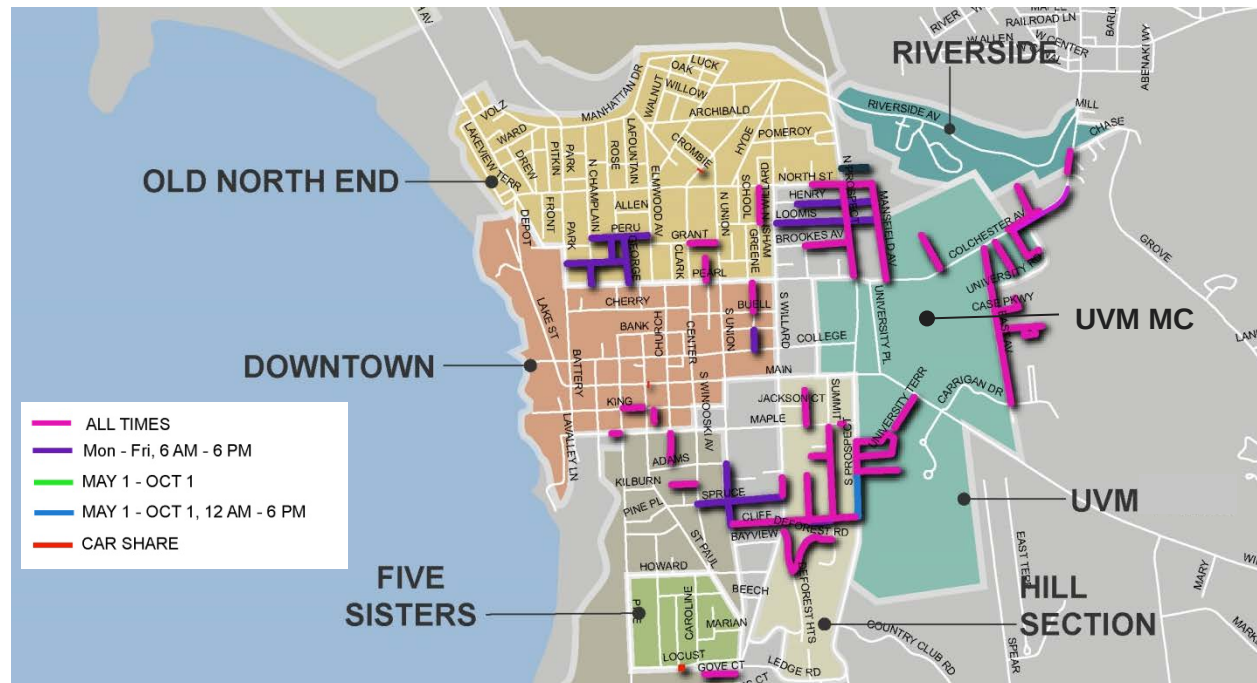
Monitoring, Compliance, and Enforcement (Sec. 8.3.3 (E))

UVM Medical Center's parking program is managed by the UVM Medical Center Security Department. UVM Medical Center utilizes a variety of tools to assign, manage, and enforce parking. These include:

- Parking registration forms—including business needs, medical needs, and emergency on-call.
- Color coded parking permits—assigned based on parking lot assignment.
- Parking tickets—issued to parking policy violators.
- UVM MC Security issues a \$10 fine for each violation of the parking regulations.
- Repeat offenders will have their car towed at their expense. If necessary, a listing of the violations will be forwarded to their immediate supervisor for corrective action and will serve as documentation for the next annual performance appraisal. Future parking in UVM MC parking lots may be denied.
- People who violate the carpool program rules will get a 30-day suspension from the carpool privileges and incentives for their first violation. A second violation will result in complete revocation of carpool privileges and incentives.

Restrictions on Public Street Parking

The map in Figure 5-5 shows that most of the neighborhoods to the north and east of the Medical Center Campus require a resident parking permit for on-street parking. Part of Colchester Avenue and University Road are signed “No Parking.” Williams Street to the west of 1 South Prospect Campus is not signed and does not restrict parking.

FIGURE 5-5: UVM MC ADJACENT RESIDENTIAL ON-STREET PARKING RESTRICTIONS

Institutional Vehicle Fleet Management (Sec. 8.3.3 (C))

UVM Medical Center owns or leases approximately 75 vehicles, which are managed by the supervisor of UVM Medical Center's Courier and Automotive Services department. Vehicles in the fleet include ambulances (9), passenger/cargo vans (26), ATV (2), SUV (11), trucks (17), sedans (6), tractors (3), and trailers (1). A complete list of UVM Medical Center vehicles is available on request.

There is no designated service vehicle parking. Based on discussions with the UVM MC's Automotive Services department, the majority of the vehicle fleet do not take up regular parking spaces at the peak hours. The vehicles are either in use, parked in a loading dock, or at other UVM Medical Center sites (not UVM MC Main Campus or 1 South Prospect) during the peak time. It is the policy of the Automotive Services department to park vehicles in areas that will not take up a regular parking space unless absolutely necessary, and then only for a brief period.

6.0 CONCLUSION

CATMA's 5-year JIPMP and its annual updates provide the City, public, Hill institutions and CATMA with a wealth of information and data on the Hill's transportation and parking environment. This Update shares current and projected parking demand and supply on the Hill, proposed developments, and calculations of respective parking deficits and surplus over the next five years.

The plan mentions policies and strategies to address parking needs, including collaborative and individual TDM solutions. TDM is a comprehensive approach that draws upon distinct strategies for specific applications and needs. Since 1992, the Hill institutions have invested in CATMA and committed to the development and deployment of TDM strategies. These investments and commitments align with and support several local transportation policies and plans, along with regional and state clean air and energy goals.

CATMA strives to enhance and promote clean commute options and choices for the Hill institutions that are attractive, convenient and sustainable. However, it can be difficult to causally attribute reduction in single occupant vehicles, as there are a number of factors that influence travel behavior.

There may be an opportunity for the City's Residential Parking Management Plan to assist with on-street parking policies. Currently, on-street parking is free in the neighborhoods surrounding institutions. This offers a convenient, free, and accessible parking option which is utilized by students and employees on the Hill, as reported in this document.

There are numerous local, regional, and state plans that address the need to enhance active transportation options, including planBTV, the CCRPC Active Transportation Plan, and the Metropolitan Transportation Plan, and the CC and UVM Active Transportation Plans.

In an effort to address reported institutional parking deficits, CATMA will continue to strengthen, evaluate, and advocate for TDM programs, incentives, tools and strategies that are responsive to changing conditions. Our goal is to reduce single occupant vehicles and implement and promote sustainable travel options. We will continue to host events and commuter challenges, create awareness and education of multimodal options to encourage and support clean commutes, and increase institutional TDM program participation and collaborate on updating parking policies.

CATMA and its institutions will continue to strengthen and foster partnerships with transportation providers to implement technology and innovative strategies to encourage and support more sustainable choices for commuters. CATMA supports GMT's planned NextGen service improvements, including mobile ticketing and real-time tracking. It has been exciting to have Greenride Bikeshare on the ground for the past year as a new commute option in our region.

This summer, Phase 2 of bikeshare will include placing 200 electric assist bikes at 25 hubs in Burlington, South Burlington, Winooski including hubs at the institutions. Micromobility options are the trend, and we are excited to explore and implement new trendy options.

In Spring 2020, this 2019-2024 5-year JIPMP will be assessed and reviewed with City Planning & Zoning Staff and the Planning Commission. CATMA plans to conduct new employee and student transportation surveys in the Fall of 2019, which will reincorporate information collected in the 2016 surveys and enable further rigorous analysis. We will closely monitor and evaluate our TDM programs and policies and refine as needed and possible.

We will focus on the value that clean commute options bring to our students and employees as well as the greater community and region. We all recognize the stress of driving alone and the impact on health, along with the expensive costs of parking, price of gas and vehicle ownership, and for employers the impact on recruiting and retaining employees.

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Burlington Planning Commission

Tuesday, May 14, 2019, 6:30 P.M.
City Hall, Conference Room 12, 149 Church Street
AGENDA

I. **Agenda**

II. **Public Forum**- Time Certain 6:30 p.m.

III. **Chair Report**

IV. **Director's Report**

V. **Joint Institutional Parking Management Plan** (45 min)

CATMA will present the updated 2019-2024 Joint Institutional Parking Management Plan. A draft recommendation/comment letter is included in the agenda packet on pages 2-6. The updated JIPMP report can be found online at: <https://www.burlingtonvt.gov/sites/default/files/Agendas/SupportingDocuments/2019-2024%20JIPMP%20FINAL%2005-09-2019.pdf>

Staff Recommendation: The Commission is requested to provide a recommendation regarding the approval of this plan for the DRB's consideration.

VI. **Proposed CDO Amendment: Inclusionary Zoning Updates** (45 min)

The Commission will continue its discussion of proposed amendments to the *Burlington Comprehensive Development Ordinance* regarding Inclusionary Zoning requirements. Information related to this item is included in the agenda packet on pages 7-24.

Staff Recommendation: Following discussion, staff recommends the Commission approve the municipal bylaw amendment report and warn the amendment for public hearing.

VII. **Burlington Housing Summit** (15 min)

Mayor Weinberger will attend to provide an update and invitation to the upcoming Housing Summit.

VIII. **Committee Reports**

IX. **Commissioner Items**

- Please review DRAFT FY19 Annual Report on pages 28-34; action requested at next meeting.
- Next meeting is May 28, 2019 at 6:30pm in Conference Room 12
- Burlington Housing Summit, June 11, 2019:

<https://www.burlingtonvt.gov/mayor/burlingtonhousingsummit2019>

X. **Minutes & Communications**

XI. **Executive Session**

The Commission is expected to convene an Executive Session to discuss a personnel matter.

XII. **Adjourn**

The City of Burlington will not tolerate unlawful harassment or discrimination on the basis of political or religious affiliation, race, color, national origin, place of birth, ancestry, age, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status, crime victim status or genetic information. The City is also committed to providing proper access to services, facilities, and employment opportunities. For accessibility information or alternative formats, please contact Human Resources Department at (802) 540-2505. Written comments on items may be directed to the Planning Commission at 149 Church Street, Burlington, VT 05401, or at mtuttle@burlingtonvt.gov

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TO: Burlington Planning Commissioners
COPY: Meagan Tuttle, Comprehensive Planner, Burlington Planning & Zoning
David White, Director, Burlington Planning & Zoning

FROM: Sandy Thibault, Executive Director, CATMA
DATE: April 16, 2019
SUBJECT: Updated CATMA 2019-2024 Joint Institutional Parking Management Plan

Per recent conversations with City staff, CATMA will present an updated 5-Year Joint Institution Parking Management Plan (JIPMP) to the Planning Commission on May 14 and to the Development Review Board on May 21. I also understand that this 2019-2024 JIPMP and its annual update will be presented and reviewed with the Planning Commission in Spring 2020.

The updated JIPMP to be presented to you on May 14 will include more detailed and updated data, analysis, sourcing and methods for the parking demand calculations, additional content regarding parking management strategies and clarity from the draft Plan presented on March 26. Therefore, at your April 23 meeting, CATMA will share with you a brief overview of the updates to the Plan, including the following:

- The updated Plan will use 2016 CATMA Employee and Student Transportation Survey data as the source for the parking demand estimates as it represents the best available and reliable data for these calculations.
- While our 2018 surveys are more recent and have larger sample sizes, they were also highly condensed and modified. Our 2018 surveys did not collect primary travel modes, number of days on campus, or work status (full-time/part-time). As a result, CATMA's Transportation Analyst has determined that the draft Plan presented to the Planning Commission on March 26 had critical limitations.
 - 1. The 2018 survey did not collect arrival and departure time with sufficient specificity to isolate the peak period, and the draft Plan carried forward peak % on campus values originally sourced from 2008 survey data.
 - 2. The draft Plan attempted to use the 2018 information collected about travel modes used during a week for the parking demand estimate. However, CATMA's Transportation Analyst determined that the method used to calculate the mode share (referred to as the 'proportional' method) produced an inconsistent measure



of travel behavior. The inconsistency of the 'proportional' mode share method was due to the conflation of different units of analysis; specifically, the treatment of information collected about the number of days a mode was used during a week with trips.

Because our 2018 surveys did not collect trip-level information about how modes were combined on each specific day, nor information about the number of days on campus per week, they did not provide a valid common unit across individuals in the dataset. As a result, we could not use them to ascertain the proportion of travel using vehicular modes (as the calculation was described). The 'proportional' method assigns individuals with widely varying travel behavior identical proportion values; this is a critical limitation, because the parking demand calculations require a consistent measure of travel behavior in order to generate reliable estimates.

Further, while a primary mode could be inferred in many cases based on the mode used for the most days per week, there are a substantial number of cases where a tie would force either a tie-breaker or an individual to be left out of the calculation. Both of these solutions are not ideal.

3. A final limitation of the calculations presented on March 26 relates to the absence of a work status identifier in the 2018 survey. The draft Plan assumed identical mode shares for full-time and part-time employees. Using the 2016 employee survey will enable CATMA staff to generate separate mode share estimates for full-time and part-time employees.

While not well-suited for the parking demand calculation, the information collected in our 2018 surveys is capable of capturing the modal portfolio used by an individual over the course of a week, and we plan to include this information in the updated Plan.

I appreciate the opportunity to share information with you about our updated calculations on April 23 and to present an updated JIPMP on May 14.

Sincerely,

A handwritten signature in dark ink, reading "Sandy Thibault".

Sandy Thibault
Executive Director, CATMA



MEMORANDUM

TO: Meagan Tuttle, Comprehensive Planner, Burlington Planning & Zoning
David White, Director, Burlington Planning & Zoning

FROM: Sandy Thibault, Executive Director, CATMA *Sandy*

DATE: May 1, 2019

SUBJECT: Updated CATMA 2019-2024 Joint Institutional Parking Management Plan

This memo provides a brief summary overview of the changes incorporated into the updated 5-Year Joint Institutional Parking Management Plan (JIPMP). We understand you will be making a Staff Recommendation to the Planning Commission ahead of our May 14 presentation to the Planning Commission and May 21 presentation to the Development Review Board. The attached updated JIPMP:

- Features new recognition of the **three sources of data for parking demand** (permit totals, survey-based estimates, and lot counts) (Table I-2 and concluding discussion of parking demand calculations in Chapter 2)
- Addresses discussion and comments about on-street parking use by including **estimates of the number of on-street parking spaces** used by students and employees (Table I-3, Tables 2-5 thru 2-7)
- Describes CATMA Student and Employee Transportation Surveys in greater detail, especially **differences between the 2016 and 2018** versions (Table 2-4)
- Includes updated discussions of **trends in student and employee automobile reliance**, featuring use of 2016 and 2018 mode data and comparisons of primary versus weekly mode use where possible
- Revises **survey-based 2019 and 2024 parking demand estimates** based upon survey-based estimates of peak % on campus and primary mode share (drive alone + 0.5 carpool) values, including **recalculated 2019 projections** from the 2014-2019 Plan based upon greater use of survey data
- Includes **adjustments to parking inventories** based upon additional information provided by institutional staff, impacting lot count occupancy rates
- Provides greater detail about sourcing and calculations, including an effort to clearly cite the **source for each figure or table** and to **delineate formulas** for parking demand and on-street parking space estimates
- References where current totals or estimates **differ from values or estimates in the 2014-2019 JIPMP 5-Year Update**

I appreciate the opportunity to share this updated Plan and information with you ahead of our upcoming scheduled presentations. Please let me know if you have any questions.

Copy: CATMA BOD and Institutional Committee Members

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TO: Burlington Development Review Board
FROM: Burlington Planning Commission
DATE: May 09, 2019
RE: 2019-2024 Joint Institutional Parking Management Plan (JIPMP)

Draft prepared by staff for PC discussion

The Joint Institutional Parking Management Plan (JIPMP) is prepared by CATMA on behalf of the University of Vermont (UVM), Champlain College (CC), and the UVM Medical Center (UVMHC). It is a parking supply and demand planning tool, enabled by the *Burlington Comprehensive Development Ordinance (CDO)*, for the purpose of ensuring that city streets in nearby neighborhoods are not unfairly burdened by the parking demands of the Institutions, and to recognize the ability for the Institutions to manage parking resources in a comprehensive and creative way. This report allows the Institutions to demonstrate parking demand and, when lower than parking requirements outlined in Article 8 of the *CDO*, receive what amounts to a parking waiver from those standards when applying for zoning permits for projects listed in the report. This report may be approved by the Development Review Board (DRB) for a period of up to five years, with annual updates reported to the City.

The Planning Commission received a presentation from CATMA and their consultant, RSG, on the 2019-2024 JIPMP on March 26, 2019. For the first time in the report's history, the JIPMP reported that UVM and CC's current estimated parking demand exceeds the current available supply for those Institutions. Additionally, using CATMA member survey data collected in 2018, the report projected significant deficiencies in future parking supply for these same Institutions in 2024—particularly for UVM. During the presentation, several factors were cited as contributing to the delta between future supply and projected demand. Most notably was a change to question formats in the CATMA member survey, which were thought to offer a greater level of detail about members' travel behaviors. Alternatively, a future parking surplus was projected for UVMHC.

However, upon further review of the draft JIPMP and the 2018 survey data by CATMA's Data Analyst, it was determined that the survey's questions were not well-suited to projecting users' mode share and future parking demand. As a result, CATMA made significant revisions to the draft JIPMP utilizing the 2016 CATMA survey data, which included previous questions which are more appropriate for predicting mode share, and cross-referenced these with other data sets. The 2024 projected parking demand figures were updated and presented to the Planning Commission on May 14, 2019. This update also estimates, for the first time, the street parking impact associated with the Institutions' members.

While the updates resulted in a smaller delta between anticipated future parking supply and the projected demand for UVM and CC, the report still anticipates a parking supply deficiency both presently and in 2024. Alternatively, the update indicates an even greater projected parking surplus for UVMHC. CC offers policies and practices it intends to continue in order to manage demand, and UVM articulates a series of strategies intended to manage and reduce parking demand. However, some key variables informing the JIPMP remain unknown: notably, UVM is currently in the process of updating both its

campus transportation and housing plans— both of which are needed for UVM to answer key questions about its future parking supply and demand.

As such, the **Planning Commission recommends the Development Review Board approve the 2019-2024 JIPMP for a period of one no more than year** as the Institutions complete these ongoing planning efforts, and work to execute the transportation demand management efforts noted in the JIPMP. Additionally, the Planning Commission recommends that:

- CATMA work with the Institutions to administer a Fall 2019 member survey that addresses gaps in the 2018 survey methodology, to create an updated baseline dataset for use in projecting future demand. The survey should include questions that enable CATMA to more confidently predict primary mode share and peak parking demand windows.
- Additionally, CATMA should coordinate the administration of this survey with Burlington Public Works so that on-street parking usage data in neighborhoods surrounding campus can be collected during the same window of time (streets without any parking regulations).
- In Spring 2020, CATMA should present to the Planning Commission: updated survey data, completed planning studies noted above, any resulting changes to estimated parking supply and demand in the JIPMP, a report on observed impact of interim TDM strategies, and additional JIPMP strategies to reduce and/or manage parking demand based on these new calculations.
- Both CC and UVM saw increases in drive-alone trips by students that live within half a mile of campus from 2016-2018. This trend should be closely monitored, with additional surveying or data analysis uncovering factors contributing to this trend (e.g. Changes to routes, frequency, or predictability of campus shuttle or GMT service; lack of safe bike/pedestrian routes; availability of inexpensive or free parking resources in close proximity to campus destinations; etc.)
- The report does not discuss any anticipated change in parking supply at the Lakeside Avenue Lot resulting from the construction of the Champlain Parkway. By the 2020 update, this should be analyzed and if a loss of parking supply is anticipated, specific strategies should be offered.
- There is some disagreement with the assertion that the projected parking deficit for CC does not warrant specific demand-reduction strategies. However, CC's current commitments to parking management and enforcement are noted. If annual monitoring demonstrates that demand does begin to exceed supply, then CC should offer specific demand-reduction strategies or additional parking supply to its members.
- UVM suggests that it could discontinue parking space leases to UVMMC, and eliminate its future parking deficit. Given the existing parking surplus—and the projected increase in surplus—for UVMMC, the Commission strongly recommends that UVM deploy this strategy. This strategy underscores the importance of this joint management plan, and the power of the Institutions' collective action to manage parking. If utilized, the Spring 2020 update should include strategies for how UVMMC will manage this change in available supply.
- Further, UVM should consider implementing a policy that either prohibits sophomores from bringing cars to campus, or requires their storage in new/expanded satellite parking areas.
- If annual monitoring for UVM demonstrates that demand does exceed supply, then UVM should employ additional demand-reduction strategies or offer additional parking supply to its members.

In one year, the Planning Commission and the DRB should receive an update from CATMA that addresses these recommendations. At that time, the Planning Commission will offer further recommendations to the DRB regarding the JIPMP's renewal for another period up to, but no longer than, 5 years.

Department of Planning and Zoning

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TO: Burlington Planning Commission
FROM: Scott Gustin, Principal Planner
DATE: April 23, 2019
RE: CDO Amendment ZA-19-XX: Inclusionary Zoning

Overview & Background

This amendment revises the standards for inclusionary housing in Article 9 and related provisions in other articles of the *Comprehensive Development Ordinance* (CDO). The amendment adjusts the sale price of inclusionary units from 75% of Area Median Income (AMI) to 70% of AMI and replaces square footage provisions for inclusionary units with a percentage (90%) relative to the average size of market rate units. The amendment also facilitates utilization of off-site and payment in lieu options for inclusionary units in more inclusive areas of the city while limiting their utilization in less inclusive areas of the city. The amendment articulates inclusionary standards of off-campus student housing. Furthermore, the amendment specifies by-right development "bonuses" associated with inclusionary housing and eliminates impact fee and minimum off-street parking requirements. Lastly, the amendment includes a number of procedural clarifications.

Significant process precedes this amendment. The 2015 Housing Action Plan identified the need to review the inclusionary zoning standards. A private consultant provided an initial report evaluating the inclusionary zoning standards in 2017. The report contained some initial recommendations. The inclusionary zoning working group was then established to build on the consultant's report with a focus on greater inclusion with consideration given to geographic distinctions within the city (i.e. more versus less inclusive areas). Finally, in 2018, the joint committee (Ordinance and CDNR) was established to specifically address each of the recommendations of the inclusionary zoning working group. The City Council adopted the final report of the joint committee in December 2018. The Planning Commission is now tasked with amending the inclusionary zoning language in the CDO to incorporate the recommendations of the joint committee.

Proposed Amendment

Amendment Type

Text Amendment	Map Amendment	Text & Map Amendment
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Purpose Statement

The purpose of this amendment is to make corrections to the *Comprehensive Development Ordinance* consistent with the list of recommendations forwarded to the Planning Commission by the City Council's joint Ordinance & CDNR Committee.

- Recommendation 1- *Reduce payment for in lieu for smaller projects.* See changes to Sec. 9.1.13.

The programs and services of the City of Burlington are accessible to people with disabilities. For accessibility information call 865-7188 (for TTY users 865-7142).

- Recommendation 2- *Replace numerical standards for minimum IZ unit requirements with a 90% of market rate unit size standard.* See changes to Sec. 9.1.14.
- Recommendation 3- *Transfer IZ administration from Housing Trust Fund manager to new Permitting & Inspections Department.* See changes to Sec. 9.1.20.
- Recommendations 4 & 4.1- *Make density and dimensional bonuses by right.* See changes to Sec. 9.1.12 and 4.4.5.
- Recommendations 4.2 & 4.3- *Eliminate minimum off-street parking and impact fee requirements for IZ units.* See changes to Sec. 3.3.3 & 8.1.8.
- Recommendations 5 & 5.1- *Allow for payment in lieu option based on HUD AMI and restructure payments based on project size.* See changes to Sec. 9.1.13.
- Recommendations 6 & 6.1- *Allow for off-site option by right based on HUD AMI and remove 1.5-unit multiplier.* See changes to Sec. 9.1.13.
- Recommendation 7- *Adjust sale price for owner-occupied IZ units from 75% AMI to 70% AMI.* See changes to Sec. 9.1.11.
- Recommendations 10 & 10.1- *Maintain the current IZ target rent price of 65% AMI, and maintain the current income eligibility level of up to 100% AMI.* See Sec. 9.1.11 and 9.1.10.
- Recommendation 12- *Develop ordinance language for meeting IZ requirements for institutional student housing projects outside of the institutional zones.* See changes to Sec. 9.1.19.

Further, this amendment incorporates a number of changes to address procedural and administrative issues forward by City Staff regarding this section of the CDO:

- *Required number of units – rounding.* See Sec. 9.1.9.
- *Distribution of units within a building/project-* See Sec. 9.1.14.
- *Unit sales (preference)-* See Sec. 9.1.14.
- *Unit marketing (initial or ongoing; first or every resale)-* See Sec. 9.1.16.
- *Rents and Section 8 vouchers-* See Sec. 9.1.10 & 9.1.11.
- *Housing Trust Fund manager involvement in prices for resale of units-* See Sec. 9.1.16.

Proposed Amendments

To achieve the goals identified above, the proposed amendment affects the sections of the *Burlington Comprehensive Development Ordinance* as outlined in the following pages.

[BEGIN TEXT AMENDMENTS]
Draft v3.0_updated for 4-23-2019 meeting

Deleted language is ~~crossed out~~, and new language is underlined in red.

ARTICLE 3. APPLICATIONS, PERMITS, AND PROJECT REVIEWS

PART 3: IMPACT FEES

Sec. 3.3.1 Purpose

As written.

Sec. 3.3.2 Applicability

As written.

Sec. 3.3.3 Exemptions and Waivers

(a) Exemptions:

The following types of development are exempt from this Part:

1. additions to existing dwelling units, provided such additions are for residential purposes;
2. alterations to an existing use provided that such alteration occurs entirely within an existing building and within the same square footage;
3. land development which does not result in new building square footage (e.g. parking lots, facade renovations, signs, etc.);
4. additions to existing buildings for which the sole purpose is to provide additional means of egress (e.g. stair towers, elevators, etc).

(b) School Impact Fee Exemption:

That portion of impact fees attributable to school impacts shall not be required for senior citizen housing projects or for that portion of a project where certain units are reserved specifically for the elderly. Any project, or portion thereof, which meets either state or federal guidelines for elderly housing, shall be deemed a senior citizen housing project and eligible for a full or partial waiver of school impact fees.

(c) Inclusionary Housing Exemption:

Inclusionary housing units per Article 9: Part 1 shall be exempt from this Part.

(e) (d) Affordable Housing Waivers:

Any residential project containing newly constructed units or substantially rehabilitated housing units that are affordable for households as described in subsections (1), (2) or (3) below ~~are eligible~~ qualifies for a waiver of impact fees for that portion of the project containing affordable housing units in excess of the minimum inclusionary housing requirements of Article 9. The terms, rules, and regulations used herein shall be the same as those defined and specified in this Ordinance pertaining to Inclusionary Zoning (Article 9). For purposes of determining median income, the income levels specified in Article 9 of this Ordinance, ~~or the most recent amendment thereto,~~ shall be applicable.

1. 25% Waiver of Fees: Twenty-five percent (25%) of the fees will be waived for ~~any~~ qualifying units in a project that initially sells for a price that is affordable for households below 90% of median income or that initially rents for a three year

period for a price (including utilities) that is affordable for households below 75% of median income.

2. ~~50% Waiver of Fees:~~ Fifty percent (50%) of the fees will be waived for ~~that portion of a residential~~ qualifying units in a project that meets the dual test of initial affordability and continuing affordability. For the purposes of this section, "initial affordability" would be defined as a unit that sells for a price that is affordable for households earning less than 75% of median income or that rents for a price (including utilities) that is affordable for households earning below 65% of median. "Continuing affordability" would be defined as affordability that lasts for a period of 99 years.
3. ~~100% Waiver of Fees:~~ One hundred percent (100%) of the fees will be waived for ~~that portion of a residential~~ qualifying units in a project that initially sells or rents for a price that is affordable for households earning less than 50% of median income and that remains continually affordable as defined above.

~~(d)~~(e) Community Garden Waivers:

As written.

**ARTICLE 4. ZONING MAPS AND DISTRICTS
PART 4: BASE ZONING DISTRICT REGULATIONS**

Sec. 4.1.1 Intent – Sec 4.4.4 Institutional District

As written.

Sec. 4.4.5 Residential Districts

(a) – (c) As written.

(d) District Specific Regulations:

1 - 6 As written.

7. Residential Development Bonuses

The following exceptions to maximum allowable residential density and dimensional standards in Tables 4.4.5-2 and 4.4.5-3 may be approved in any combination subject to the maximum limits set forth in Table 4.4.5-8 at the discretion of the DRB. Any bonuses that are given pursuant to this ordinance now or in the future shall be regarded as an exception to the limits otherwise applicable.

A. Inclusionary Housing Requirement.

~~Inclusionary Housing units shall be provided, with applicable additional lot coverage and density allowances, in accordance with the provisions of Article 9, Part 1. A maximum of an additional 10 feet of building height may be permitted for an additional 5% inclusionary housing units provided in excess of the requirements of Article 9, Part 1. The total gross floor area dedicated to the additional inclusionary housing shall be equivalent to the gross floor area resulting from the additional allowance.~~

Additional lot coverage and residential densities allowances shall not exceed the following:

Table 4.4.5-4: Inclusionary Housing Allowances

District	Maximum Coverage	Maximum Density
RL/RL-W	44%	8.75 du/ac
RM	48%	25 du/ac
RM-W	72%	25 du/ac
RH	92%	46 du/ac

B. – E. As written (except for re-lettered following deletion of A).

ARTICLE 8. PARKING

PART 1: GENERAL REQUIREMENTS

Sec. 8.1.1 – 8.1.7 As written.

Sec. 8.1.8 Minimum Off-Street Parking Requirements

Parking for all uses and structures shall be provided in accordance with Table 8.1.8-1.

- (a) Where no requirement is designated and the use is not comparable to any of the listed uses, parking requirements shall be determined by the DRB upon recommendation by the administrative officer based upon the capacity of the facility and its associated uses.
- (b) When the calculation yields a fractional number of required spaces, the number of spaces shall be rounded to the nearest whole number.
- (c) The minimum off-street parking requirement for a development with inclusionary housing units provided on site shall be reduced by the percentage of inclusionary units required by Article 9.

(Example: A 100-unit residential development with a requirement of 15% inclusionary units shall provide minimum off-street parking based on 85 dwelling units.)

Table 8.1.8-1 Minimum Off-Street Parking Requirements			
	Neighborhood Districts	Shared Use Districts	Downtown Districts
RESIDENTIAL USES ¹	Per Dwelling Unit except as noted		
Multi-unit attached dwelling units, studio units or 1-bedroom dwelling unit.	2	1	1
Single Family detached and Duplex	2	2	1
<u>1. Adjusted for development with inclusionary housing units per Sec. 8.1.8 (c).</u>			
RESIDENTIAL USES – SPECIAL ¹	Per Dwelling Unit except as noted		
Assisted Living	0.5	0.5	0.4
Bed and Breakfast (per room, in addition to single-family residence)	1	0.75	0.5
Boarding House (per two (2) beds)	1	0.75	0.5
Community House	1	0.75	0.5
Convalescent Home (per four (4) beds)	1	1	1

Table 8.1.8-1 Minimum Off-Street Parking Requirements			
	Neighborhood Districts	Shared Use Districts	Downtown Districts
Dormitory (per two (2) beds)	1	1	1
Emergency Shelter	0	0	0
Group Home (per two (2) beds)	1	1	1
Historic Inn (per room, in addition to single-family residence)	1	0.75	0.5
Sorority & Fraternity (per two (2) beds)	1	1	1
<u>1. Adjusted for development with inclusionary housing units per Sec. 8.1.8 (c).</u>			
NON-RESIDENTIAL USES	Per 1,000 square feet of gross floor area (gfa) except as noted		
As written.			

Sec. 8.1.9 – 8.1.5 As written.

ARTICLE 9. INCLUSIONARY AND REPLACEMENT HOUSING

PART 1: INCLUSIONARY ZONING

Sec. 9.1.1 Intent

The intent of these regulations is:

- (a) To meet the specific mandates of 24 V.S.A. Chapter 117 related to housing opportunities for all of Vermont's citizens, particularly for those citizens of low or moderate income;
- (b) To ensure the provision of housing that meets the needs of all economic groups by precluding construction of only market rate housing on the limited supply of available land within the City;
- (c) To improve the quality of life for all residents by having an economically integrated housing supply throughout the City; and,
- (d) To prevent overcrowding and deterioration of the limited supply of affordable housing, and thereby promote the public health, safety and general welfare.

Sec. 9.1.2 Authority

These regulations are enacted under the authority of 24 V.S.A. Chapter 117.

Sec. 9.1.3 Inclusionary Units, General Description

Inclusionary units shall include those units in a covered project, which are regulated in terms of:

- (a) Selling price or rent level;
- (b) Marketing and initial occupancy; and,
- (c) Continued requirements pertaining to re-sale, rent or carrying cost increases, as specified in this article.

Sec. 9.1.4 Miscellaneous Definitions

~~“Affordable housing” or “Affordable” shall refer to a housing in which the that is owned or rented by its inhabitants whose gross annual household income does not exceed 80 percent of the county median income or 80 percent of the standard metropolitan statistical area (MSA) income, as defined by the US Department of Housing and Urban Development, and the total cost of the housing, including principal, interest taxes and insurance and condominium association fees, if owned housing, or the total cost of the housing, including rent, utilities and condominium association fees, if rental housing, is not more than thirty per cent (30%) of the household’s gross annual income.~~

“Area Median Income” shall refer to the income for the Burlington MSA set forth in or calculated by regulations promulgated by the United States Department of Housing and Urban Development, pursuant to Section 8 of the Housing Act of 1937, as amended by the Housing and Community Development Act of 1974. The median income consists of all households in the geographic area. The median is the middle value when all are arranged from highest to lowest. The median income that is current on the first day of March of any year shall be used throughout the subsequent twelve (12) months in calculating the general requirements for affordable housing under this article.

“Carrying charges” refer to costs associated with housing co-operatives.

“Certificate of Inclusionary Housing Compliance” shall refer to a certificate issued by the Manager of the Housing Trust Fund, which certificate provides legal assurance that a developer’s obligations under this article are being satisfied.

“Housing Trust Fund (HTF)” shall refer to a special revenue account established by the Burlington City Council for purposes related to the creation, promotion, and preservation of long-term affordable housing for very low, low, or moderate income households.

- **“Housing Trust Fund Administrative Committee”** shall refer to an administrative committee consisting of the Manager of the Housing Trust Fund, an appointee of the City Council President and a designee of the Mayor responsible for the administration of the HTF by resolution of the City Council.
- **“Manager of the Housing Trust Fund” or “Manager”** shall be the Director of the City’s Community and Economic Development Office, unless otherwise designated by the City Council by resolution.

~~“Median Income” shall refer to the income for the Burlington MSA set forth in or calculated by regulations promulgated by the United States Department of Housing and Urban Development, pursuant to Section 8 of the Housing Act of 1937, as amended by the Housing and Community Development Act of 1974. The median income consists of all households in the geographic area. The median is the middle value when all are arranged from highest to lowest. The median income that is current on the first day of March of any year shall be used throughout the subsequent twelve (12) months in calculating the general requirements for affordable housing under this article.~~

Sec. 9.1.5 Applicability

This ordinance provision ~~shall apply~~^{ies} to any development of five or more residential units in a single structure ~~shall be subject to the standards of this article~~. Multiple developments or projects by the same applicant or responsible party within any consecutive twelve (12) month period that in the aggregate equal or exceed the above criteria shall be subject to these regulations.

Except as otherwise provided in this ordinance, these regulations shall apply in the instances specified below.

- (a) The creation of five (5) or more residential units or twenty (20) or more rooming units in a co-living project through new construction and/or substantial rehabilitation of existing structures, including the development of housing units utilizing development provisions other than those specified in Sec 9.1.5 (b).
- (b) Where units are created using the Adaptive Reuse or Residential Conversion criteria pursuant to the provisions of Art 4, Sec 4.4.5, this article shall be applicable when at least ten (10) or more dwelling units are created.
- (c) An applicant may elect to be subject to the provisions of this article when developing fewer than 5 residential units in a single structure, or when~~An applicant may elect to be subject to the provisions of this article if~~ any new units are added to existing units ~~for a total of 5 or more units.~~

Sec. 9.1.6 Exemptions

Exempt from the requirements of this article are:

- (a) ~~On-campus projects~~ On-campus projects that are located within an Institutional (I) zoning district that are ~~developed by an educational institution for the exclusive residential use and occupancy by that institution's students;~~
- (b) Those dwelling units in a covered project that are produced as "replacement units," pursuant to Article 9, Part 2 and which do not produce any net new units; and,
- (c) Projects created using the Senior Housing Development Bonus pursuant to the provisions of Article 4.

Commented [SG1]: Sharon Bushor comment. Reflects the intent, but could be construed as a policy change from the literal interpretation of present wording.

Sec. 9.1.7 Certificate of Inclusionary Housing Compliance

Notwithstanding any other provision of this ordinance, no certificate of occupancy for a project covered by this chapter shall be granted unless and until a Certificate of Inclusionary Housing Compliance has been issued by the Manager of the city's Housing Trust Fund.

Sec. 9.1.8 Inclusionary Units, Rental and Sales

For covered projects in which units are offered for rent or sale, a base of fifteen percent (15%) of all of the dwelling units in the project, graduated as specified in Table 9.1.9-1, shall be designated as inclusionary units

This includes any covered project where units are offered for sale via the conveyance of a deed or share for individual units, including fee simple ownership, condominium ownership and cooperative ownership.

Table 9.1.8-1 Inclusionary Zoning Percentages	
If the average sale and rental price of project units is affordable to a household earning:	The percentage of units which are subject to rent and sales prices as per Sec. 9.1.9 and are subject to marketing and continued affordability provisions (Sec. 9.1.10 and Sec. 9.1.11) shall be:
Less than 139% of median income	15%
140%-179% of median income	20%

Development in any Waterfront district (RM-W, RL-W, NAC-CR and FD5 west of Battery St) or 180% of median income and above in any other district	25%
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Sec. 9.1.9 Percentage of Inclusionary Units

Except as provided for below for institutional student housing projects outside of an Institutional (I) zoning district, All covered projects shall meet the percentage requirements for inclusionary units as specified above, calculated as follows:

Using the units/acre allowed for a covered project (i.e. 46 in the RH, 24 in the RM or 5.5 in the RL), the total number of units proposed is multiplied by the required percentage of Inclusionary units (15%, 20% or 25%, depending on the rent/selling price of the units). When the calculation yields a fractional number of required inclusionary units, the number of units shall be rounded up or down to the nearest whole number.

(Example: a moderately-priced, multi-family housing development with no commercial space on a one-acre lot in the RH would be able to provide 46 units on-site. Of those, $46 \times .15$ (15%) = 6.9 (rounded up to 7) units of a total of 46 must be inclusionary units. If the applicant can only provide 20 of such moderately priced units on the site, 15% of the 20 units, i.e. $20 \times .15 = 3$ units shall be Inclusionary units).

Student housing projects outside of the Institutional (I) zoning district for the exclusive residential use and occupancy by that institution's students shall meet the percentage requirements for inclusionary units by documenting that 15% or more of the undergraduate student body eligible for occupancy of the project falls under 65% Area Median Income on a yearly basis. An annual report shall be filed with the Manager of the Housing Trust Fund demonstrating that the undergraduate student population continues to meet the 15% inclusionary requirement and also including the percentage of residents within the project qualifying under the standards for inclusionary housing. In cases where the 15% inclusionary requirement cannot be met, the percentage requirements for inclusionary units shall be met as noted above. A written covenant between the educational institution and the City shall be executed guaranteeing that, in the event that the institutional student housing project ceases to be used as such, the percentage requirements for inclusionary units shall be met as noted above.

Sec. 9.1.10 Income Eligibility

Inclusionary Units required under this Article, shall be marketed for purchase or rent to households earning less than the median income for the Burlington Metropolitan Statistical Area, adjusted for household size, as specified in Sec 9.1.12. The median income shall be determined on the basis of the data which is most recent to the time that the units are ready for occupancy. Inclusionary units occupied by households receiving Section 8 vouchers can be presumed to satisfy the income eligibility requirements of this section.

Sec. 9.1.11 Calculating Rents and Selling Prices

The following provision shall apply to the calculation of rents, selling prices and carrying charges, and to the relationship between unit size and household size:

- (a) Inclusionary rental units shall be rented at a price which is affordable for a household with an annual income that is sixty-five percent (65%) of median income adjusted for household size;
- (b) Inclusionary units for sale, including cooperative units and the carrying costs associated therewith, shall be sold at a price which is affordable for a household with an annual income that is seventy-five percent (705%) of median income adjusted for household size;
- (c) In calculating the rents or carrying charges of inclusionary units, the following relationship between unit size and household size shall apply:

Unit Size	Household Size Equivalent
Efficiency Units:	1 Person Household;
One-Bedroom Units:	1.5 Person Household (average of one and two-person household incomes);
Two-Bedroom Units:	3 Person Household;
Three-Bedroom Units:	4.5 Person Household (average of four and five-person household incomes);
Four-Bedroom Units:	6 Person Household.

With respect to inclusionary units offered for sale, prices will be calculated on the basis of:

- (d) An available fixed-rate thirty-year mortgage, consistent with a "blended rate" for Burlington banks plus the Vermont Housing Finance Agency as determined and declared semi-annually (January and July) by the Housing Trust Fund Manager. A lower rate may be used in calculating affordable prices if the developer can guarantee the availability of a fixed-rate thirty-year mortgage at this lower rate from the Vermont Housing Finance Agency for all of the required inclusionary units;
- (e) A down payment of no more than five percent (5%) of the purchase price;
- (f) Annual property taxes; and
- (g) Homeowner insurance, homeowner association fees or condo fees. Homeowner association fees shall be calculated in the same manner as the fees for the market units in the same development. The Housing Trust Fund Manager may modify the amount used in the calculation of condominium fees for the determination of the initial sale price limit for condominium inclusionary units. This modification shall be for the purposes of removing costs, such as plowing, maintenance, insurance, electricity, which are not included in the calculation of the sale price limit for single family inclusionary units.

Sec. 9.1.12 Additional Density and Other Development Allowances

All covered projects shall be entitled to increases in the development allowances of the underlying zoning district in accordance with the provisions of this section.

- (a) Any covered project shall be entitled by right to an increase in the maximum lot coverage, density/intensity, and, where applicable, height allowed for the site lot(s) on which the project is located. Applicable design standards in Articles 6 and 14 shall not be construed such that the by-right provisions of this section are reduced following the calculation of density, height, lot coverage, setbacks, and parking improvements for the site. Calculations for these entitlements shall be based on the following tables:

Table 9.1.12-1 Density/Intensity Allowance Table				
Zoning District	Additional Allowance	Maximum Units/Acre	FAR/Height	Maximum Lot Coverage
RH	15%	46	n/a 120' height set back 10' along street facade ¹	92%
RM, RM-W	20%	25	n/a	48%
RM-W		25	120' height set back 10' along street facade ¹	72%
RL, RL-W	25%	8.75	n/a	44%
FD6, FD5	n/a	n/a	0.5 FAR	100%
NMU, NAC, NAC-R, NAC-CR, BST	n/a	n/a	0.5FAR+120' height set back 10' along street facade	92%
NAC-CR		n/a	0.5FAR+120' height set back 10' along street facade	72%

1. In the RH and RM-W residential zones an additional 120 feet of building height shall be allowed by right only for an additional 5% inclusionary housing units provided in excess of the minimum requirements of Sec. 9.1.8.

Table 9.1.12-2 Lot Coverage Allowance Table		
Zoning District	Additional Allowance	Maximum Lot Coverage
RH, NMU, NAC, NAC-R	15%	92%
RM-W, NAC-CR	20%	72%
RM	20%	48%
RL, RL-W	25%	44%

- (1) Design requirements for Additional density, intensity, and/or height:
- i. There are a number of ways that building shape, articulations, and choice of materials can be used to reduce the perceived height and mass of buildings, and ensure a high quality of design that complements the character of a project's surrounding area. After consultation with the Design Advisory Board, the Development Review Board shall evaluate any proposal seeking to increase units per acre, lot coverage, and height per the following design criteria:
 - i. The proposed building presents a design that emphasizes slender, vertically-oriented proportions to assure a rich visually interesting experience as viewed within the context of the downtown skyline; reinforces opportunities for establishing points of reference for visual orientation; and, provides visual interest and human scale at the

~~pedestrian level through the use of a variety of scales, materials, fenestration, massing, or other architectural design techniques.~~

~~ii. Step backs, horizontal and vertical variation, selection of materials, and/or other architectural design techniques are used to reinforce the street wall, create transitions from buildings of a smaller mass and height, and reduce the perceived height and mass of upper stories from the street level; and,~~

~~iii. Upper story proportions of the building are oriented and tapered and/or separated into separate masses in order to retain sky view between individual building elements from the public thoroughfare.~~

~~ii. The DRB may condition the approval of additional units per acre, lot coverage, and height by reducing the building(s') massing or requiring alterations to design features, but in no case shall the maximum number of units, lot coverage, or height be reduced.~~

- (b) Other possible allowances for the provision of Inclusionary Units may include:
1. ~~A waiver of up to 50% waiver of parking spaces as outlined in Article 8, Sec. 8.1.14,~~
 2. ~~A waiver of a portion of the impact fees associated with the Inclusionary units, pursuant to the Art. 3, Part 3 Impact Fee Administrative Regulations.~~
- (c) ~~(b)~~ The allowances provided for herein may be declined at the option of the applicant;
- (d) ~~(c)~~ With the approval of the DRB, units added to a project as market rate units may be substituted by nonresidential uses wherever such nonresidential uses are otherwise permitted in the district where the project is located. Approved substitution for nonresidential uses shall occur at the following rate: 1 market-rate dwelling unit = 1,500 square feet nonresidential space
- (e) ~~(d)~~ All provisions of Sec. 9.1.8 through 9.1.11 shall apply, without exception, to any inclusionary units that are constructed.

Sec. 9.1.13 Off-Site and Payment In Lieu Options

(a) Off-Site Option

The developer of a covered project may construct inclusionary units on a lot (or lots) within the City of Burlington other than that on which the covered project is located as determined by HUD's Low- and Moderate-Income Summary Data as updated annually. The offsite option may be utilized by-right per the following scenario.

(1) Covered projects located in a census block where more than fifty-one percent (51%) of the residents are below eighty percent (80%) HUD Area Median Income as determined by HUD's Low- and Moderate-Income Summary Data may utilize the off-site option by right.

(2) In areas where less than fifty-one percent (51%) of the residents are below eighty percent (80%) HUD Area Median Income as determined by HUD's Low- and Moderate-Income Summary Data, utilization of the off-site option shall not be allowed. The DRB, upon a finding that unique, difficult and/or challenging site conditions exist that prevent the inclusionary units from being constructed upon the same site as the market units, may allow any developer of a covered project to comply constructing inclusionary units on a site within the City of Burlington other than that on which the covered project is located, subject to the following conditions:

In all cases, utilization of the off-site option shall be subject to the following conditions:

- ~~(a)~~ (1) The number of inclusionary units to be provided by the developer or by the developer's designee through off-site development shall be ~~no fewer than 1.5 times equivalent to~~ the number otherwise required by this Article;
- ~~(b)~~ (2) No additional development provisions as outlined in ~~this Article~~ Sec. 9.1.12 shall be granted to the development of units constructed off-site or to the project constructed on-site;
- ~~(c)~~ (3) Off-site inclusionary units must be located within the City of Burlington;
- ~~(d)~~ (4) All of the provisions of Sections 9.1.8 through 9.1.11 shall apply without exception to off-site inclusionary units under the provisions of this section;
- ~~(e)~~ (5) Waiver of provisions from the HTF with regard to minimum square footage and bedroom count relative to average size and bedroom count in a covered project is not permitted; and
- ~~(f)~~ (6) ~~Should the City Council decide that a payment in lieu is acceptable in exchange for not providing the inclusionary units on or off of the site, the payment shall be \$100,000, adjusted annually in accordance with the CPI, commencing January 1, 2007, per the number of units required in (a) above.~~

The off-site option shall not apply to a project located within a waterfront zoning district or the NAC-CR district. For the purposes of this Sec. 9.1.13, "site" shall consist of all adjacent ~~lands~~ lots which are the subject of a PUD or other single development application.

(b) Payment In-Lieu Option

The developer of a covered project may provide a payment in lieu to the Housing Trust Fund rather than construct inclusionary units on or offsite contingent on HUD Area Median Income as determined by HUD's Low- and Moderate-Income Summary Data. The payment in lieu option may be utilized by right under the two following scenarios

(1) Covered projects located in a census block where more than fifty-one percent (51%) of the residents are below eighty percent (80%) HUD Area Median Income as determined by HUD's Low- and Moderate-Income Summary Data may utilize the payment in lieu option by right subject to the following standards:

- i. The payment in lieu fee shall be \$35,000 per dwelling unit for projects containing 5-16 dwelling units.
- ii. The payment in lieu fee shall be \$70,000 per dwelling unit for projects containing 17-49 dwelling units.
- iii. The payment in lieu fee shall be \$85,000 per dwelling unit for projects containing 50 or more dwelling units.

A marginal fee approach shall be used in payment of the in lieu fees.

(Example: A 17-unit project would pay a total of \$140,000 {\$35,000 for each of the first two inclusionary units and \$70,000 for the third inclusionary unit}.)

(2) Covered projects located in a census block where less than fifty-one percent (51%) of the residents are below eighty percent (80%) HUD Area Median Income as determined by HUD's Low- and Moderate-Income Summary Data may utilize the payment in lieu option by right per the following standards:

- i. The payment in lieu fee shall be \$35,000 per dwelling unit for projects containing 5-16 dwelling units.
- ii. The payment in lieu fee shall not be allowed for projects containing 17 or more dwelling units.

The payment in lieu option shall not apply to a project located within a waterfront zoning district. For the purposes of this Sec. 9.1.13, "site" shall consist of all adjacent lots which are the subject of a PUD or other single development application.

Sec. 9.1.14 General Requirements for Inclusionary Units

All covered projects must comply with the requirements set forth below.

- (a) In order to assure an adequate distribution of inclusionary units by household size, the bedroom mix of inclusionary units in any project shall be in the same ratio as the bedroom mix of the non-inclusionary units of the project;
- (b) Rental inclusionary units within a covered project may "float" (as opposed to designating specific units). Owner-occupied inclusionary units within a covered project must be specifically designated. In either case, inclusionary units may be grouped together or distributed throughout a covered project;
- (c) Covered projects including both rental and owner-occupied dwelling units shall provide inclusionary units proportionate to the numbers of rental and owner-occupied dwelling units;
- (d) Inclusionary units may differ from the market units in a covered project with regard to interior amenities and gross floor area, provided that:
 - 1. These differences, excluding differences related to size differentials, are not apparent in the general exterior appearance of the project's units; ~~and~~
 - 2. These differences do not include insulation, windows, heating systems, and other improvements related to the energy efficiency of the project's units; and,
 - 2-3. Inclusionary units are afforded the same opportunity for parking that the market units are afforded.
- (e) The gross floor area of the inclusionary units is not less than ninety percent (90%) of the average gross floor area of the market rate units within the project and of the same number of bedrooms. ~~the following minimum requirements, unless waived by the DRB using the following criteria:~~
 - 1. ~~All of the units being provided with a specific bedroom count are smaller than the standards outlined below;~~
 - 2. ~~More than the required number of inclusionary units are provided on site, not all shall be subject to bedroom mix and size requirement; or,~~
 - 3. ~~The units have an efficient floor plan (meaning that less than 5% of the square footage is devoted to circulation) and the bedroom size(s) is a minimum of 144sf or 12'x12.~~

One bedroom	750 square feet
Two bedroom	1,000 square feet
Three bedroom.....	1,100 square feet
Four bedroom.....	1,250 square feet
- (f) Upon demonstration of inability to sell units to income eligible residents earning 75-70% of the median income, the Manager of the HTF may extend income eligibility to allow priority in the sale of inclusionary units to households earning as much as eighty percent (80%) of median income, adjusted for household size and to households residing in Burlington at the time that these units are offered for sale or lease. In extending income eligibility, priority of the purchase of for sale inclusionary units shall be given to the lowest income household who qualifies for purchase;

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Commented [SG2]: Sec. 9.1.11 articulates a relationship between unit size and household size only for rentals. This provision refers to for-sale units with no such relationship articulated in 9.1.11 or anywhere else. Seemingly, priority could be based on income alone.

- (g) Except for household income limitations as set forth herein, occupancy of any inclusionary unit shall not be limited by any conditions that are not otherwise applicable to all units within the covered project unless required under federal law, e.g. local use of the Low Income Housing Tax Credit, or in conflict with the stricter bylaws of the designated housing agency; and
- (h) The final calculations for the number of inclusionary units shall be determined by the Manager prior to the issuance of the zoning permit. If there is any change in the project due to sales prices for these units that increases the number of inclusionary units required, such modifications shall be determined by the Manager and communicated to the administrative officer prior to the issuance of a certificate of occupancy for the covered project. The rental or sales price of the inclusionary units shall also be determined by the Manager prior to the issuance of a certificate of occupancy.

Sec. 9.1.15 Marketing of Inclusionary Units

Any applicant developing a covered project shall adhere to the following provisions with respect to the initial offering of inclusionary units for sale or rental:

(a) Trust Fund Notification.

The developer shall notify the Manager of the HTF, as defined in Section 18-400 of the Burlington Code of Ordinances, of the prospective availability of any inclusionary units at the time that the building permit is issued for such units in a covered project;

(b) Trust Fund Option.

The Manager of the HTF, in consultation with the other members of the HTF Administrative Committee, shall then have an exclusive option for one hundred twenty (120) days to purchase each inclusionary unit offered for sale from the developer unless waived or assigned;

(c) Trust Fund Waiver.

If the Manager of the HTF, in consultation with the other members of the HTF Administrative Committee or its designee, fails to exercise its option by failing to negotiate and sign a purchase and sale agreement for the inclusionary units, or if the Manager declares its intent not to exercise its option, the developer shall offer the units for purchase to households earning less than the median income referenced in Section 9.1.11. If requested by the developer, the Manager of the HTF shall execute documents that may be recorded in the Burlington Land Records to evidence said waiver of the option;

(d) Time of Closing.

Closing on inclusionary units purchased by the Housing Trust Fund Manager shall occur on or after the time of issuance of the certificate of occupancy. If the Housing Trust Fund Manager fails to close on these inclusionary units, the developer shall offer the unit for purchase or rent to households earning less than the median income referenced in Section 9.1.11, adjusted for household size;

(e) Transfer of Option.

On or before a purchase and sale agreement is executed between the developer and the manager, the Manager may assign the options specified in this section to any "designated housing agency," as defined by the provisions of Article 5 of Chapter 18 of the Burlington Code of Ordinances, in which event it shall notify the developer of such assignment and the agency to which it has assigned the option, which agency shall deal directly with the developer, and shall have all of the authority of the Manager, as provided under this section.

(f) Rentals.

In the case that the inclusionary units are being offered for rent rather than for sale, the Manager shall also be notified in the manner prescribed by subsection (a) regarding Trust Fund Notification, and the Manager and developer shall cooperate in order to rent such units to individuals meeting the income guidelines of Sec 9.1. 11(a).

Sec. 9.1.16 Continued Affordability Requirements

All covered projects shall comply with the following provisions to ensure continued affordability of inclusionary units provided under this article and units required to be continually affordable under Section 9.1.16.

(a) 99-Year Requirement.

All inclusionary units shall remain affordable for a period of no less than ninety-nine (99) years commencing from the date of initial occupancy of the units. Where a developer can establish that regulatory or other considerations make it impossible to provide the required inclusionary units if subject to the full extent of this requirement, the development review board may modify the duration of the period of continued affordability only to the extent necessary to render the development feasible;

(b) Deed Restrictions.

Provisions to ensure continued affordability of inclusionary units shall be embodied in legally binding agreements and/or deed restrictions satisfactory to the City Attorney's office, which shall be prepared by the developer, but which shall not be recorded or filed until reviewed and approved by the Housing Trust Fund Manager with such modifications as it may deem necessary to carry out the purpose of this article. Such review and approval shall be completed within forty-five (45) days following date of submission of such documents to the Manager of the HTF. Failure of the Manager to respond within the forty-five (45) day period as set forth herein shall constitute approval of the documents;

(c) Resale Restrictions.

Provisions to ensure continued affordability of inclusionary units offered for sale shall include a formula for limiting equity appreciation to an amount not to exceed twenty-five percent (25%) of the increase in the inclusionary unit's value, as determined by the difference between fair market appraisal at the time of purchase of the property and a fair market appraisal at the time of resale, with such adjustments for improvements made by the seller and necessary costs of sale ~~as may be approved by the Manager, with a recommendation from the Administrative Committee of the HTF;~~

(d) Rent Increases

Provisions for continued affordability of inclusionary rental units shall limit annual rent increases to the percentage increase in the median household income within the Burlington Metropolitan Statistical Area (MSA), except to the extent that further increases are made necessary by hardship or other unusual conditions, and shall provide that no rent increase may take effect until it has received the approval of the Housing Trust Fund Administrative Committee in writing;

(e) Purchase Option

Provisions for continued affordability of inclusionary units shall provide that the Housing Trust Fund Administrative Committee or its designee shall have an exclusive option to purchase any owner-occupied inclusionary unit when it is first offered for resale for a period of one hundred twenty (120) days from the date on which the HTF Administrative Committee is notified of the availability of the unit; and

(f) Sublet Restrictions.

Provisions for continued affordability of inclusionary units shall prohibit subletting rental units for a price exceeding that which is affordable for a household with an annual income that is seventy-five percent (70~~5~~%) of median for the County or the City, whichever is less, consistent with the relationship between unit size and household size set forth in Section 9.1.11.

Sec. 9.1.17 Review of Proposal for Phasing

Proposals for projects to be constructed in phases shall be reviewed as a component of the initial project review and shall be included in any conditions of approval. A schedule setting forth the phasing of the total number of units in a covered project, along with a schedule setting forth the phasing of the required inclusionary unit(s), shall be presented for review and approval as part of the permitting process, for any development subject to the provisions of this article. If phasing is not included as part of the review process, no phasing of the inclusionary units shall be allowed.

If a covered project is approved to be constructed in phases, the requirements of the following section shall be applicable to each such phase.

Sec. 9.1.18 Timeline for Availability/Phasing of Inclusionary Units for Issuance of Certificate of Occupancy

Inclusionary units shall be made available for occupancy on approximately the same schedule as a covered project's market units, except that certificates of occupancy for the last ten percent (10%) of the market units shall be withheld until certificates of occupancy have been issued for all of the inclusionary units; except that with respect to covered projects to be constructed in phases, certificates of occupancy may be issued on a phased basis consistent with the conditions of approval set forth in Sec. 9.1.17.

Sec. 9.1.19 Enforcement

Violations of this article shall be punishable as provided by Article 2 of this Ordinance.

Sec. 9.1.20 Administration

The Housing Trust Fund and its Manager ~~or designee~~ shall monitor activity under this article and shall provide a report no less than every year to the city council, setting forth its findings, conclusions, and recommendations for changes that will render the program more effective. The report described above shall be presented to the city council at a legally warned public hearing.

END TEXT AMENDMENTS

Relationship to planBTV

This following discussion of conformance with the goals and policies of planBTV is prepared in accordance with the provisions of 24 V.S.A. §4441(c).

Compatibility with Proposed Future Land Use & Density

This amendment is aimed purely at housing affordability and has little, if any, impact on the proposed future land use and densities proposed in the *Municipal Development Plan (planBTV)*.

Impact on Safe & Affordable Housing

This amendment is aimed at improving the city's inclusionary housing standards and procedures with greater flexibility and geographic sensitivity in meeting inclusionary housing requirements consistent with the policies regarding affordable housing articulated in the *Municipal Development Plan (planBTV)*.

Planned Community Facilities

This amendment is not expected to have an impact on any planned community facilities.

Process Overview

The following chart summarizes the current stage in the zoning amendment process, and identifies any recommended actions:

Planning Commission Process				
Draft Amendment prepared by: Staff, referred by City Council	Presentation to & discussion by Commission 3/26/2019 4/9/2019 4/23/2019	Approve for Public Hearing	Public Hearing	Approve & forward to Council
				Continue discussion
City Council Process				
First Read & Referral to Ordinance Cmte	Ordinance Committee discussion	Ordinance Cmte recommends to Council [as is / with changes]	Second Read & Public Hearing	Approval & Adoption
				Rejected

Burlington Planning Commission

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Andy Montroll, Chair
Bruce Baker, Vice-Chair
Yves Bradley
Alexander Friend
Emily Lee
Harris Roen
Jennifer Wallace-Brodeur



Burlington Planning Commission

Tuesday, April 9, 2019, 6:30 P.M.

Conference Room 12, City Hall, 149 Church Street

Draft Minutes

Members Present	A Montroll, B Baker, Y Bradley, A Friend, E Lee, H Roen, J Wallace-Brodeur
Members Absent	
Staff Present	M Tuttle, D White, S Draper, S Gustin, T Rawlings

I. Agenda

Call to Order	Time: 6:35pm
Agenda	Agenda approved as is, but updated handout for item VI was distributed at the meeting.

II. Public Forum

Name	Comment	Commission Action
Barbara Headrick	Shared a document regarding students living off-campus to illustrate the impact on the housing market; suggests promoting more on-campus housing.	

III. Report of the Chair

A Montroll	No Report
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IV. Report of the Director

D White	- Mayor presented the State of the City address last week, identifying a priority to advance proposals related to housing: ADU's, short-term rentals, parking requirements, increase in the Housing Trust Fund, etc. Goal is to have a summit in May, and related draft CDO amendments in the fall. - Many staff from P&Z will be going to the National Planning Conference next week in San Francisco. M Tuttle, D White will be presenting on planBTV as an example of how plans lead to implementation. - S Draper's last meeting. D White and PC thanked her for hard work, wished her well.
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V. Proposed CDO Amendment: Zoning Administrative Office

Action: Approve the Municipal Bylaw Amendment Report and warn for public hearing		
Motion by: Y Bradley	Second by: E Lee	Vote: Approved Unanimously
Type: Discussion	Presented by: D White	
Discussion/Notes: This action is a result of the charter change vote in March 2019, creating the new Department of Permitting and Inspections, and separating Planning to its own department. Currently, the ZAO and the Planning Director are combined into one position. With the new department, the ZAO needs to reside in that department, and separate from the Planning Director.		

- Some Commissioners asked about the implications of voting against this amendment. D White explains that the charter change will become state statute, which would override the City's ordinance. This amendment is to avoid contradicting the charter, and creating confusion. The commission could choose not to vote on the amendment, but eventually the City Council would likely ask for a recommendation and a decision would have to be made.

VI. Proposed CDO Amendment: Inclusionary Zoning Update

Action: No Action Required		
Motion by:	Second by:	Vote:
Type: Presentation & Discussion		Presented by: M Tuttle, S Gustin, T Rawlings
Discussion/Notes: - Previous meeting discussed proposed amendments regarding offsets. Staff updated the proposed amendments per commission feedback on parking requirements, and design standards that apply to the additional density/intensity and height provisions. Parking: - Discussed including explicit language that ensure parking is an amenity for which equal access is required, and clarify that parking calculation refers to on-site parking. - A commissioner suggests being more aggressive with changing parking minimums for all housing if the goal is to reduce costs. Staff noted that parking requirements will be reviewed as a whole in the near future, so this addresses parking for IZ until a comprehensive update. Density/Intensity and Height Provisions - Regarding Article 4 height bonus a Commissioner proposed increasing the height bonus to 12', in order to promote its use and create more flexibility for design of space. The Commission asked staff to include that adjustment. - Commissioners discussed whether IZ only applies to 5 or more units, or whether it should be optional for smaller projects as well, especially the opportunity for the bonuses to enable small-scale infill development in neighborhoods where parking and lot coverage requirements may currently be preventing those units from being created. The Commission asked staff to discuss this and provide a recommendation. - Commissioners felt that the proposed design standards need to be clearly communicate that the DRB cannot condition a project through design changes in a way that would result in a reduction of units. Additionally, requested staff to modify design standards to be more applicable to smaller residential projects outside of the Form Districts. - A Commissioner suggested avoiding design standards that emphasize materials and colors on the exterior of the building to break up the massing. Payment-in-Lieu Option: - A payment-in-lieu option to the Housing Trust Fund is an option to providing inclusionary units on- or off-site. Changes come directly from Council recommendations; payment options vary depending on the location in more or less inclusionary areas of the city and by the number of units being provided. Changes are intended to address smaller projects where it may not be feasible to provide inclusionary units. - Need to ensure in this section that the language is clear that the payments go to the Housing Trust Fund, intended to promote more inclusion. Off-Site Option: - Developers have the option to provide inclusionary units off-site if the new units being created are in an area that currently has more inclusion. Option is not available if units are being created in an area that currently has less inclusion.		

Size and Sale Price of Inclusionary Units:

- The amendment replaces a square footage requirement for IZ with a requirement that they are at least 90% of the size of the market rate units.
- The sale price of the units decreases from 75% to 70% of median household income.
- A commissioner questions the language in section 9.1.14 (f) "Priority of the purchase of for-sale inclusionary units shall be given to the lowest income household who qualifies for purchase."
- Commissioners ask to clarify this section to indicate that it is not the only factor considered when deciding who will purchase the unit. After all things are considered, it would then go to the lowest income household.

VII. Committee Reports

Executive	No Report
Ordinance	Ordinance changes to be forwarded to the Planning Commission coming soon.
Long Range	No Report

VIII. Commissioner Items

Next Meeting	Tuesday, April 23, 2019 @ 6:30pm in Conference Room 12, City Hall
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IX. Minutes & Communications

Action: Approve Minutes & Accept Communications		
Motion by: Y Bradley	Second by: B Baker	Vote: Approved Unanimously
Changes to Minutes: N/A		
Communications Filed: • Communication from B Headrick regarding off-campus student housing		

X. Adjourn

Adjournment	Time: 8:09pm	
Motion: Y Bradley	Second: B Baker	Vote: Approved Unanimously

draft

**FY 2019
BURLINGTON
PLANNING COMMISSION
ANNUAL REPORT**

PREPARED FOR:
BURLINGTON CITY COUNCIL
MAYOR MIRO WEINBERGER

PLANNING COMMISSION OVERVIEW

Planning Commission Membership

The Planning Commission is composed of seven Commissioners, appointed to staggered terms of four years. Each Commissioner participates on at least one Standing Committee, and some Commissioners also participate on ad-hoc committees established to facilitate special projects. The FY 2019 membership of the Planning Commission and participation in Committees is listed below; a record of attendance for the full Commission meetings is included in **Appendix A**.

Andy Montroll, *Chair, Executive Committee, (Chair)*
Bruce Baker, *Vice-Chair, Executive Committee, Ordinance Committee, Inclusionary Zoning Working Group, Permit Reform Advisory Committee*
Yves Bradley, *Executive Committee*
Alexander Friend, *Ordinance Committee (Chair)*
Emily Lee, *Long Range Committee*
Harris Roen, *Long Range Committee (Chair)*
Jennifer Wallace-Brodeur, *Long Range Committee*

Planning Commission Duties

The Burlington Planning Commission facilitates the optimal and sustainable development of Burlington's built and natural environment by engaging the community in long-range, comprehensive City-wide land use planning; advising the Mayor and City Council on matters pertaining to land use planning and development in general; reviewing and developing land development ordinances for approval by the City Council; providing oversight to the Department of Planning & Zoning (DPZ); providing comments and feedback, as necessary, to the Chittenden County Regional Planning Commission; and other functions as set forth in 24 V.S.A. §4325.

In short, the Planning Commission dedicates a tremendous amount of time to creating and implementing planBTV—also known as the Municipal Development Plan—which includes specific plans for areas and important issues in the City.

FY 2019 Meetings

Full Commission meetings are typically held twice monthly, and usually last 1.5 to 2 hours. The Commission canceled some of its regularly scheduled meetings during 2018 in order to hold neighborhood workshops for the *planBTV: Comprehensive Plan* update, and scheduled several special meetings in the fall to discuss recommendations related to the Permit Reform Initiative. The Commission's Executive Committee meets quarterly, the Ordinance Committee meets monthly, and the Long-Range Committee meets as needed to guide special planning projects.

FY19 PROJECTS & POLICY WORK

planBTV: Burlington's Comprehensive Plan

In February 2018, the Planning Commission and Planning Department began work on the 2019 update to *planBTV*, Burlington's Comprehensive Plan. Often referred to as "the Municipal Development Plan," *planBTV* is the long-range plan for land use and development across the City. This plan has been updated every 5 years since the 1970's, to ensure that the policies and actions continue to guide the work of the City regarding land use and development according to the vision of Burlington as a sustainable core community in our region.

The Planning Commission first approved a "Blueprint," which provided key goals and objectives for the update. This guide noted that the update was not about creating a new vision for Burlington. Instead, the Planning Commission's main objective was to update and prioritize the policies and actions that guide the implementation of the plan's long-standing vision. This included reviewing what had been done since the last plan update, identifying the gaps to address issues and trends that weren't previously included in the plan, and clarified the role and relationship of the *Municipal Development Plan* to other *planBTV* studies (e.g. *planBTV: Downtown & Waterfront Master Plan* and *planBTV Walk/Bike*).

In May of 2018, the Commission canceled their regularly-scheduled meetings to host a series of community workshops and to attend other events to talk with residents about big issues and emerging trends that would influence the plan's update. The Commission then worked over the summer and fall of 2018 to develop, review, hear public feedback on, and revise sections of the updated draft plan. In the late fall 2018, a complete draft of the updated plan was shared for the community's review and discussion. The process to draft the plan was iterative, and Commissioners dedicated a great amount of time outside of regularly scheduled meetings to assist staff in collecting input and communicating about the plan update. The Planning Commission's work culminated in a December 2018 workshop and public hearing. Following this public hearing, the Planning Commission and staff made a series of additional changes and referred the draft plan to City Council with a recommendation of adoption. City Council received presentations on the draft plan and held its public hearings during January to March 2019. Following the second public hearing on March 25, 2019, the plan was unanimously re-adopted by the City Council, and will be the first update to be in effect for 8 years.

The most significant change in the 2019 update was in how the plan's policies and actions are organized, and how it references other plans and studies. The new framework emphasizes the interrelatedness of the issues that the plan's policies address, and strategically incorporates data, maps, and other details that help communicate the plan's vision and measure its implementation. Additionally, the plan is more succinct than its previous versions, including higher-level policies and actions regarding a wide range of issues, and referencing area-wide and topical plans that provide a greater level of detail and specificity about how certain issues will be addressed.

planBTV: South End Master Plan

Following the release of a draft of *planBTV: South End Master Plan* in 2015, the Planning Commission's Long Range Planning Committee reviewed each section of the draft plan, and public comments on these elements, and provided direction to the Department on revisions. The Long Range Committee spent significant time in 2016 and 2017 discussing these revisions. In May 2018, to coincide with the process to update the city-wide *Municipal Development Plan*, a revised draft of the plan was presented to the community and posted online for comment. The Planning Commission made final modifications to this plan following the December 2018

public hearing, and referred it to the City Council with a recommendation of adoption by its reference in the *planBTV: Comprehensive Plan* update. Following the March 25, 2019 Council Public hearing, the plan was approved and adopted by reference into *planBTV*.

Comprehensive Development Ordinance Amendments

The Planning Commission and its Ordinance Committee reviewed and discussed 10 proposed amendments to the *City's Comprehensive Development Ordinance* (CDO) in FY 2019. The Commission recommended 9 of these proposed amendments for adoption by City Council. 2 of these amendments have been adopted by Council and are now in effect ([ZA-19-01](#) and [ZA-19-05](#)). An additional 3 amendments were adopted and became effective this year, all of which had been referred by the Planning Commission in FY 2018. The following is a complete list of amendments which have been recommended by the Planning Commission to the City Council in FY 2018 and 2019, and their current status.

ZA-18-04 Density Calculations: The purpose of this amendment was to address a discrepancy in the CDO regarding calculation of permitted density on a site. After several iterations, the amendment was expanded to ensure the language was consistent with Article 13 definitions, and to update methodology for calculating non-residential density. The Planning Commission referred this amendment to City Council with recommendation; however, the amendment expired before it could be acted upon by City Council. (See [ZA-19-05](#).)

ZA-18-05 Article 3 Amendments: The purpose of this amendment was to update Article 3 relative to zoning permit release, timelines for pending permit applications, permit extensions, and permit duration. The amendment was adopted by City Council and became effective on December 12, 2018.

ZA-18-06 Article 8 Bike Parking: The purpose of this amendment was to modify bike parking regulations in Article 8 and in Table 8.2.5-1. These changes increase the required ratios of bicycle parking for selected uses to more closely align with the APBP guidelines, and establish a payment in lieu option for required bike parking. The amendment was adopted by City Council and became effective on December 12, 2018.

ZA-18-07 Conditional Use Exemptions: The purpose of this amendment was to eliminate the Conditional Use exemption from Section 3.5.3 Exemptions, which was added to this section in 2015. This is to ensure that change of use and rehabilitation of structures involving conditional uses will still be subject to the closer review scrutiny per the conditional use standards of Section 3.5.6. The amendment was adopted by City Council and became effective on February 27, 2019.

ZA-18-08 Form District 5 Boundaries: The purpose of this proposed amendment is to modify the boundaries of Form District 5 to include additional properties located along the boundary of the current district. Properties proposed for inclusion are currently zoned Residential High Density or Residential Medium Density, and have been evaluated for their current and future potential use and intensity. These have been recommended for inclusion in Form District 5 in order to encourage the appropriate type and intensity of future infill or redevelopment, and to enable greater flexibility for expansion or reuse of existing uses and structures by reducing non-conformities. The Commission held a public hearing on this amendment on June 12, 2018 and referred it to Council for consideration. Final Council action on this amendment is anticipated in the coming year.

ZA-19-01 Grocery in E-LM: The purpose of this amendment was to expand the allowable size for grocery stores in the Enterprise Light Manufacturing zoning district from 30,000 sq.ft to 35,000 sq.ft. The amendment was referred by the Planning Commission in August 2018, and was adopted by City Council and became effective on December 12, 2018.

ZA-19-02 Additional Residential Unit in RL: The purpose of this proposed amendment is to remove the provision for an additional unit to be added to an existing multi-family structure within the Residential-Low Density zoning district. This amendment was referred by the Planning Commission in August 2018. Council action on this amendment is anticipated in the coming year.

ZA-19-03 Parking Amendments: The purpose of the proposed amendment referred by the Planning Commission was to add parking requirements for Art Gallery/Studio uses, align parking requirements for small daycares/preschools with those of large daycares/preschools, to allow tandem parking for all dwelling units and to clarify its arrangement when used for multi-family structures, and allow parking within a front yard setback in a driveway when there is room for at least one parking space beyond the setback. This amendment was referred by the Planning Commission in August 2018, and was subsequently modified by the Council Ordinance Committee to remove all restrictions on front yard parking. Council action on this amendment is anticipated in the coming year.

ZA-19-04 Trees, Junkyards, Cross Reference: The purpose of this proposed amendment is to 1) relocate tree cutting standards and provisions for exemptions from these standards within the CDO to eliminate unintentional conflicts in the ordinance, 2) to update definitions related to Junkyards and Auto/Vehicle Salvage Yards per the City's Code of Ordinances, and 3) to correct a cross reference. The Planning Commission has scheduled a Public Hearing on this amendment on May 28, and Council action is anticipated in the coming year.

ZA-19-05 Density Calculations: See ZA-18-04. This amendment revived ZA-18-04 upon its expiration. The amendment was referred by the Planning Commission in November 2018, and was adopted by City Council and became effective on February 27, 2019.

ZA-19-06 Article 7: Signs: The purpose of this proposed amendment is to update the city-wide sign regulations to both modernize the standards and respond to recent US Supreme Court decisions regarding content neutrality. The amendment is content-neutral and form-based, and absorbs two related sections of the municipal code (Ch5, Art 5 – Illuminated Signs, and Ch 27, Art 3 – Projections over the Sidewalk) in order to improve coordination and remove redundancy and confusion. The Planning Commission referred this amendment to the Council with recommendation in November 2018. Council is expected to take action on this amendment in the coming year.

ZA-19-07 Commercial Uses in E-LM: The purpose of this proposed amendment is to permit additional uses in certain parts of the E-LM zoning district in a way that is consistent with the vision for the South End as articulated in *planBTV: South End Master Plan*. This includes permitting banks, removing the limitations on performing arts centers, creating new R&D and technical office uses, and establishing a requirement that a majority of the gross floor area on a lot south of Home Avenue be industrial/commercial/warehouse/R&D/arts and similar uses. The Planning Commission referred this amendment to the Council with recommendation in January 2019. City Council's Ordinance Committee is anticipated to make a recommendation on this amendment in May.

ZA-19-09 Zoning Administrative Officer: The purpose of this proposed amendment is to disjoin the director of Planning and Zoning from the Zoning Administrative Officer (ZAO), and to reflect the approved charter change regarding the appointment process for the ZAO in the future. The Planning Commission has scheduled a Public Hearing on this amendment on May 28, and Council action is anticipated in the coming year.

ZA-19-10 Inclusionary Zoning: The purpose of this proposed amendment is to make a series of changes to the Inclusionary Zoning requirements. Recommended changes were forwarded to the Planning Commission following a consultant review, working group, and Council committee. The Planning Commission has scheduled a Public Hearing on this amendment on **DATE**, and Council is expected to take action on this amendment in the coming year.

Other Amendments Considered by the Commission

ZA-19-08 Dwelling Unit Definition: The Planning Commission received a recommended amendment from the Planning & Zoning and City Attorney's staff regarding language to clarify the term "dwelling unit" in the CDO. The amendment proposed to replace references to "family" with "residential" in various definitions of dwelling units, while leaving intact the term "family" and the associated occupancy limits on unrelated adults which apply only in residential zones. This proposal prompted the Commission to request additional information from the Department regarding the effect that the occupancy limits would have on the housing stock in other parts of the city, including mixed-use and institutional zoning districts. This item is expected to be discussed further in the coming year.

OTHER COMMISSION AND STAFF ACTIVITIES

Bruce Baker represented the Planning Commission on two ad-hoc committees this year. The Inclusionary Zoning Working Group reviewed and forwarded to Council a series of recommendations regarding a consultant's review of Burlington's Inclusionary Zoning Ordinance and Program. The Permit Reform Advisory Committee met monthly to discuss efforts being undertaken by the Planning Department, Code Enforcement Office and DPW's Inspection Services Division to improve the City's development permitting process. These recommendations ultimately led to the city advancing a proposal to create a new Permitting and Inspections department, which was approved by the Burlington voters in March 2019.

During several of its meetings, the Planning Commission offered its input to Councilors and City Staff regarding this proposal. This new department is anticipated to include the current planning functions of the Planning & Zoning Department (e.g. zoning permits, administration of the CDO), along with building permits and inspections and enforcement functions of the Department of Public Works and Code Enforcement Office respectively. The Planning Commission also weighed in on a proposal to merge the long-range planning functions of the Planning & Zoning Department with the Community & Economic Development Office as it undergoes restructuring as well. The proposal to merge Planning and CEDO was ultimately not advanced. It is anticipated that activities related to the restructuring of these departments will begin in the coming fiscal year.

Andy Montroll continued to serve as the Burlington representative on the Chittenden County Regional Planning Commission. Andy was also the recipient of the Northern New England Chapter of the American Planning Association's 2018 Citizen Planner of the Year award (following his receipt of the same award from the Vermont Planners Association in April 2018). Andy was selected for this award not only for his nearly 25 years of public service as a City Councilor, Planning Commissioner, and CCRPC Commissioner, but particularly for his leadership on the Joint Form Based Code Committee to develop *planBTV: Downtown Code*,



Andy Montroll (middle) receiving Citizen Planner of the Year award at the Northern New England Chapter of the APA's 2018 Conference in Maine; pictured with David White and Meagan Tuttle.



David White, Sandrine Thibault, and Meagan Tuttle following their presentation, entitled "Plans as Catalysts for Change," at the 2019 American Planning Association Conference in San Francisco.

and for his key role in encouraging municipal support for the merger of the former CCMPO with the CCRPC.

Students in the Burlington High School City and Lake Semester Program took a deep dive into exploring land use, transportation, and economic development issues associated with the South End Enterprise District during one of their program days this spring. Additionally, students in an undergraduate Community Development and Applied Economics course spent the semester studying both the land- and water-based infrastructure and systems along the Burlington waterfront in anticipation of the City's update to the Harbor Management Plan in the next fiscal year.

Planning Director David White was appointed by Mayor Weinberger to serve jointly as the Interim CEDO Director from January 2019 through the end of the fiscal year, as recruitment for the CEDO Director was underway. Shaleigh Draper served the department as the Zoning Clerk and Secretary for the Planning Commission from May 2018 to April 2019. The position is expected to be filled in early FY20, and will be part of the new Permitting and Inspections Department following the restructuring.

David White, and Comprehensive Planner, Meagan Tuttle, were selected to present at the American Planning Association's National Planning Conference in San Francisco in April 2019. Joined by former comprehensive planner, Sandrine Thibault, the presentation highlighted a number of public reinvestments, private developments, and public-private partnerships that have been implemented in the downtown and waterfront since the adoption of *planBTV: Downtown & Waterfront Master Plan* in 2013.

Burlington Planning Commission

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Andy Montroll, Chair
Bruce Baker, Vice-Chair
Yves Bradley
Alexander Friend
Emily Lee
Harris Roen
Jennifer Wallace-Brodeur



Burlington Planning Commission

Tuesday, May 14, 2019, 6:30 P.M.

Conference Room 12, City Hall, 149 Church Street

Minutes

Members Present	A Montroll, Y Bradley, A Friend, E Lee, H Roen, J Wallace-Brodeur
Members Absent	B Baker
Staff Present	M Tuttle, D White, S Gustin, T Rawlings

I. Agenda

Call to Order	Time: 6:35pm
Agenda	No changes to the agenda

II. Public Forum

Name	Comment	Commission Action
A DiMario, Birchwood Terrace	Requesting a zoning amendment for the parking requirements for staffing and lot coverage for convalescence homes to be similar to senior housing.	

III. Report of the Chair

A Montroll	No Report
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IV. Report of the Director

D White	Budget presentation to Board of Finance on May 21 at 5pm
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V. Joint Institutional Parking Management Plan

Action: Provide recommendation of one year approval to DRB, with additional comments offered		
Motion by: J. Wallace-Brodeur	Second by: H. Roen	Vote: Approved Unanimously
Type: Presentation & Discussion, Action		Presented by: CATMA
Discussion/Notes: - CATMA presented updated report and projections based on clarified data and methodology. - Commissioners expressed concern about upward trends students who live within 0.5 mi of campus who drive to campus and/or park in nearby neighborhoods. - A Commissioner asked what parking resources are included the projected UVMCM surplus, when it seems anecdotally that so many hospital employees are already taking the shuttle, and as a visitor it doesn't seem that there is a lot of excess. CATMA indicated they would look into the lot counts. - A Commissioner encouraged collaboration with City on greater regulation of on-street parking to discourage driving within 0.5 miles of campus, and more investments in bicycling infrastructure near campus. - Staff noted that key recommendation is that this is only approved for one year based on current planning by UVM making it difficult to identify parking piece and new CATMA survey because what has been done is very different from what was originally presented.		

- The Commission approved changes to the draft recommendation to indicate that there should be stronger language about more concrete strategies to reduce driving within 0.5 mi likely jointly between institutions and City, and to ensure that any unanticipated housing created that increases the projected parking deficit (not currently in the JIPMP) should be accommodated by satellite parking

VI. Proposed CDO Amendment: Inclusionary Zoning Update

Action:		
Motion by:	Second by:	Vote:
Type: Presentation & Discussion, Action		Presented by: M Tuttle, S Gustin, T Rawlings
Discussion/Notes:		
• Staff continued to outline proposed changes to the Inclusionary Zoning ordinance, particularly related to the administration of the ordinance. • A Commissioner asked why there is no requirement for on-going income monitoring; indicated so that residents are not displaced if their income increases, offer some flexibility to transition to market rate • It was noted that the ordinance should be clear that "0.5" is the point from which rounding up or down takes place when calculating number of units • Add "all else equal" regarding income requirements for households in the sale of inclusionary units • A Commissioner asked if there should be a time limit on how long a unit must be offered for sale at the target %AMI sale price before being allowed to offer it to a buyer that exceeds that, or set an IZ sales price at a percent of market rate. It was noted that lowering the sale price to 70% is intended to cure this. • A Commissioner expressed some concern that rents are able to go down, as it would have an effect on a developer's pro-forma and impact the rate of market-rate units. IZ Administrative Committee voted not to establish a floor to maintain ability for units to be affordable based on changes in income over time. • P O'Brian: in 9.1.16 (c), how does limiting equity maintain perpetual affordability, rather than restricting appreciation. CHT explained briefly the formula regarding principal, improvements, and appreciation.		

VII. Burlington Housing Summit

Action: N/A		
Motion by:	Second by:	Vote:
Type: Presentation		Presented by: Mayor Weinberger
Discussion/Notes:		
• Overview of Housing Summit planned for June 11th and extended an invitation for the Commission to participate. Purpose is to launch a process to bring focus on a handful of key unfinished recommendations from the Housing Action Plan, other housing policy needs • A Commissioner requested that ADU's policy updates be discussed sooner than later; staff indicated will follow up post-summit and will send the Commission the ADU White Paper		

VIII. Committee Reports

Executive	No Report
Ordinance	No Report
Long Range	No Report

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IX. Commissioner Items

Next Meeting	Tuesday, May 28, 2019 @ 6:30pm in Conference Room 12, City Hall
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X. Minutes & Communications

Action: Approve Minutes & Accept Communications		
Motion by: A. Friend	Second by: E. Lee	Vote: Approved Unanimously
Changes to Minutes: N/A		
Communications Filed: • Communication from B Headrick regarding May 9 JIPMP Draft		

XI. Executive Session

Action: Recess regular meeting at 9:00pm to convene an executive session regarding a personnel matter		
Motion by: Y. Bradley	Second by: J Wallace Brodeur	Vote: Approved Unanimously
Action: Close executive session at 9:12pm to resume regular meeting		
Motion by: A Friend	Second by: Y Bradley	Vote: Approved Unanimously

XII. Adjourn

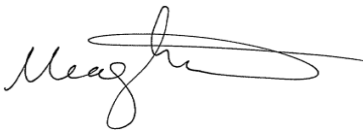
Adjournment	Time: 9:13pm	
Motion: Y Bradley	Second: E Lee	Vote: Approved Unanimously



Signed: May 31, 2019

Andy Montroll, Chair

Respectfully submitted by:



Meagan Tuttle, Comprehensive Planner