



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

645 Pine Street, Suite A
Post Office Box 849
Burlington, VT 05402-0849
802.863.9094 VOICE
802.863.0466 FAX
802.863.0450 TTY
www.burlingtonvt.gov/dpw

Chapin Spencer
DIRECTOR OF PUBLIC WORKS

MEMORANDUM

To: Tenzin Chokden, Clerks Office
From: Chapin Spencer, Director
Date: April 15, 2021
Re: Public Works Commission Agenda

Please find information below regarding the next Commission Meeting.

Date: **April 21, 2021**
Time: 6:30 – 9:00 p.m.

Due to current social distancing measures, this meeting will be held entirely virtually.

To view the meeting:

1. CCTV YouTube Channel (*streamed live*) or on Burlington Telecom Channel 317 (aired on a later date, *not live*). Comments on YouTube are not monitored by DPW staff.
<https://www.youtube.com/channel/UCJkWMLSqRNKLoyUZQiNoAcQ>
2. Join via Zoom: <https://us02web.zoom.us/j/83495330508>
3. Call in for audio only: Phone number: 301-715-8592 Webinar ID: 834 9533 0508

To participate in public comment:

1. You must either join the meeting via the Zoom link above or by calling via the call-in information above.
2. If signed in via Zoom, please use the “Raise Your Hand” feature. This will alert DPW staff that you wish to speak and will automatically add you to the queue. When it’s your turn to speak, your name will be called and you will be unmuted.
3. If you are calling in, please press *9 which will alert DPW staff that you wish to speak. When it’s your turn to speak, your phone # will be called out and you will be unmuted.
4. If you encounter any difficulties when attempting to speak during public forum, please email DPWCommunications@burlingtonvt.gov.
5. In the event of challenges with Zoom video, please use the call-in option.

AGENDA

ITEM

- 1 Call to Order – Welcome – Chair Comments

- 2 5 Min Agenda
- 3 10 Min Public Forum (3 minute per person time limit)
- 4 5 Min Consent Agenda
 - A Update to Free Employee Parking Policy
 - B Parking Request for Lakewood Parkway GSI Project
 - C Design Vehicles Guidelines
- 5 20 Min Water Resources Rate Recommendations
 - A Communication, M. Moir, J. Olson, J. Lavalette
 - B Commissioner Discussion
 - C Public Comment
 - D Action Requested –Vote
- 6 30 Min Consolidated Collection Study Update
 - A Communication, L. Perry
 - B Commissioner Discussion
 - C Public Comment
 - D Action Requested –Vote
- 7 15 Min BSD School Travel Plan Kickoff
 - A Communication, P. Peterson
 - B Commissioner Discussion
 - C Public Comment
 - D Action Requested –None
- 8 15 Min Annual Downtown Parking Report
 - A Presentation, J. Padgett
 - B Commissioner Discussion
 - C Public Comment
 - D Action Requested –None
- 9 5 Min Approval of Draft Minutes of 3-17-2021
- 10 10 Min Director's Report
- 11 10 Min Commissioner Communications
- 12 **Adjournment & Next Meeting Date – May 19, 2021**

Non-Discrimination

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.



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

645 Pine Street, Suite A
Post Office Box 849
Burlington, VT 05402-0849
802.863.9094 VOICE
802.863.0466 FAX
802.863.0450 TTY
www.burlingtonvt.gov/dpw

Chapin Spencer
DIRECTOR OF PUBLIC WORKS

MEMORANDUM

To: Tenzin Chokden, Clerks Office
From: Chapin Spencer, Director
Date: April 15, 2021
Re: Public Works Commission Agenda

Please find information below regarding the next Commission Meeting.

Date: **April 21, 2021**
Time: 6:30 – 9:00 p.m.

Due to current social distancing measures, this meeting will be held entirely virtually.

To view the meeting:

1. CCTV YouTube Channel (*streamed live*) or on Burlington Telecom Channel 317 (aired on a later date, *not live*). Comments on YouTube are not monitored by DPW staff.
<https://www.youtube.com/channel/UCJkWMLSqRNKLoyUZQiNoAcQ>
2. Join via Zoom: <https://us02web.zoom.us/j/83495330508>
3. Call in for audio only: Phone number: 301-715-8592 Webinar ID: 834 9533 0508

To participate in public comment:

1. You must either join the meeting via the Zoom link above or by calling via the call-in information above.
2. If signed in via Zoom, please use the “Raise Your Hand” feature. This will alert DPW staff that you wish to speak and will automatically add you to the queue. When it’s your turn to speak, your name will be called and you will be unmuted.
3. If you are calling in, please press *9 which will alert DPW staff that you wish to speak. When it’s your turn to speak, your phone # will be called out and you will be unmuted.
4. If you encounter any difficulties when attempting to speak during public forum, please email DPWCommunications@burlingtonvt.gov.
5. In the event of challenges with Zoom video, please use the call-in option.

AGENDA

ITEM

- 1 Call to Order – Welcome – Chair Comments

- 2 5 Min Agenda
- 3 10 Min Public Forum (3 minute per person time limit)
- 4 5 Min Consent Agenda
 - A Update to Free Employee Parking Policy
 - B Parking Request for Lakewood Parkway GSI Project
 - C Design Vehicles Guidelines
- 5 20 Min Water Resources Rate Recommendations
 - A Communication, M. Moir, J. Olson, J. Lavalette
 - B Commissioner Discussion
 - C Public Comment
 - D Action Requested –Vote
- 6 30 Min Consolidated Collection Study Update
 - A Communication, L. Perry
 - B Commissioner Discussion
 - C Public Comment
 - D Action Requested –Vote
- 7 15 Min BSD School Travel Plan Kickoff
 - A Communication, P. Peterson
 - B Commissioner Discussion
 - C Public Comment
 - D Action Requested –None
- 8 15 Min Annual Downtown Parking Report
 - A Presentation, J. Padgett
 - B Commissioner Discussion
 - C Public Comment
 - D Action Requested –None
- 9 5 Min Approval of Draft Minutes of 3-17-2021
- 10 10 Min Director's Report
- 11 10 Min Commissioner Communications
- 12 **Adjournment & Next Meeting Date – May 19, 2021**

Non-Discrimination

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.



City of Burlington
Department of Public Works
Division of Parking and Traffic
645 Pine Street, Suite A
Burlington, VT 05402
802.863.9094 P
802.863.0466 F
802.863.0450 TTY
www.burlingtonvt.gov

Chapin Spencer
DIRECTOR OF PUBLIC WORKS

Jeffrey A. Padgett, MBA
ASSISTANT DIRECTOR for PARKING & TRAFFIC

Date: April 21, 2021
To: Public Works Commission
From: Jeffrey A. Padgett, MBA
Assistant Director for Parking and Traffic
C.C. Chapin Spencer, Director of Public Works
Subject: Policy Update
Employee Free Parking for Downtown Restaurant/Retail/Service Workers

Motion

"To update the attached 'Policy: Free Parking for Downtown Restaurant/Retail/Service Workers at the Lakeview/College Street Garage' to reflect changes in Section 7 – Program Execution."

Background

The attached Policy has been updated to streamline and better define the business processes that are needed to execute this program; in Section 7. No other changes have been made, the scope of the program and eligibility remain unchanged. The changes to Section 7 merely ensure that the business processes that evolved during the initial roll out of the program are clearly documented and communicated to future participants in the program (internal and external).

Please let me know if you have any questions at jpadgett@burlingtonvt.gov.

Attachments:

- A. Policy: Free Parking for Downtown Restaurant/Retail/Service Workers at the Lakeview/College Street Garage – Updated 4/21/2021

An Equal Opportunity Employer

This material is available in alternative formats for persons with disabilities. To request an accommodation, please call 802.863.9094 (voice) or 802.863.0450 (TTY).



Policy: Free Parking for Downtown Restaurant/Retail/Service Workers at the Lakeview/College Street Garage

~~March 17~~ April 21, 2021

Table of Contents

- 1 - Overview
- 2 - City Goals
- 3 - Business Eligibility
- 4 - Employee Eligibility
- 5 - Funding
- 6 - Funding Audit
- 7 - Program Execution

1 - Overview

A free parking program for retail/restaurant/service employees has been an express goal under the Downtown Parking and Transportation Management Plan since 2015. It is recognized by downtown merchants as a valuable tool to attract and retain the front line employees while simultaneously making prime parking spaces available for visitors in order to keep Downtown Burlington vibrant, dynamic and welcoming.

During the holiday seasons of 2018, 2019 free-parking for restaurant and retail employees was funded by grants from Brookfield, a former developer of City Place Burlington. Coupons were created by DPW and personally distributed by the Burlington Business Association for parking at Lakeview/College Street Garage. The goal of this program was to reduce parking pressure from employees and increase capacity for customers at the Marketplace Garage, as well as increase utility of the Lakeview/College Street Garage.

After the 2019 holiday season, there were remaining funds available to continue the promotion. Therefore, in 2020 an updated program was launched that allowed merchants to produce their own validations for employee free parking. Before COVID-19 hit and garage operations were suspended in March of 2020, there were over 40 merchants using the program.

When garage operations resumed in June, the free parking program was re-implemented as a COVID-19 relief effort, still funded by remaining Brookfield funds. These funds sustained the program through February 2021, supporting the employees of 64 downtown merchants. After the Brookfield funds were fully utilized, program funding during March 2021 has been provided by Downtown Improvement District assessment funds earmarked for validation programs.

Beginning on April 1, 2021, The City of Burlington will begin to fund this program with a portion of the increased revenues resulting from the removal of “2 Hours Free” at the Marketplace Garage. This provides a sustainable and ongoing parking solution for the Restaurant/Retail/Service workers that are critical contributors to the vitality of Downtown Burlington. This program is known as the “Employee Free Parking” program.

2 - City Goals

1. Support the retail, restaurant, and service businesses of Downtown Burlington which are key to the City’s economy at large.
2. Increase appeal and retention of retail, restaurant, and service jobs in Downtown Burlington by reducing the cost of parking for these workers.
3. Increase parking availability for customers and visitors to Downtown Burlington in the Marketplace Garage and on-street parking by encouraging the use of the nearby Lakeview/College Street Garage for commuters employed by the retail, restaurant, and personal service industries.
4. Increase the utility of the Lakeview/College Street Garage.
5. Maintain a sustainable financial model to support this program.

3 - Business Eligibility

Eligible businesses/merchants must be:

1. Physically located within the boundaries of the Downtown Improvement District
2. Conduct primary business transactions within the boundaries of the Downtown Improvement District

The boundary of the Downtown Improvement District can be found here: [Link to DID Map](#)

The following types of businesses located in the Downtown Improvement District are eligible (examples are not exhaustive):

- **Retailers:**
 - Hard Goods – equipment, tools, furniture, décor, etc
 - Soft Goods – clothing, footwear, etc.
- **Restaurants:**
 - Sit down dining
 - Take out
- **Personal Services:**
 - Salons and Spas
 - Massage Therapists
 - Nail Care
 - Fitness
 - Hotel Hospitality

The following are NOT eligible:

- **Ineligible Businesses:**
 - Professional Services
 - Consulting Services
 - Technical Services

Eligibility criteria is subject to change as necessary to achieve the stated goals of the program.

4 - Employee Eligibility

For eligible businesses, the following defines the eligibility of their employees:

- **Restaurant, Retail, Service Workers, examples:**
 - Service Staff
 - Reception
 - Sales Associates
 - Customer-Facing Managers
 - Janitorial

The Following are NOT eligible:

- **Ineligible for this program**
 - Business Owners
 - Non-Customer Facing Management
 - Independent Contractors

Eligibility criteria is subject to change as necessary to achieve the stated goals of the program.

5 - Funding

This program was created in coordination with the removal of the “2 Hours Free” program at the Marketplace Garage and the opportunity cost for this program is expected to be covered by the increased revenue generated by transient parking for 2 hours or less. The following summarizes this expectation:

Historical Value of “2 Hours Free”	
At the Marketplace Garage (Conservative)	= \$400,000

Program Budget, Conservative Estimate:

Revenue:	Increase Due to Removal of “2 Hours Free”	= \$300,000
Expense:	Employee Free Parking value: \$15,000/Month*	= <u>\$180,000</u>
	Balance of Revenue Increase	= \$120,000

*Estimated based on program adoption in 2020 and 2021.

6 - Funding Audit

This program will be audited annually and presented to the Public Works Commission as part of the annual Parking Garage Reporting requirement. This report will show:

- 1) Total revenue at the Marketplace Garage from parking for less than 2 hours
- 2) Total cost of monthly permits issued under this program
- 3) Total number of ALL permits issued at the Lakeview/College Street Garage
- 4) Occupancy assessment at the Lakeview/College Street Garage to ensure it is not exceeding capacity
- 5) Assessment of the impact of Free Employee Permits on the ability to sell regular permits

7 - Program Execution

1. Parking Services will advertise the program via ParkBurlington.com and other avenues.
2. Initial requests for Business Eligibility for Employee Free Parking will be made via ParkBurlington.com.~~Requests for Employee Free Parking will be made via ParkBurlington.com.~~
3. Business Eligibility will be confirmed by Parking Services staff.~~Upon request for Employee Free Parking, eligibility will be determined by Parking Services staff.~~
4. The Eligible Business will provide Parking Services with the following information for each Eligible Employee:~~If eligible:~~
 - ~~a. A parking account will be established for the employee, collecting:~~
 - ~~i. Name~~
 - ~~ii. Email~~
 - ~~iii. Employer~~
 - ~~iv. Position~~
 - ~~v. License plate number~~
 - ~~b. Employer will be notified and must approve employee~~
 - ~~c. A "Free Employee Permit" for the Lakeview/College street garage will be assigned. Valid 7 Days per week, issued monthly.~~
 - a. Name
 - b. Title
 - c. Job Duties
 - d. Email
 - e. License plate number
5. All businesses and employees are subject to eligibility audit.~~Permits issued will be audited by Parking Services monthly for ongoing eligibility.~~
6. A parking permit at the Lakeview/College Street Garage will be created for each Eligible Employee.
7. Parking Services will issue new Permits to the Eligible Employer for distribution to Eligible Employees

8. DPW will not coordinate directly with Eligible Employees.

9. Permit will be valid for 7 days per week for one month

10. Permit will expire monthly

11. Permit will be renewed upon request of the Eligible Employer via a form provide by
Parking Services.

5.12. All renewal requests must be made by the 20th of the current month to renew
permits for the following month.



City of Burlington
Department of Public Works

Technical Services Engineering Division
645 Pine Street, Suite A
Burlington, VT 05402
P 802-863-9094 / F 802-863-0466 / TTY 802-863-0450
www.burlingtonvt.gov/DPW

Memo

Date: April 15, 2021

To: Public Works Commission

From: Phillip Peterson E.I., Associate Engineer
Ashley Walenty P.E., DPW Water Resources

CC: Megan Moir, Water Resources Division Director
Susan Molzon P.E., Senior Public Works Engineer
Norm Baldwin P.E., City Engineer
James Sherrad
Chapin Spencer, Director Department of Public Works

Subject: Green Stormwater Infrastructure Proposed No-Parking Zones

Recommendations:

Staff recommend the DPW Commission approve:

7 No-parking areas.

No person shall park any vehicle at any time in the following locations:

- On north side of Lakewood Parkway beginning at the driveway for 182 Lakewood Parkway and extending west for 40 feet.
- On north side of Lakewood Parkway beginning at the driveway for 191 Lakewood Parkway and extending west for 40 feet.
- On north side of Lakewood Parkway between the driveway for 146 Lakewood Parkway and the driveway for 154 Lakewood Parkway.

Purpose & Need:

The purpose of the proposed no parking zones is to provide the space needed for the installation of bioretention stormwater treatment systems in the area, see Attachment-1. In parallel with providing the space for the proposed stormwater treatment systems, the proposed no parking zones will provide the needed space for emergency services to conduct operations per the DPW Narrow Streets Standard Operating Procedure (SOP), see Attachment-2.

Project Checklist:

	N/A	Yes	No	Reference
Aligns with MUTCD standards and/or established City Policy?		X		DPW Narrow Streets SOP, SW GSI Operations and Maintenance Standard Manual (Draft Form)
Aligns with City plans?		X		SW GSI Operations and Maintenance Standard Manual (Draft Form), Typical bioretention system details
Followed Public Engagement Plan?		X		These Traffic Regulation changes are defined as an INVOLVE project in the Public Engagement Plan (PEP).

Summary and Conclusion

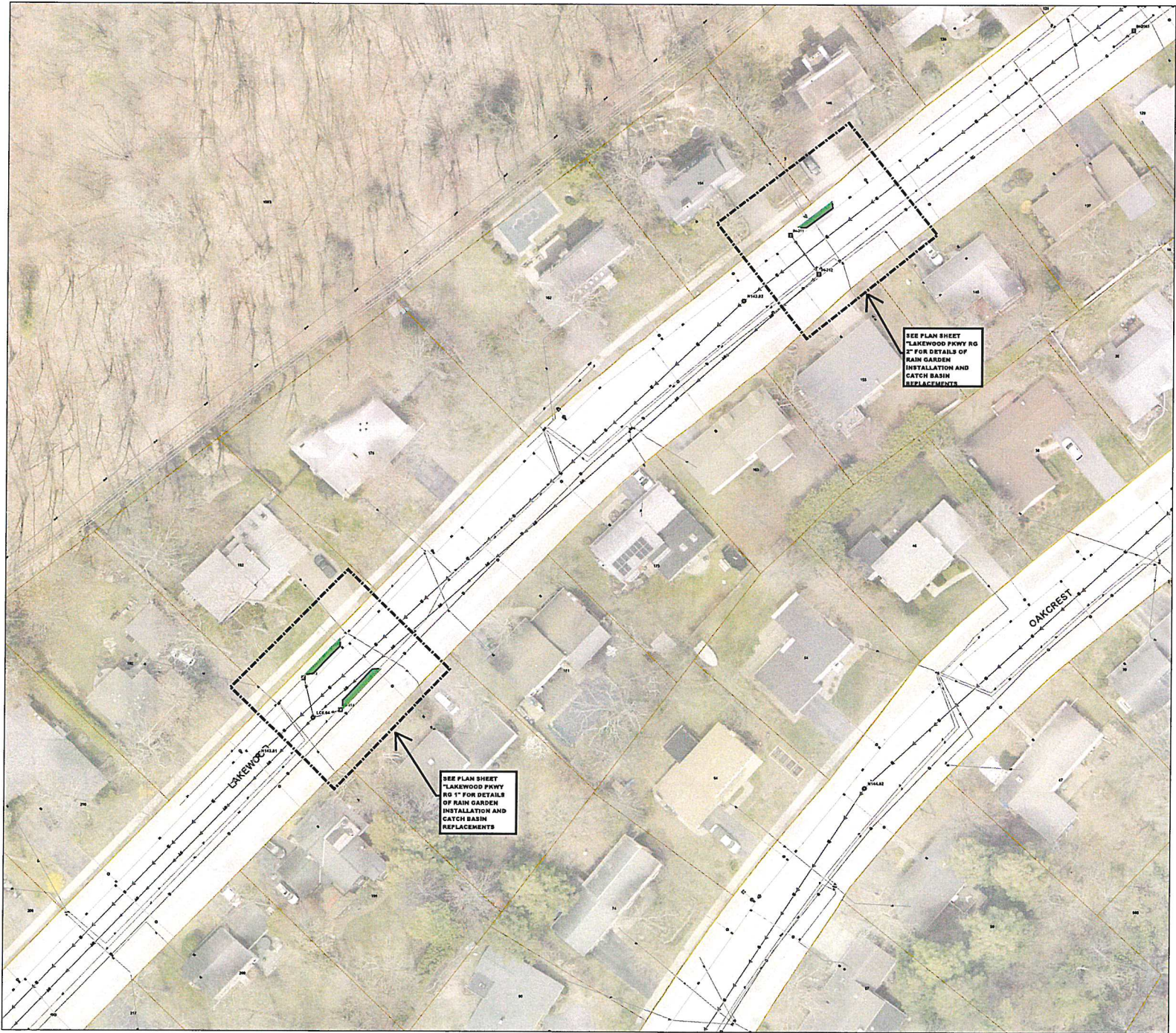
DPW Staff developed this plan to help reduce the stormwater that is entering the lake through an outfall located off Oakcrest Drive, which has had slope failures in the past. Additionally, this particular outfall contributes stormwater to a ravine that is connected to another sensitive outfall located adjacent to the Little Eagle Bay beach. These systems will be maintained to the Green Stormwater Infrastructure (GSI) operations and maintenance manual and under the long term funding of the stormwater program funding for continued maintenance of these systems. This amendment would allow for better stormwater treatment for the City, and reduction of stormwater entering sensitive stormwater infrastructure, while still maintaining the appropriate space for emergency responders and streets maintenance to conduct operations.

Public Engagement:

In preparation for the 4/21/21 DPW Commission Meeting, Staff mailed flyers to each property owner adjacent to the project area. Staff received two (2) emails from local residents in support of this recommendation, one (1) email from a local resident that does not support this recommendation, and two (2) emails from residents seeking clarification on the plans; see Attachment 3. One of the communications seeking clarification, Water Resources Staff responded to City Councilor Sarah Carpenter to clarify the project purpose and goals.

Attachments:

1. Lakewood Parkway Stormwater Improvement Site Plan.
 2. Lakewood Parkway Proposed No Parking Site Plan.
 3. Public input correspondence.
-



EXISTING UTILITIES

- Manhole
- Catch Basin
- Combined Waste Water
- Sewage
- Storm Runoff
- Pressurized Sewer
- Water System Valves
- ◇ Water Hydrants
- Water Mains
- Overhead Power
- Underground Electric
- Gas Line



CITY OF BURLINGTON
DEPT OF PUBLIC WORKS
WATER RESOURCES DIVISION
234 Penny Lane
Burlington, VT 05401
(802)-863-4501 water-resources@burlingtonvt.gov

CITY OF BURLINGTON, VT

CIVIL PLAN AND REPAIR SCHEDULE

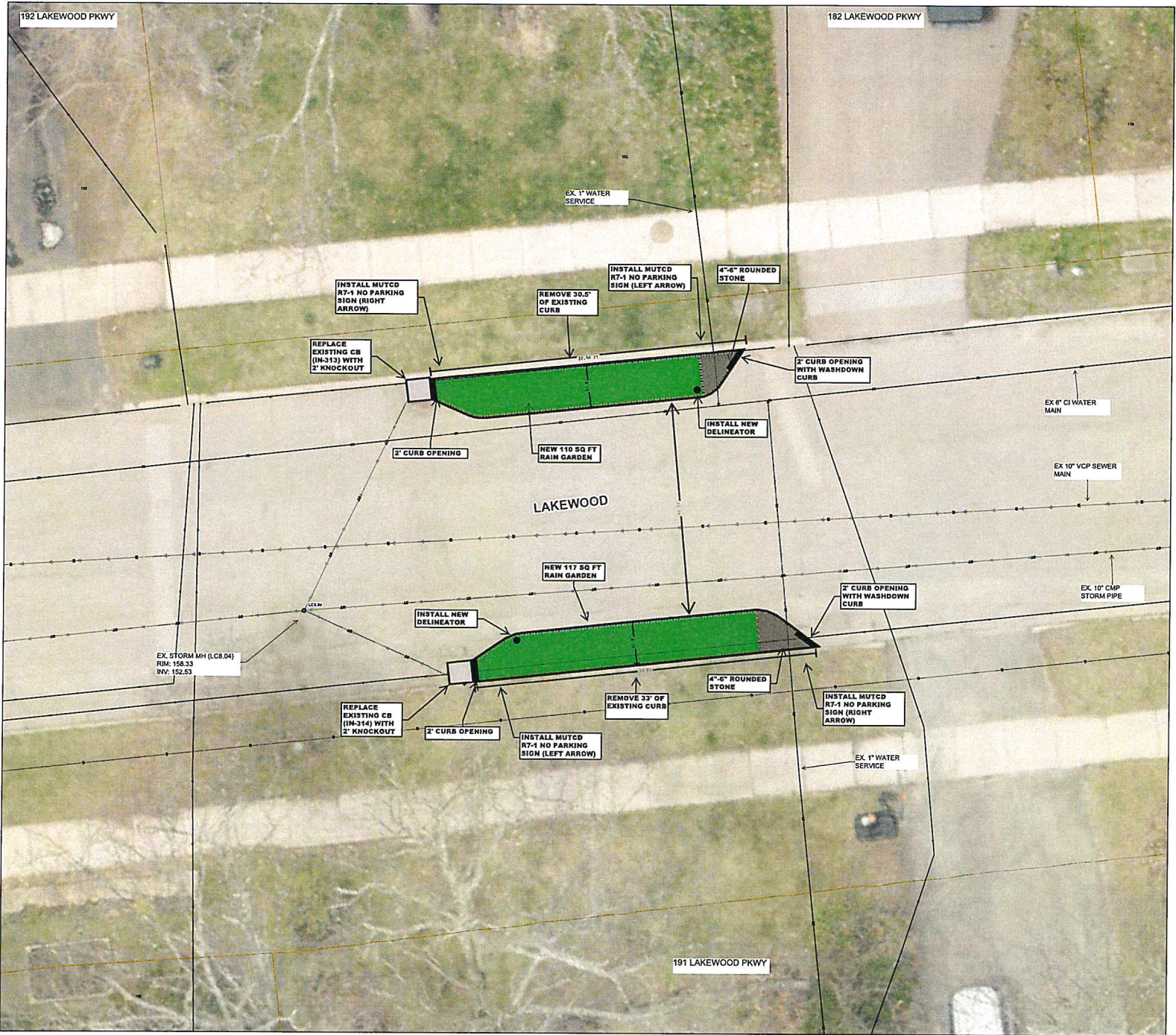
LAKWOOD PKWY

DESIGNED: GAJ/AEW

DRAWN: GAJ

CHECKED:

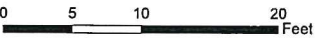
DATE: 12/18/2018



- GENERAL SITE NOTES:
1. MATCH EXISTING GRADE AT ALL PAVEMENT ABUTMENTS AND GRADE TIE-INS
 2. MODIFY NEW CURB IN THE FIELD TO CREATE SMOOTH TRANSITIONS TO TIE INTO EXISTING CURB
 3. ALL FLUSH CURB/CURB CUTS SHALL HAVE 2' LENGTH WIPEDOWNS
 4. INSTALL DELINEATOR WITH STEEL POST AT ALL RAINGARDENS FACING ONCOMING TRAFFIC. MUTCD OM3-R SIGNS
 5. FLUSH CURB ENTRY TO RAIN GARDEN SHALL BE INSTALLED AT LEAST 6 FEET FROM EXISTING DRIVEWAY CURB CUTS

EXISTING UTILITIES

- Manhole
- Catch Basin
- Combined Waste Water
- Sewage
- Storm Runoff
- Pressurized Sewer
- Water System Valves
- Water Hydrants
- Water Mains
- Overhead Power
- Underground Electric
- Gas Line



CITY OF BURLINGTON
DEPT OF PUBLIC WORKS
WATER RESOURCES DIVISION
234 Penny Lane
Burlington, VT 05401
(802)-863-4501 water-resources@burlingtonvt.gov

CITY OF BURLINGTON, VT
SEWER & STORMWATER IMPROVEMENTS

CIVIL PLAN AND REPAIR SCHEDULE

LAKEWOOD PKWY

DESIGNED: GAJ/AEW
DRAWN: GAJ
CHECKED:
DATE: 1/8/2020



- GENERAL SITE NOTES:
1. MATCH EXISTING GRADE AT ALL PAVEMENT ABUTMENTS AND GRADE TIE-INS
 2. MODIFY NEW CURB IN THE FIELD TO CREATE SMOOTH TRANSITIONS TO TIE INTO EXISTING CURB
 3. ALL FLUSH CURB/CURB CUTS SHALL HAVE 2' LENGTH WIPEDOWNS
 4. INSTALL DELINEATOR WITH STEEL POST AT ALL RAINGARDENS FACING ONCOMING TRAFFIC. INSTALL MUTCD OM3-R
 5. FLUSH CURB ENTRY TO RAIN GARDEN SHALL BE INSTALLED AT LEAST 6 FEET FROM EXISTING DRIVEWAY CURB CUTS

EXISTING UTILITIES

- Manhole
- Catch Basin
- Combined Waste Water
- Sewage
- Storm Runoff
- Pressurized Sewer
- Water System Valves
- Water Hydrants
- Water Mains
- Overhead Power
- Underground Electric
- Gas Line



0 5 10 20 Feet



CITY OF BURLINGTON
DEPT OF PUBLIC WORKS
WATER RESOURCES DIVISION
234 Penny Lane
Burlington, VT 05401
(802)-863-4501 water-resources@burlingtonvt.gov

CITY OF BURLINGTON, VT
SEWER & STORMWATER IMPROVEMENTS

CIVIL PLAN AND REPAIR SCHEDULE

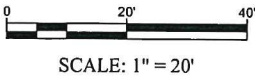
LAKEWOOD PKWY

DESIGNED: GAJ/AEW

DRAWN: GAJ

CHECKED:

DATE: 1/8/2020



LAKWOOD PARKWAY
STORMWATER
INFRASTRUCTURE
PARKING PLAN



**BURLINGTON
PUBLIC WORKS
ENGINEERING DIV.**
645 PINE STREET
BURLINGTON, VT 05401
(802) 863-1004
(802) 863-0466 (Fax)

DESIGNED PMP	SCALE 1"=20'
DRAWN PMP	DRAWING NO.
CHECKED SM	DATE 4/14/2021
	SHEET 1 OF 2



Attachment 3

Public input correspondence emails

Wed 4/13/2021

Thanks for the letter requesting feedback. No doubt you are getting some.

You can count 155 in favor of the proposed work to create storm water mitigation in Lakewood Parkway. We are right across the street from one of them.

A few thoughts.

We have lived here twenty years and it is rare that a car is parked in the designated area across from our home.

I appreciate that narrowing the road may cause traffic to slow at the choke point. This is a great side effect because Lakewood is built like a drag strip. I have often parked cars on both sides of the street in front of 155 to slow people down especially in summer when kids are out playing.

The lake and beach access we have is compromised by the storm water run off and ensuing yuck so anything to mitigate that is great. Many people here in Lakewood ignore the lake buffer zone when applying lawn treatments so this should help sequester some of the prohibited chemicals.

Thanks for the thoughtful environmental engineering.

Jim & Chrissy Forbes

Sun 4/11/2019

Phillip –

We live at 154 Lakewood Pkwy, and Rita Church copied above, lives at 146 Lakewood Pkwy.

We, the Rieley's, don't have a problem with a "No Parking Zone" between our driveway and Rita Church's driveway, it that is all it is. However, if this is a precursor to a future "bump-out" construction into the street, then I do have concerns. Please let me know what your final plan is and why you are doing this.

Thank you.

Shell and Penny Rieley

Mon 4/12/2019

Hello Phillip,

I concur with my neighbor, 154 Sheldon Rieley to install a NO Parking Zone between our driveways 154 and 146 Rita Church. I do not agree or want any street type Bump-out built at the foot of my drive way.

This present plan is accident waiting to happen. Please re-consider any type of Bump-out structure being built in the street between our driveways.

No Parking Zone

Street Bump-out-Feedback

1. Oil delivery truck-monthly
2. Trash removal-weekly
3. City-Recycling-weekly
4. Delivery truck purchases
5. Pick-ups
6. All Emergency vehicles-city/Ambulance=Fire truck
7. Street cleaning- gutter leaves in Fall of year
8. Winter snow storms-Street plow not being able to clear in Front of my driveway. (Thus dumping snow in street) ice and snow build up.

Due to my my medical restrictions I am not physically able to handle the remaining debris. I have lived for 50 years in my home and I do not want a Street Bump-out at the base of my driveway now. Lost Parking Space

Thank you for your consideration.

Rita Church

(City Cemetery Commissioner)

Mon 4/12/2019

Hi Rita - I did begin discussion on this with DPW. As I understand the work; this has nothing to do with parking needs or traffic on Lakewood Pkwy. A no parking zone is not what is needed. The purpose of bump outs or "rain gardens" are to increase options for storm water runoff particularly near the lake. The gardens are located based on available space, how they connect and work together hydrologically, for soil or grade reasons (sometimes these things can change significantly within a small area). I understand that we do need these drainage areas in Lakewood, so they must be somewhere, but have asked why the two are close together.

I have also asked if the City has other examples of rain gardens on residential streets and how your concerns have been addressed. Of course, we do know that many streets in Burlington are narrower and have more street parking, and these concerns have been adequately addressed. Some of their most recently installed gardens include St. Paul St between Maple and Main which feature a series of systems, or Mansfield Ave at North St.

All - can one of you get back to Mrs. Church and the Riely's and discuss this further and let us know what options there are for some reconsideration if necessary.

Thank you.

Sarah Carpenter

Ward 4 City Councilor, Burlington VT

Tue 4/13/2019

Afternoon Councilor Carpenter,

Councilor, if you would like City Staff to reach out directly to residents that have contacted you regarding the Lakewood bioretention systems don't hesitate to ask. If you would prefer to share the following information to your Ward 4 constituents directly please feel free to do so.

The City's Stormwater Program coordinates runoff management practices on an annual basis with our planned street paving efforts. Each year we look for those roads which are scheduled for paving and prioritize the incorporation of stormwater system in the areas of greatest need. As stormwater bioretention bump outs, such as those proposed on Lakewood, require the removal of pavement this coordination effort maximizes both taxpayer and rate payer funds by eliminating the need to remove existing pavement for the proposed systems. This cost saving coordination is an ongoing and important part of both the Stormwater and paving efforts here in Burlington.

The Lakewood bioretention systems are high priority systems as they will help reduce the amount of stormwater that is entering the lake via an outfall located along Oakcrest Drive. This particular outfall had a slope failure last year and was repaired at that time. However, part of the long-term protection of these outfalls is minimizing the amount of runoff passing through them during larger events. The proposed efforts along Lakewood will help provide this added protection. Additionally, this stormwater enters a ravine that feeds an outfall located at the beach near Little Eagle Bay which is another of area which we are mindful of finding opportunities for runoff reduction.

With regards to the bioretention systems proximity to one another, these systems are actually more spread out than some of our other system that are installed in the Old North End, such as the systems located on Decatur Street and North Street, as well as in the South End where a significant bioretention installation effort is taking place this construction season. It's important to note that the locations of these systems are wholly dependent on existing catch basin locations, sub-surface utilities, and soil conditions. System placement and design is driven entirely by these existing infrastructure realities. The overview plan set is attached.

Understanding that stormwater management cannot preclude other uses, especially those safety related, the Burlington Fire Department has reviewed and approved this project with consideration of their emergency response vehicle access needs (email from BFD attached). In terms of snow removal these systems have been laid out and discussed with our Streets team which plow and sweep our City streets as well as provide recycling pick-up services throughout the City. The plow truck drivers are extremely experienced with snow removal in and around these systems as we have them installed throughout the City.

An example of one of these types of recently installed systems located on Booth St. is attached for your reference (IMG_1522).

A response document compilation for frequently asked questions stemming from the South End project is also attached and available at this link. This is a comprehensive document which focuses on the specific questions of the South End residents affected by this planned project, however many of the issues brought up by Lakewood residents are discussed within this document in detail.

For questions related to water line connections, we encourage residents to reach out to DPW Water Resources Customer Care department at 802-863-4501 or water-resources@burlingtonvt.gov for more information.

Please don't hesitate to reach out to me or our Water Resources Engineer, Ashley Walenty (awalenty@burlingtonvt.gov) directly if any additional questions or comments come up with regards to this water quality improvement effort.

James Sherrard
Stormwater Program Coordinator



City of Burlington
Department of Public Works

Technical Services Engineering Division
645 Pine Street, Suite A
Burlington, VT 05402
P 802-863-9094 / F 802-863-0466 / TTY 802-863-0450
www.burlingtonvt.gov/DPW

Memo

Date: April 21, 2021

To: Public Works Commission

From: Olivia Darisse, P.E., Public Works Engineer

CC: Chapin Spencer, DPW Director
Norm Baldwin, P.E., Assistant Director and City Engineer
Susan Molzon, P.E., Senior Public Works Engineer

Subject: Intersection Design Vehicles Guidance Document

Recommendations to the DPW Commission:

Commission feedback on the applicable guidelines and standards is welcomed. *No action is required by the Commission.*

Purpose & Need:

Due to a growing need for intersection design standards that meet the needs and objectives specific to the City of Burlington, an Intersection Design Vehicles Guidance document has been developed as a resource for engineers and designers. Existing design resources provide general guidance that lacks consideration for unique downtown settings and pedestrian safety. This document standardizes the intersection design process for the City of Burlington, and will be used as a design resource for City staff and consultants to balance the needs of various road users and modes of travel. The intent of this document is not to change any existing and functioning intersections, but rather, to provide guidance when intersections are undergoing a capital project, redesign or reconstruction

Background

In early 2020, DPW procured a professional consultant, Stantec Consulting Services, to develop the Intersection Design Vehicles Guidance document.

In the early stages of guidance development, Stantec collaborated and collected preliminary information such as:

- Past and existing issues around the City
- Existing City planning documents and objectives (i.e. Burlington Walk Bike Masterplan)
- Feedback from Burlington Fire Department
- Existing national design guidelines (i.e. AASHTO, NACTO, VTrans)
- Similar guidance documents from other states and municipalities

The consultant used preliminary information to expand on existing design concepts and establish specific guidance on its application in the City of Burlington. The end result of this effort is a standard, three-step process, as summarized below, for designing intersections with widths and turning radii that will meet vehicular mobility needs while creating safer streets for bicyclists and pedestrians.

Step 1: Design Traffic Volumes

This step outlines the process for which volume and turning data is collected for each intersection of interest. It also establishes a classification system for different types of Design Vehicles (i.e. Passenger Cars, Semi-Trailers, Busses, Fire Trucks).

Step 2: Design Vehicle Selection

This step outlines the process for which the information collected in Step 1 is applied and how a Design Vehicle is selected. It also establishes a classification system for intersection types and roadway types, which are used in consideration of Design Vehicle Selection. A Design Vehicle, in this application, is defined as a control vehicle for which its physical characteristics and turning path must be accommodated through an intersection.

Step 3: Intersection Layout

This step provides guidance for applying indicated design criteria to develop a geometric layout compact enough to maximize pedestrian and bicycle safety while accommodating the Design Vehicles selected in Step 2. The design criteria include minimum turning paths, encroachment standards (how far a design vehicle is allowed to approach or depart into the opposing lane), and consideration for intersection types based on route types (i.e. truck or bus routes), traffic and turning volumes, susceptibility to congestion and intersection controls. For example, a low-volume, stop-controlled intersection may be designed to allow encroachment of the selected design vehicle, while encroachment on a high-volume, signalized intersection would be highly disruptive to the flow of traffic and therefore unacceptable. This step also includes considerations for special elements such as low or mountable curbs, truck aprons, or clear zones that would allow a design vehicle to operate outside of the normal boundary of the curb radii while still effectively calming traffic. These circumstances will be evaluated on a case-by-case basis.

Conclusion

Intersection design will be completed using processes outlined in this guidance document. DPW staff and consultants typically use a CAD program called AutoTurn to aid in the intersection design process, which enables designers to verify that a design vehicle's physical characteristics and turning path will be accommodated in accordance with the appropriate standards. This Intersection Design Vehicles Guidance document will standardize the intersection design process in the City of Burlington amongst City staff and consultants, and aim to eliminate oversight in the process that can lead to significant disruptions to the travelling public and expensive repairs. As users gain experience with this document, it may be modified or amended to address gaps or shortfalls in this guidance.

Attachments:

1. Intersection Design Vehicles Guidance Document



INTERSECTION DESIGN VEHICLE GUIDANCE

BURLINGTON, VERMONT
April 2021



ACKNOWLEDGMENTS

Thanks to the following for their involvement in developing this guidance document:

Burlington City Staff

Nicole Losch
Olivia Darisse
Laura Wheelock
Susan Molzon
Chapin Spencer
Norm Baldwin

Stantec Consultant Team

Greg Goyette
Rick Bryant
Sean Neely
Greg Edwards
Dawn Moss
Alison LeFlore



Burlington Public Works Department

645 Pine St Suite A
Burlington, VT 05401
(802) 863-9094





CONTENTS

Introduction	1
Application	1
Design Vehicle Concept	2
Design Process Overview	3
Appendix A - Sample Traffic Count Data	12
Appendix B - Traffic Counting	15
Appendix C - Roadway Functional Classifications	17
Appendix D - Planning Documents	20

INTRODUCTION

The City of Burlington is committed to the creation of a multimodal transportation network with streets designed for slow traffic to protect pedestrians and bicyclists while still meeting the vehicular mobility needs of a vibrant downtown. Achieving this balance is an objective stated in the Safe Streets Design Principles of the Plan *BTV Walk Bike Master Plan*.

“Streets should allow people to travel in a safe, dignified, and efficient manner no matter their age, gender or level of ability. Though the focus of this plan is on improving conditions for walking and biking, recommendations must also consider the needs of people driving. Streets must allow for harmony between multiple modes - allowing for safe and efficient movement of trucks, public transit, and emergency response vehicles.”

From a design perspective, improving conditions for walking and biking often means making intersections as compact as possible, with narrow lanes and tight curb radii, thereby calming traffic and shortening pedestrian crossing distances. Improving the efficient movement of vehicles, however, often means building larger intersections with wide lanes and large curb radii. This guidance document is intended to help designers achieve the balance between accommodating vehicular traffic and non-vehicular traffic desired by the City of Burlington.

APPLICATION

This guidance should be followed by engineers when redesigning intersections or designing new intersections in downtown Burlington and adjacent neighborhoods. The guidance should also be applied by designers to temporary conditions such as detours associated with roadway construction or Burlington Quick-Build projects. The guidance is generally intended to ensure that intersection improvements made to better accommodate pedestrians and bicyclists do not result in designs that are too restrictive for vehicular movements. The guidance is not intended to prescribe the enlargement of intersections to better accommodate existing vehicular traffic. The scope of the guidance is limited to intersection layout. Other City guidelines and policies apply to design elements such as the number of lanes proposed, traffic controls, and materials.

DESIGN VEHICLE CONCEPT

This design vehicle concept is described in A Policy on Geometric Design of Highways and Streets published by the American Association of State Highway and Transportation Officials (AASHTO)¹ and other documents reviewed in developing this guidance². A Policy on Geometric Design of Highways and Streets, also known as the AASHTO Green Book states:

“Key controls in geometric highway design are the physical characteristics and the proportions of vehicles of various sizes using the highway. Therefore, it is appropriate to examine all vehicle types, establish general class groupings, and select vehicles of representative size within each class for design use. These selected vehicles...are known as design vehicles.”

The Green Book goes on to say:

“In the design of any highway facility, the designer should consider the largest design vehicle likely to use that facility with considerable frequency or a design vehicle with special characteristics appropriate to a particular intersection in determining the design of such critical features as radii at intersections...”

The Green Book also provides detailed information regarding the dimensional and operating characteristics of various vehicle types, such as turning paths. However, it points out that the type of vehicles that will be accommodated and the manner in which they are accommodated may be determined based on the vehicular and pedestrian traffic demands at an intersection. For example, where significant pedestrian demands should be accommodated, a more compact design may be realized by assuming that the occasional large truck using the intersection may swing wide, “encroaching on other traffic lanes without disrupting traffic significantly”.

This guidance document adheres to the design vehicle concept and includes specific guidance on its application in the City of Burlington. It provides guidance for:

- The selection of the design vehicle or vehicles depending on the vehicle mix at the subject intersection;
- The appropriate accommodation of each design vehicle; and,
- The accommodation of emergency vehicles.

In doing so, it helps define imprecise terms from the AASHTO Green Book design vehicle policy. Specifically, it indicates volume thresholds that should be applied when determining if a particular class of vehicle uses an intersection with “considerable frequency”. The volume thresholds in combination with operational criteria indicate when lane encroachment constitutes “disrupting traffic significantly”.

¹ A policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, Washington, DC, 2004.

² See "Additional References" section for other sources consulted.

DESIGN PROCESS OVERVIEW

The design guidance should be implemented in a three-step process. First, design traffic volumes for the subject intersection should be determined. The volume data will indicate the least maneuverable class of vehicles that uses or is expected to use the intersection routinely or with “considerable frequency.” Next, a design vehicle is selected to represent this vehicle class, typically the largest or least maneuverable vehicle in that class. In the final step, the turning path of the design vehicle is applied to determine the intersection configuration, typically corner radii, lane widths, stop bar locations, and on-street parking restrictions proximate to the intersection. These steps are described in greater detail below along with some of the terms used in this guidance document.

STEP 1: DESIGN TRAFFIC VOLUMES

Step 1 is to determine design volumes for the subject intersection. Ideally, turning movement diagrams for the intersection will be developed showing vehicle turning movements by vehicle class for a peak hour and for a twelve-hour period. Examples of such diagrams, based on data collected in Burlington by the Vermont Agency of Transportation (VTrans), are shown in Appendix A. The vehicle classes are groupings of similar vehicle types. The vehicular volumes by group should be determined through a traffic count program.

Vehicle Types

The many types of vehicles operating on our roadways range in size and maneuverability. Vehicle types or vehicle classifications are listed in the AASHTO Green Book. Listed vehicle types range in size from passenger cars (P) to semitrailers with a 62-foot wheelbase (WB-62). The National Association of City Transportation Officials (NACTO) lists two additional vehicle types, delivery vehicles and recycle trucks in its Urban Street Design Guide.¹ The Burlington Fire Department also provides dimensional and performance data for its representative emergency vehicles, the Tower Truck and Tanker/Pumper Truck. These vehicle types are organized into groups in this guidance document.

Vehicle Groups

Vehicle types of comparable size and maneuverability are combined into four vehicle groups: Small Vehicles; Intermediate Vehicles; Large Vehicles; and Very Large Vehicles. A fifth group applies to emergency vehicles, or more specifically, fire apparatus. These groupings, shown in Table 1, help limit the number of vehicle types to consider when selecting a design vehicle and simplify the data collection process when traffic counts are conducted

¹ <https://nacto.org/publication/urban-street-design-guide/design-controls/design-vehicle/>

TABLE 1. VEHICLE TYPES AND GROUPINGS

GROUP 1: SMALL VEHICLES PASSENGER CAR - P	GROUP 2: INTERMEDIATE VEHICLES DELIVERY VEHICLE - DL23 CAR AND BOAT TRAILER - P/B
GROUP 3: LARGE VEHICLES SINGLE UNIT TRUCK - SU30 INTERCITY/COACH BUS SCHOOL BUS CITY TRANSIT BUS SEMITRAILER - WB-40 MOTOR HOME - MH CAR AND CAMPER TRAILER - P/T RECYCLE TRUCK	
GROUP 4: VERY LARGE VEHICLES SEMITRAILER - WB - 50 SEMITRAILER - WB - 62 MOTOR HOME AND BOAT TRAILER - MH/B	GROUP 5: FIRE APPARATUS TANKER/PUMPER TRUCK TOWER TRUCK

Note: Letter/Number combinations following the vehicle names relate to design vehicle codes used by the American Association of State Highway and Transportation Officials (AASHTO) and/or the National Association of City Transportation Officials (NACTO). The numbers typically refer to the vehicle's wheelbase length.

Traffic Count Data

This guidance promotes a data-driven approach, whereby vehicle turning movement counts should first be done to establish existing peak hour and 12-hour travel demands at the subject intersection. Existing traffic count data can be used to determine traffic conditions provided that the data is no more than five-years-old upon commencement of the design process. The use of older data may be allowed by the City on a case-by-case basis. If a new count is conducted, the procedures described in Appendix B should be followed. New counts should record vehicles by the groupings cited above.

Traffic Volume Estimates

The requirement to conduct new counts may be waived when the City determines that there is sufficient data available to estimate traffic demands with reasonable accuracy. For example, consideration of older data may be allowed if the City determines that traffic conditions at the intersection have not changed significantly since the older count was completed. Likewise, volumes for a nearby intersection may be substituted if the City deems that the nearby intersection exhibits similar traffic conditions as the subject intersection. Roadway functional classifications may aid in identifying comparable intersections as the classifications are typically indicative of the mix of traffic using the roadway. A discussion of roadway classifications and classifications applied to Burlington Streets is included in Appendix C.

Design Volumes

It may be necessary to adjust the existing condition volumes to reflect design conditions. Design conditions may be representative of a future year reflecting anticipated future traffic growth, new land development proposals, and/or planned roadway system changes. Unless waived by the City, current policies, master plans, and future development proposals should be considered when developing design volumes, as major land-use changes can influence traffic patterns. Likewise, transportation system improvement projects, including maintenance projects that may temporarily change traffic patterns, should be considered. Appendix D provides a checklist of documents for review considered in identifying projects or policies that could impact future traffic patterns. The designer should consult with the Department of Public Works to determine appropriate adjustments to the existing traffic conditions.

STEP 2: DESIGN VEHICLE SELECTION

In Step 2, the design vehicle (or vehicles) for the intersection is selected. The choice of design vehicle(s) depends on the design volume data and the need to accommodate fire apparatus at all intersections. The selected design vehicle will typically be the design vehicle for the least maneuverable group of vehicles that uses or is expected to use, the intersection *with considerable frequency*, or the design vehicle for Group 5, Fire Apparatus. Group 5 vehicles are not expected to use any intersections with considerable frequency, however, per the direction of Burlington DPW, they must be accommodated at all locations for public safety reasons.

Design Vehicles

One vehicle type from each of the five groups listed in Table 1 represents the group as a potential design vehicle. The potential design vehicle is the least maneuverable vehicle type in each group. These design vehicles are listed below.

- Group 1/Small Vehicles: Passenger Cars (P);
- Group 2/Intermediate Vehicles: Delivery Vehicle (DL);
- Group 3/Large Vehicles: Single Unit Truck (SU30);
- Group 4/Very Large Vehicles: Semi-Trailer (WB-50); and,
- Group 5/Fire Apparatus: Tower Truck

Travel paths or turning templates for design vehicles are used to lay out the intersection, described in Step 3 of this guidance.

Intersection Types

The above criteria lead to the definition of four intersection types listed in Table 2. As shown, two design vehicles should be considered for three of the four types of intersections. The two design vehicles include the fire apparatus design vehicle and the design vehicle for the least maneuverable group of vehicles at the intersection. Since the design vehicle for the Very Large Vehicles group is less maneuverable than the fire apparatus design vehicle only the design vehicle for the Very Large Vehicles group needs to be considered for this intersection type.

TABLE 2. INTERSECTION TYPES

LEAST MANEUVERABLE VEHICLE GROUP OCCURRING WITH CONSIDERABLE FREQUENCY	INTERSECTION TYPE	DESIGN VEHICLE(S)
Group 1: Small Vehicles	A	Passenger Car Tower Truck
Group 2: Intermediate Vehicles	B	Delivery Vehicle Tower Truck
Group 3: Large Vehicles	C	Single Unit Truck Tower Truck
Group 4: Very Large Vehicles	D	Semi-Trailer (WB-50)

Note: The design vehicle listed in bold text represents the least maneuverable vehicle group occurring with considerable frequency at the intersection.

Considerable Frequency

The term “considerable frequency” is used in the Green Book to define routine use of an intersection by a particular vehicle type or group. Frequency of use is considered to avoid constructing unnecessarily large intersections. It recognizes that large vehicles may be challenged when negotiating a compact intersection and then disrupt traffic operations while maneuvering through the intersection and/or waiting for other vehicles to clear a path. Such disruption may be tolerated on an infrequent basis and that a high level of tolerance can lead to a more compact design. The Green Book does not quantify the term “considerable frequency.” Roadway and highway jurisdictions can choose their own volume thresholds based on their tolerance for disrupted traffic operations relative to their desire to build compact, pedestrian-friendly intersections.

In developing this design guidance, the Burlington DPW has adopted the following traffic volume thresholds to define “considerable frequency.”

- Four or more vehicles per peak hour for a group; or
- 12 or more vehicles per 12 hours for a group

These thresholds should be compared to the Design Volumes defined above to determine the intersection type.

When evaluating the design volumes, left and right turning movements should be counted separate from through movements. Typically, even Very Large Vehicles can pass straight through an intersection without significantly disrupting traffic operations. Conflicts only occur when turning movements are attempted and the turning vehicle encroaches into opposing travel lanes. Consequently, through-vehicles can generally be ignored when determining if the above volume thresholds have been met.

However, the designer should confer with DPW before making this assumption. Any planned construction projects and associated detours could result in through movements becoming turning movements.

STEP 3: INTERSECTION LAYOUT

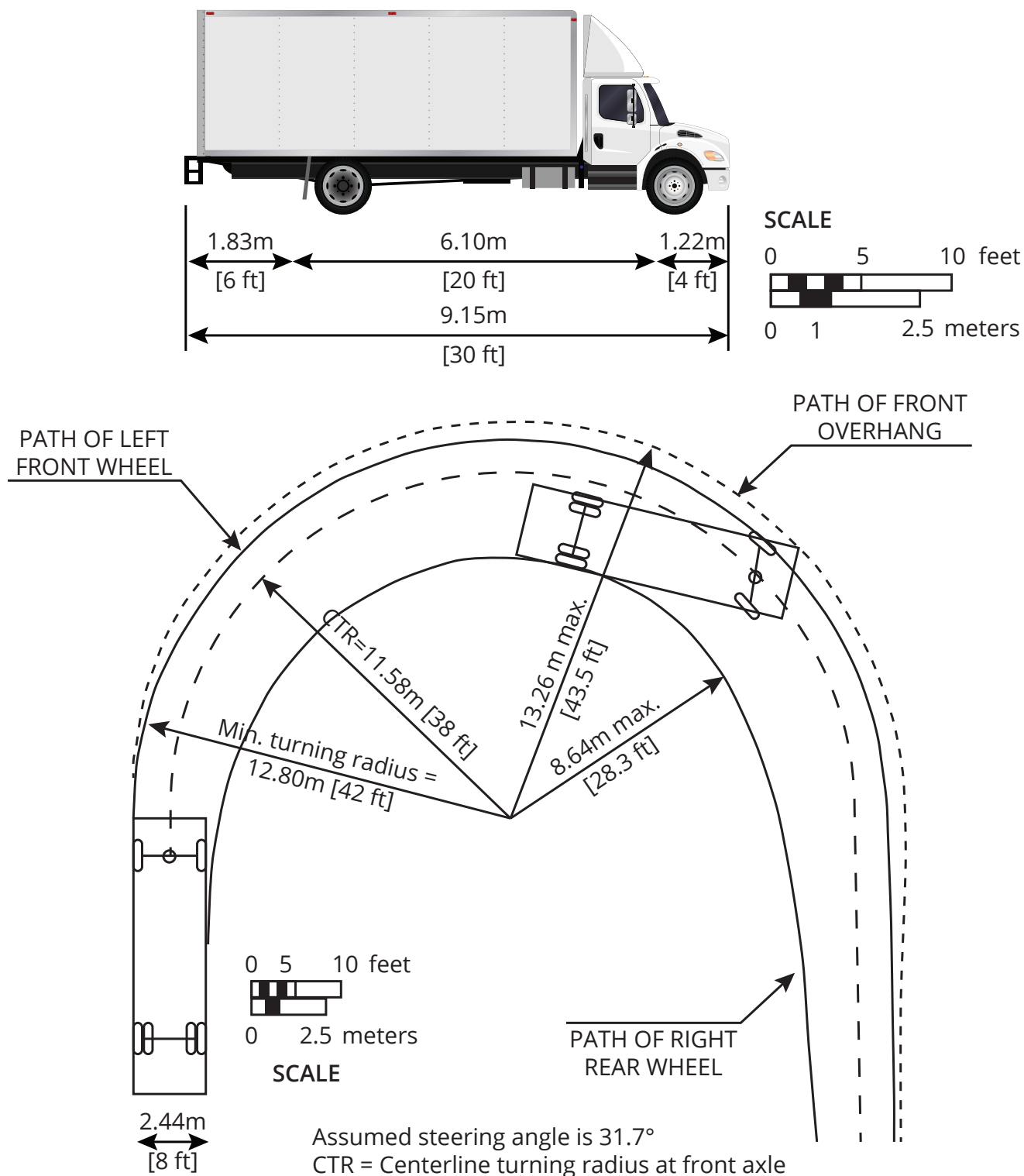
In Step 3, the intersection layout should be developed to represent the most compact configuration that accommodates the applicable design vehicle(s) for the intersection type. The manner in which the design vehicle is accommodated depends on several factors described below, including: the type of design vehicle; the level of congestion at the intersection; and the type of traffic control. Under certain conditions it should be assumed that the design vehicle will operate “between the lines,” that is, the layout should not require the design vehicle to encroach into opposing travel lanes. In other cases, the design should assume that the design vehicle is permitted to encroach into opposing travel lanes but not encroach on curb lines or parking lanes. In rare cases, the Burlington DPW may also permit consideration of a design vehicle operating beyond the curb lines. In these cases, areas free of vertical obstructions would be designated behind the curb lines assuming that the design vehicle may mount the curb to complete a turning maneuver. In addition to keeping areas free of vertical obstructions, the design could include mountable elements such as slope curbing and truck aprons. The design vehicle considered in this case is referred to as a “control vehicle.”

Minimum Vehicle Turning Paths

Minimum vehicle turning paths or turning templates are used to layout the intersection. They are a function of the vehicle’s length, width, axle configuration, and turning radius. These dimensional data are provided in the AASHTO Green Book and reprinted in Appendix E. The Green Book also depicts the turning paths for each vehicle type. A representative turning template for a single unit truck (SU 30) is shown in Figure 1. These turning paths assume a travel speed of less than ten miles per hour. Vehicle turning paths have been translated into computer-aided design software such as AutoTurn. When applying the software, crawl speed (typically two miles per hour) turns should be assumed. Turning path templates for Burlington’s fire apparatus are available from the Burlington DPW however, templates for the WB-40 design vehicle are comparable to the templates for the Fire Department’s least maneuverable vehicle, the Tower Truck, and can be applied instead.



FIGURE 1. TYPICAL VEHICLE TURNING TEMPLATE

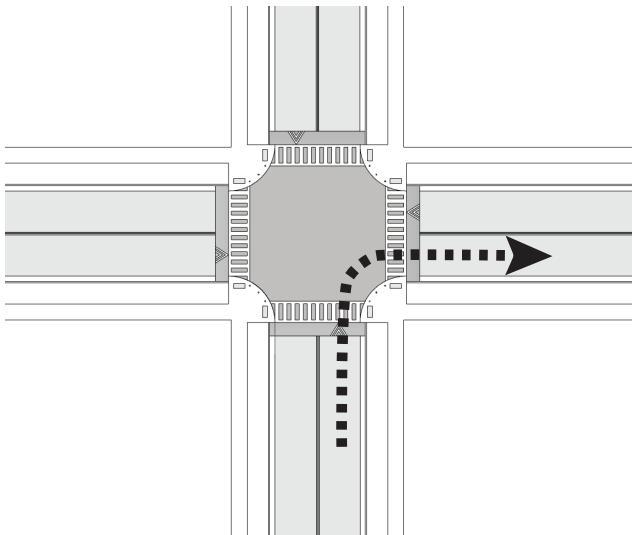


Adapted from: A Policy for the Geometric Design of Highways and Streets, American Association of State Highway Officials, 2008.

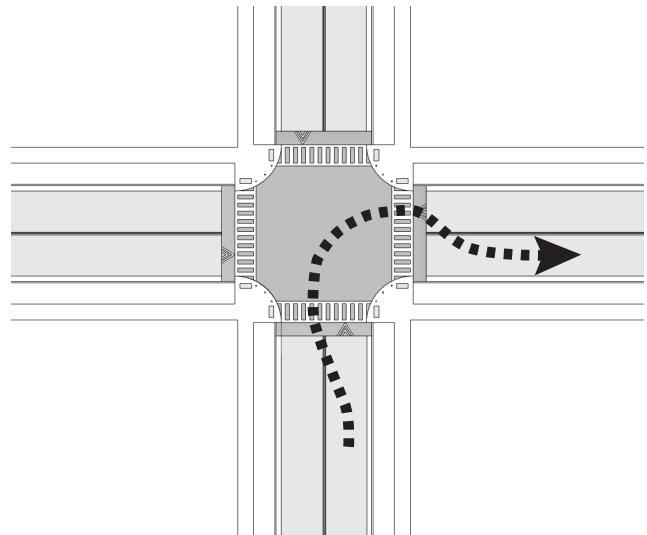
Encroachment

Encroachment relates to vehicles using adjacent, same direction travel lanes, or crossing into opposing direction travel lanes to execute a turn. Figure 2 illustrates examples of these types of encroachment. Encroachment is permissible in the design process when the design vehicle under consideration is the Group 5 - Fire Apparatus design vehicle. Traffic laws require motorists to yield to emergency vehicles so it can be assumed that other vehicles will clear a path allowing emergency vehicles to encroach upon other lanes. For other design vehicles, encroachment is not permissible unless the intersection is considered “uncongested.” Consequently, intersection geometries will typically be defined using two types of design vehicles: “Design Vehicle A” which must operate “between the lines” or in its own lane, and “Design Vehicle B” which must operate “between the curbs” or with lane encroachments permitted. Table 3 distinguishes Design Vehicles A and B for the intersection types defined in Table 4 that are under signal control or congested as defined below.

FIGURE 2. TYPICAL ENCROACHMENT BY A DESIGN VEHICLE



No Encroachment
Approach in right hand lane.
Depart in full right hand lane.



Lane Encroachment
Approach into opposing flow,
depart into opposing flow.

TABLE 3. DESIGN VEHICLE BY INTERSECTION TYPE - CONGESTED OR SIGNAL CONTROLLED INTERSECTIONS

INTERSECTION TYPE	LEAST MANEUVERABLE VEHICLE GROUP OCCURRING WITH CONSIDERABLE FREQUENCY	DESIGN VEHICLE A (NO LANE ENCROACHMENT PERMITTED)	DESIGN VEHICLE B (NO LANE ENCROACHMENT PERMITTED)
A	Group 1: Small Vehicles	Passenger Car	Tower Truck
B	Group 2: Intermediate Vehicles	Delivery Vehicle	Tower Truck
C	Group 3: Large Vehicles	Single Unit Truck	Tower Truck
D	Group 4: Very Large Vehicles	Semi-Trailer (WB-50)	Not Applicable

"Congested" Intersections

Lane encroachment by a design vehicle may not disrupt traffic significantly if the intersection is uncongested. It is assumed that any intersection under traffic signal control is a congested intersection. Presumably, the signal was installed because the intersection would operate with excessive delays without a signal. Also, with signal control, vehicles stopped at a red light on a cross street would not be able to lawfully enter the intersection (except possibly on a right-on-red condition) to clear a path for a design vehicle turning from the intersecting street. Consequently, signalized intersections are considered “congested” intersections. A Stop sign controlled intersection may be considered congested if significant vehicle queuing on the street into which the design vehicle would be turning would prohibit lane encroachment. Significant vehicle queuing is defined by Burlington DPW as an average peak hour queue of three vehicles. Peak hour vehicle queues can be measured in the field or calculated through an intersection operations analysis. If calculated, procedures described in the latest edition of the *Highway Capacity Manual* or other method approved by the Burlington DPW should be followed.

If an intersection is deemed uncongested, then lane encroachment by the design vehicle for the least maneuverable vehicle group occurring with considerable frequency can be assumed when laying out the intersection. In these situations, another Design Vehicle A must be selected to help define the intersection geometry and, in particular, the location of lane lines and Stop bars. The next more maneuverable design vehicle should be selected. For example, if under “congested” conditions the Delivery Vehicle would be chosen as Design Vehicle A then the passenger car design vehicle should be used for a comparable “uncongested” intersection. Accordingly, an alternative design vehicle matrix would apply for uncongested intersections as shown in Table 5.

TABLE 4. DESIGN VEHICLE BY INTERSECTION TYPE - UNCONGESTED INTERSECTIONS

INTERSECTION TYPE	LEAST MANEUVERABLE VEHICLE GROUP OCCURRING WITH CONSIDERABLE FREQUENCY	DESIGN VEHICLE A (NO LANE ENCROACHMENT PERMITTED)	DESIGN VEHICLE B (NO LANE ENCROACHMENT PERMITTED)
A	Group 1: Small Vehicles	Passenger Car	Tower Truck
B	Group 2: Intermediate Vehicles	Passenger Car	Tower Truck
C	Group 3: Large Vehicles	Delivery Vehicle	Tower Truck
D	Group 4: Very Large Vehicles	Single Unit Truck	WB 50

Context-Sensitive Design - Control Vehicle

On a case-by-case basis, the Burlington DPW may choose to have a control vehicle considered in the design process to further promote compact intersection design where pedestrian activity is significant. This would apply to Type D intersections where the WB 50 design vehicle would instead be treated as a control vehicle. As noted above, when designing for a control vehicle, the intersection may include elements such as low or mountable curbs, truck aprons, and clear zones outside the roadway edges. These elements would allow the control vehicle to operate outside normal boundaries for vehicular movement. Similarly, for locations that on occasion accommodate the very largest vehicle types, the WB 62 vehicle type could be used as a control vehicle.

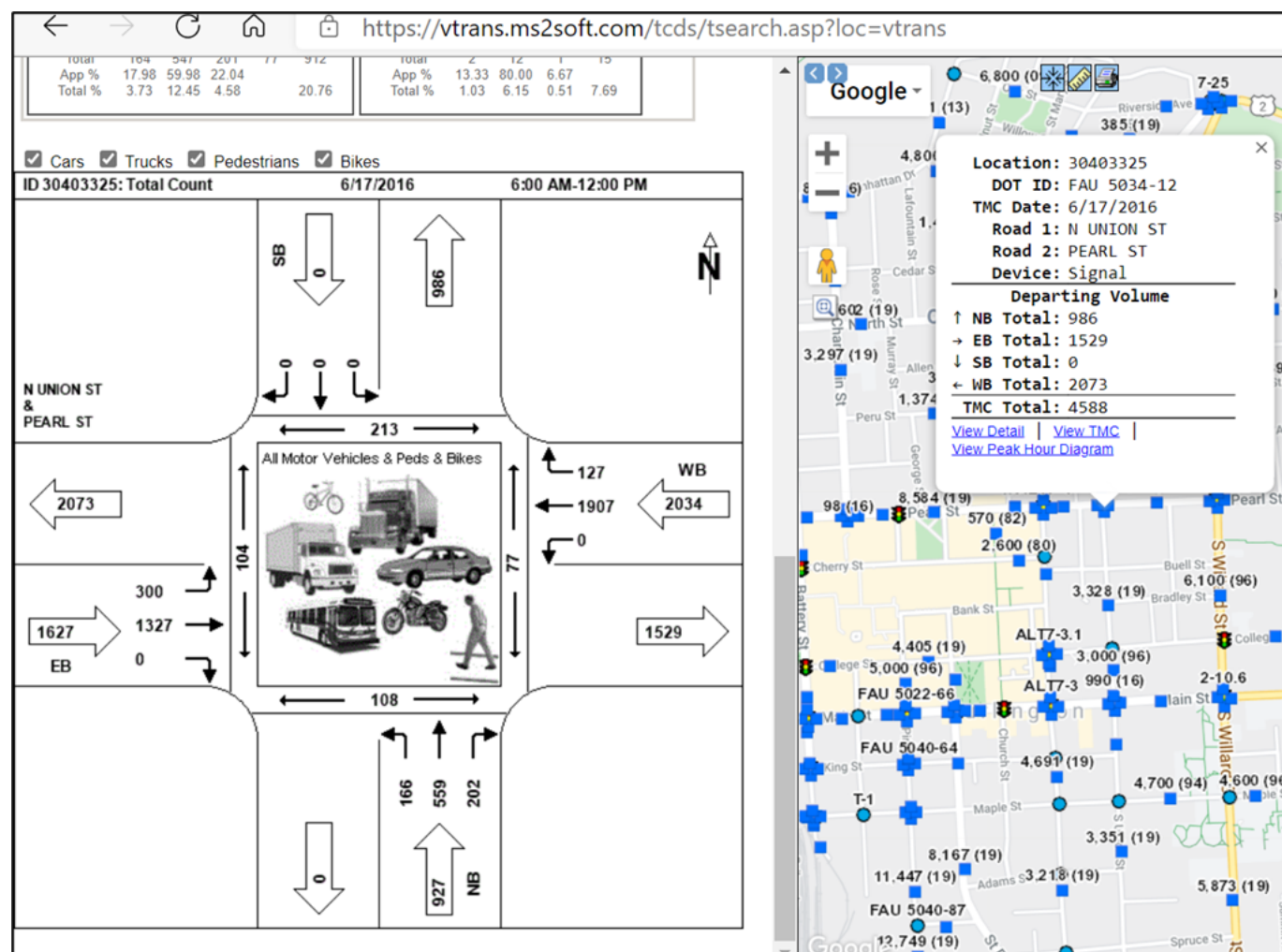
Final Design

The intersection layout can be completed using the turning paths for the selected design vehicles, and control vehicle if applicable. Again, software such as AutoTurn can be used in this process. The layout should indicate proposed curb radii, lane widths, stop bar locations, and on-street parking, as appropriate. When evaluating vehicle encroachments, parking lanes should be treated the same as curb lines and bike lanes the same as vehicular travel lanes. The needs of each intersection approach should be evaluated separately. However, in the final design, uniformity, for example, a consistent curb radius on all four corners, may be desirable for multiple reasons. Uniformity could reduce construction costs, better meet pedestrian and driver expectations, and provide aesthetic benefits.

APPENDIX A

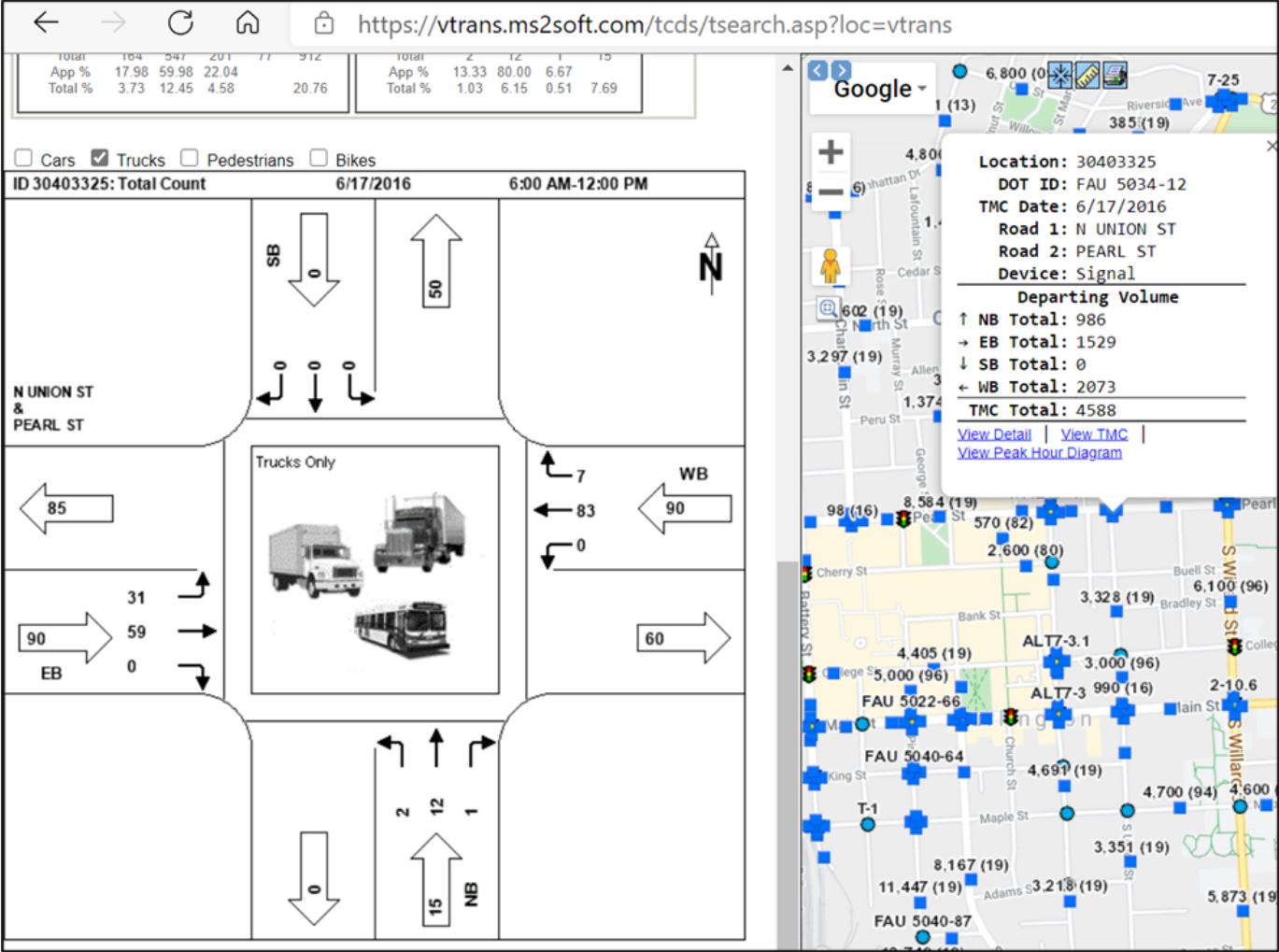
SAMPLE TRAFFIC COUNT DATA

Turning movement count displaying volumes for all vehicle types.



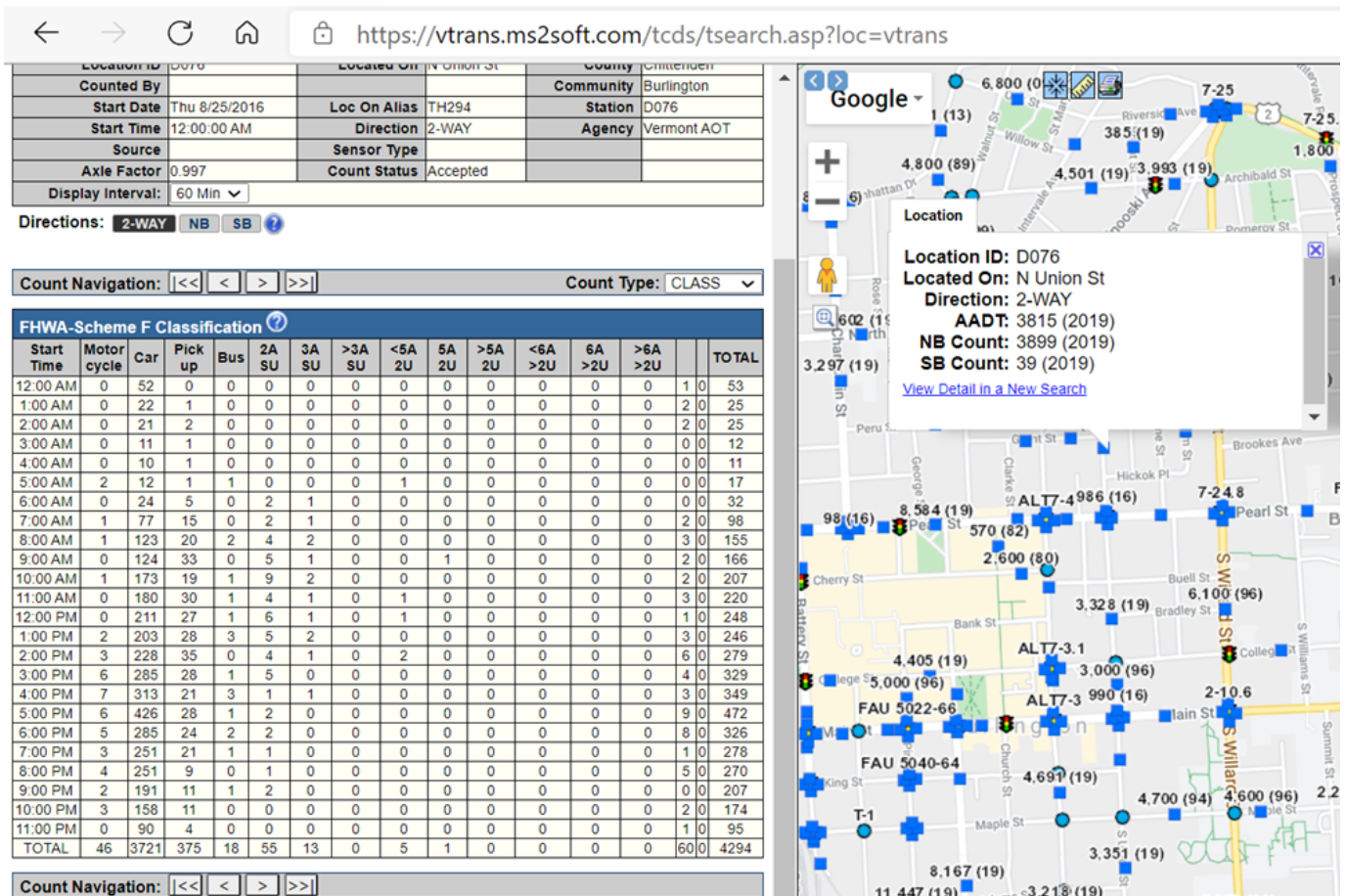
Appendix A - Sample Traffic Count Data

Turning movement count displaying volumes for trucks and buses



Appendix A - Sample Traffic Count Data

Automatic Traffic Recorder count displaying volumes by federal vehicle classes for a roadway segment.



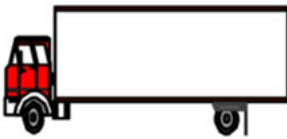
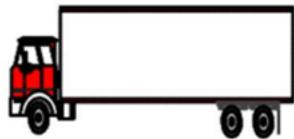
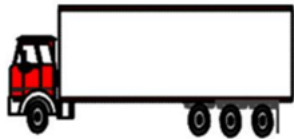
APPENDIX B

TRAFFIC COUNTING

The selection of design vehicles depends on the volume and mix of vehicles using the intersection. When traffic counts are conducted to support design decisions, a 12-hour vehicle classification/turning movement count conducted by 15-minute intervals on a typical weekday is recommended. The data should be summarized to identify morning and evening commuter peak hour volumes. Roadways providing direct connections to Burlington waterfront attractions shall also be examined for a typical Saturday during the summer season, if possible, to capture recreational vehicle traffic and vehicles towing trailers.

The volume counts should classify vehicles by the five groups listed in Table 1. This is best accomplished through a manual count. Field staff conducting the counts should be trained in advance to identify and group the vehicle types. The illustration provided in Figure A-1 identifies federal vehicle classifications and can be used as a training guide. However, this illustration does not include drawings for delivery vehicles, recycle trucks, recreational vehicles, and cars pulling trailers.

Figure A-1 FHWA Vehicle Classifications

1 Motorcycles 	2 Passenger Cars 	3 Two Axle, 4 Tire Single Units 	4 Buses 
5 Two Axle, 6 Tire Single Units 	6 Three Axle Single Units 	7 Four or More Axle Single Units 	8 Four or Less Axle Single Trailers 
9 Five Axle Single Trailers 	10 Six or More Axle Single Trailers 	11 Five or Less Axle Multi-Trailers 	
12 Six Axle Multi-Trailers 	13 Seven or More Axle Multi-Trailers 		

Appendix B - Traffic Counting

Source: 2019 Automatic Vehicle Classification Report, Vermont Agency of Transportation, Highway Division, Traffic Research Unit, July 2020.

Automated traffic counts are an alternative and less desirable source of data. Automatic Traffic Recorder (ATR) or tube counts can generally identify the vehicle types shown in Figure A-1 however, the counts can only measure volumes by direction on a roadway segment. They cannot collect turning movement data at an intersection. Video Camera Unit (VCU) counts collect video of vehicle turning movements, however, the software that “counts” the vehicles classifies them into only three groups: Cars (Motorcycles, Cars, Light Good Vehicles or Vans); Single Unit Heavy (Buses, Single-Unit Trucks); and, Multi-Unit Heavy (Articulated Trucks). If the VCU data is used directly, then Groups 2 and 3 should be combined and treated as Group 3 under this guidance document. Alternatively, the VCU videos can be reviewed manually to count Group 2 vehicles separately. The approach to collecting, combining, or estimating traffic volumes should be reviewed with the Burlington DPW at the beginning of each design project.

APPENDIX C

ROADWAY FUNCTIONAL CLASSIFICATIONS

Municipalities and states assign functional classifications to roadways defining the roadway system hierarchy. All roadways serve access and mobility needs on a continuum. At one end of the spectrum, local roads provide a high level of land access with many curb cuts, low volumes, short trips, and slow travel speeds. Freeways are at the other end of the spectrum providing a high level of mobility, moving large volumes of traffic long distances at high speeds with limited side friction. The functional classifications VTrans has applied to Burlington streets include:

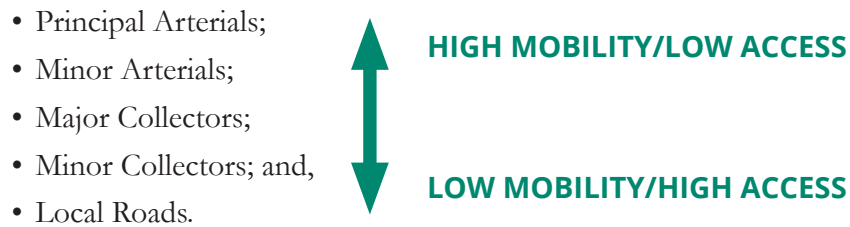
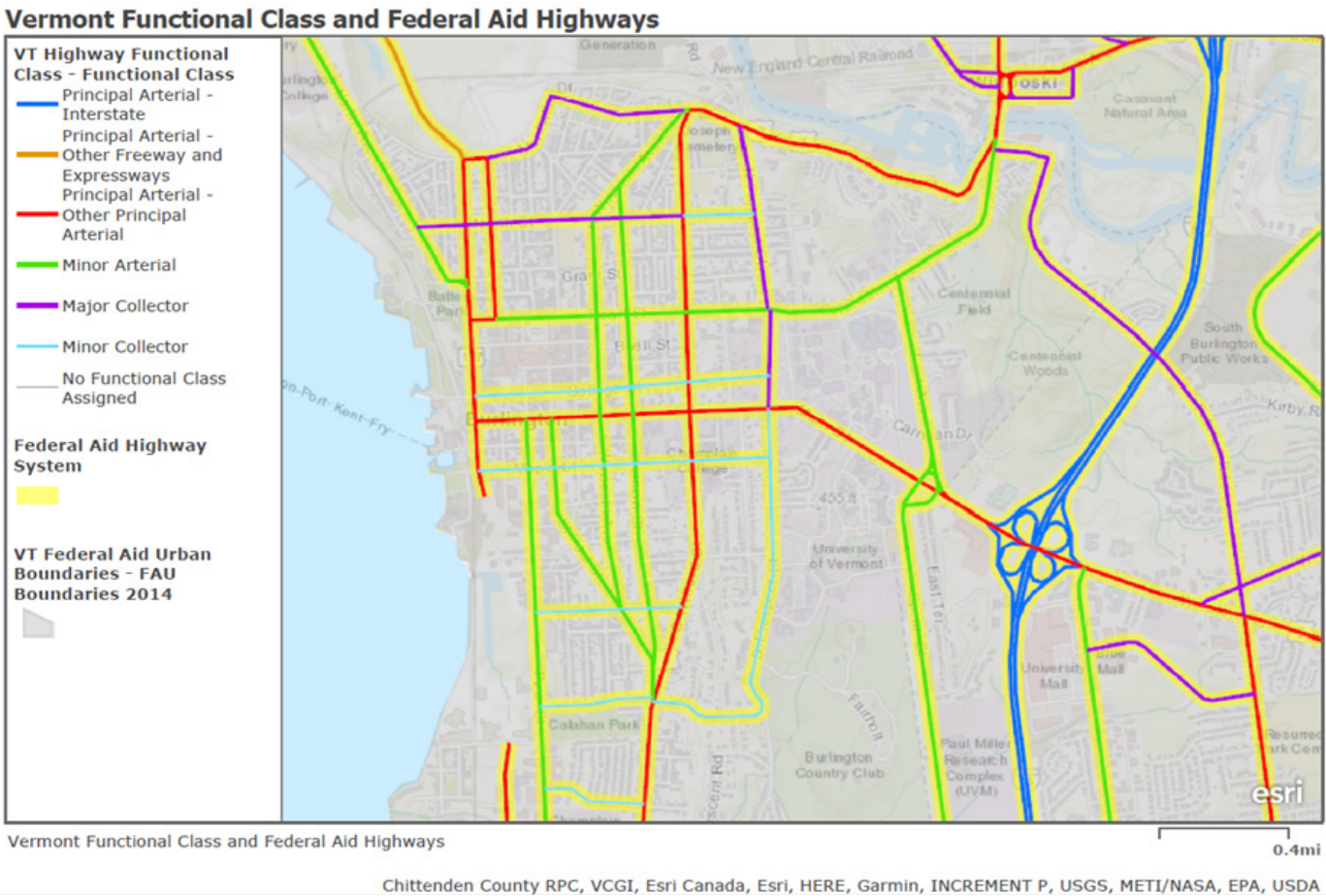


Figure A-2 shows the mapping of Federal-Aid roadways in downtown Burlington by functional classification (as of April 2020). Table A-1 provides a listing of arterial and collector streets and street segments identified by the map. The current VTrans classifications shall apply in this guidance document unless directed otherwise by the City.

Appendix C - Roadway Functional Classifications

Figure A-2 VTrans Roadway Classification Map for Burlington



Appendix C - Roadway Functional Classifications

Table A-1 Functional Classifications of Burlington Streets

Functional Classification	Street or Street Segment	
Principal Arterial	Battery Street	Park Street
	Hyde Street (North of Willard)	Pearl Street (Battery to N. Champlain)
	Main Street	Riverside Avenue
	Manhattan Drive (Park to N. Champlain)	Shelburne Street
	N. Champlain Street	Willard Street
Minor Arterial	Colchester Avenue	Pine Street (Main to Flynn)
	East Avenue	Spear Street
	Flynn Avenue	St. Paul Street (South of Main)
	North Avenue	Union Street
	Pearl Street (East of N. Champlain)	Winooski Avenue
Major Collector	Barrett Street	Oak Street
	Grove Street	Prospect Street (North of Main)
	Manhattan Drive (East of N. Champlain)	Riverside Avenue (West of N. Winooski)
	North Street (West of Willard)	
Minor Collector	Birchcliff Parkway	Locust Street
	College Street	Maple Street
	Howard Street	North Street (East of Willard)
	Ledge Road	Prospect Street (South of Main, North of Ledge)
	Locust Street	

APPENDIX D

PLANNING DOCUMENTS

The plans and studies listed below should be considered in anticipating changes in future traffic patterns at the subject intersection. This list is updated periodically. The design engineer should consult with Burlington DPW during the design process to confirm that this list is current.

Studies and Plans
PlanBTV Downtown & Waterfront
PlanBTV Walk/Bike
Plan BTV South End
Burlington Transportation Plan
Colchester Avenue Corridor Plan
North Avenue Corridor Study
Winooski Avenue Transportation Study
Champlain Parkway
Development Review Board Agendas
Capital Improvement Plan
Construction/Repaving Plan

List last updated January 28, 2020.



Burlington Public Works Department

645 Pine St Suite A
Burlington, VT 05401
(802) 863-9094





To: DPW Commission

From: Megan Moir, Water Resources Division Director
Jessica Lavalette, Water Resources Customer Care and Finance Manager
Jenna Olson, Water Quality Program and Policy Manager

Date: April 21, 2021

Re: Request for Support for the Water Resources Division Rate Restructuring and Affordability Program Proposal

Request

The Department of Public Works (“DPW”) and its Water Resources Division seeks the official support and recommendation of the Public Works Commission that the City Council approve and adopt the proposed Rate Restructuring and Affordability Programs.

Background

Recognizing the need for future water, sewer, and stormwater rate increases due to aging infrastructure, operational needs and new regulatory challenges, in April 2019 the Burlington City Council requested the Water Resources Division to consider alternative rate structures, revenue sources, and affordability frameworks.

The Division engaged Raftelis, our on-call financial and utility management consultant, to assist in this process. Raftelis is a leading consulting firm providing utility rate and management solutions. The Division and Raftelis worked together throughout 2019 and early 2020 to propose modified rate structures and policies. In order to gather stakeholder input about the proposed changes, several meetings and events were held including: an open house in October 2019, presentations to the Neighborhood Planning Assemblies, and meetings with City Council and Mayor Weinberger. The City Council last heard a presentation on proposed changes during a work session meeting on March 9th, 2020. The following week, the Covid-19 pandemic hit Vermont. Given the significant uncertainties presented during the early phase of the pandemic and our ability to develop a tight COVID-era FY21 budget without rate increases, we determined that we needed to temporarily suspend the rate study.

Given the importance of this project to ensuring sustainable funding for the water resources utilities while simultaneously addressing rate payer affordability, we restarted the project in January of this year. We briefed the Board of Finance (with Councilors invited) and then the Public Works Commission, and the Transportation, Energy and Utilities Committee with an update on the project and a few changes from our 2020 proposals (see “Evolution of Proposal”). Burlington Water Resources staff have conducted extensive public outreach throughout the project (see Appendix A: List of Outreach Efforts).

This memo presents the most up to date evolution of the proposal and includes updated revenue needs and, correspondingly, updated rates and two additional customer assistance programs, a rebate program to assist property owners with the costs of filming and inspecting their private sewer lateral and a rebate program for WaterSense plumbing fixtures. It also discusses our Division’s commitment to evaluating additional affordability options for more of Burlington’s renters.

We are proposing to bring this to the City Council for approval in May with implementation on July 1, 2021.

Impetus for Changes to the Division’s Rates

The Division of Water Resources provides water, wastewater, and stormwater service to approximately 10,000 customers and 42,000 residents. The Division provides essential services including water treatment and distribution, fire protection, water quality protection, wastewater collection and treatment, stormwater collection and pollution management, and billing and customer service. The Division is organized as three separate enterprise funds for water, wastewater, and stormwater.

The Division faces on-going financial pressure to continue providing these services at an ever-higher regulatory standard while maintaining and upgrading aging infrastructure. While the Administration and City Council have supported initiating a generational reinvestment in City water resources infrastructure over the last five years, a significant infrastructure deficit remains for many water resources assets which are beyond their calculated useful life. In order to balance the need for rate increases to sustainably fund water resources services, in an April 2019 Resolution (<http://bit.ly/RateAffordability>) the City Council charged the Division with developing the following:

- Alternative rate structures, including progressively priced tiers to protect access to “essential” water;
- Alternative revenue sources;
- Affordability frameworks, including discounts for certain qualifying rate payers, water conservation programs and grants and loans for upgrades to service lines; and
- An initial stakeholder process to educate and solicit input on Water Resources rates and a follow-up stakeholder process reporting on the proposed solutions.

In addition to the direct charge from Council, the Division had some of its own goals for the study, which are as follows:

- Ensure affordability of rates
- Apply outside perspective and experience on the long-term financial health of the utilities and pursue potential cost saving and efficiency initiatives
- Develop rate structures that improve financial health and sustainability, and increase revenue predictability
- Ensure utility funds are recouping the costs of all services provided in an equitable manner and in accordance with industry standards:
 - All customers pay a “ready to serve” charge via a fixed fee
 - Customers receiving additional service may need to pay additional cost e.g. private fire protection (building fire suppression supply, private hydrants)
 - Staff and administration costs for new/redevelopment project review (water and sewer connection review, meter sizing, stormwater management plans); note this is still in development

Financial Needs of the Water Resources Division

The Department’s proposed FY22 budget for the Water, Wastewater and Stormwater requires revenue increases of 6%, 6% and 5% respectively, which would represent a 5.96% increase on the bill for a typical single-family residence that uses 400 cubic feet (cf) per month. This is a slight decrease from the 6%, 7% and 5% revenue requirement presented in January, which would have resulted in a 6.4% increase for the typical single-family residential customer. These increases cover required operation and maintenance of systems; debt service and bond coverage covenants; a prudent mix of cash and debt funding of capital projects; and funding for the Water Resources Assistance Program for qualifying income burdened residential and non-profit multifamily customers. The Division is extremely pleased to report that this proposed budget also meets the additional goals we presented in January: budgeted capital reserve contributions of \$50K each for Water and Stormwater and \$100K for Wastewater and funding for sewer filming rebates and WaterSense fixture installations. Additionally, the Wastewater budget includes a small planned budget surplus to replenish its operating reserve which is the lowest proportionally of the three funds.

Proposed Rate Structure & Policy Changes

The Division has worked with Raftelis to finalize a new rate structure and suite of affordability measures that accomplish the Division’s and Council’s goals of financial health, affordability, conservation, and equity among customer classes. This iteration incorporates community comments as well as additional modifications generated by the project team to improve the reach of affordability benefits and in recognition of the financial impact of the pandemic on commercial customers who, in general, will be seeing increases in charges due to the cost of service realignment.

Table 1. Proposed Rate Structural Changes to Water and Wastewater Rates

Rate Proposals	What is it?	Why do it?
Fixed Charges by Meter Size	A water and wastewater fixed charge that increases based on the size of the customer's water meter	- Is industry best practice – reflects cost of service for infrastructure to be “ready to serve” - Improves revenue stability and predictability - Encouraged by bond rating agencies - Recovers 10% of revenue; future goal is 20% to match actual ratio of fixed to volumetric costs
Class-Based Rates	Different rates for different classes of customers	- Justified based on the strains each customer type puts on the utility's infrastructure - Provides framework for realignment of water rates with the higher cost of service for non-residential customers - Can now apply specific affordability based pricing of essential, residential water usage into the future
Irrigation Rate	A separate, higher rate for those who solely use water for irrigation (with the exception of community gardening initiatives)	- Irrigation often contributes to peak water use, which necessitates system expansion and associated costs - Sends price signal to conserve water when use is not for basic needs
Private Fire Protection Charges	A separate, fixed, monthly charge that escalates with connection size for those who have private fire service or hydrants	- Water Resources has invested in system capacity to serve private properties during a fire event, thus the customers who benefit from this service should pay for that capacity - Will be phased in over 5 years

Tables 2 - 3. Proposed Rate Affordability and Customer Assistance Measures



Proposals	What is it?	Why do it?
Lifeline Rate Tier	"Essential" water consumption (below median usage) is charged at a lower rate; only applicable to single-family residential account holders	- Discounts the first 400 cubic feet of water consumption for single-family residential properties - Incentivizes efficient water use, since water above 400 cubic feet is charged at a higher rate
Fixed-Fee Waiver	Waives the proposed fixed monthly water and wastewater charge for residential customers at or below 185% of the Federal Poverty Level.	Provides relief to single-family households who meet income or age eligibility criteria, and non-profit affordable senior housing developments
Flexible Payment Terms	Encompasses existing payment plan options, but adds 'budget billing' option.	Ensures customers have access to resources and assistance that will allow them to afford services and pay their bills
Type	Program	Details
Infrastructure Assistance	Up to \$250 rebates for residential customers to cover costs of filming a private sewer lateral - Residential property owners eligible for \$200 rebate - Income qualified customers eligible for full rebate up to \$250	- Funds to support 160-200 laterals/year - Helps property owners understand condition of lateral and plan for replacement costs - Gives City data to develop future possible loan/grant programs for sewer lateral replacement
Conservation Assistance	Up to \$75 rebates for residential customers towards purchase of WaterSense plumbing fixtures	- Reduces water usage through installation of low flow faucets, shower heads, and low flow and dual flush toilets 200 rebates available
Stormwater Management Assistance	Implementing BLUE® BTV residential stormwater management grant program	- Provides "Lake Friendly" home evaluations to residential properties - Provides grants towards the costs of roof gutters, rain gardens, permeable pavers etc.

Evolution of Proposal

Several adjustments and additions have been made over the course of the project in order to mitigate the magnitude of the impact on commercial customers while maintaining affordability benefits for residential customers; the impact of the fixed meter charge on fixed income seniors with low water usage; and the impact of the fixed meter charge and fire protection charge on low-income and senior multi-family housing. The latest addition includes several customer assistance programs. Those adjustments are:

1. The percentage of revenues recovered from fixed charges was reduced to 10% (from 15% proposed in original March 2020 proposal) to aid affordability by keeping the fixed portion of customer bills as low as is reasonably possible. Fixed expenses represent approximately 20% of the total expenses of the Water and Wastewater expenses; as such, these fixed fees will be reviewed each year and ideally gradually aligned with the true proportion of fixed costs.
2. Private fire protection charges are set to be phased in over a 5 year period to reduce “rate shock” for customers who will be charged for private fire service for the first time. We will recoup 20% of the cost of service allocated to customers with private fire protection in FY22 with each subsequent year increasing an additional 20% until the full charge is realized in FY26.
3. The commercial rate was lowered and is now equal to other non-residential rates to mitigate the magnitude of bill impacts (fixed fees and private fire protection) on businesses. Commercial properties, in general, will still be seeing an increase in their bills (average 9%).
4. The multi-family volumetric rate was reduced from early cost of service based proposals since the project team acknowledged the potential impact on rental costs.
5. The WRAP program was expanded to include, at a minimum, non-profit multifamily low-income and senior housing developments (e.g., Burlington Housing Authority, Champlain Housing Trust, etc.) and senior-owned single-family residential properties. Eligible accounts will have their water and wastewater fixed charge waived.
6. Customer infrastructure assistance (Sewer Filming rebates) and conservation assistance (WaterSense fixture rebate) and stormwater assistance (BlueBTV) programs were added in April 2021 as part of the FY22 proposed budget.

Future: Addressing Affordability for More Renters

Water utilities across the U.S. have struggled with how to ensure that water affordability programs benefit renters, particularly those in multi-family properties. The WRAP proposal will certainly benefit single-family homeowners, especially those who are income qualified. It will also benefit renters in single-family homes, and some duplex, triplex properties that have separately metered units (not common), but the program is not currently available to many renters. We acknowledge that this is a current gap in our proposed program given that 64% of properties in Burlington are rentals and that rental costs (which often include water, sewer, stormwater and other utility costs) are high. This is a program gap that water utilities across the U.S. have struggled to address, and Burlington is not alone.

The underlying challenge is the fact that most renters are not the direct account holders for water and wastewater and can only be so if 1) they are in a separately metered unit and 2) the landlord agrees to put the account in their name (but also agrees to be responsible for charges). Most multi-family properties (including many duplexes and triplexes) share a meter. With these constraints, even if the Division were to pass on a fixed fee waiver (or some other type of discount) to the property owner if they had income qualifying renters, there is no mechanism in place to require that the property owner pass this savings on to the tenants. Additionally, in multi-family properties with multiple units sharing a meter, the fixed fee waiver might not provide a financially significant benefit; a rental unit specific discount may be more applicable. One important goal of our program was to keep administration costs low, as the Division is not adding additional staff for these programs.

There are several developments that the Division is monitoring in relation to this issue 1) the launch of a rental water bill assistance program by DC Water in Washington D.C. that appears could provide a model for Burlington and 2) the creation of the Low-Income Household Water Assistance Program (LIHWAP) by the Biden administration.

The Division is committed to evaluating options to address the needs of income-constrained renters. As the above programs develop and after a minimum 18 month initial implementation of our currently proposed WRAP program, we believe that we can develop additional recommendations for review by stakeholders. We propose to submit a report by April 2023 that will evaluate options for a possible expansion of the program as necessary.

Proposed FY 22 Water, Fire Protection, Wastewater, and Stormwater Rates

The proposed changes to the Division's rates, including the increased revenue requirements for FY22, result in the rates shown in Table 2. The proposed FY22 rates are compared against the current FY21 rates. Note that currently there is no charge for private fire protection. Stormwater rates will see an estimated 5% across-the-board increase based on revenue requirements but does not have any proposed structural changes. Please note that there may be some small shifts in the final proposed rates listed as we finalize QA/QC activities on customer data and the FY22 budget.

Table 2. Current FY 21 and Proposed FY 22 Water, Wastewater, and Fire Rates

	Water		Wastewater		Private Fire	
	FY 21 Current	Proposed	FY 21 Current	Proposed	FY 21 Current	Proposed
Fixed Charge per Month						
5/8"	\$0.00	\$3.32	\$0.00	\$4.67	-	\$6.52
3/4"	\$0.00	\$4.99	\$0.00	\$7.00	-	\$6.52
1"	\$22.73	\$8.31	\$31.74	\$11.67	-	\$6.52
1.5"	\$45.51	\$16.62	\$63.55	\$23.35	-	\$6.52
2"	\$72.68	\$26.60	\$101.49	\$37.36	-	\$6.52
3"	\$145.32	\$49.87	\$202.93	\$70.05	-	\$6.52
4"	\$248.28	\$83.11	\$346.70	\$116.75	-	\$6.52
6"	\$454.12	\$166.22	\$634.14	\$233.50	-	\$18.95
8"	-	-	-	-	-	\$40.38
10"	-	-	-	-	-	\$72.62
Private Fire Hydrant	-	-	-	-	-	\$18.95
Volumetric Rate (per 100 CF)						
Single-family Residential	\$4.44	-	\$6.20	-		
Tier 1 (0-400 CF)	-	\$2.42	-	\$6.07		
Tier 2 (401 CF and higher)	-	\$6.05	-	\$6.07		
Duplex	\$4.44	\$4.24	\$6.20	\$6.07		
Triplex	\$4.44	\$4.24	\$6.20	\$6.07		
Multi-Family Residential	\$4.44	\$4.24	\$6.20	\$6.07		
Mixed Residential & Commercial	\$4.44	\$4.24	\$6.20	\$6.07		
Commercial	\$4.44	\$4.24	\$6.20	\$6.07		
City	\$4.44	\$4.24	\$6.20	\$6.07		
Irrigation/Heating/Cooling	\$4.53	\$7.26	-	-		

Note: 1" customers and above currently pay a fixed charge in the form of a "minimum" charge. This charge includes a usage allowance. Under the new (lower) fixed charge structure all customers would pay a "ready to serve" charge (lower for 1" and above customers than they currently pay) but will not get a usage allowance.

Customer Impacts of Proposed Rate Structure

The projected need for water, wastewater and stormwater rates to increase by 6%, 6%, and 5% respectively would result in an across the board overall customer bill increases **without** the proposed structural rate changes. For a typical single-family customer that uses 400 cf/month, they would see approximately a 5.96% in their overall water resources bill if we kept our current rate structure. The impact of the new structural changes will vary from customer to customer as any increases or decreases in overall bill will be determined by a combination of meter size, future water usage, eligibility for the WRAP program, customer class and the existence of private fire services or hydrants. As such, one of the critical components of our customer outreach will be the advertisement of a variety of methods for requesting an estimate of a customer's bill under the new proposal. Overall, however, we are pleased to project that the typical single-family residential customer using 400 cf/month) will benefit from the structural changes and will see no increase to the water and wastewater portion of their bill. Qualifying low-income or senior owned single-family residential customers will see a significant decrease on their bill with the new WRAP program (if they continue to use the same amount of water). Table 3 compares the estimated FY21

annual water, wastewater, stormwater, and fire charges to the expected FY22 totals using the proposed changes for several hypothetical customer groups using the CY19 water usage data.

*Table 3. Current and Proposed Annual Water Resources Bill Under Proposed FY 22 Rates
(For non-residential customers, the bill is calculated using water usage from CY19)*

Hypothetical Customer Type	FY 2021	FY 2022 Proposed		
	Bill (\$)	Bill (\$)	\$ Change	% Change
Single Family Residential				
Low Volume - 200 CF	\$343	\$393	\$50	14.5%
WRAP - Low Volume - 200 CF	\$343	\$297	(\$46)	-13.4%
Median Volume - 400 CF	\$608	\$604	(\$4)	-0.6%
WRAP - Median Volume - 400 CF	\$608	\$508	(\$100)	-16.4%
High Volume - 600 CF	\$872	\$905	\$33	3.8%
WRAP - High Volume - 600 CF	\$872	\$809	(\$63)	-7.2%
Multi-Family Residential				
Low Income Housing	\$66,078	\$65,243	(\$835)	-1.3%
Senior Housing	\$39,159	\$38,258	(\$901)	-2.3%
Commercial				
Technology Company	\$17,471	\$19,959	\$2,488	14.2%
Retail Company	\$27,234	\$29,210	\$1,976	7.3%
Institutions				
University	\$1,881,653	\$2,044,738	\$163,085	8.7%
UVMCMC	\$742,864	\$831,670	\$88,806	12.0%
School District	\$130,170	\$142,377	\$12,207	9.4%

Table 3 represents only a sample of estimated bill impacts. As mentioned above, although this table represents many of the City's customers and customer types, there will be a variety of impacts to customers depending on the specifics of that customer.

We encourage all rate payers to visit the [project page](https://www.burlingtonvt.gov/DPW/Water/AffordabilityProject)¹ where they can complete a [proposed rate summary impact review](https://www.burlingtonvt.gov/DPW/water/accountimpact)² and also review details on [actions](https://www.burlingtonvt.gov/sites/default/files/tiles/Rate%20Change%20%26%20Opportunity%20Summary_FINAL.pdf)³ they can take to mitigate any impact of the proposed changes.

Additional information about the project and remaining project approval and implementation steps can be found in the attached presentation (Appendix B).

¹ <https://www.burlingtonvt.gov/DPW/Water/AffordabilityProject>

² <https://www.burlingtonvt.gov/DPW/water/accountimpact>

³ https://www.burlingtonvt.gov/sites/default/files/tiles/Rate%20Change%20%26%20Opportunity%20Summary_FINAL.pdf

Summary of Benefits:

In support of our request for your recommendation, we offer the following overall benefits for your consideration:

- The Wastewater, Water and Stormwater proposed FY22 budget is built to ensure proper operation and sustainable stewardship of infrastructure, with targeted funding for customer assistance programs
- Without the rate restructuring and affordability changes, all residential rate payers would see approximate 5.9% increase on their bill
- With the proposed changes:
 - › Income qualified ratepayers and seniors will see a decrease in their overall water resources bill (on average \$100/year for someone who uses 400 cu. ft./month) from this year
 - › Over 63% of single family residential ratepayers will see benefit on their water resources bill (i.e. less than a 5.9% increase)
 - › Will have established a customer class based rate structure which will allow for specific affordability based pricing of essential, residential water usage into the future

MOTIONS:

The Department of Public Works' Water Resources Division respectfully requests that the Public Works Commission approve the following motion:

1. "To recommend that the City Council approve and adopt the 2021 Water Resources Rate Restructuring and Affordability Program Proposal."

Remaining Project Schedule

April - June 2021 | Continuous Improvement & QA/QC of Data

- o QA/QC of all fire service data
- o Develop Draft WRAP Policy
- o Propose any ordinance changes necessary

April - June 2021 | Approvals

- o Public Works Commission (4/21/21) – request for recommendation to Council
- o TEUC (4/27/21) – request for recommendation to Council
- o Board of Finance & City Council vote to approve rate structure and affordability programs
- o City Council vote on FY22 Mayoral Budget & Water Resources rates

July - August 2021 | Implementation

- o Additional educational outreach to customers on upcoming changes
- o Changes take effect July 1, 2021
- o Will be reflected in bills mailed starting in August 2021

Completed Events

April 2021 | Public Outreach

- o April 8-13, 2021: Informational postcard mailed to all addresses in Burlington
- o April 14, 2021: Zoom Public Meeting for all users

March 2021 – January 2021 | Public Outreach 2.0

- o March 2021: Message on all water bills
- o 2021 NPA Meetings
 - o Wards 1 & 8 - 1/13/2021
 - o Wards 2 & 3 - 2/11/2021
 - o Wards 4 & 7 - 2/24/2021
 - o Ward 5 - 1/21/2021
 - o Ward 6 - 2/4/2021
- o January 25, 2021: Presentation to the Transportation, Energy, and Utilities Commission
- o January 20, 2021: Presentation to Public Works Commission
- o January 4, 2021: Presentation to Board of Finance

March 2020 – December 2020 | PANDEMIC HIATUS

March 2020 – October 2019 | Public Outreach

- o March 9, 2020: Presentation to City Council
- o 2019 NPA Meetings
 - o Wards 1 & 8 - 11/13/19
 - o Wards 2 & 3 - 11/14/19
 - o Ward 5 – 12/19/19
 - o Ward 6 – 11/7/19
 - o Wards 4 & 7 – 11/20/19
- o November 20, 2019: Presentation to Public Works Commission
- o October 29, 2019: Kick Off Open House Event

CITY OF BURLINGTON

Water Resources Division

Rate & Affordability Project
DPW Commission

April 21, 2021



Project Team



Megan Moir

Division Director, Water Resources
Burlington Water Resources



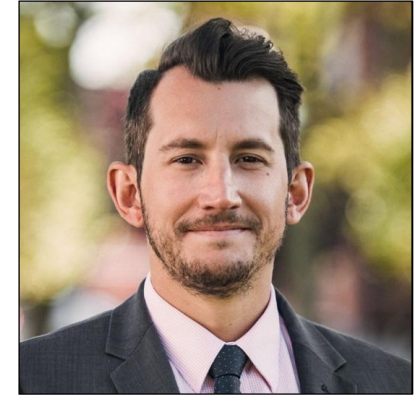
Jessica Lavalette

Customer Care & Finance Manager
Burlington Water Resources



Jenna Olson

Water Policy & Programs Manager
Burlington Water Resources



Dave Fox

Senior Project Manager
Raftelis



Rates & Affordability Refresher



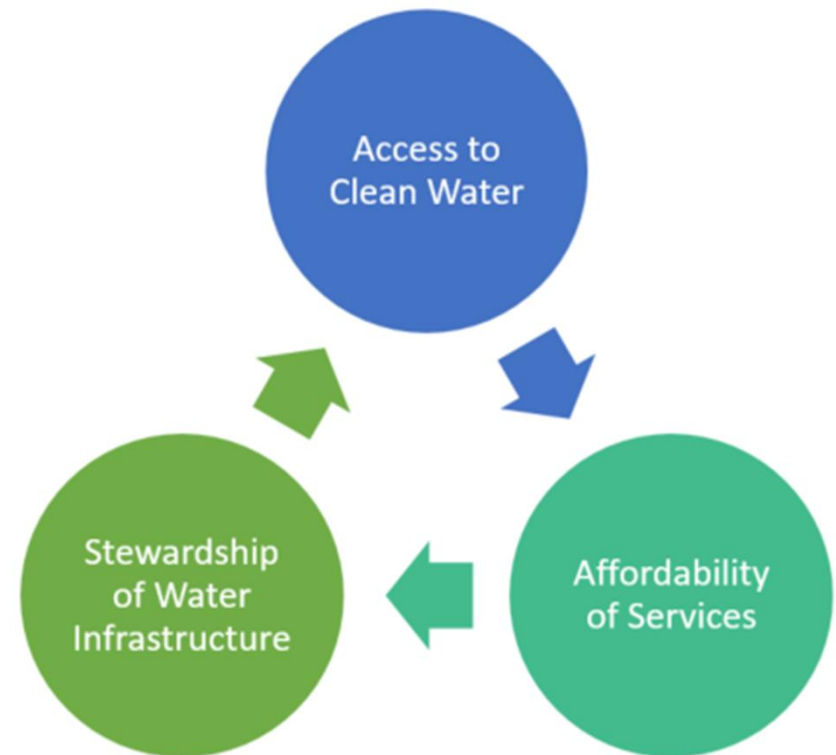
- Studied rate options keeping three objectives in mind:
 - › Ensure affordability of rates
 - › Improve financial health & sustainability, along with revenue stability
 - › Ensure rates are recouping the cost of service provided in an equitable manner



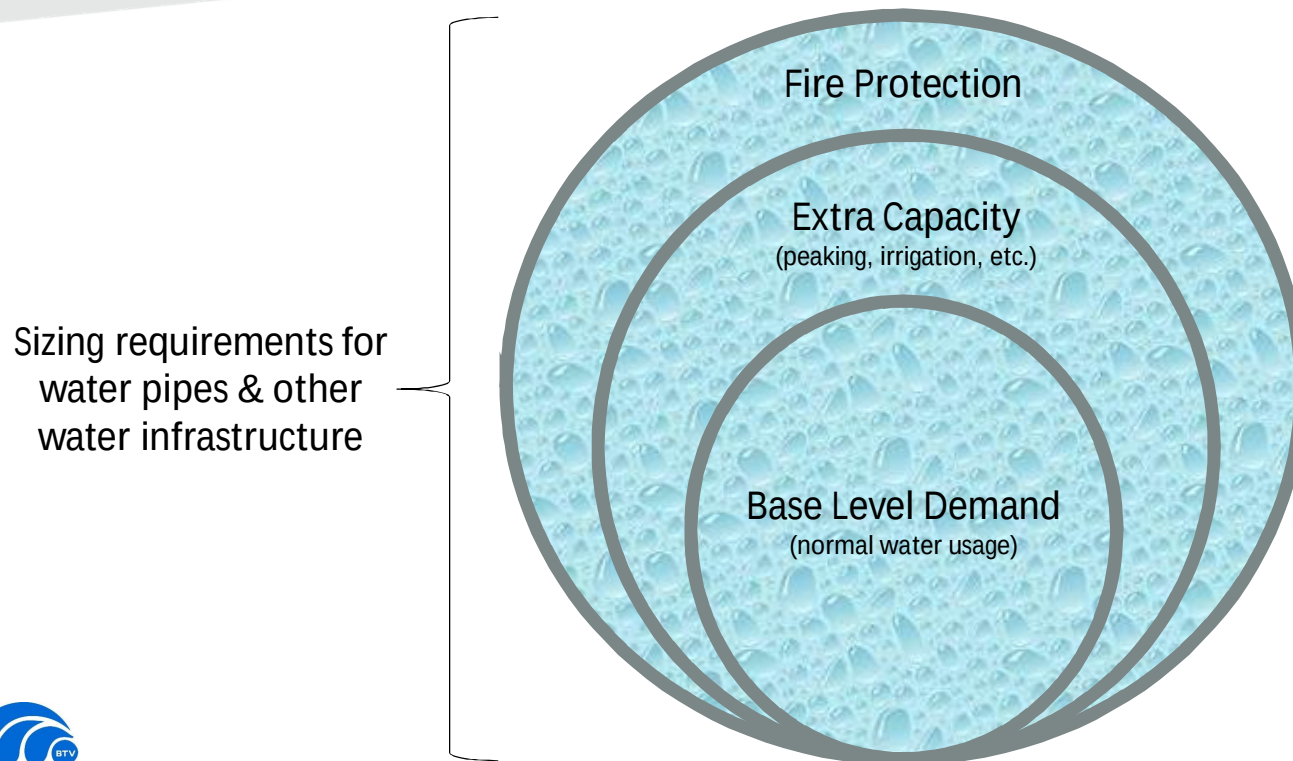
Crossroads: Core Values & Existing Rate Structure

Sustainable funding is crucial to ensuring **access to clean water**. We need money to take care of the infrastructure that produces and delivers clean, safe drinking water and collects, treats and manages wastewater and stormwater before it drains to our rivers and the lake.

When utility costs are not **affordable** then rate payers may not have equal access to the essential amount of water needed to live.



Goal 1 - EQUITY



All customers are currently paying the same rate.

This is not consistent with the burden specific uses place on the City's infrastructure.



Proposed Rate Structure Changes

Rate Proposals		What is it?	Why do it?
Fixed Charges by Meter Size	A water and wastewater fixed charge that increases based on the size of the customer's water meter		• Is industry best practice – reflects cost of service for infrastructure to be “ready to serve” • Improves revenue stability and predictability • Encouraged by bond rating agencies • Recovers 10% of revenue; future goal is 20% to match actual ratio of fixed to volumetric costs
Class-Based Rates	Different rates for different classes of customers		• Justified based on the strains each customer type puts on the utility's infrastructure • Provides framework for realignment of water rates with the higher cost of service for non-residential customers • Can now apply specific affordability based pricing of essential, residential water usage into the future
Irrigation Rate	A separate, higher rate for those who solely use water for irrigation (with the exception of community gardening initiatives)		• Irrigation often contributes to peak water use, which necessitates system expansion and associated costs • Sends price signal to conserve water when use is not for basic needs
Private Fire Protection Charges	A separate, fixed, monthly charge that escalates with connection size for those who have private fire service or hydrants		• Water Resources has invested in system capacity to serve private properties during a fire event, thus the customers who benefit from this service should pay for that capacity • Will be phased in over 5 years



Goal 2 - AFFORDABILITY

Existing Assistance Options To Date

Interest-Free Payment Plans

Stormwater Credits for 'Directly Assessed' Properties

It was clear we could do more to assist customers who needed it.



Proposed Rate Affordability Options



Proposals	What is it?	Why do it?
Lifeline Rate Tier	"Essential" water consumption (below median usage) is charged at a lower rate; only applicable to single-family residential account holders	• Discounts the first 400 cubic feet of water consumption for single-family residential properties • Incentivizes efficient water use, since water above 400 cubic feet is charged at a higher rate
Fixed-Fee Waiver	Waives the proposed fixed monthly water and wastewater charge for residential customers at or below 185% of the Federal Poverty Level.	• Provides relief to single-family households who meet income or age eligibility criteria, and non-profit affordable senior housing developments
Flexible Payment Terms	Encompasses existing payment plan options, but adds 'budget billing' option.	• Ensures customers have access to resources and assistance that will allow them to afford services and pay their bills

Note: Existing programs will remain in addition to these options.



Proposed Assistance Programs

Type	Program	Details
Infrastructure Assistance	Up to \$250 rebates for residential customers to cover costs of filming a private sewer lateral - Residential property owners eligible for \$200 rebate - Income qualified customers eligible for full rebate up to \$250	- Funds to support 160-200 laterals/year - Helps property owners understand condition of lateral and plan for replacement costs - Gives City data to develop future possible loan/grant programs for sewer lateral replacement
Conservation Assistance	Up to \$75 rebates for residential customers towards purchase of WaterSense plumbing fixtures	- Reduces water usage through installation of low flow faucets, shower heads, and low flow and dual flush toilets 200 rebates available
Stormwater Management Assistance	Implementing BLUE[®] BTV residential stormwater management grant program	- Provides “Lake Friendly” home evaluations to residential properties - Provides grants towards the costs of roof gutters, rain gardens, permeable pavers etc.



Addressing Affordability for More Renters

- Currently proposed WRAP Fixed Fee Waiver applies to:
 - › Single family properties where the occupant is the account holder
 - › Non-profit affordable or senior housing accounts
- Generally renters in **multi-family rentals** will not have access in this phase, Why?
 - › If City provides Fixed Fee Waiver to landlords, some landlords might not pass on affordability measure to tenants
 - › Multi-family units often share meter, so current fixed fee waiver structure not beneficial to an individual rental unit



Affordability for Renters, cont.

- Water utilities across the country are struggling to address this gap
 - › Most utilities don't have a renter specific program
 - › DC Water and NYC Water have only recently launched programs we are monitoring
- Burlington Water Resources will evaluate options for consideration by stakeholders and City Council by April 2023



Current & Proposed Rates

	Water		Wastewater		Private Fire	
	FY 21 Current	Proposed	FY 21 Current	Proposed	FY 21 Current	Proposed
<u>Fixed Charge per Month</u>						
5/8"	\$0.00	\$3.32	\$0.00	\$4.67	-	\$6.52
3/4"	\$0.00	\$4.99	\$0.00	\$7.00	-	\$6.52
1"	\$22.73	\$8.31	\$31.74	\$11.67	-	\$6.52
1.5"	\$45.51	\$16.62	\$63.55	\$23.35	-	\$6.52
2"	\$72.68	\$26.60	\$101.49	\$37.36	-	\$6.52
3"	\$145.32	\$49.87	\$202.93	\$70.05	-	\$6.52
4"	\$248.28	\$83.11	\$346.70	\$116.75	-	\$6.52
6"	\$454.12	\$166.22	\$634.14	\$233.50	-	\$18.95
8"	-	-	-	-	-	\$40.38
10"	-	-	-	-	-	\$72.62
Private Fire Hydrant	-	-	-	-	-	\$18.95
<u>Volumetric Rate (per 100 CF)</u>						
Single-family Residential	\$4.44	-	\$6.20	-		
Tier 1 (0-400 CF)	-	\$2.42	-	\$6.07		
Tier 2 (401 CF and higher)	-	\$6.05	-	\$6.07		
Duplex	\$4.44	\$4.24	\$6.20	\$6.07		
Triplex	\$4.44	\$4.24	\$6.20	\$6.07		
Multi-Family Residential	\$4.44	\$4.24	\$6.20	\$6.07		
Mixed Residential & Commercial	\$4.44	\$4.24	\$6.20	\$6.07		
Commercial	\$4.44	\$4.24	\$6.20	\$6.07		
City	\$4.44	\$4.24	\$6.20	\$6.07		
Irrigation/Heating/Cooling	\$4.53	\$7.26	\$6.20	\$6.07		



Snapshot of Possible Customer Impacts



Caveat! These are estimated customer bills based on CY19 customer class trends (Pre-Covid).

Actual bills will vary based on water consumption.

Meter size, private fire service size and # of private hydrants affects bills.

Includes a 5% increase to stormwater for all customers.

Customers should complete an “Account impact summary request form” to understand the impact to their specific bill(s).



Hypothetical Customer Type	FY 2021	FY 2022 Proposed		
	Bill (\$)	Bill (\$)	\$ Change	% Change
Single Family Residential				
Low Volume - 200 CF	\$343	\$393	\$50	14.5%
WRAP - Low Volume - 200 CF	\$343	\$297	(\$46)	-13.4%
Median Volume - 400 CF	\$608	\$604	(\$4)	-0.6%
WRAP - Median Volume - 400 CF	\$608	\$508	(\$100)	-16.4%
High Volume - 600 CF	\$872	\$905	\$33	3.8%
WRAP - High Volume - 600 CF	\$872	\$809	(\$63)	-7.2%
Multi-Family Residential				
Low Income Housing	\$66,078	\$65,243	(\$835)	-1.3%
Senior Housing	\$39,159	\$38,258	(\$901)	-2.3%
Commercial				
Technology Company	\$17,471	\$19,959	\$2,488	14.2%
Retail Company	\$27,234	\$29,210	\$1,976	7.3%
Institutions				
University	\$1,881,653	\$2,044,738	\$163,085	8.7%
UVMC	\$742,864	\$831,670	\$88,806	12.0%
School District	\$130,170	\$142,377	\$12,207	9.4%

Customer Impacts of New Rate Structure

- ❓ All bills will vary based on actual water consumption, meter size and private fire protection
- ✓ Complete an Account Impact Summary Request to understand your specific impacts
- 💡 Think about what mitigation opportunities apply to your property

Key Drivers	Opportunities To Lower Bill	Who Is Eligible?
Fixed Meter Charge	Apply for WRAP	Single Family Households Meeting Income or Age Criteria; Non Profit Housing Developments Providing Affordable or Senior Living Units
	Request a Meter Sizing Review	All Customers with Meters Sized at 3/4" or Larger
	Evaluate Meter Removal	All Customers
Consumption Above 400 CF	Implement Conservation Strategies	All Customers
	Investigate for Internal Plumbing Leaks	
Private Fire Protection Charge	Request Verification of Pipe Diameter	All Customers with Protective Fire Infrastructure
Irrigation Rate	Evaluate Meter Removal	All Customers
	Implement Conservation Strategies	
Stormwater Rate	Apply for Stormwater Fee Credit	All Directly Assessed Customers Who Have Installed Stormwater Management Measures



Highlights

- The Wastewater, Water and Stormwater proposed FY22 budget is built to ensure proper operation and sustainable stewardship of infrastructure, with targeted funding for customer assistance programs
- Without the rate restructuring and affordability changes, all residential rate payers would see approximate 5.9% increase on their bill
- With the proposed changes:
 - › Income qualified ratepayers and seniors will see a decrease in their overall water resources bill (on average \$100/year for someone who uses 400 cu. ft./month) from this year
 - › Over 63% of single family residential ratepayers will see benefit on their water resources bill (i.e. less than a 5.9% increase)
 - › Will have established a customer class based rate structure which will allow for specific affordability based pricing of essential, residential water usage into the future



Next Steps

q Continuous Improvement (April 2021-July 2021)

- Ø Incorporate feedback from all stakeholders
- Ø Review, validate and respond to impact summary requests
- Ø Ongoing QA/QC with data and required updates to billing system
- Ø Draft WRAP policy and any needed ordinance changes

q Approvals (April 2021-June 2021)

- Ø DPW Commission (4/21/21)
- Ø Transportation, Energy and Utility Committee (4/27/21)
- Ø City Council approval of rate & fee structure changes including WRAP (5/10/21)
- Ø City Council approval of budgets & rates for FY 22

q Implementation (July 2021-August 2021)

- Ø Changes will be effective beginning July 2021 and reflected on August bills
- Ø Additional round of outreach to all customers in advance of August bills





**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

645 Pine St. Suite A
Burlington, VT 05401
802.865.7200 VOX
802.863.0466 FAX
802.863.0450 TTY

Chapin Spencer
DIRECTOR OF PUBLIC WORKS

Lee Perry
*ASSISTANT DIRECTOR
DPW MAINTENANCE DIVISION*

MEMORANDUM

To: Public Works Commission

From: Chapin Spencer, Director
Lee Perry, Assistant Director DPW Maintenance

Date: April 15, 2021

Re: Evaluation of Municipally Operated Consolidated Collection Alternative

Background:

There are many ways communities coordinate the collection of trash, recyclables and food scraps. In our City, individual residential property owners subscribe with a local hauler for solid waste services or bring their trash to one of the County's Drop-Off Centers. According to a survey of 461 communities nationwide, this subscription arrangement occurs only in approximately 11% of communities. Consolidated collection, on the other hand, is the much more common approach with 83% of communities having the municipality either collecting waste streams itself or contracting with private haulers. Of those communities with consolidated collection, approximately 58% contract with private haulers and 40% have a municipal operation and 2% have some hybrid approach according to our consultant GBB.

Consolidated collection has been explored in our region for decades. Long-time staffers recall a City Council resolution seeking to explore the concept for trash collection around 2000. In 2009, the Chittenden Solid Waste District launched a countywide analysis of consolidated collection that ran until 2014. In April of 2018, the City Council passed a resolution requesting the Department of Public Works to undertake a citywide consolidated collection feasibility study with the City of South Burlington and Chittenden Solid Waste District. The report evaluated a franchised model with private haulers and the findings were presented to the Council's Transportation Energy & Utilities Committee (TEUC) in June and July 2020. Past materials can be found at: <https://www.burlingtonvt.gov/dpw/Maintenance/Consolidated>

At the August 2020 TEUC meeting, the Committee requested DPW staff do an in-house financial analysis of a municipally run consolidated collection system. This memo summarizes the key findings from this effort. The findings were presented to the TEUC at their March 23, 2021 meeting.

Study of a Municipally Run Collection Program – Scope of Work:

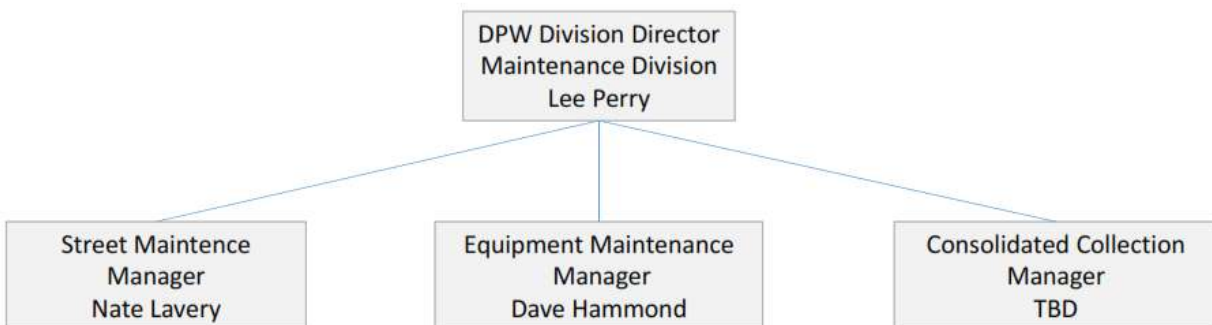
Here are key components we have evaluated in starting up and operating a municipally managed consolidated collection program for Burlington residents:

- Administration and supervision
- Direct personnel salaries and benefits
- Vehicle and equipment capital
- Cart procurement, replacement and repair
- One-time implementation costs
- Vehicle operating, maintenance and fuel
- Facility capital (office space, vehicle maintenance facility, cart storage, vehicle parking)
- Public education, outreach, and enforcement
- Processing and disposal
- Billing options
- Other operating and maintenance costs

The following is what we have identified as necessary, to operate an efficient collection system, as we have learned where we have had success, and where we have encountered short falls within our recycling program.

Organizational Structure:

If Public Works were to run a consolidated collection program, our recommendation is to establish the operation as a program within our Maintenance Division. This team has strong field work experience and also maintains the City's municipal fleet. Of our four divisions, the Maintenance Division is best suited to manage this projected \$5M/year enterprise.



While the Consolidated Collection Manager would supervise the collection field crews, as you'll see in the next section, we are recommending four additional FTEs in other divisions to adequately support this significant new enterprise.

Staff Resource:

To operate a consolidated collection program, we estimate needing 14 additional employees. These positions are broken down as follows:

- **1 Consolidated Collection Manager:** The position would oversee the day-to-day operations of the division. Similar to the Streets Maintenance Manager, and the Fleet Manager. The Manager will interface with the Customer Service team to address operational questions and service requests.
- **9 Additional CDL Licensed Drivers:** Based on a proposed service level of weekly trash, recycling and compost collection, we would propose increasing the recycling portion of the division by (3) CDL licensed drivers, and (6) total CDL licensed drivers for the trash, compost portion of the division. This would bring the total number of drivers for the division to (12). The added full time employees will give the division some redundancy, as employees request time off, are out sick, or are injured. Currently in our recycling program, when this occurs we have to substitute on a rotational basis, with an employee from our Street Maintenance team. This has not been a good practice, as it keeps Street Maintenance from operating at full staff, which disrupts work crews, and daily work schedules, as well as affecting our revenue lines. During winter months, it prohibits the department from effectively clearing the streets, and sidewalks of snow during snow events. We have had instances where we have to substitute for an injured driver for months at a time. The added help will also assist in efficiency, as this will not be a fully automated pick up operation. It will still require staff to get out of the truck to retrieve the carts, and place them back on the greenspace, or side of the road. In recent months we have seen an increase to our tons disposed increased by an average of ~40 tons per month. This is requiring our current recycling crews to work longer hours to compensate for the increase in material. We have on occasion given them seasonal help to try to make the process more efficient. In addition to increasing staff, we have proposed to increase the position from a Grade 12, to a Grade 13. We hope that this will help retain staff, as we have had a substantial amount of turnover in the recycling program over the past 6 years. Some turnover can be attributed to staff moving into other positions within the City, but equally as many can be attributed to staff leaving because this is a laborious position.
- **2 Customer Service Members:** We would supplement our Customer Service team by adding a Senior Customer Care Associate and Customer Care Associate. The team would handle billing, service changes, and operational issues for consolidated collection customers. While we pick up residential recycling currently, the haulers bill the customers.
- **1 Public Outreach and Enforcement Position:** This person would educate the public on proper disposal practices for trash, recycling, and food scraps – and monitor compliance in the field. This position would be similar to our Excavation Inspector.
- **1 Additional Fleet Technician:** Currently the recycling program requires one Fleet Technician to commit 953 labor hours annually, out of a possible 1500 available labor hours, or 63% of their annual labor hours to repair and maintain the recycling fleet's four trucks. Because of this, the remaining fleet suffers, as they do not get the proper attention needed to keep up with preventative maintenance and repairs. With a projected 9 vehicles for a municipally operated consolidated collection system, an additional technician would be needed.

In addition to these new positions, the following existing positions would be significantly involved in the operation:

- Division Director – overseeing the Consolidated Collection Manager and field operations
- Finance & Customer Care Manager – overseeing the billing operations and Customer Care team members

Depending on the final structure of the program, we could consider reducing the number of permanent CDL drivers and have a seasonal or entry-level employees provide non-driving support on the collections vehicles. While this may provide more of a career ladder in the program, it may also limit our operational resiliency if a driver is out for whatever reason.

Capital Resources

We estimate needing to invest approximately \$5.9M to \$6.7M in capital funds to stand up this operation.

- **Facility \$3.6M - \$4.0M:** Unfortunately, our 645 Pine St. location is unable to accommodate a new operation of this size. The 645 Pine site is limited in vehicle storage, employee parking, and office/meeting space. The site is at its maximum lot coverage for zoning and covered under the Pine Street Barge Canal Institutional Controls so any effort to eke out additional space would be very expensive and have impacts on other municipal operations. Although the main functions of the program would occur off site, all repair and maintenance to the fleet would be conducted at Fleet Services located at 645 Pine St. Two possible locations to establish space to house the consolidated collection operations are:
 1. 195-201 Flynn Avenue – The City has an option to purchase this site from Chittenden Solid Waste District for ~\$500,000 to establish a drop off center. The 3-acre parcel would have approximately 1 acre beyond the estimated 2 acres needed for CSWD’s new drop off center. The remaining acre would likely be sufficient to accommodate the consolidated collection operations.
 2. 339 Pine Street – The former location of the Public Works Department. The site may involve historic renovation restrictions, Pine Street Barge Canal Institutional Controls, and soil remediation efforts – all factors that carry risk and would likely increase costs.

This large facility investment makes a municipally operated system more challenging to establish.

- **Fleet \$1.4M:** The new program will have to initially purchase (4) split body refuse trucks to pick up trash and compost, as well as at least one (1) replacement for the (4) existing, aging recycling trucks. Four trucks are required for both recycling, and trash/compost, so that we always have a spare truck in case of mechanical failure. Even with a spare truck, there is no guarantee that there will not be adequate trucks to complete the routes. Recently we had to rent a refuse truck from Myers for three months, as one of our newer trucks was out of service for a part that was not yet available for purchase, and one of the other older trucks needed repairs. A new pickup truck will be required for the Division Manager to deliver carts, and to respond to other issues that may arise.
- **Equipment \$900K - \$1.2M:** The division would have to purchase an estimated 13,000 new 65-gallon trash carts and 25-gallon compost carts for residents, and an estimated 6,000 new 65-gallon recycling carts for the 0% opt out scenario. The goal is to replace all existing blue bins with carts. The carts are safer for our operators and cut down on windblown litter.

Billing: While additional due diligence is required to come to a more conclusive recommendation on how to structure the billing, our initial concept is to utilize Water Resources’ Harris Flexibill software to manage the consolidated collection billing. Staff’s experience with this platform would help in setting up the consolidated collection billing. It is important to note that based on our initial analysis, we are recommending a separate bill for consolidated collection and not merging it with the water bills. This is due to: 1) the existing complexity of Water Resources bills that include Water, Wastewater and Stormwater charges, 2) the difficulty when water and solid waste bills are paid by different people (landlords vs. tenants) at the same address, and 3) that there will likely be many options to manage under the consolidated collection billing (opt-out, back door service, seasonal service, various cart sizes, compost service, etc).

Financial Structure: If a municipally run system were established, we are initially recommending it be set up as either a Special Revenue Fund or an Enterprise Fund and not including this operation in the City’s General Fund budget. The reason is to ensure the sustainability of this \$5M/yr asset-heavy program, it should have a more independent budget separate from the broad interests and needs of the General Fund. The downside of this financial independence is that the fund would need to carry costs for audits and City indirect costs. If it were to be an Enterprise Fund, it would appear to require a charter change to [24 V.S.A. App. c. 3 § 65](#). A Special Revenue Fund may not require a Charter Change, but revisions to City Ordinance.

Legal Considerations: We worked with the City Attorney to evaluate the City’s authority to institute a consolidated collection system – whether operated by the City or contractors. The rights detailed in the City Charter are quite broad. [City Charter §48\(6\)](#) states that City Council has the right to “require and provide for the collection, removal, and disposal of such materials, by the City at its expense by contract with some private individual or agency, or by some City officer, officers, or department either existing, or hereafter created and established by the City Council for that purpose”. While these authorities appear broad, solid waste haulers could still seek to challenge the City’s efforts to restrict private haulers in the market as it sets up a consolidated collection system.

Costs: DPW originally created two operating budgets. One is a “0% Opt Out” scenario that is based off a collection scenario of weekly trash, recycling, and compost, with no option for residential customers to opt out of the service. The second is the “25% Opt Out” scenario, based off a weekly collection scenario, but with a 25% of residents opting out of curbside collection. During the March 23, 2021 TEUC meeting, it was requested that there be a “15% Opt Out” scenario added to match the original study cost comparison completed by GBB. Here is a summary of the total costs for each.

Options	Municipal Model 195-201 Flynn Ave 0% Opt Out	Municipal Model 339 Pine St. 15% Opt Out	Municipal Model 339 Pine St. 25% Opt Out	Franchise Model 0% Opt Out*	Franchise Model 15% Opt Out	Franchise Model 25% Opt Out**
Households Served Weekly	13,005	11,054	9,754	13,005	11,054	9,754
Resident Annual Cost	\$414.38	\$457.30	\$494.92	\$410.03	\$422.98	\$422.80*
Resident Monthly Cost	\$34.53	\$38.11	\$41.24	\$34.17	\$35.25	\$35.23*

* There was an arithmetical error in the franchised “0% Opt Out” final cost listed in the March TEUC packet. This brought the franchised cost down from \$412.83 annually to \$410.03 annually.

** The consultant ran the franchise model originally at 0% and 15% opt out. City staff has updated the costs based on updated tip fees and made some initial assumptions on the 25% opt out but are awaiting confirmation from our consultant. The overall cost figures for this scenario are preliminary.

While the 15% and 25% opt out options do have lower operational costs, these savings are often overshadowed by having fewer residents to cover the projected costs than in the 0% opt out option. This results in higher per customer bills under the 15% and 25% opt out scenarios compared to the 0% opt out option.

Based on these preliminary budgetary projections above, the municipal model is:

- An estimated 1% more expensive under the 0% Opt Out scenario

- An estimated 8% more expensive under the 15% Opt Out scenario
- An estimated 17% more expensive under the 25% Opt Out scenario

The cost differences between DPW projections and GBB's projections under a franchise model vary because of certain costs incurred by DPW that are not accounted for if a private contractor were to be collecting trash, recycling, and compost in the City of Burlington:

- **Capital Facility:** DPW would have to build a facility to house staff, vehicles, and equipment for the enterprise because we do not have existing space to accommodate the operations. Private haulers may be able to accommodate this operation within their existing facilities.
- **Billing:** Unlike private haulers who already have billing systems tailored to curbside collection, DPW will be incurring billing costs due to the added staff and software.
- **Labor:** DPW took a conservative approach when projecting labor needs so that we have redundancy among the staff and are able to operate an efficient program without having to pull from other DPW work groups. All field staff positions we modeled as full-time Unionized positions.

Considerations:

Advancing Municipally Run Model	Advancing Franchise Model
• Offers opportunity for more City / Union positions • Presents financial risk to the City (acquiring property, building facilities, managing another fund) • Absorbs a significant percentage of the department's 'innovation capacity' over the next 3-4 years • Once running, has potential to provide ongoing dependable, affordable, efficient service – balanced with risk of increased complexity and bigger operational footprint for department that can limit capacity in other areas • Still would have private haulers serving large residential and commercial customers in the City • Likely to generate more opposition from area haulers	• Doesn't provide opportunity to hire additional City / Union positions • Requires less of a financial investment from the City – though would also see end of the Solid Waste Generation Tax that has funded the recycling program. • Requires less 'innovation capacity' over next 3-4 years • Would require carefully drafted bid documents and ongoing oversight to protect City's and residents' interests • Offers opportunity for City to bid in any bidding periods should City want to consider a municipally run operation in the future – or just transition to municipal operation at the end of a franchise term • We understand that the City of South Burlington is interested in advancing this model after the pandemic recedes

DPW Staff Insights: As we have undertaken this evaluation of a municipally run consolidated collection operation for the TEUC, the question DPW leadership keeps coming back to is "Is it a top priority for the Administration and the Council for DPW to run a consolidated collection enterprise?" We can do it if given the resources, time and space. If it is a priority, this department has proven again and again that we have the skills and fortitude to do great things. That said, we all know that this small City has big ambitions and often expects government to play a lead role. DPW's mission is broad and we are at the center of moving the needle on many pressing issues - water quality, sustainable transportation, green infrastructure, restructuring parking services, asset management, resource recovery, streetscape enhancements, etc. The challenge is that the priorities are many and resources are finite. If standing up and operating an ongoing \$5M/year municipal consolidated collection enterprise is a priority, other initiatives will take a back seat.

Next Steps: DPW Staff welcomes the input of the Public Works Commission as we collectively consider the following decisions:

1. Whether or not to advance consolidated collection
2. If yes, whether to advance a franchise model with private haulers or a municipally-run operation

At the TEUC's March meeting, the Committee unanimously passed a motion supporting consolidated collection, but they have yet to formally weigh in on whether or not to recommend a private franchise model or a municipally-operated model. Their next meeting is tentatively scheduled for April 27, 2021. Once we have feedback from both the TEUC and the DPW Commission, we would prepare for a full City Council presentation along with Chittenden Solid Waste District and our consultant GBB.

Thank you for your interest in consolidated collection. We hope this briefing has been helpful. Do not hesitate to contact Division Director Lee Perry at lperry@burlingtonvt.gov, or 802-316-7568.

Conceptual Operating Budget for Municipally Run Consolidated Collection	Current FY21 Recycling Budget	Municipal Consolidated Collection Alternative - 25% Opt Out	Municipal Consolidated Collection Alternative - 0% Opt Out
<i>Personnel Services</i>			
Salaries and Wages Regular, Full Time	\$148,274	\$825,094	\$868,520
Salaries and Wages Seasonal/Temporary	\$4,600	\$0	\$0
Overtime	\$12,000	\$128,794	\$135,572
Other Personnel Services Other Compensation	\$8,500	\$55,819	\$58,757
Other Personnel Services Allowance Taxable	1,500.00	\$8,313	\$8,750
Employee Benefits FICA	\$13,378	\$87,494	\$92,099
Employee Benefits Workers Compensation	\$96,502	\$366,708	\$386,008
Direct Benefits (Health, Dental, Life, Retirement)	\$65,380	\$462,881	\$487,243
Personnel Service Subtotal	\$348,634	\$1,935,102	\$2,036,950
<i>General Operating</i>			
Medical Fees And Supplies	\$500	\$1,900	\$2,000
Small Tools and Equipment	\$500	\$1,425	\$1,500
Clothing And Uniforms	\$750	\$1,900	\$2,000
Legal Notice & Advertising	\$1,500	\$4,275	\$4,500
Utilities Cellular Communications	\$400	\$760	\$800
Prof and Consultant Svs Contractual Services	\$230,400	\$2,280,033	\$2,400,035
Billing Costs	\$0	\$72,675	\$76,500
DPW Indirect Costs	\$0	\$25,650	\$27,000
General Operating Subtotal	\$234,050	\$2,388,618	\$2,514,335
<i>Capital Outlay</i>			
Property		\$285,044	\$319,075
Vehicles	\$40,000	\$228,837	\$228,837
Equipment	\$40,000	\$217,368	\$289,818
Capital Cost Subtotal	\$80,000	\$731,249	\$837,731
Division 153 - Consolidated Collection Totals	\$662,684	\$5,054,970	\$5,389,015

	MUNICIPAL OPERATION	
	15% Opt Out 339 Pine St site	0% Opt Out 195 Flynn Ave site
Households	11,054	13,005
Annually	\$457.30	\$414.38
Monthly	\$38.11	\$34.53
25% Opt Out 339 Pine St.		
Households	9,754.00	
Annually	\$494.92	
Monthly	\$41.24	

FRANCHISED OPERATION		
	15% Opt Out	0% Opt Out
Households	11,054	13,005
Annually	\$422.98	\$410.03
Monthly	\$35.25	\$34.17
	25% Opt Out	
	9,754.00	
	\$422.80	
	\$35.23	
Delta:		
0% Opt Out	1.06%	
15% Opt Out	8.11%	
25% Opt Out	17.07%	



BURLINGTON

Annual Occupancy Analysis Report

Lakeview and College Street Garage

Public Works Commission – 4/21/21

Why this report?

Delegated Authority.

In October, 2019 the Public Works Commission delegated the authority to enter into ***parking agreements*** to the Department of Public Works.

This was done to:

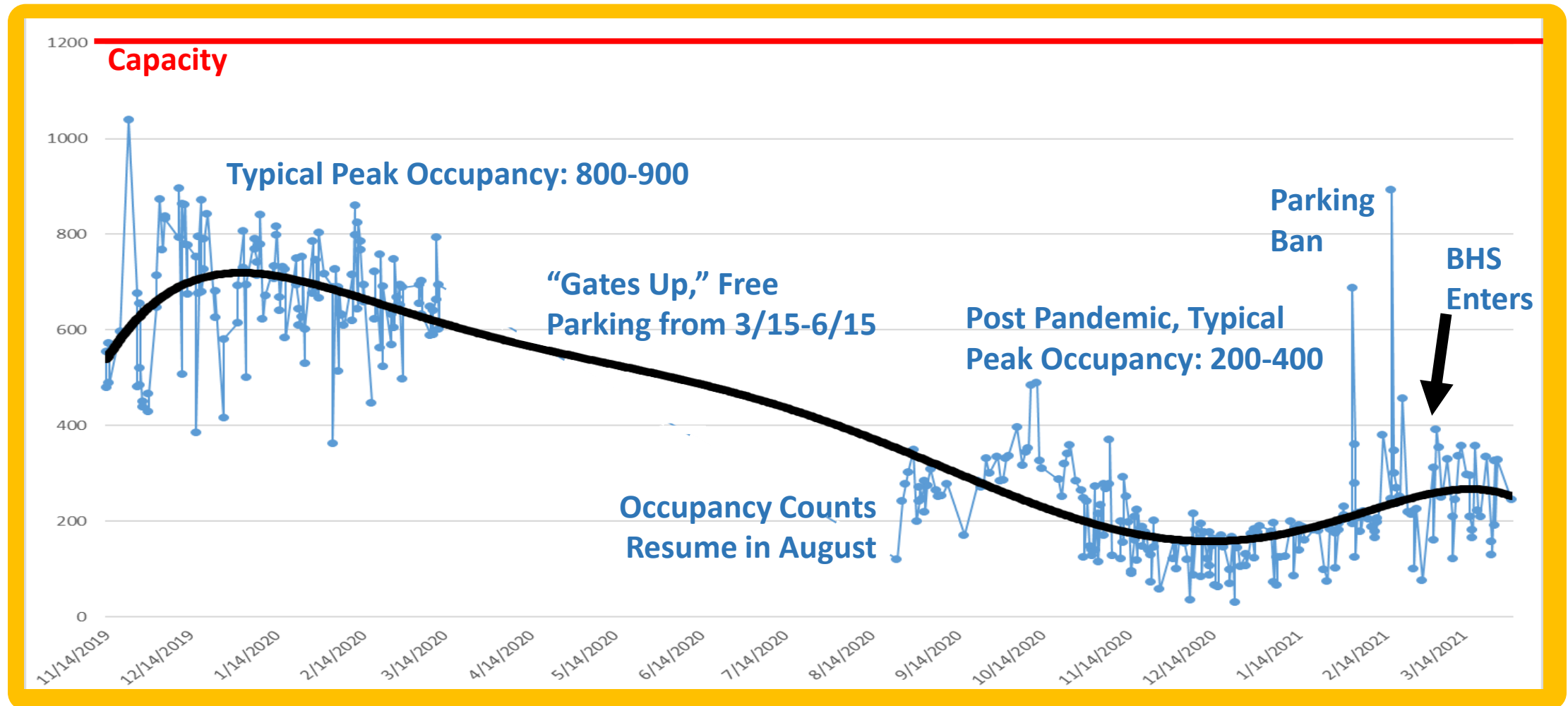
- 1) Expedite processing for parkers
- 2) Minimize work effort for DPW staff
- 2) Allow DPW greater flexibility in optimizing occupancy

This is the Second required Annual Report to keep the PWC apprized of ***occupancy performance*** at the Lakeview and College Street Garage.*

*Note: This report only addresses occupancy of Lakeview/College Street Garage. There are only legacy parking agreements in the Marketplace Garage and no more are being sold.

What's the daily occupancy?

Occupancy remains dramatically below capacity and historic volumes.



How are revenues impacted by COVID-19?

Monthly and transient revenues are both down dramatically.

	Typical Pre COVID-19	Post COVID-19	Percent of Typical
Monthly Permit Revenue Per Month <i>Permit Count</i>	\$82K <i>1,200</i>	\$45K <i>760</i>	55% <i>60%</i>
Transient Revenue Per Month	\$25K	\$8K	32%

**Net active parkers, accounts for parkers that have left the system.*

What's the status of the Free Employee Program?

Currently Onboarding Companies and Employees, participation is enthusiastic.

**Companies
Participating
52**

**Employees
Participating
200**

*Participation exceeds
expected, but there is
currently garage capacity.*

X \$96 = **\$19,200**

Expected Value = **\$15,000**

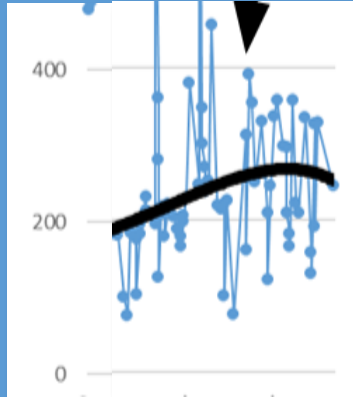
Observations and future actions:

- 1) Only three weeks into the program
- 2) Early applications included non-eligible employees
- 3) On-going audit of employees will reveal non-eligible parkers
- 4) On-going audit of parker behavior will reflect actual usage

Conclusion – COVID-19 has had a dramatic impact

Occupancy remains very low and permit sales remain sluggish.

**Occupancy
Remains Low**



**Sales are
Low**

55%



Next Steps @ LVG/CSG

- 1) Monitor usage of Employee Free Parking
- 2) Monitor occupancy at LVG/CSG
- 3) Create an *Oversell Threshold*

END

**DEPARTMENT OF PUBLIC WORKS
645 PINE STREET
BURLINGTON, VERMONT 05401
COMMISSION MEETING MARCH 17, 2021**

Commissioners Present: Commissioner Archambeau, Commissioner Barr, Commissioner Bose (late), Commissioner Gillman, Commissioner Hogan (Chair), Commissioner O'Neill-Vivanco (Vice-Chair), Commissioner Overby.

ITEM 1 – CALL TO ORDER

Commissioner Hogan called meeting to order at 6:34 p.m.

ITEM 2 – AGENDA

Commissioner Overby wanted to pull Item A off the consent agenda for discussion.
Commissioner Barr makes a motion to accept agenda with A removed and added at Item 4.1
Commissioner Archambeau seconds
Unanimous approval

ITEM 3 – PUBLIC FORUM –

ITEM 4 – CONSENT AGENDA

B – ADA Space Removal – 124 North Union Street

Commissioner Barr made a motion to accept consent agenda
Commissioner Overby asked for an amendment to remove the Making Spaces Agenda Item
Commissioner Barr accepted this amendment
Commissioner Archambeau seconded
Unanimous approval

Item 4.1 – MAKING SPACES – GRAB AND GO SPACES

Commissioner Overby asked for clarity on this item as the memo refers to the Streets Seats program.

DPW Engineer Phillip Peterson confirmed that the memo asked for action on the Grab & Go pickup spaces and that no action was requested on the other “Making Spaces” programs. Director Spencer confirmed this and said that staff will come back for further authorization, when necessary.

Commissioner Barr made a motion to accept Item 4.1
Commissioner O'Neill-Vivanco seconded
Unanimous approval

ITEM 5 – PARKING PROGRAM FOR RESTAURANT AND RETAIL WORKERS

Assistant Director Jeff Padgett made a motion to adopt, publish and notice the updates related to parking rates as described in Appendix C, Chapter 19 (b)(8) to include free parking for downtown restaurant/retail/service workers at the Lakeview/College street parking facility. AD Padgett stated that a goal of this policy change is to aid downtown businesses and workers, especially during this period of uncertainty.

Commissioner Overby expressed concerns that this free parking will encourage people to drive and that it is a subsidy for downtown businesses.

Commissioner O'Neill-Vivanco stated we do need a change in transportation mindset and we should encourage businesses to promote transportation options. This would include more car share pods & more bike parking in the garages.

Assistant Director Padgett stated that 2 to 3 more EV charging stations are going into the Lakeview Garage. We have additional money from DID for bike racks but it is hard to find a place to install bike racks. There are several initiatives going on to enhance transportation options.

Commissioner Barr stated there are many different opportunities and CATMA has a host of programs that they run. Bike share improvements are coming to Burlington and thinks this is one way to further enhance transportation choice.

AD Padgett stated that we have money for subsidizing bus passes but buses are free right now for everyone. We need to support downtown merchants as this change for free employee parking is a critical part of the removal of the free 2-hour parking in the Marketplace Garage.

Commissioner Archambeau asked how passes will be issued and for how long and when will they be valid.

AD Jeff Padgett stated there is no sense of percentages but 65 businesses in the downtown area value this and are looking for steady growth.

Commissioner Hogan asked if the permits were tied to individuals and license plate numbers and was informed that yes the permit is assigned to a person. There is a good idea of how many will have to park. It is a month-to-month pass that is issued. There are changes coming as well as some challenges in the future.

AD Padgett confirmed that his approach was necessary to support businesses, workers and the economic recovery.

Director Spencer clarified that this is not about subsidizing businesses. We want to direct people to not park on the street and instead use the underutilized garage in the evening. This frees up parking for residents, shoppers and visitors on street. We are proposing to take a small slice of a very underutilized garage for parking for downtown workers.

Commissioner Barr made a motion to accept as presented.

Commissioner Archambeau seconded

Commissioner Overby stated she is not in support of this amendment for change.

Commissioner Archambeau "Aye", Commissioner Barr "Aye", Commissioner Bose "Aye", Commissioner Gillman "Aye", Commissioner O'Neill-Vivanco "Aye", Commissioner Overby "No", Commissioner Hogan "Aye".

Aye's win 6 to1.

ITEM 6 – SLOPE STABILITY SITE ADJUSTMENTS

Associate Engineer Philip Peterson shared a Power point presentation. He advised that there are four slope inspections that occurred in 2019 and 2020. One was the Northshore Natural Area, which will need an inspection in five year, but we will monitor it. Manhattan Drive and Route 127 on the west side is stable but will be inspected every 3 years but will be monitored. Manhattan Drive at North Champlain Street urgent repair need but inspection good, will keep with other side of Route 127. Riverside Avenue has three segments and for some of them we need homeowner's permission to go onto the land so we are more limited on what we can do on the private property.

Commissioner Archambeau asked if there was imminent danger for people's safety and City Engineer Baldwin stated with the unknown conditions sandy soil easily erodes. If people stop putting material on the banks, it will be okay. River system at the bottom depends on how close the river gets. Commissioner Archambeau asked if there were contingencies in place if there was another super soaker rain and was advised that, we could not prepare for loss of land.

Commissioner Bose asked about historical floods and loss of landscape considered safe for slope, stabilization. Is there more willingness by business owners to talk? City Engineer Baldwin stated we don't have authority to walk onto property and look without homeowner consent.

Associate Engineer Philip Peterson stated that Public Works or consultants are measuring data we can collect to get more buy in for inspections. Information is shared with other city departments. Stormwater has consultants vetting this for future projects. DPW Engineer Baldwin stated there is a development review process for a scale of what is going on. We need to invest in outfalls. DPW Engineer stated that homeowners have done some work and some are working with consultants to stabilize banks.

Sharon Bushor, 862-3604, called in during public comment and stated that Riverside Avenue stability of slope banks the side not abutting the river that is an old landfill and the stability of the area is in question. The whole area needs to be looked at, as it is a safety and liability issue. She expressed appreciation for staff's work on this.

ITEM 7 – PASSENGER RAIL PROJECT AND LAVALLEY LANE

Director Spencer and City Engineer Baldwin offered an introduction and also shared that Senior Engineer Susan Molzon will be working on this project. There are many partners in this. We are moving the bike path from the east side of the railroad tracks to the west side from College Street to King Street; Lavalley Lane is going to be relocated. A transformer has been installed for shore power to trains. Additional work still needs to go out to bid. Contract 4 includes the relocation of Lavalley Lane.

Commissioner Barr stated great presentation and it is high time we have rail in Burlington.

Commissioner O'Neill Vivanco agreed that it is an aggressive time line, lots of obstacles to make the time line and do we have support through the city? CE Baldwin stated there was tremendous support in the city. Lavalley Lane needs to be moved first. Asked when we could expect at the Commission and Mr. Baldwin stated next month. Commissioner Overby asked about the water treatment plant and the large vehicle challenge of getting in and out and was informed that the consultant was asked to evaluate this.

Commissioner Hogan asked about the rail being in close proximity to the critical wastewater infrastructure. City Engineer Martin Lee stated it is not water treatment so from that perspective it's less challenging and that the existing footprint should be able to accommodate these changes.

ITEM 8 – RAILYARD ENTERPROSE PROJECT

Senior Engineer Susan Molzon offered an intro and said that we are in the preliminary engineering stage after years of scoping studies. The Cooperative agreement financing details include 80% federal, 10% state and 10% local. We will hire a consultant this summer and move forward with the three alternatives. This is a federal process with Federal Highway.

Commissioner Gilman asked if there was a better way of connecting Battery Street and Pine Street.

Commissioner Overby stated she had contacted City Engineer Molzon earlier to see if we could go back and look at other options.

Johnathan Eddy from the Waterfront Diving Center telephoned in and stated he was concerned about losing parking and warehouse space stating this would be detrimental to his business. He stated the King Street revitalization program should come off King Street.

Jacob Albee is looking forward to seeing how it goes. The sidewalk on the east side of the street is more functional as the west side pedestrians are more often on this side of the street and walking between cars, which is dangerous.

Director Spencer stated that we are engaging the property owners in the process, but that there is no public right of way between Pine Street and Battery Street.

ITEM 9 - APPROVAL OF DRAFT MINUTES

Commissioner Barr made a motion to approve the minutes.

Commissioner Archambeau seconded.

Commissioner Overby stated that there were two sentences she wanted removed one on page 2 and the other on the last page.

Commissioner Barr accepted the friendly amendment

Commissioner Archambeau seconded

Unanimous approval

ITEM 10 – DIRECTOR’S REPORT

See Director’s Report.

ITEM 11 – COMMISSIONER COMMUNICATIONS

Commissioner O’Neill-Vivanco wanted to thank the Public Works staff for staying healthy all winter long.

Commissioner Overby heard that there was no longer an appeals process for permitting and inspections and asked for clarity. Assistant Director Baldwin stated that nothing has likely changed and appeals should still be coming before this commission.

Commissioner Archambeau is on the permit reform committee and had not seen or heard of any changes.

Commissioner Hogan referenced emails that may have appeared to come from him and offered a general warning about suspicious emails.

ITEM 12 – ADJOURNMENT & NEXT MEETING APRIL 21, 2021

Commissioner Archambeau made a motion to adjourn

Commissioner Barr seconded

Unanimous approval

Meeting adjourned at 9:15 p.m.



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

645 Pine Street, Suite A
Burlington, VT 05401
802.863.9094 VOICE
802.863.0466 FAX
802.863.0450 TTY
www.burlingtonvt.gov/dpw

To: DPW Commissioners
Fr: Chapin Spencer, Director
Re: **DPW Director's Report**
Date: April 15, 2021

The April 2021 Public Works Commission meeting will be held online via Zoom.

FY'21 Goals and Objectives – Mid Year Review: Attached, please find a mid-year review of our progress towards our department's FY'21 goals and objectives. The Commission reviewed our proposed departmental goals and objectives last fall. We are pleased to report that despite the pandemic, our staff has successfully advanced most of the objectives laid out in the document. Our progress is detailed in the last column. Thank you to our great staff for all of their efforts especially during these challenging times. I am happy to answer any questions or clarifications prior to the meeting or during my Director's Report at the meeting. This document should be helpful to the Commission's annual review of the Director and City Engineer at next month's meeting.

Upcoming Transportation, Energy & Utilities Committee (TEUC) Meeting: The next TEUC meeting is scheduled for April 27 and its usual start time is 5:30pm. There will be two significant items on the agenda that are also on this month's Commission agenda:

- Water Resources Rate Recommendation
- Consolidated Collection

Commissioners and members of the public are welcome to participate at this Council committee meeting as well to provide additional input on these important topics.

Staff News: I wanted to let the Commission know that Senior Engineer Susan Molzon has decided to return to her family's home in New Jersey and she will therefore be leaving DPW on May 3. I am happy for her – and this will be a big loss for our team. Susan has adeptly managed a number of complex projects for the City including the Champlain Parkway, the Railyard Enterprise Project and many more. Her skills, strategic insights, team spirit and super friendly personality will be sorely missed.

Clean Sweep: We are preparing for Clean Sweep to run from April 28 through May 6. We will be sweeping bike lanes and areas of high debris prior to Clean Sweep when the weather is favorable. Project contact: Lee Perry, lperry@burlingtonvt.gov.

Please reach out with any questions prior to Wednesday's Commission meeting.

Public Works FY'21 Goals and Objectives - April 2021 Mid Year Review

Our Mission: To steward Burlington's infrastructure and environment by providing efficient, effective and equitable public services

		DPW GOALS			METRICS	DIVISION	COMMISSION ROLE	FY'21 STATUS
OBJECTIVE		Operational Excellence	Exemplary Cust. Serv.	Culture of Innovation				
	DPW-wide Objectives							
1	Respond to COVID-19 pandemic with internal protocols and external initiatives that protect our staff and meet the needs of our community	✓	✓	✓	Written policies developed and pandemic-tailored services delivered.	DPW-wide	Approve changes that require Commission adoption	Implemented policies and protocols. Maintained critical water, wastewater and plowing services throughout. Initiated wastewater testing for COVID-19 prevalence which provided early notice to public health leaders and congregate care facilities.
2	Stand up asset management program to advance City's capabilities and procure CMMS (computerized maintenance management system)	✓	✓	✓	Complete Phase II Asset Management work for GF and procure CMMS tool in FY'21.	DPW-wide	Provide feedback on draft plan	Staff launched multi-departmental initiative. Conducted successful procurement with 19 proposals. Council approved contract with VUEWorks in February. Contract executed and multi-departmental kick-off meeting held in March 2021.
3	Continue to close capital funding gaps across asset classes (Water, WW, Stormwater, Fleet, Streets, Sidewalks, Signals, Facilities) by developing and implementing funding strategies with stakeholders	✓			Budgeted Funding vs. Actual investments vs. funding targets for each asset class. Service reliability (number of main breaks / year).	DPW-wide	Evaluate and recommend funding strategies	COVID-19 delayed some W/WW/SW capital work. Continued elevated sidewalk and paving work into FY'21 - last year of FY'17-21 Sustainable Infrastructure Plan. CY'2021 workplan may shrink due to pandemic budget constraints, but we are actively evaluating whether American Rescue Plan funds and/or General Fund unassigned fund balance can supplement. Working now on next 5 year capital plan and will seek Commission guidance in coming months. We hope to bring it to voters at a special election in November 2021.
4	Enhance growth opportunities within department through professional development, job shadowing, succession planning, etc.	✓	✓	✓	% of staff participating in a professional development opportunity each year. % of mid and upper level positions that are filled internally.	DPW-wide		Internally promoted staff into 3 out of 4 open manager positions (Fleet Manager, Garage Operations Manager, Public Information & Customer Service Manager). Used City's online training platform for continuing compliance training and we achieved 92% compliance rate. External training opportunities have been more limited during COVID-19.
5	Increase engagement of under-represented constituencies through enhanced outreach efforts while also ensuring capital project and maintenance prioritization does not inadvertently underinvest in these areas of the community	✓	✓	✓	DPW staff and engaged community members reflect the diversity of our city. Enhanced outreach engages more unrepresented residents. Capital project and maintenance prioritization evaluated for equity.	DPW-wide		Multiple staff members are participating in Racial Equity, Inclusion & Belonging Committee. Winter parking ban information translated into 5 languages. Resolved 44 year old street acceptance issue with BHA Franklin Square. Public Information Manager continuing to strengthen outreach. Preparing to implement Racial Equity Toolkit.
6	Reduce injuries through strengthened safety program that includes active safety committee and online Learning Management System	✓	✓		DPW Safety Team meets at least quarterly. Reduction in recordable incidents and lost time injuries.	DPW-wide		Reduction in recordable injuries (11 in 2020, 21 in 2019), a reduction in lost time injuries (1 in 2020, 3 in 2019) and a reduction in lost time days (9 in 2020, 88 in 2019).
7	Improve capital project accounting with enhanced systems, provide leadership in the development of formalized policies and procedures, and transition to multi-year capital budget accounting	✓		✓	Written policies and multi-year capital budgeting in place.	Tech Services, Water Res.		DPW staff fully engaged in strengthening capital project accounting. New chart of accounts and procedures implemented. A minor re-organization was completed.

Burlington Public Works FY'21 Goals and Objectives

8	Provide effective coordination with private projects through project review and coordinated investments	✓	✓		Deptment turns material review in agreed upon timelines. Assists applicants with helpful guidance. Cambrian Rise, Cambria Hotel, Bove's, CityPlace progress according to timelines.	DPW-wide		Staff have assisted Cambrian Rise, CityPlace Burlington, Downtown BHS, 77 Pine St, Passenger Rail. Some private projects have been delayed due to the pandemic.
	Cross-Division Objectives							
9	Expand preventative maintenance program of pavement, pavement markings, sidewalk, guardrails, railings, fences, valves, fleet and other infrastructure that has historically not been adequately maintained -- and better prepare the department to maintain new assets	✓			Number of potholes, sewer plugs, main breaks decrease. Percent of fleet PMs to repairs increases. Maintenance crews trained and provided maintenance schedule for new assets.	DPW-wide		Implementation of Asset Management is major step in improving DPW's maintenance of assets. Final year of elevated investment through 5-year Sustainable Infrastructure Plan (FY'17-FY'21) continued into FY'21. Now staff and Commission need to develop next 5-year plan. Annual metrics will be easier to compile with Asset Management program.
10	Develop engineering standards that will efficiently direct future investments.	✓		✓	First phase of engineering standards compiled in FY'21.	Tech Services, Water Resources	Recommend adoption of standards to Council	This project is progressing but has been slowed due to other priorities.
11	Advance high priority capital projects (Champlain Parkway, Amtrak, PlanBTW Walk/Bike, Downtown Great Streets) in accordance with project schedules	✓			Projects advance according to project schedules. Annually budgeted capital projects completed.	Tech Services, Water Resources	Review and approve ordinance changes related to projects.	Resolved multiple Passenger Rail challenges and project is going to construction this year. St Paul St was completed and Great Streets planning effort for Main St will begin soon. Successfully advocated to State and FHWA to expedite Railyard Enterprise Project. Winooski Ave 4-to-3 installed.
12	Improve cost allocations between DPW and other departments (ie. have Water credited for fire protection service, contain growth of PILOT payments, end payment for parking enforcement, transfer crossing guard program to schools)	✓			More appropriate cost allocations between departments / funds. Would enable Traffic and Water divisions to better reinvest in their aging systems.	Traffic, Water Resources, CT office, Schools		Water rate restructuring starts to address cost allocations between different customer classes. Minimal additional work in this area has occurred. Pandemic has refocused efforts on to more immediate challenges.
	Division Objectives							
13	Integrate BPD & DPW Parking Services through an plan that integrates Parking Enforcement budget, personnel and facilities into DPW	✓	✓	✓	Articulated plan, community engagement and administrative integration completed. Identification of efficiency opportunities for the creation of a "Parking Services" group.	Parking & Traffic	Provide feedback and input on integration plan.	BPD Parking Enforcement team now DPW Parking Services employees. Preparing for minor reorganization in April/May 2021 with larger reorganization in FY'23.
14	Leverage parking technology within Parking & Traffic Division	✓	✓	✓	Integrate parking revenue and enforcement systems / technology across all parking services	Parking & Traffic	Provide feedback and input on customer service and customer experience.	Beginning the process of integrating Parking Services operations and Parking Garage operations to inform the larger reorganization in FY'23. Executing a pilot program to convert offstreet parking to the same payment and technology systems as on-street.
15	Unify parking resources within DPW, branded as ParkBurlington, providing a singular parking resource		✓		Integrate DPW-managed, Parks-managed and third party parking assets unthe the management of Park Burlington	Parking & Traffic	Review and approve parking operations agreements and policy changes	Integrated Park Mobile services in both DPW and Parks facilities. Parks and DPW are now on the same ParkMobile Platform and DPW is working for Parks to help maintain the functionality of their paystations. Still managing public parking at private 194 St Paul facility.

Burlington Public Works FY'21 Goals and Objectives

16	Improve parking experience through new services and technology	✓	✓		Provide improved signage, communication tools and service (online and in person)	Parking & Traffic	Review and provide input	Commission approved Downtown employee parking program and visitor validation program launched in Spring 2021 launch. The monument signs are illuminated. An interior wayfinding signage design will be complete by July 1.
17	Expand use of transportation options while increasing safety of system and reducing overall environment impact consistent with City plans			✓	Implement first phase of Winooski Corridor Study in FY'21. Launch e-bike share in FY'21. Consider launching Vision Zero in FY'21. Non-SOV mode share increases. Annual # of crashes decreases.	Technical Services	Review and approve ordinance changes related to projects.	Implemented first phase of Winooski Corridor Study in fall 2020. Commission approved bicycle-friendly ordinance changes in February 2021. E-bike share launching May 2021. Coordinated with GMT with their ongoing fare free service during the pandemic.
18	Transition solid waste collection system for garbage, recycling and organics to a more integrated system		✓	✓	Complete consolidated collection study (including evaluation of a municipally operated model) and get City Council direction in FY'21.	Maintenance	Review study and recommend approval to City Council.	Completed Consolidated Collection review with consultant GBB. Recently completed analysis of a municipally operated system. Now we will be seeking Commission and Council recommendation for path forward.
19	Implement Phase I of Clean Water Resiliency Plan capital upgrades in FY'21	✓			Complete upgraded programmable logic control (PLC) system and disinfection system at WWTPs. Initiate construction of Green Stormwater Infrastructure and pump station upgrades in FY'21.	Water Resources	Recommend approval of CWRP borrowing to City Council.	Commission recommended approval of CWRP borrowing. PLC and disinfection system upgrades complete at WWTPs. South End GSI and two pump station upgrades will be constructed CY'21.
20	Restart and complete rate study and get Council approval for updated rate structure for Water, Wastewater and Stormwater utilities	✓	✓		Develop options for rates / incentives / programs for public review. Council decides on new rate structure by April 2021 for FY'22 budgeting. Postponed due to COVID. Considering how to advance in FY21 given COVID financial impact to customers who may be impacted by rate structural changes	Water Resources	Review proposed rate structure, recommend to Council	Commission provided initial input at January 2021 meeting. Staff seeking Commission recommendation for Council approval at April 2021 meeting.
21	Advance second phase of Water Resources staffing plan for increased operational sustainability	✓	✓		Advance second phase of WR Re-org with proposed hiring of Customer Care II, Water Resources Technician, and WW Operator in Training.	Water Resources		In process. Hired Customer Care II. Hired Water Resources Technician as limited service position. Developing plan for remaining positions.
22	Complete Integrated Water Quality Management Plan for how City will meet its Clean Water Act regulatory obligations and its local water quality priorities & begin implementation	✓		✓	Completion of interim project milestones such as: Wet weather/stormwater master plan, selection of high priority projects, completion of financial capability analysis.	Water Resources	Review and provide feedback on final draft of Integrated Plan	Commission provided input at July 2020 meeting. Staff finalizing plan with VT Dept of Environmental Conservation.
23	Improve process for customer requests related to transportation, traffic calming, and parking regulations	✓	✓	✓	Reduce outstanding traffic calming requests and reduce time to resolution and closing customer requests in SeeClickFix.	Technical Services, Administration	Consider potential process changes for evaluating requests.	Commission provided input on draft Traffic Calming program at September 2020 meeting. Staff has taken input and updated Traffic Calming program and procedures.

PLEASE MOVE ALL BASKETBALL HOOPS OFF THE SIDE OF THE ROAD FOR SWEEPING

Street	From	To
Algird Street	North Avenue	Vesthaven Drive
Arlington Court	Heineberg Road	Heineberg Road
Barley Road	North Avenue	Plattsburg Avenue
Bennington Court	Saratoga Avenue	End of Street
Billings Court	Van Patten Parkway	End of Street
Birch Court	North Avenue	End of Street
Blondin Circle	Lopes Avenue	End of Street
Borestone Lane	River's Edge Drive	River's Edge Drive
Brandywine Street	Village Green	Saratoga Avenue
Brook Drive	Van Patten Parkway	Rockland Street
Cayuga Court	North Avenue	Dorset Lane
Charity Street	Randy Lane	Gazo Avenue
Clover Lane	Turf Road	Barley Road
Dorset Lane	Birch Court	Cayuga Court
Edgemoor Drive	North Avenue	End of Street
Ethan Allen Parkway	North Avenue	Gazo Avenue
Fairmont Place	North Avenue	End of Street
Faith Street	James Avenue	Gazo Avenue
Farrington Parkway	Gosse Court	Ethan Allen Parkway
Forest Street	North Avenue	North View Drive
Franklin Square	North Ave	Franklin Square
Franklin Square (Loop)	South and East side	
Gazo Avenue	Sandra Circle	Ethan Allen Parkway
Gosse Court	North Avenue	Farrington Parkway
Hale Court	Saratoga Avenue	End of Street
Heineberg Road	North Avenue	Farrington Parkway
Hope Street	James Avenue	Gazo Avenue
James Avenue	Ethan Allen Parkway	Sandra Circle
Janet Circle	James Avenue	James Avenue
Lopes Avenue	Roseade Parkway	Ethan Allen Parkway
Lori Lane (Including Loop)	Entire Street	
Marshall Drive	Gosse Court	Heineberg Road
Meridian Street	Sunset Drive	Venus Avenue
Moore Court	Moore Drive	End of Street
Moore Drive	Ethan Allen Parkway	Moore Court
Morgan Street	North Avenue	Vesthaven Drive
Morill Drive	Van Patten Parkway	Van Patten Parkway
North Avenue (East Side Only)	North Cove Road	Institute Road
Northview Drive	North Avenue	River's Edge Drive
Pennington Drive	North Avenue	Vesthaven Drive
Plattsburg Avenue	North Avenue	Sunset Drive
Poirier Place	North Avenue	Heineberg Road
Randy Lane	Hope Street	Lori Lane
Revere Court	Saratoga Avenue	End of Street
Rivermount Terrace	Saratoga Avenue	Van Patten Parkway
River's Edge Drive	North View Drive	Plattsburg Avenue
Rockland Street	Van Patten Parkway	Temple Street
Roseade Parkway	Lopes Avenue	Sandy Lane
Sandra Circle	Gazo Avenue	Matthew Avenue
Sandy Lane	Lopes Avenue	Ethan Allen Parkway
Saratoga Avenue	North Avenue	Rivermount Terrace
Sky Drive	Sunset Drive	Meridian Street
Sunset Drive	Plattsburg Avenue	Meridian Street
Temple Street	Rockland Street	End of Street
Turf Road	Barley Road	Plattsburg Avenue
Valade Park	Sunset Drive	Valade Street
Van Patten Parkway	Village Green	Rockland Street
Venus Avenue	Sunset Drive	End of Street
Vesthaven Drive	Morgan Street	End of Street
Village Green	North Avenue	Saratoga Avenue
Woods Street	North Avenue	North View Drive



STREET SWEEPING ZONE B

g to the
side only!
od?

cars must be off all
is map. Parking ban

able at the following city lots
until 9AM April 30, 2021: Cherry
St), College Street Garage (60
Garage (Entrances on Cherry &

ke it possible for the Department of Public
sweeping the streets of your neighborhood!

ll 658-7669 or 863-9094 x3, or visit our website at
ow.

ARE HIGHLIGHTED WILL BE SWEPT* (See back for listings)
E OF NORTH AVENUE ONLY – NOT BOTH SIDES*

INSTITUTE RD

Map details: The map shows a coastal area with streets such as North Avenue, West Road, and various residential streets. A red line indicates the 'STREET SWEEPING ZONE B'. Text overlays include: 'STREET SWEEPING ZONE B', 'cars must be off all is map. Parking ban', 'able at the following city lots until 9AM April 30, 2021: Cherry St), College Street Garage (60 Garage (Entrances on Cherry &', 'ke it possible for the Department of Public sweeping the streets of your neighborhood!', 'll 658-7669 or 863-9094 x3, or visit our website at ow.', 'ARE HIGHLIGHTED WILL BE SWEPT* (See back for listings)', 'E OF NORTH AVENUE ONLY – NOT BOTH SIDES*', and 'INSTITUTE RD'.

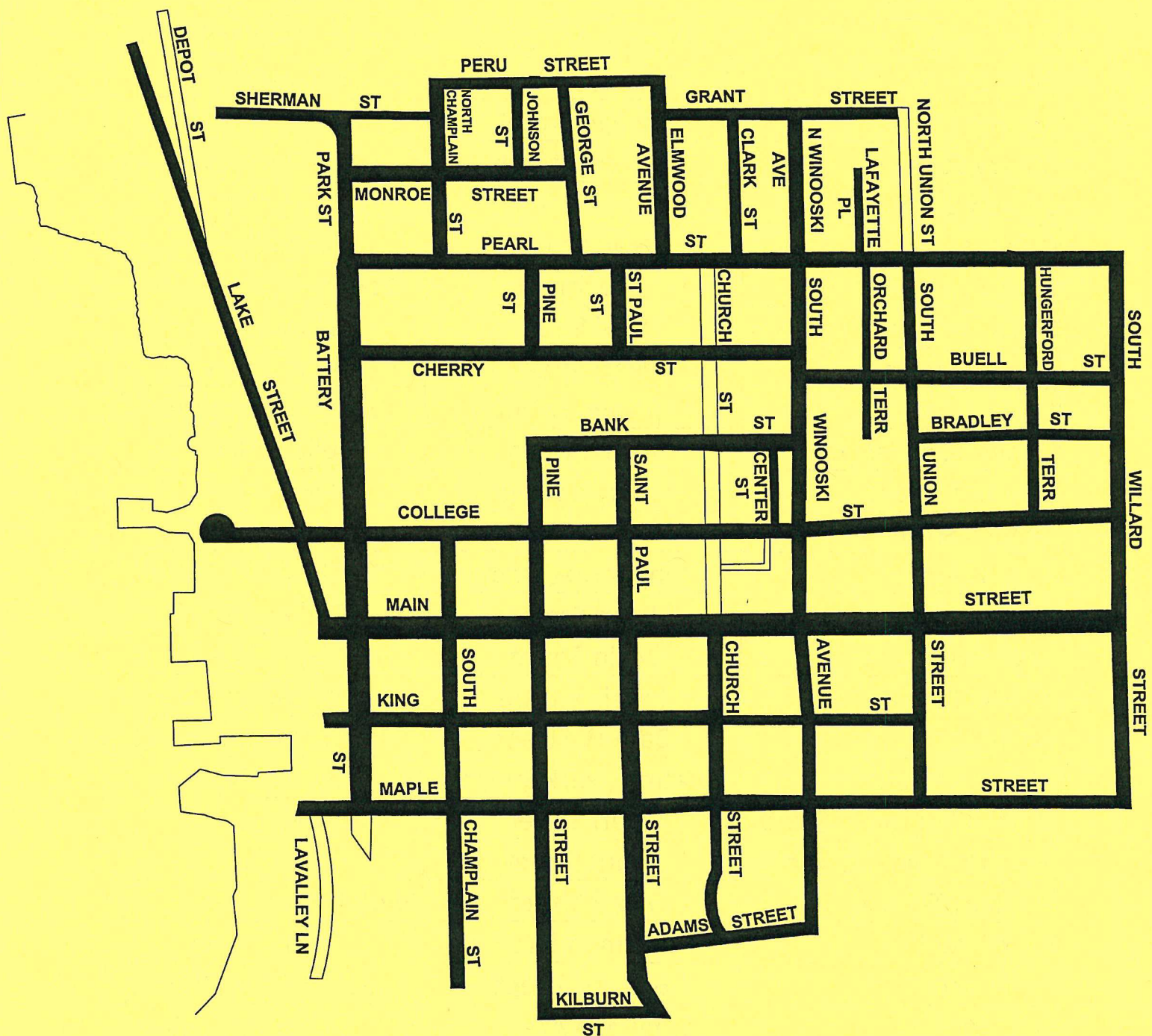
PLEASE MOVE ALL BASKETBALL HOOPS OFF THE SIDE OF THE ROAD FOR SWEEPING

Street	From	To
Alexis Drive	Appletree Point Road	Stirling Place
Appletree Point Lane	Staniford Farms Road	End of Street
Appletree Point Road	Staniford Road	Nottingham Lane
Balsam Street	Shore Road	Brierwood Lane
Beachcrest Drive	Oakcrest Drive	End of Street
Birchwood Lane	Lakewood Parkway	Woodridge Drive
Brierwood Lane	Shore Road	Dale Road
Browe Court	North Avenue	End of Street
Cottage Grove	Loaldo Drive	Grey Meadow Drive
Crescent Beach Drive	Shore Road	Ridgewood Drive
Cross Parkway	North Avenue	End of Street
Cumberland Road (Including Loops)	Appletree Point Road	End of Street
Curtis Avenue	Starr Farm Road	Starr Farm Road
Dale Road	Brierwood Lane	End of Street
Derway Drive	North Avenue	Hardy Drive
Dewey Drive	North Avenue	Edson Street
Dodds Court (Including Loop)	North Avenue	Ivy Lane
Driftwood Lane	Beachcrest Drive	Street Corner
Edinborough Drive	Cumberland Road	Muirfield Road
Fairfield Drive	North Avenue	End of Street
Fern Street	Ivy Lane	Brierwood Lane
Glenwood Lane	Shore Road	Wildwood Drive
Green Acres Drive	North Avenue	Cottage Grove
Grey Meadow Drive (Including Spur)	Cottage Grove	Starr Farm Road
Hardy Drive	Derway Drive	Westward Drive
Holly Lane	Shore Road	Wildwood Drive
Institute Road	Burlington High School	North Avenue
Ivy Lane	Dodds Court	Fern Street
Killarney Drive	North Avenue	End of Street
Lakewood Parkway	Beachcrest Drive	Woodridge Drive/North Avenue
Laurel Court	Shore Road	End of Street
Leddy Park Road (Including Loop)	North Avenue	End of Street
Leonard Street	North Avenue	End of Street
Little Eagle Bay	North Avenue	End of Street
Loaldo Drive	North Avenue	Green Acres Drive
Muirfield Road	Appletree Point Road	Nottingham Lane
North Avenue (West Side Only)	North Cove Road	Institute Road
Northgate Road (Including Loop)	North Avenue	End of Street
Nottingham Lane	Appletree Point Road	End of Street
Oakcrest Drive	Tallwood Lane	Beachcrest Drive
Oakland Terrace	Staniford Road	York Drive
Pleasant Avenue	Starr Farm Road	Starr Farm Road
Ridgewood Drive	Shore Road	Crescent Beach Drive
Shore Road	North Avenue	Crescent Beach Drive
Simms Street	North Avenue	End of Street
Stanbury Road	Staniford Road	Dale Road
Staniford Farms Road	Appletree Point Road	End of Street
Staniford Road	North Avenue	Appletree Point Road
Starr Farm Road	North Avenue	Curtis Avenue
Stirling Place	Shore Road	End of Street
Surf Road	Crescent Beach Drive	End of Street
Tallwood Lane	Lakewood Parkway	Woodridge Drive
Tracy Drive	North Avenue	Grey Meadow Drive
Vine Street	Shore Road	Brierwood Lane
West Road	North Avenue	End of Street
Western Avenue	Staniford Road	York Drive
Westminster Drive	Appletree Point Road	Nottingham Lane
Westward Drive	North Avenue	Northshore Drive
Wildwood Drive	Shore Road	Dale Road
Wing Street	Dewey Drive	Simms Street
Woodbury Road	North Avenue	Stanbury Road
Woodlawn Road	North Avenue	Stanbury Road
Woodridge Drive	Lakewood Parkway	Tallwood Lane

STREET SWEEPING ZONE F



CLEAN SWEEP is coming to the Downtown area! *Is that your neighborhood?*



From 12AM May 2, 2021 until 6AM May 2, 2021, cars must be off all highlighted streets on this map. Parking ban lights will be on.

Free parking will be available at the following city lots from 7PM May 1, 2021 until 9AM May 2, 2021: Cherry Street Garage (45 Cherry St), College Street Garage (60 College St), Marketplace Garage (Entrances on Cherry & Bank St).

Your cooperation will make it possible for the Department of Public Works to go a great job sweeping the streets of your neighborhood!

Any questions? Please call 658-7669 or 863-9094 x3, or visit our website at www.burlingtonvt.gov/dpw.

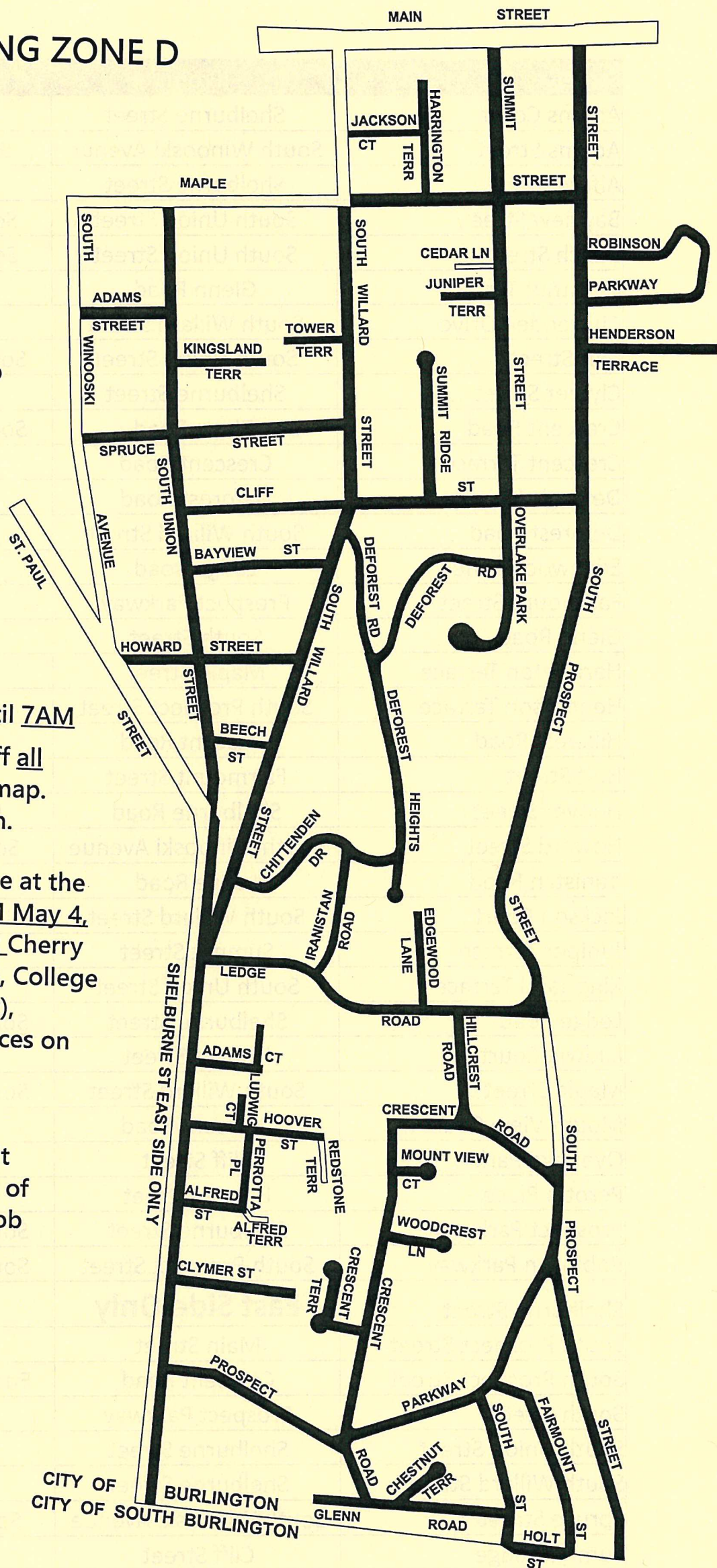
ONLY STREETS THAT ARE HIGHLIGHTED WILL BE SWEEP (See back for listings)

PLEASE MOVE ALL BASKETBALL HOOPS OFF THE SIDE OF THE ROAD FOR SWEEPING

Street	From	To
Adams Street	St. Paul Street	South Winooksi Avenue
Bank Street	Pine Street	South Winooksi Avenue
Battery Street	Pearl Street	Maple Street
Bradley Street	South Union Street	South Willard Street
Buell Street	South Winooksi Avenue	South Willard Street
Center Street	College Street	Bank Street
Cherry Street	Battery Street	South Winooksi Avenue
Church Street	Main Street	Adams Street
Clark Street	Pearl Street	Grant Street
College Street	Lake Street	South Willard Street
Elmwood Avenue	Pearl Street	Peru Street
George Street	Pearl Street	Peru Street
Grant Street	Elmwood Avenue	North Union Street
Hungerford Terrace	Pearl Street	College Street
Johnson Street	Monroe Street	Peru Street
Kilburn Street	Pine Street	St. Paul Street
King Street	King Street Dock	South Union Street
Lafayette Place	Pearl Street	End of Street
Lake Street	Main Street	Depot Street
Maple Street	Lavalley Lane	South Willard Street
Main Street	Battery Street	South Willard Street
Monroe Street	Battery/Park Street	George Street
North Champlain Street	Pearl Street	Peru Street
North Winooksi Avenue	Grant Street	Pearl Street
Orchard Terrace	Pearl Street	End of Street (by Co-op)
Park Street	Sherman Street	Pearl Street
Pearl Street	Battery Street	South Willard Street
Peru Street	Elmwood Avenue	North Champlain Street
Pine Street	Pearl Street	Cherry Street
Pine Street	Bank Street	Kilburn Street
Sherman Street	North Champlain Street	End of Street
South Champlain Street	College Street	End of Street
South Union Street	Pearl Street	Maple Street
South Willard Street	Pearl Street	Maple Street
(BOTH SIDES)		Maple Street
South Winooksi Avenue	Pearl Street	Adams Street
St. Paul Street	Pearl Street	Cherry Street
St. Paul Street	Bank Street	Adams Street

Street	From	To
Allen Street	Elmwood Avenue	Murray Street
Archibald Street	North Willard Street	Spring Street
Berry Street	North Avenue	Lakeview Terrace
Blodgett Street	Ward Street	North Street
Booth Street	North Street	Loomis Street
Bright Street	Riverside Avenue	Archibald Street
Canfield Street	North Avenue	Lakeview Terrace
Cedar Street	Elmwood Avenue	North Champlain Street
Charles Street	North Willard Street	Russell Street
Cloarec Court	Intervalle Avenue	End of Street
Convent Square	North Avenue	Washington Street
Converse Court	Hickok Place	End of Street
Crombie Street	North Winooksi Avenue	Intervalle Avenue
Crowley Street	North Avenue	End of Street
Decatur Street	North Winooksi Avenue	Intervalle Avenue
Depot Street	Parking Lot	Lake Street
Drew Street	Ward Street	North Street
Elmwood Avenue	Spring Street	Grant Street
Front Street	North Street	End of Street
Green Street	Loomis Street	Pearl Street
Haswell Street	North Avenue	Lakeview Terrace
Hickok Place	North Union Street	Isham Street
Hyde Street	North Street	North Willard Street
Intervalle Avenue	North Street	Manhattan Drive
Isham Street	Loomis Street	Hickok Place
LaFountain Street	Manhattan Drive	North Street
Lake Street	Depot Street	Stop Sign
Lakeview Terrace	Berry Street	Burlington College Parking Lot
Loomis Street	North Union Street	North Willard Street
Luck Street	Intervalle Avenue	St Louis Street
Manhattan Drive	Washington Street	Intervalle Avenue
Murray Street	North Street	Peru Street
Myrtle Street	North Champlain Street	Park Street
North Avenue	Sherman Street	Convent Square
North Champlain Street	Manhattan Drive	Peru Street
North Street	North Willard Street	North Avenue
North Union Street	Pearl Street	North Winooksi Avenue
North Winooksi Avenue	Riverside Avenue	Grant Street
Oak Street	Manhattan Drive	Intervalle Avenue
Park Street	Manhattan Drive	Sherman Street
Pitkin Street	Manhattan Drive	North Street
Pomeroy Street	North Willard Street	Hyde Street
Poplar Street	North Champlain Street	Park Street
Riverside Avenue	Hyde Street	Intervalle Avenue
Rose Street	Manhattan Drive	North Street
Russell Street	Charles Street	North Street
School Street	Loomis Street	Hyde Street
Spring Street	Intervalle Avenue	Manhattan Drive
St Louis Street	Manhattan Drive	Oak Street
St Louis Street	Willow Street	Archibald Street
St Mary Street	Willow Street	Manhattan Drive
Strong Street	Pitkin Street	North Avenue
Summer Street	Front Street	Park Street
Sunset Court	North Avenue	End of Street
Voltz Street	Manhattan Drive	End of Street
Walnut Street	Manhattan Drive	Spring Street
Ward Street	Manhattan Drive	North Avenue
Washington Street	Manhattan Drive	North Avenue
Willow Street	Walnut Street	Intervalle Avenue

***ONLY STREETS THAT ARE HIGHLIGHTED WILL BE SWEEPED* (See back for listings)**
PLEASE MOVE ALL BASKETBALL HOOPS OFF THE SIDE OF THE ROAD FOR SWEEPING

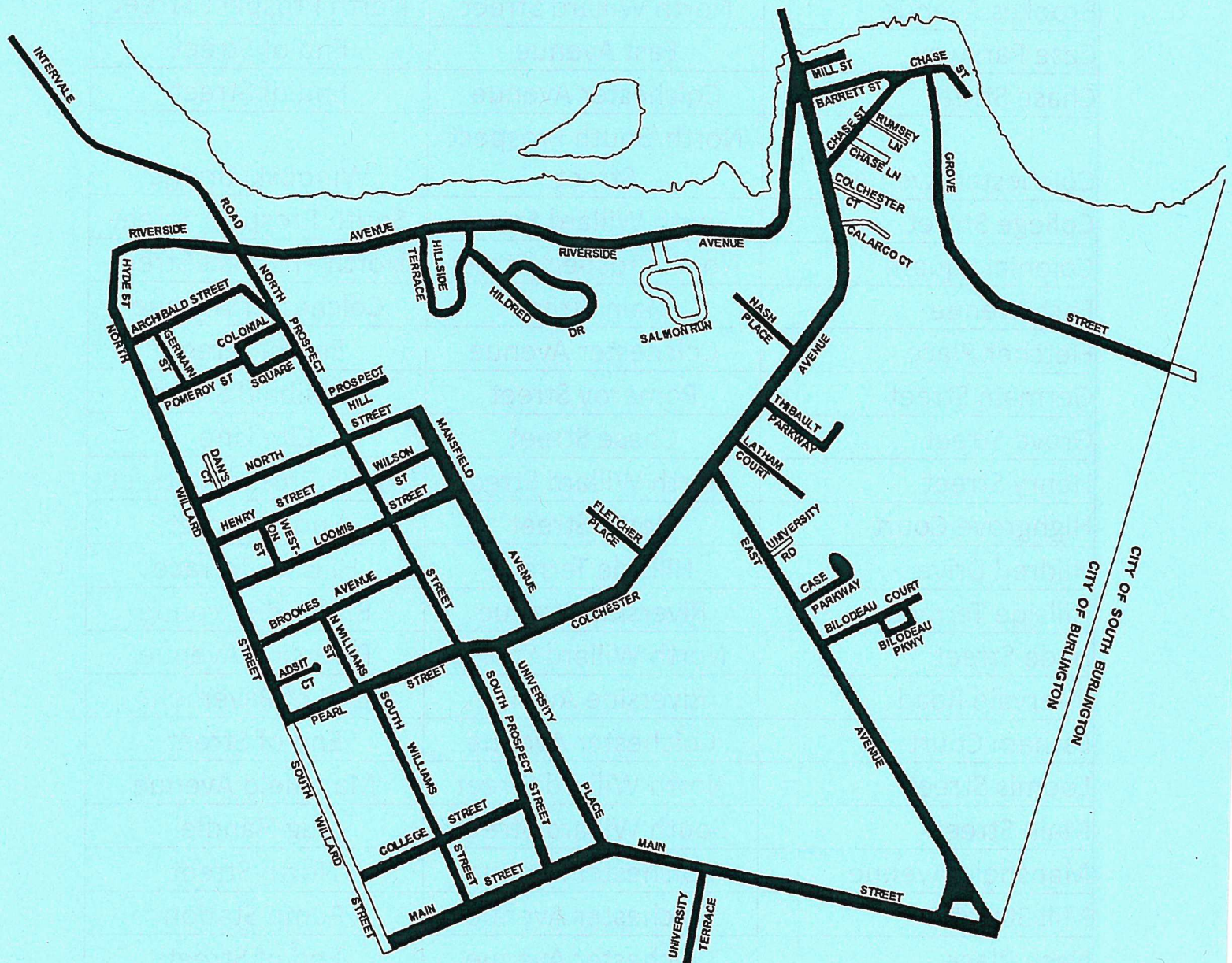


Street	From	To
Adams Court	Shelburne Street	End of Street
Adams Street	South Winooksi Avenue	South Union Street
Alfred Street	Shelburne Street	Perotta Place
Bayview Street	South Union Street	South Willard Street
Beech Street	South Union Street	South Willard Street
Chestnut Terrace	Glenn Road	End of Street
Chittenden Drive	South Willard Street	Deforest Heights
Cliff Street	South Union Street	South Prospect Street
Clymer Street	Shelburne Street	End of Street
Crescent Road	Glenn Road	South Prospect Street
Crescent Terrace	Crescent Road	End of Street
Deforest Heights	Deforest Road	End of Street
Deforest Road	South Willard Street	Overlake Park
Edgewood Lane	Ledge Road	End of Street
Fairmount Street	Prospect Parkway	Rice High School
Glenn Road	South Street	End of Street
Harrington Terrace	Maple Street	End of Street
Henderson Terrace	South Prospect Street	End of Street
Hillcrest Road	Crescent Road	Ledge Road
Holt Street	Fairmount Street	South Street
Hoover Street	Shelburne Road	Redstone Terrace
Howard Street	South Winooksi Avenue	South Willard Street
Iranistan Road	Ledge Road	Chittenden Drive
Jackson Court	South Willard Street	Harrington Terrace
Juniper Terrace	Summit Street	End of Street
Kingsland Terrace	South Union Street	End of Street
Ledge Road	Shelburne Street	South Prospect Street
Ludwig Court	Hoover Street	End of Street
Maple Street	South Willard Street	South Prospect Street
Mount View Court	Crescent Road	End of Street
Overlake Park	Cliff Street	End of Street
Perotta Place	Hoover Street	Alfred Street
Prospect Parkway	Shelburne Street	South Prospect Street
Robinson Parkway	South Prospect Street	South Prospect Street
Shelburne Street	East Side Only	
South Prospect Street	Main Street	Ledge Road
South Prospect Street	Crescent Road	End of Street (by Rice)
South Street	Prospect Parkway	Holt Street
South Union Street	Shelburne Street	Maple Street
South Willard Street	Shelburne Street	Maple Street
Spruce Street	South Winooksi Avenue	South Willard Street
Summit Ridge	Cliff Street	End of Street
Summit Street	Main Street	Overlake Park
Tower Terrace	South Willard Street	End of Street
Woodcrest Lane	Crescent Road	End of Street

STREET SWEEPING ZONE E



CLEAN SWEEP is coming to the University area! Is that your neighborhood?



From 10PM May 5, 2021 until 7AM May 6, 2021 cars must be off all highlighted streets on this map. Parking ban lights will be on.

Free parking will be available at the following city lots from 7PM May 5, 2021 until 9AM May 6, 2021: Cherry Street Garage (45 Cherry St), College Street Garage (60 College St), Marketplace Garage (Entrances on Cherry & Bank St).

Your cooperation will make it possible for the Department of Public Works to go a great job sweeping the streets of your neighborhood!

Any questions? Please call 658-7669 or 863-9094 x3, or visit our website at www.burlingtonvt.gov/dpw.

ONLY STREETS THAT ARE HIGHLIGHTED WILL BE SWEEPED (See back for listings)

PLEASE MOVE ALL BASKETBALL HOOPS OFF THE SIDE OF THE ROAD FOR SWEEPING

Street	From	To
Adsit Court	North Willard Street	End of Street
Archibald Street	North Willard Street	North Prospect Street
Barrett Street	Colchester Avenue	Chase Street
Bilodeau Court	East Avenue	End of Street
Bilodeau Parkway	Bilodeau Court	North Prospect Street
Brookes Avenue	North Willard Street	North Prospect Street
Case Parkway	East Avenue	End of Street
Chase Street	Colchester Avenue	End of Street
Colchester Avenue	North/South Prospect Street	Winooski Bridge
College Street	South Willard Street	South Prospect Street
Colonial Square	North Prospect Street	North Prospect Street
East Avenue	Main Street	Colchester Avenue
Fletcher Place	Colchester Avenue	End of Street
Germain Street	Pomeroy Street	Archibald Street
Grove Street	Chase Street	City Line
Henry Street	North Willard Street	North Prospect Street
Highbrook Court	North Street	End of Street
Hilbred Drive	Hillside Terrace	Hillside Terrace
Hillside Terrace	Riverside Avenue	Riverside Avenue
Hyde Street	North Willard Street	Riverside Avenue
Intervale Road	Riverside Avenue	End of Pavement
Latham Court	Colchester Avenue	End of Street
Loomis Street	North Willard Street	Mansfield Avenue
Main Street	South Willard Street	Jug Handle
Mansfield Avenue	Colchester Avenue	North Street
Mill Street	Colchester Avenue	Pump Station
Nash Place	Colchester Avenue	End of Street
North Prospect Street	Pearl Street	Riverside Avenue
North Street	North Willard Street	Mansfield Avenue
North Willard Street	Pearl Street	Hyde Street
North Williams Street	Pearl Street	Brookes Avenue
Pearl Street	South Willard Street	South Prospect Street
Pomeroy Street	North Willard Street	Colonial Square
Prospect Hill	North Prospect Street	End of Street
Riverside Avenue	Hyde Street	Winooski Bridge
South Prospect Street	Main Street	Pearl Street
South Williams Street	Main Street	Pearl Street
Thibault Parkway	Colchester Avenue	End of Street
University Place	Main Street	Colchester Avenue
University Terrace	Main Street	End of Street
Weston Street	Loomis Street	Henry Street
Wilson Street	North Prospect Street	Mansfield Avenue



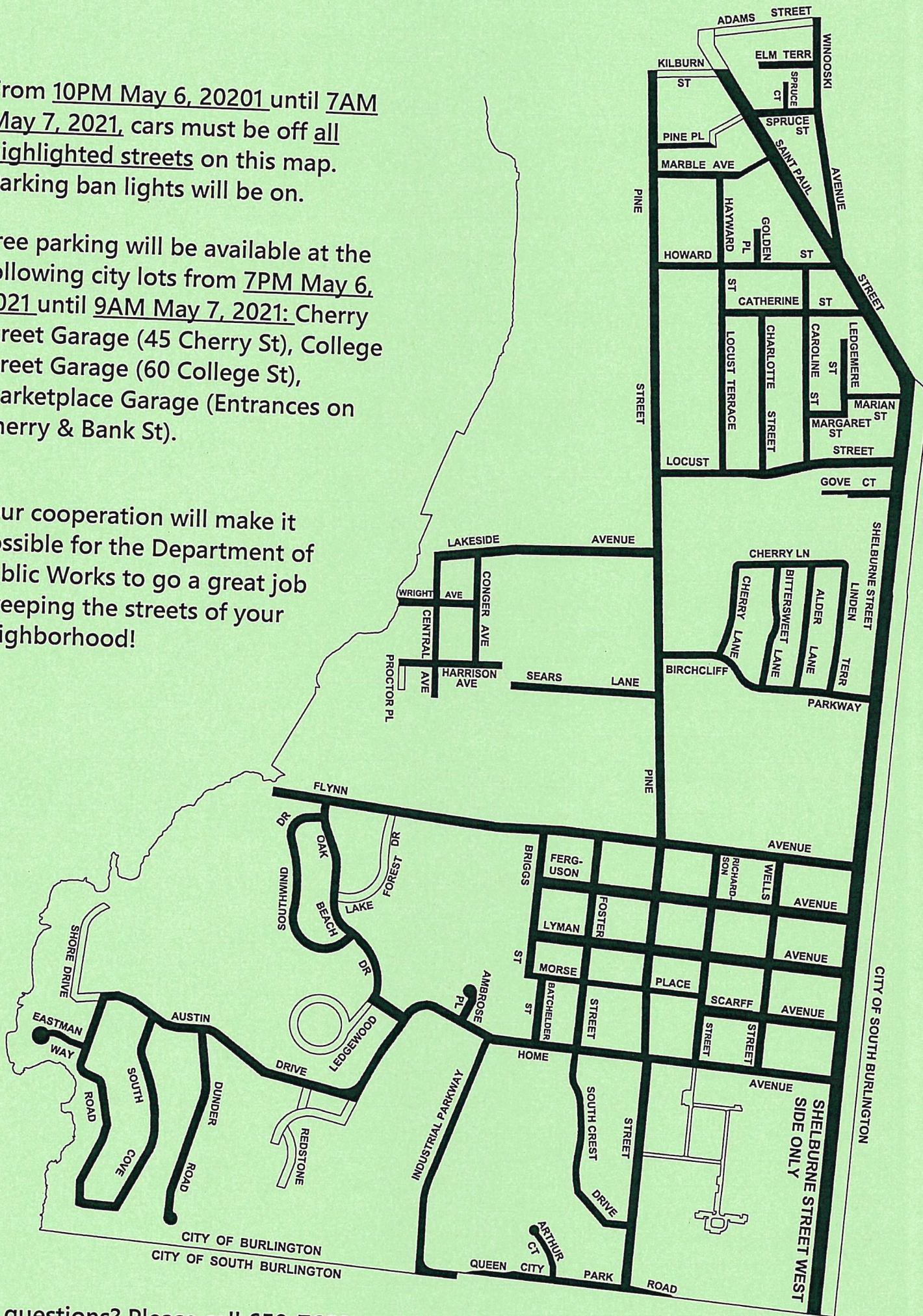
STREET SWEEPING ZONE C

CLEAN SWEEP is coming to the South End!
Is that your neighborhood?

From 10PM May 6, 2021 until 7AM May 7, 2021, cars must be off all highlighted streets on this map. Parking ban lights will be on.

Free parking will be available at the following city lots from 7PM May 6, 2021 until 9AM May 7, 2021: Cherry Street Garage (45 Cherry St), College Street Garage (60 College St), Marketplace Garage (Entrances on Cherry & Bank St).

Your cooperation will make it possible for the Department of Public Works to go a great job sweeping the streets of your neighborhood!



Any questions? Please call 658-7669 or 863-9094 x3, or visit our website at www.burlingtonvt.gov/dpw.

ONLY STREETS THAT ARE HIGHLIGHTED WILL BE SWEEP (See back for listings)
PLEASE MOVE ALL BASKETBALL HOOPS OFF THE SIDE OF THE ROAD FOR SWEEPING

Street	From	To
Alder Lane	Birchcliff Parkway	Cherry Lane
Arthur Court	Queen City Park Road	End of Street
Austin Drive	Industrial Parkway	South Cove Drive
Batchelder Street	Morse Place	Home Avenue
Birchcliff Parkway	Shelburne Street	Pine Street
Bittersweet Lane	Birchcliff Parkway	Cherry Lane
Briggs Street	Flynn Avenue	Morse Place
Caroline Street	Howard Street	Locust Street
Catherine Street	St. Paul Street	Locust Terrace
Central Avenue	Lakeside Avenue	End of Street
Charlotte Street	Catherine Street	Locust Street
Cherry Lane	Birchcliff Parkway	Linden Terrace
Conger Avenue	Lakeside Avenue	Harrison Avenue
Dunder Road	Austin Drive	End of Street
Eastman Way	South Cove Road	End of Street
Elm Terrace	South Winooksi Avenue	End of Street
Ferguson Avenue	Shelburne Street	Briggs Street
Flynn Avenue	Shelburne Street	Oakledge Park Gate
Foster Street	Flynn Avenue	Home Avenue
Golden Plave	Howard Street	End of Street
Gove Court	Shelburne Street	End of Street
Harrison Avenue	Proctor Avenue	End of Street
Hayward Street	Marble Avenue	Catherine Street
Home Avenue	Shelburne Street	Industrial Parkway
Howard Street	St. Paul Street	Pine Street
Industrial Parkway	Home Avenue	Queen City Park Road
Lakeside Avenue	Pine Street	Central Avenue
Ledgemere Street	Margaret Street	End of Street
Linden Terrace	Birchcliff Parkway	Cherry Lane
Locust Street	Shelburne Road	Pine Street
Locust Terrace	Catherine Street	Locust Street
Lyman Avenue	Shelburne Street	Briggs Street
Marble Avenue	St. Paul Street	Pine Street
Margaret Street	Ledgemere Street	Caroline Street
Marian Street	Shelburne Street	Ledgemere Street
Morse Place	Richardson Street	Briggs Street
Oak Beach Drive (Not Including Loop)	Flynn Avenue	Austin Drive
Pine Place	Pine Street	End of Pavement
Pine Street	Kilburn Street	Queen City Park Road
Queen City Park Road	Shelburne Road	Industrial Parkway
Richardson Street	Flynn Avenue	Home Avenue
Scarf Avenue	Shelburne Street	Richardson Street
Sears Lane	Pine Street	End of Street
Shelburne Street (West Side Only)	St. Paul Street	Queen City Park Road
South Cove Road	Austin Drive	Austin Drive
South Crest Drive	Home Avenue	Pine Street
Southwind Drive	Oak Beach Drive	Oak Beach Drive
South Winooksi Avenue	Adams Street	St. Paul Street
Spruce Court	Spruce Street	End of Street
Spruce Street	St. Paul Street	South Winooksi Avenue
St. Paul Street	Kilburn Street	Shelburne Street
Wells Street	Flynn Avenue	Home Avenue
Wright Avenue	Conger Avenue	End of Street



ZONE A: 4/26, 10PM-7AM
NEW NORTH END - EAST
CLEAN SWEEP

DO YOU LIVE IN THIS
ZONE?

See back of flyer for the
streets in this zone

During Clean Sweep,
parking is not allowed on-
street in your zone during
the ban. Cars left on
street are subject to a \$75
ticket and \$75 tow fee.

FREE overnight parking is
available in the
Downtown &
Marketplace Garages.

WHY CLEAN SWEEP

Lake Health
Preserve Infrastructure
A Beautiful City

Translations &
Interpreters Available



Your help will make Clean Sweep a success.



Questions? We're here to help.

802-863-9094

dpw-pinecustomerservice@burlingtonvt.gov

Garages, tickets, towing?

802-540-2380

ParkingServices@burlingtonvt.gov



burlingtonvt.gov/dpw

Street	From	To
Algird Street	North Avenue	Vesthaven Drive
Arlington Court	Heineberg Road	Heineberg Road
Barley Road	North Avenue	Plattsburg Avenue
Bennington Court	Saratoga Avenue	End of Street
Billings Court	Van Patten Parkway	End of Street
Birch Court	North Avenue	End of Street
Blondin Circle	Lopes Avenue	End of Street
Borestone Lane	River's Edge Drive	River's Edge Drive
Brandywine Street	Village Green	Saratoga Avenue
Brook Drive	Van Patten Parkway	Rockland Street
Cayuga Court	North Avenue	Dorset Lane
Charity Street	Randy Lane	Gazo Avenue
Clover Lane	Turf Road	Barley Road
Dorset Lane	Birch Court	Cayuga Court
Edgemoor Drive	North Avenue	End of Street
Ethan Allen Parkway	North Avenue	Gazo Avenue
Fairmont Place	North Avenue	End of Street
Faith Street	James Avenue	Gazo Avenue
Farrington Parkway	Gosse Court	Ethan Allen Parkway
Forest Street	North Avenue	North View Drive
Franklin Square	North Ave	Franklin Square
Franklin Square (Loop)	South and Westside	
Gazo Avenue	Sandra Circle	Ethan Allen Parkway
Gosse Court	North Avenue	Farrington Parkway
Hale Court	Saratoga Avenue	End of Street
Heineberg Road	North Avenue	Farrington Parkway
Hope Street	James Avenue	Gazo Avenue
James Avenue	Ethan Allen Parkway	Sandra Circle
Janet Circle	James Avenue	James Avenue
Lopes Avenue	Roseade Parkway	Ethan Allen Parkway
Lori Lane (Including Loop)	Entire Street	
Marshall Drive	Gosse Court	Heineberg Road
Meridian Street	Sunset Drive	Venus Avenue
Moore Court	Moore Drive	End of Street
Moore Drive	Ethan Allen Parkway	Moore Court
Morgan Street	North Avenue	Vesthaven Drive
Morill Drive	Van Patten Parkway	Van Patten Parkway
North Avenue (East Side Only)	North Cove Road	Institute Road
Northview Drive	North Avenue	River's Edge Drive
Pennington Drive	North Avenue	Vesthaven Drive
Plattsburg Avenue	North Avenue	Sunset Drive
Poirier Place	North Avenue	Heineberg Road
Randy Lane	Hope Street	Lori Lane
Revere Court	Saratoga Avenue	End of Street
Rivermount Terrace	Saratoga Avenue	Van Patten Parkway
River's Edge Drive	North View Drive	Plattsburg Avenue
Rockland Street	Van Patten Parkway	Temple Street
Roseade Parkway	Lopes Avenue	Sandy Lane
Sandra Circle	Gazo Avenue	Matthew Avenue
Sandy Lane	Lopes Avenue	Ethan Allen Parkway
Saratoga Avenue	North Avenue	Rivermount Terrace
Sky Drive	Sunset Drive	Meridian Street
Sunset Drive	Plattsburg Avenue	Meridian Street
Temple Street	Rockland Street	End of Street
Turf Road	Barley Road	Plattsburg Avenue
Valade Park	Sunset Drive	Valade Street
Van Patten Parkway	Village Green	Rockland Street
Venus Avenue	Sunset Drive	End of Street
Vesthaven Drive	Morgan Street	End of Street
Village Green	North Avenue	Saratoga Avenue



**DO YOU LIVE IN THIS
ZONE?**

See back of flyer for the
streets in this zone

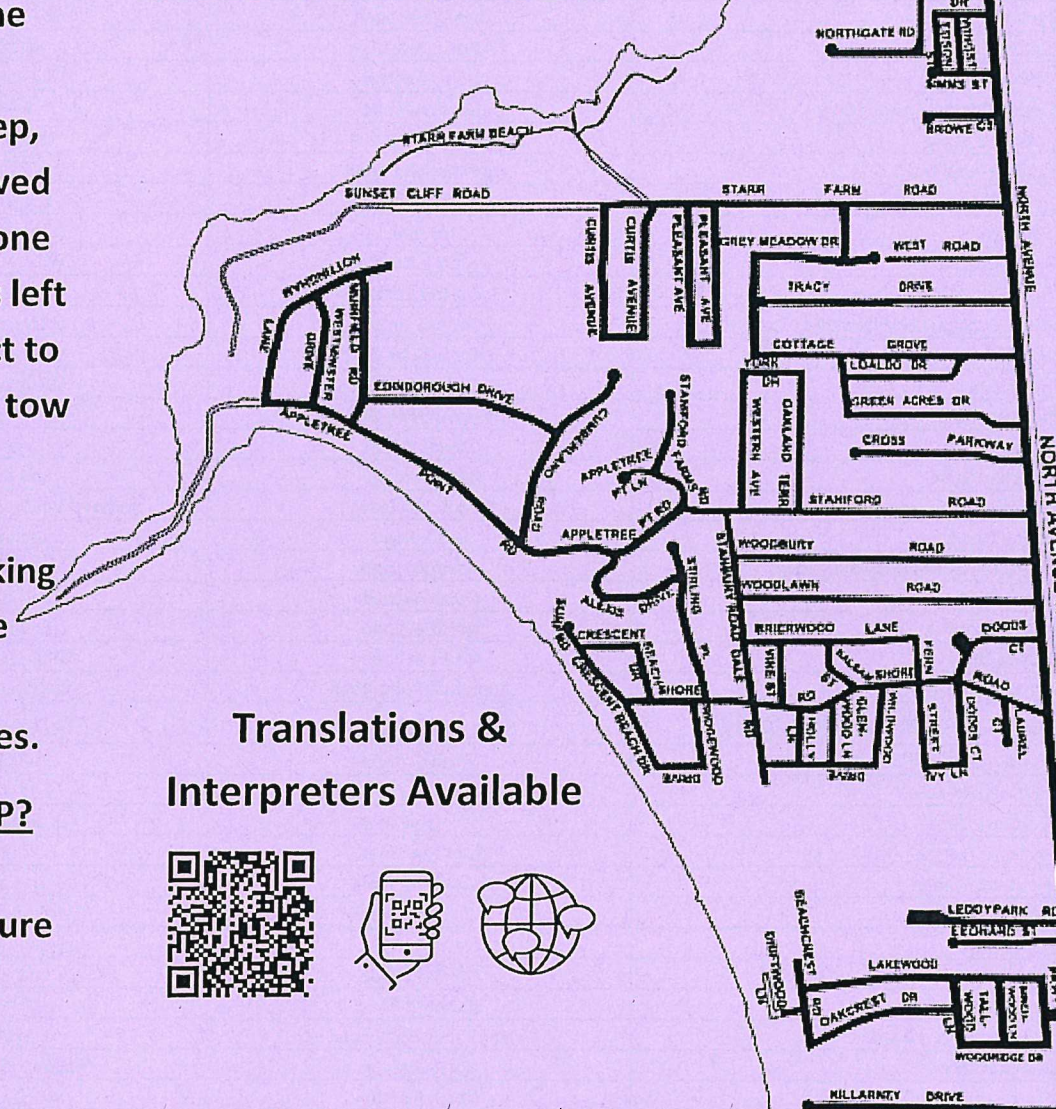
During Clean Sweep,
parking is not allowed
on-street in your zone
during the ban. Cars left
on street are subject to
a \$75 ticket and \$75 tow
fee.

FREE overnight parking
is available in the
Downtown &
Marketplace Garages.

WHY CLEAN SWEEP?

Lake Health
Preserve Infrastructure
A Beautiful City

**ZONE B: 4/27, 10PM-7AM
NEW NORTH END - WEST
CLEAN SWEEP**



**Translations &
Interpreters Available**



Your help will make Clean Sweep a success.



Questions? We're here to help.

802-863-9094

dpw-pinecustomerservice@burlingtonvt.gov

Garages, tickets, towing?

802-540-2380

ParkingServices@burlingtonvt.gov



burlingtonvt.gov/dpw

Street	From	To
Alexis Drive	Appletree Point Road	Stirling Place
Appletree Point Lane	Stanford Farms Road	End of Street
Appletree Point Road	Stanford Road	Nottingham Lane
Balsam Street	Shore Road	Brierwood Lane
Beachcrest Drive	Oakcrest Drive	End of Street
Birchwood Lane	Lakewood Parkway	Woodridge Drive
Brierwood Lane	Shore Road	Dale Road
Brove Court	North Avenue	End of Street
Cottage Grove	Loaldo Drive	Grey Meadow Drive
Crescent Beach Drive	Shore Road	Ridgewood Drive
Cross Parkway	North Avenue	End of Street
Cumberland Road (Including Loops)	Appletree Point Road	End of Street
Curtis Avenue	Starr Farm Road	Starr Farm Road
Dale Road	Brierwood Lane	End of Street
Derway Drive	North Avenue	Hardy Drive
Dewey Drive	North Avenue	Edson Street
Dodds Court (Including Loop)	North Avenue	Ivy Lane
Driftwood Lane	Beachcrest Drive	Street Corner
Edinborough Drive	Cumberland Road	Muirfield Road
Fairfield Dr	North Avenue	End of Street
Fern Street	Ivy Lane	Brierwood Lane
Glenwood Lane	Shore Road	Wildwood Drive
Green Acres Drive	North Avenue	Cottage Grove
Grey Meadow Drive (Including Spur)	Cottage Grove	Starr Farm Road
Hardy Drive	Derway Drive	Westward Drive
Holly Lane	Shore Road	Wildwood Drive
Institute Road	Burlington High School	North Avenue
Ivy Lane	Dodds Court	Fern Street
Killamey Drive	North Avenue	End of Street
Lakewood Parkway	Beachcrest Drive	Woodridge Drive/North Avenue
Laurel Court	Shore Road	End of Street
Leddy Park Road (Including Loop)	North Avenue	End of Street
Leonard Street	North Avenue	End of Street
Little Eagle Bay	North Avenue	End of Street
Loaldo Drive	North Avenue	Green Acres Drive
Muirfield Road	Appletree Point Road	Nottingham Lane
North Avenue (West Side Only)	North Cove Road	Institute Road
Northgate Road (Including Loop)	North Avenue	End of Street
Nottingham Lane	Appletree Point Road	End of Street
Oakcrest Drive	Talwood Lane	Beachcrest Drive
Oakland Terrace	Stanford Road	York Drive
Pleasant Avenue	Starr Farm Road	Starr Farm Road
Ridgewood Drive	Shore Road	Crescent Beach Drive
Shore Road	North Avenue	Crescent Beach Drive
Simms Street	North Avenue	End of Street
Stanbury Road	Stanford Road	Dale Road
Stanford Farms Road	Appletree Point Road	End of Street
Stanford Road	North Avenue	Appletree Point Road
Starr Farm Road	North Avenue	Curtis Avenue
Stirling Place	Shore Road	End of Street
Surf Road	Crescent Beach Drive	End of Street
Talwood Lane	Lakewood Parkway	Woodridge Drive
Tracy Drive	North Avenue	Grey Meadow Drive
Vine Street	Shore Road	Brierwood Lane
West Road	North Avenue	End of Street
Western Avenue	Stanford Road	York Drive
Westminster Drive	Appletree Point Road	Nottingham Lane
Westward Drive	North Avenue	Northshore Drive
Wildwood Drive	Shore Road	Dale Road
Wing Street	Dewey Drive	Simms Street
Woodbury Road	North Avenue	Stanbury Road
Woodlawn Road	North Avenue	Stanbury Road
Woodridge Drive	Lakewood Parkway	Talwood Lane
York Drive	Oakland Terrace	End of Street



ZONE H: 4/27, 10PM-7AM

NEW NORTH END - WEST

CLEAN SWEEP

DO YOU LIVE IN THIS ZONE?

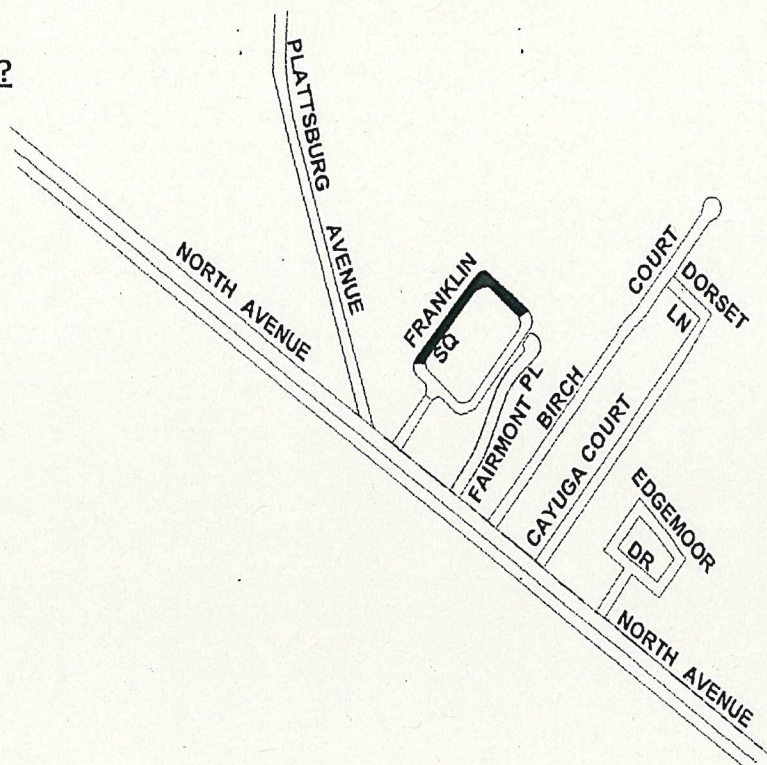
See back of flyer for the streets in this zone

During Clean Sweep, parking is not allowed on-street in your zone during the ban. Cars left on street are subject to a \$75 ticket and \$75 tow fee.

FREE overnight parking is available in the Downtown & Marketplace Garages.

WHY CLEAN

SWEEP? Lake Health
Preserve Infrastructure
A Beautiful City



Translations &
Interpreters Available



Your help will make Clean Sweep a success.



Questions? We're here to help.

802-863-9094

dpw-pinecustomerservice@burlingtonvt.gov

Garages, tickets, towing?

802-540-2380

ParkingServices@burlingtonvt.gov

burlingtonvt.gov/dpw



Street	From	To
Franklin Square	North and East side	





CLEAN SWEEP 2023

ZONE F: 5/1, 12MIDNIGHT-6AM

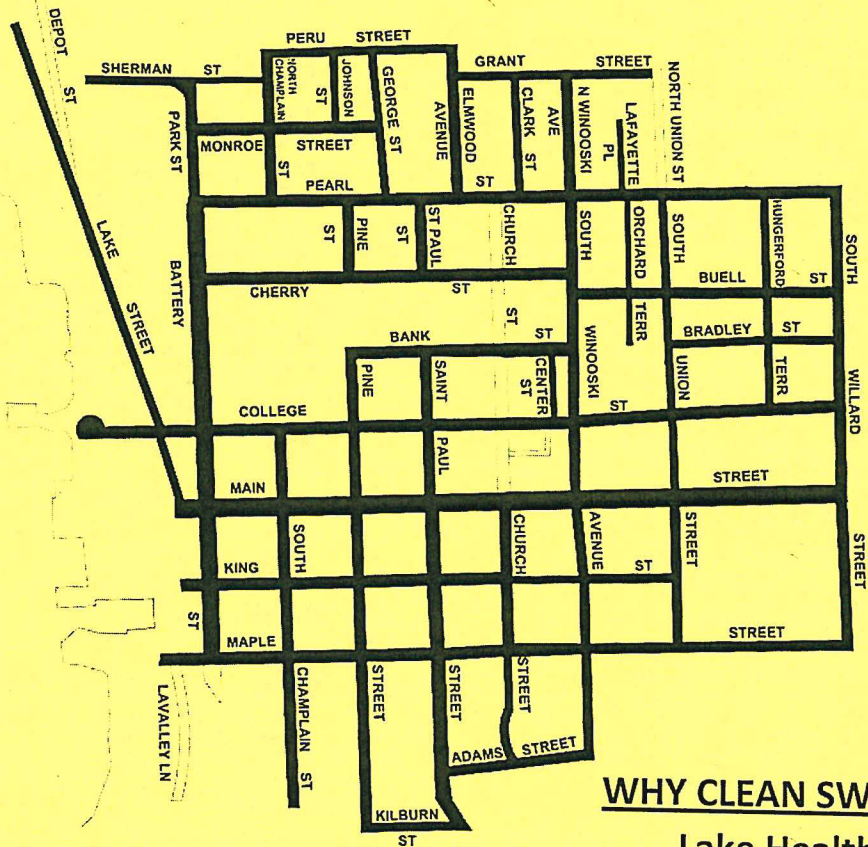
DOWNTOWN

DO YOU LIVE IN THIS ZONE?

See back of flyer for the streets in this zone

During Clean Sweep, parking is not allowed on-street in your zone during the ban. Cars left on street are subject to a \$75 ticket and \$75 tow fee.

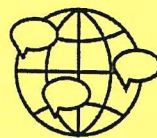
FREE overnight parking is available in the Downtown & Marketplace Garages.



WHY CLEAN SWEEP?

Lake Health
Better Infrastructure
A Beautiful City

**Translations &
Interpreters Available**



Your help will make Clean Sweep a success.



Questions? We're here to help.

802-863-9094

dpw-pinecustomerservice@burlingtonvt.gov

Garages, tickets, towing?

802-540-2380

ParkingServices@burlingtonvt.gov



burlingtonvt.gov/dpw

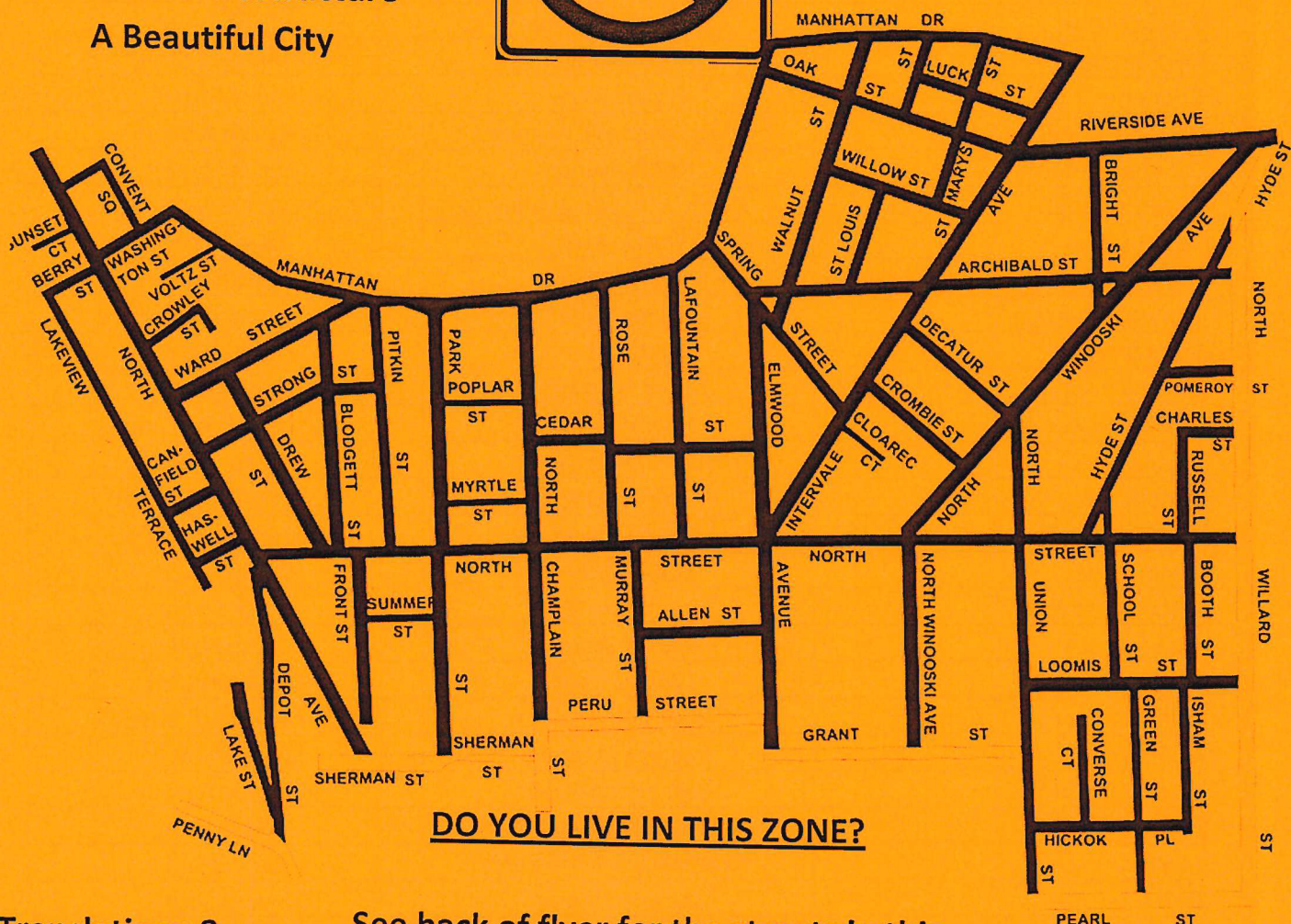
Street	From	To
Adams Street	St. Paul Street	South Winooksi Avenue
Bank Street	Pine Street	South Winooksi Avenue
Battery Street	Pearl Street	Maple Street
Bradley Street	South Union Street	South Willard Street
Buell Street	South Winooksi Avenue	South Willard Street
Center Street	College Street	Bank Street
Cherry Street	Battery Street	South Winooksi Avenue
Church Street	Main Street	Adams Street
Clark Street	Pearl Street	Grant Street
College Street	Lake Street	South Willard Street
Elmwood Avenue	Pearl Street	Peru Street
George Street	Pearl Street	Peru Street
Grant Street	Elmwood Avenue	North Union Street
Hungerford Terrace	Pearl Street	College Street
Johnson Street	Monroe Street	Peru Street
Kilburn Street	Pine Street	St. Paul Street
King Street	King Street Dock	South Union Street
Lafayette Place	Pearl Street	End of Street
Lake Street	Main Street	Depot Street
Maple Street	Lavalley Lane	South Willard Street
Main Street	Battery Street	South Willard Street
Monroe Street	Battery/Park Street	George Street
North Champlain Street	Pearl Street	Peru Street
North Winooksi Avenue	Grant Street	Pearl Street
Orchard Terrace	Pearl Street	End of Street (by Co-op)
Park Street	Sherman Street	Pearl Street
Pearl Street	Battery Street	South Willard Street
Peru Street	Elmwood Avenue	North Champlain Street
Pine Street	Pearl Street	Cherry Street
Pine Street	Bank Street	Kilburn Street
Sherman Street	North Champlain Street	End of Street
South Champlain Street	College Street	End of Street
South Union Street	Pearl Street	Maple Street
South Willard Street	Pearl Street	Maple Street
(BOTH SIDES)		
South Winooksi Avenue	Pearl Street	Maple Street
St. Paul Street	Bank Street	Adams Street

CLEAN SWEEP 2023

ZONE G: 5/1 10PM-7AM
OLD NORTH END

WHY CLEAN SWEEP?

Lake Health
Preserve Infrastructure
A Beautiful City



DO YOU LIVE IN THIS ZONE?

Translations &
Interpreters Available

See back of flyer for the streets in this
zone



During Clean Sweep, parking is not
allowed on-street in your zone during
the ban. Cars left on street are subject
to a \$75 ticket and \$75 tow fee.

FREE overnight parking is available in
the Downtown & Marketplace
Garages.



Questions? We're here to help.
802-863-9094

dpw-pinecustomerservice@burlingtonvt.gov

Garages, tickets, towing?
802-540-2380

ParkingServices@burlingtonvt.gov

burlingtonvt.gov/dpw



Street	From	To
Allen Street	Elmwood Avenue	Murray Street
Archibald Street	North Willard Street	Spring Street
Berry Street	North Avenue	Lakeview Terrace
Blodgett Street	Ward Street	North Street
Booth Street	North Street	Loomis Street
Bright Street	Riverside Avenue	Archibald Street
Canfield Street	North Avenue	Lakeview Terrace
Cedar Street	Elmwood Avenue	North Champlain Street
Charles Street	North Willard Street	Russell Street
Cloarec Court	Intervale Avenue	End of Street
Convent Square	North Avenue	Washington Street
Converse Court	Hickok Place	End of Street
Crombie Street	North Winooksi Avenue	Intervale Avenue
Crowley Street	North Avenue	End of Street
Decatur Street	North Winooksi Avenue	Intervale Avenue
Depot Street	Parking Lot	Lake Street
Drew Street	Ward Street	North Street
Elmwood Avenue	Spring Street	Grant Street
Front Street	North Street	End of Street
Green Street	Loomis Street	Pearl Street
Haswell Street	North Avenue	Lakeview Terrace
Hickok Place	North Union Street	Isham Street
Hyde Street	North Street	North Willard Street
Intervale Avenue	North Street	Manhattan Drive
Isham Street	Loomis Street	Hickok Place
LaFountain Street	Manhattan Drive	North Street
Lake Street	Depot Street	Stop Sign
Lakeview Terrace	Berry Street	Cambrian Way
Loomis Street	North Union Street	North Willard Street
Luck Street	Intervale Avenue	St Louis Street
Manhattan Drive	Washington Street	Intervale Avenue
Murray Street	North Street	Peru Street
Myrtle Street	North Champlain Street	Park Street
North Avenue	Sherman Street	Convent Square
North Champlain Street	Manhattan Drive	Peru Street
North Street	North Willard Street	North Avenue
North Union Street	Pearl Street	North Winooksi Avenue
North Winooksi Avenue	Riverside Avenue	Grant Street
Oak Street	Manhattan Drive	Intervale Avenue
Park Street	Manhattan Drive	Sherman Street
Pitkin Street	Manhattan Drive	North Street
Pomeroy Street	North Willard Street	Hyde Street
Poplar Street	North Champlain Street	Park Street
Riverside Avenue	Hyde Street	Intervale Avenue
Rose Street	Manhattan Drive	North Street
Russell Street	Charles Street	North Street
School Street	Loomis Street	Hyde Street
Spring Street	Intervale Avenue	Manhattan Drive
St Louis Street	Willow Street	Archibald Street
St Mary Street	Willow Street	Manhattan Drive
Strong Street	Pitkin Street	North Avenue
Summer Street	Front Street	Park Street
Sunset Court	North Avenue	End of Street
Voltz Street	Manhattan Drive	End of Street
Walnut Street	Manhattan Drive	Spring Street
Ward Street	Manhattan Drive	North Avenue
Washington Street	Manhattan Drive	North Avenue
Willow Street	Walnut Street	Intervale Avenue

CLEAN SWEEP 2023



ZONE D: 5/2 10PM-7AM

HILL SECTION

DO YOU LIVE IN THIS
ZONE?

See back of flyer for the
streets in this zone

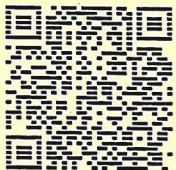
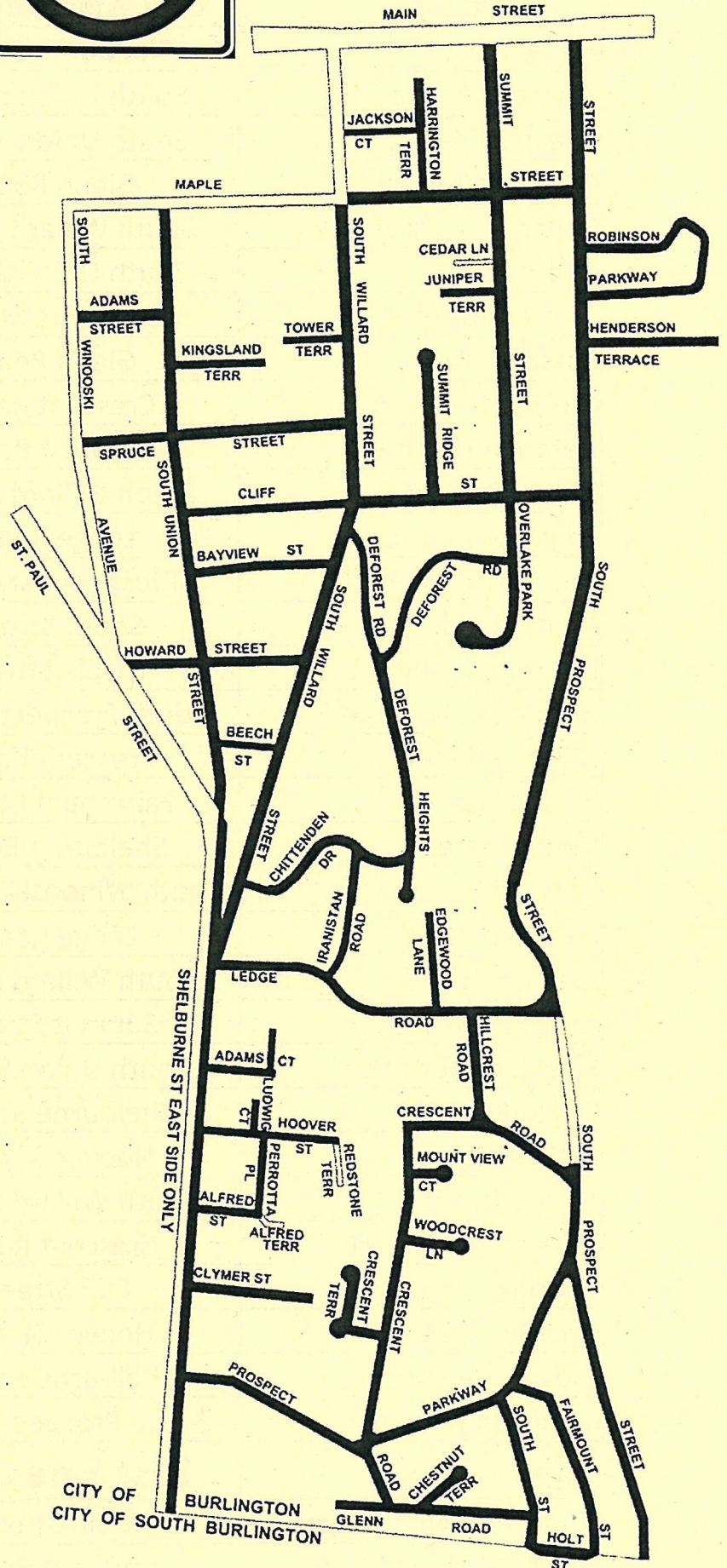
During Clean Sweep, parking is
not allowed on-street in your
zone during the ban. Cars left
on street are subject to a \$75
ticket and \$75 tow fee.

FREE overnight parking is
available in the Downtown &
Marketplace Garages.

WHY CLEAN SWEEP?

Lake Health Preserve
Infrastructure A Beautiful
City

Translations &
Interpreters Available



Your help will make Clean Sweep a success.



Questions? We're here to help.

802-863-9094

dpw-pinecustomerservice@burlingtonvt.gov

Garages, tickets, towing?

802-540-2380

ParkingServices@burlingtonvt.gov

burlingtonvt.gov/dpw



Street	From	To
Adams Court	Shelburne Street	End of Street
Adams Street	South Winooksi Avenue	South Union Street
Alfred Street	Shelburne Street	Perotta Place
Bayview Street	South Union Street	South Willard Street
Beech Street	South Union Street	South Willard Street
Chestnut Terrace	Glenn Road	End of Street
Chittenden Drive	South Willard Street	Deforest Heights
Cliff Street	South Union Street	South Prospect Street
Clymer Street	Shelburne Street	End of Street
Crescent Road	Glenn Road	South Prospect Street
Crescent Terrace	Crescent Road	End of Street
Deforest Heights	Deforest Road	End of Street
Deforest Road	South Willard Street	Overlake Park
Edgewood Lane	Ledge Road	End of Street
Fairmount Street	Prospect Parkway	Rice High School
Glenn Road	South Street	End of Street
Harrington Terrace	Maple Street	End of Street
Henderson Terrace	South Prospect Street	End of Street
Hillcrest Road	Crescent Road	Ledge Road
Holt Street	Fairmount Street	South Street
Hoover Street	Shelburne Road	Redstone Terrace
Howard Street	South Winooksi Avenue	South Willard Street
Iranistan Road	Ledge Road	Chittenden Drive
Jackson Court	South Willard Street	Harrington Terrace
Juniper Terrace	Summit Street	End of Street
Kingsland Terrace	South Union Street	End of Street
Ledge Road	Shelburne Street	South Prospect Street
Ludwig Court	Hoover Street	End of Street
Maple Street	South Willard Street	South Prospect Street
Mount View Court	Crescent Road	End of Street
Overlake Park	Cliff Street	End of Street
Perotta Place	Hoover Street	Alfred Street
Prospect Parkway	Shelburne Street	South Prospect Street
Robinson Parkway	South Prospect Street	South Prospect Street
Shelburne Street	East Side Only	
South Prospect Street	Main Street	Ledge Road
South Prospect Street	Crescent Road	End of Street (by Rice)
South Street	Prospect Parkway	Holt Street
South Union Street	Shelburne Street	Maple Street
South Willard Street	Shelburne Street	Maple Street
Spruce Street	South Winooksi Avenue	South Willard Street
Summit Ridge	Cliff Street	End of Street
Summit Street	Main Street	Overlake Park
Tower Terrace	South Willard Street	End of Street
Woodcrest Lane	Crescent Road	End of Street



CLEAN SWEEP 2023

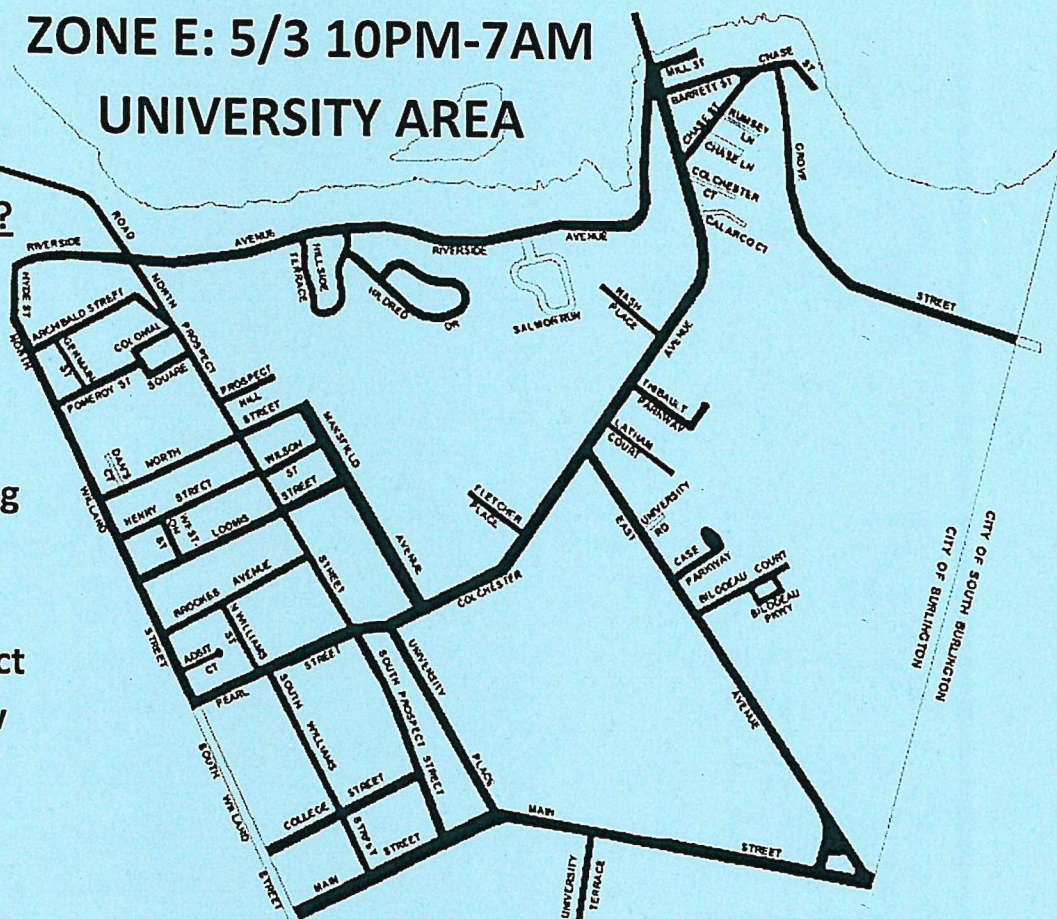
ZONE E: 5/3 10PM-7AM UNIVERSITY AREA

DO YOU LIVE IN THIS ZONE?

See back of flyer for the streets in this zone

During Clean Sweep, parking is not allowed on-street in your zone during the ban. Cars left on street are subject to a \$75 ticket and \$75 tow fee.

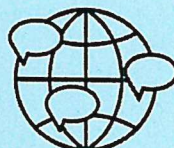
FREE overnight parking is available in the Downtown & Marketplace Garages.



WHY CLEAN SWEEP?

Lake Health
Preserve Infrastructure
A Beautiful City

Translations & Interpreters Available



Your help will make Clean Sweep a success.



Questions? We're here to help.

802-863-9094

dpw-pinecustomerservice@burlingtonvt.gov



Garages, tickets, towing?

802-540-2380

ParkingServices@burlingtonvt.gov

burlingtonvt.gov/dpw

Street	From	To
Adsit Court	North Willard Street	End of Street
Archibald Street	North Willard Street	North Prospect Street
Barrett Street	Colchester Avenue	Chase Street
Bilodeau Court	East Avenue	End of Street
Bilodeau Parkway	Bilodeau Court	Bilodeau Court
Brookes Avenue	North Willard Street	North Prospect Street
Case Parkway	East Avenue	End of Street
Chase Street	Colchester Avenue	End of Street
Colchester Avenue	North/South Prospect Street	Winooksi Bridge
College Street	South Willard Street	South Prospect Street
Colonial Square	North Prospect Street	North Prospect Street
East Avenue	Main Street	Colchester Avenue
Fletcher Place	Colchester Avenue	End of Street
Germain Street	Pomeroy Street	Archibald Street
Grove Street	Chase Street	City Line
Henry Street	North Willard Street	North Prospect Street
Highgrove Court	North Street	End of Street
Hildred Drive	Hillside Terrace	Hillside Terrace
Hillside Terrace	Riverside Avenue	Riverside Avenue
Hyde Street	North Willard Street	Riverside Avenue
Intervale Road	Riverside Avenue	End of Pavement
Latham Court	Colchester Avenue	End of Street
Loomis Street	North Willard Street	Mansfield Avenue
Main Street	South Willard Street	Jug Handle
Mansfield Avenue	Colchester Avenue	North Street
Mill Street	Colchester Avenue	Pump Station
Nash Place	Colchester Avenue	End of Street
North Prospect Street	Pearl Street	Riverside Avenue
North Street	North Willard Street	Mansfield Avenue
North Willard Street	Pearl Street	Hyde Street
North Williams Street	Pearl Street	Brookes Avenue
Pearl Street	South Willard Street	South Prospect Street
Pomeroy Street	North Willard Street	Colonial Square
Prospect Hill	North Prospect Street	End of Street
Riverside Avenue	Hyde Street	Winooksi Bridge
South Prospect Street	Main Street	Pearl Street
South Williams Street	Main Street	Pearl Street
Thibault Parkway	Colchester Avenue	End of Street
University Place	Main Street	Colchester Avenue
University Terrace	Main Street	End of Street
Weston Street	Loomis Street	Henry Street
Wilson Street	North Prospect Street	Mansfield Avenue



ZONE C: 5/4 10PM-7AM

SOUTH END

CLEAN SWEEP

DO YOU LIVE IN THIS ZONE?

See back of flyer for the streets in this zone

During Clean Sweep, parking is not allowed on-street in your zone during the ban. Cars left on street are subject to a \$75 ticket and \$75 tow fee.

FREE overnight parking is available in the Downtown & Marketplace Garages.

WHY CLEAN SWEEP?

Lake Health
Preserve Infrastructure
A Beautiful City

Translations &
Interpreters Available



Your help will make Clean Sweep a success.



Questions? We're here to help.

802-863-9094

dpw-pinecustomerservice@burlingtonvt.gov

Garages, tickets, towing?

802-540-2380

ParkingServices@burlingtonvt.gov

burlingtonvt.gov/dpw

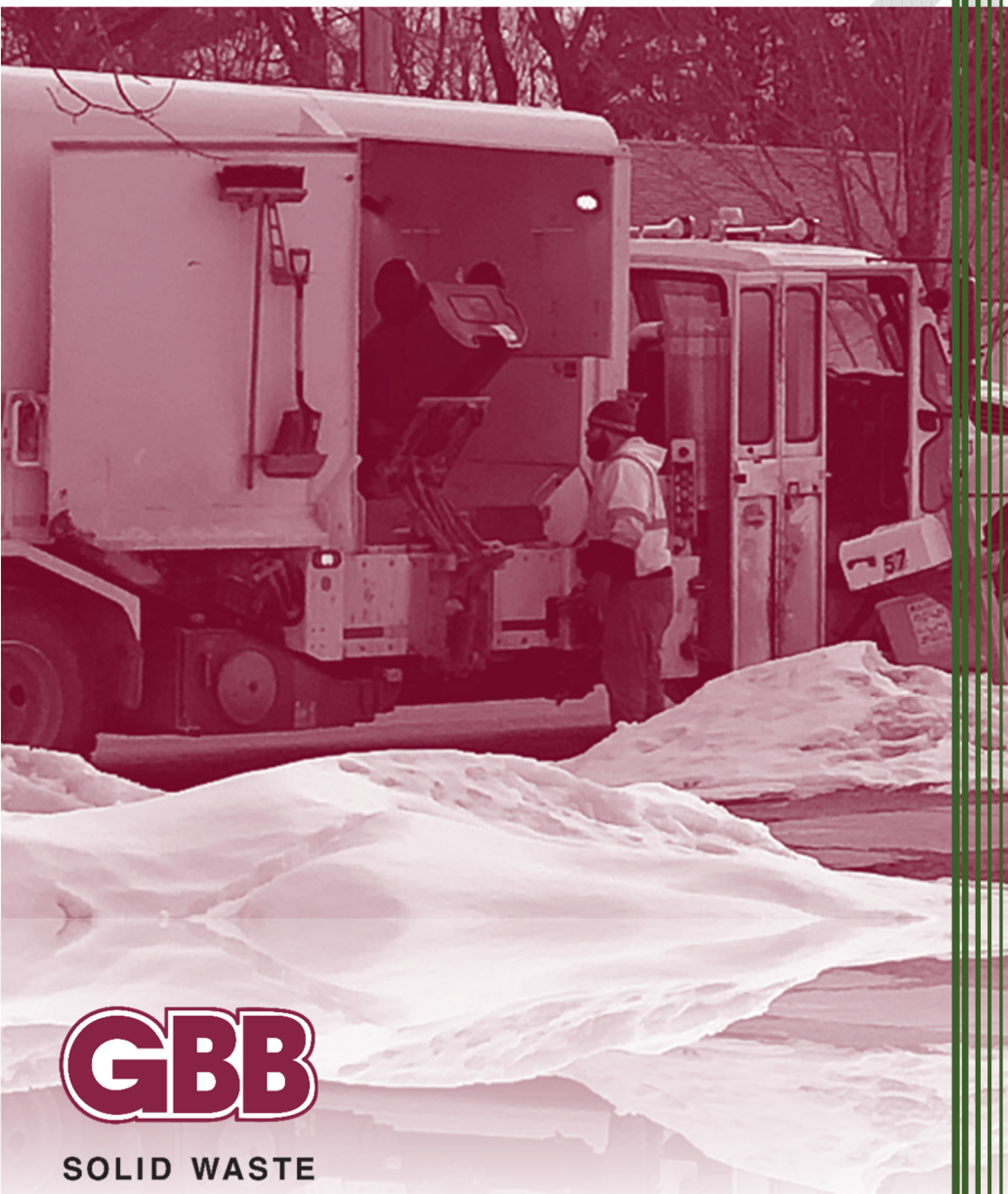


Street	From	To
Alder Lane	Birchcliff Parkway	Cherry Lane
Arthur Court	Queen City Park Road	End of Street
Austin Drive	Industrial Parkway	South Cove Drive
Batchelder Street	Morse Place	Home Avenue
Birchcliff Parkway	Shelburne Street	Pine Street
Bittersweet Lane	Birchcliff Parkway	Cherry Lane
Briggs Street	Flynn Avenue	Morse Place
Caroline Street	Howard Street	Locust Street
Catherine Street	St. Paul Street	Locust Terrace
Central Avenue	Lakeside Avenue	End of Street
Charlotte Street	Catherine Street	Locust Street
Cherry Lane	Birchcliff Parkway	Linden Terrace
Conger Avenue	Lakeside Avenue	Harrison Avenue
Dunder Road	Austin Drive	End of Street
Eastman Way	South Cove Road	End of Street
Elm Terrace	South Winooksi Avenue	End of Street
Ferguson Avenue	Shelburne Street	Briggs Street
Flynn Avenue	Shelburne Street	Oakledge Park Gate
Foster Street	Flynn Avenue	Home Avenue
Golden Plave	Howard Street	End of Street
Gove Court	Shelburne Street	End of Street
Harrison Avenue	Proctor Avenue	End of Street
Hayward Street	Marble Avenue	Catherine Street
Home Avenue	Shelburne Street	Industrial Parkway
Howard Street	St. Paul Street	Pine Street
Industrial Parkway	Home Avenue	Queen City Park Road
Lakeside Avenue	Pine Street	Central Avenue
Ledgemere Street	Margaret Street	End of Street
Linden Terrace	Birchcliff Parkway	Cherry Lane
Locust Street	Shelburne Road	Pine Street
Locust Terrace	Catherine Street	Locust Street
Lyman Avenue	Shelburne Street	Briggs Street
Marble Avenue	St. Paul Street	Pine Street
Margaret Street	Ledgemere Street	Caroline Street
Marian Street	Shelburne Street	Ledgemere Street
Morse Place	Richardson Street	Briggs Street
Oak Beach Drive (Not Including Loop)	Flynn Avenue	Austin Drive
Pine Place	Pine Street	End of Pavement
Pine Street	Kilburn Street	Queen City Park Road
Queen City Park Road	Queen City Park Road	Industrial Parkway
Richardson Street	Flynn Avenue	Home Avenue
Scarff Avenue	Shelburne Street	Richardson Street
Sears Lane	Pine Street	End of Street
Shelburne Street (West Side Only)	St. Paul Street	Queen City Park Road
South Cove Road	Austin Drive	Austin Drive
South Crest Drive	Home Avenue	Pine Street
Southwind Drive	Oak Beach Drive	Oak Beach Drive
South Winooksi Avenue	Adams Street	St. Paul Street
Spruce Court	Spruce Street	End of Street
Spruce Street	St. Paul Street	South Winooksi Avenue
St. Paul Street	Kilburn Street	Shelburne Street
Wells Street	Flynn Avenue	Home Avenue
Wright Avenue	Conger Avenue	End of Street



Feasibility Study for Residential Solid Waste Collection Contracts

February 3, 2020



Prepared for:

Lee Perry
Assistant Director, Department of Public Works
City of Burlington

Justin Rabidoux
Public Works Director / City Engineer
City of South Burlington

Prepared by:

Jennifer Porter
Vice President
Gershman, Brickner & Bratton, Inc. (GBB)
2010 Corporate Ridge, Suite 510
McLean, VA 22102
(703) 573-5800
www.gbbinc.com

GERSHMAN, BRICKNER & BRATTON, INC.

Feasibility Study for
Residential Solid Waste Collection Contracts

Gershman, Brickner & Bratton, Inc.

2010 Corporate Ridge, Suite 510

McLean, Virginia 22102

Phone 703.573.5800

www.gbbinc.com

© 2020 Gershman, Brickner & Bratton, Inc.

Client Number 18051



We Print on Recycled Paper.

Table of Contents

1. Executive Summary.....	1
Recommendations for Consolidated Residential Collection System	2
2. Introduction to the Project.....	6
National Context.....	6
3. Definition of Household	7
Definition of Household	7
4. Public Input & Project Survey	7
Overview.....	7
4.1.1 Results and Analysis.....	10
4.1.1.1 Demographics.....	10
4.1.1.2 Waste Destination and Collection	16
4.1.1.3 Which Hauler?.....	19
4.1.1.4 Back-door Service.....	20
4.1.1.5 Bulky Items	22
4.1.1.6 Yard Trimmings	25
4.1.1.7 Franchising	28
Conclusions.....	35
Public Meetings	36
5. Collection Routing.....	37
Scenarios	37
5.1.1 Potential Future RFP / Contract Process Specifications	40
5.1.1.1 Small Hauler Participation	40
5.1.1.2 Container Size Options	43
City of Burlington.....	44
5.1.2 Review of Current Collection System	44
5.1.3 City of Burlington, Consolidated Collections Scenarios—Summary Report	44
City of South Burlington	45
5.1.4 Review of Current Collection System	45
5.1.5 City of South Burlington, Consolidated Collections Scenarios—Summary Report.....	45
Consolidated Routing Observations	46
Greenhouse Gas Impact	47
5.1.6 Greenhouse Gas Impact Summary	47
5.1.7 Observations/Conclusions regarding Greenhouse Gas Impact	48
Recommendations for Consolidated Residential Collection System	48
6. Comparative Analysis of Current Utility Bills	51
City of Burlington.....	51
City of South Burlington	52
Conclusion	52
7. Implementation Steps and Timeline	54

Appendix I – Project Kickoff Trip Report Photos	1
Appendix II – GHG Calculations for Consolidated Collection Scenarios	19
Appendix III – ShapardResearch Project Survey Results (full): City of Burlington	20
Appendix IV – ShapardResearch Project Survey Results (full): City of South Burlington	227
Appendix V – C2 Logix Routing Scenario file: City of Burlington	438
Appendix VI – C2 Logix Routing Scenario file: City of South Burlington.....	633
Appendix VII - Addendum Documenting Discussions at Public Meetings and City Council Meetings (forthcoming)	814

1

List of Tables

Table 1: Private Hauler Service Levels and Pricing of Carts and Bins in CSWD permit application	39
Table 2: City of Burlington and City of South Burlington- Consolidated Routing Scenarios - Capital Expenditure Assumptions	40
Table 3: City of Burlington -Consolidated Collections Scenarios- Summary Report.....	44
Table 4: City of South Burlington -Consolidated Collections Scenarios- Summary Report	45
Table 5: CO2E Emissions for Consolidated Collection Model (Pounds of CO2E per week and per year)...	47

List of Figures

Figure 1: Demographic information of the participants in the survey – City of Residence.....	7
Figure 2: Demographic information of the participants in the survey – Age	10
Figure 3: Demographic information of the participants in the survey – Gender	10
Figure 4: Demographic information of the participants in the survey – Level of Education Completed ...	11
Figure 5: Demographic information of the participants in the survey – Residence Type	12
Figure 6: Demographic information of the participants in the survey – Status and Size	13
Figure 7: Demographic information of the stratified participants in the survey – Residency & Income ...	14
Figure 8: Participant Experience with Curbside Collection Services.....	15
Figure 9: Participant response to, “Where does your Waste Go”?	16
Figure 10: Participant understanding of collection of solid waste and recyclable material	17
Figure 11: Response to, “How often do you bring your Waste to Drop Off”?	18
Figure 12: Response to, “What Hauler Collects Your Curbside or Dumpster”?	19

Figure 13: Response to, “How much do you pay for Trash Service per Month”?	20
Figure 14: Response to, “Do you use “Back-door” Service”?	21
Figure 15: Response to, “Does your hauler offer bulky collection”?	22
Figure 16: Response to, “Do you use the bulky collection offered by your hauler”?	22
Figure 17: Response to, “If not curbside, what do you do with bulky”?	23
Figure 18: Response to, “How often do you have bulky items to dispose”?	24
Figure 19: Response to, “What do you do with yard trimmings”?	25
Figure 20: Frequency Results – Countywide response to, “Do you compost at home”?	26
Figure 21: Response to, “How often do you drop off yard trimmings”?	27
Figure 22: Response to, “On average, how many bags of yard trimmings do you bring to drop-off”?	27
Figure 23: Response to, “Would you support or oppose franchising, as described to you today”?	28
Figure 24: Response to, “How would you like to be billed, if there’s franchising”?	30
Figure 25: Response to, “If you currently do drop-off, would you still go to drop-off if there were a franchise, or would you rather have curbside”?	32
Figure 26: Response to, “Would you like bulky collection, if there's franchising”? and “If you had bulky collection with franchising, how would you like to pay”?	33
Figure 27: Response to, “If there were franchising, would you be interested in yard trimmings collection”?	34
Figure 28: Response to, “If there were franchising, would you be interested in food scraps collection”?	34
Figure 29: Burlington Combined Utility Bill with Stormwater, Sewer, and Water Fees	51
Figure 30: City of Burlington Electric Bill	52

1. Executive Summary

In January 2019, the Chittenden Solid Waste District (“District” or “CSWD”), on behalf of the City of Burlington and City of South Burlington, contracted Gershman, Brickner & Bratton, Inc. (GBB) and sub-contractors C2Logix, LLC and ShapardResearch (altogether “GBB Team”) to undertake a feasibility study, including a household survey, to assess the viability of consolidating residential trash, recycling, and food scraps collection services.

Consolidated residential curbside collection provided by a municipality is a standard service method for solid waste collection in the United States, particularly among communities that have access to residential curbside recycling service. In the report, *2015-2016 Centralized Study on Availability of Recycling*, prepared by RRS and Moore Recycling Associates, researchers found that 73% of households in the United States had access to curbside recycling services in 2015. Of these households, 81% were served by the municipality directly or private haulers under contract with the municipality. In contrast, residential households that contract with private haulers independently, such as the models currently implemented in the Cities of Burlington and South Burlington, are in the minority at 19%.

Project Survey

For the resident survey and collection modeling, the GBB Team used the definition of a household to be 1-4-unit properties and worked collaboratively to develop a survey instrument to meet the objectives of the project. Key Project Survey observations include:

- **Service subscriptions:** Approximately three-quarters of respondents reported using subscription based curbside collection services at present. The GBB Team assumes that in a consolidated model, with more service packages available, some of the residents who are now only using drop-off and do not have a curbside collection subscription, would be converted to curbside customers.
- **Bulky waste:** Residents seem to have relatively few bulky items of which to dispose, and those that do mostly self-haul or otherwise manage it themselves.
- **Food waste:** Most respondents had a positive opinion of the idea to add food waste collection for composting to their waste management services.
- **Yard waste:** Most of the yard waste generated in Burlington and South Burlington is currently managed on site or already being removed by the resident or their landscaper. Very few residents said that they had yard trimmings collection right now.
- **Cost:** The GBB team concludes that there are cost savings for residents of Burlington and South Burlington in a consolidated model due to the current route inefficiencies.

See Section 4 - [Public Input & Project Survey](#) - of this report for more information.

Collection Scenarios

For both Burlington and South Burlington, a base case and five (5) variations on collection frequency and service items were modeled. Note that current gate rates in Chittenden County were used for collection routing pricing estimates. It is assumed that negotiated rates may be more favorable to the rate payer.

The customer rate ranges that are estimated for consolidated collection present a significant reduction based on the current rate ranges reported in Table 1 and echoed in the Project Survey. This is an indication of the inefficiencies of having multiple service providers in the same service areas.

Cost Savings

There are significant potential cost savings to the solid waste collection systems of the City of Burlington and the City of South Burlington if a consolidated collection is implemented for all residents, using bi-weekly/EOW solid waste and recycling as the comparative service level:

- City of Burlington: The annual system cost savings could be between \$710K and \$2.9M.¹
- City of South Burlington: The annual system cost savings could be between \$329K and \$1.4M.²

From the Project Survey respondents, three (3) haulers served 75% of the residential units of the cities; however, none served greater than 50%. From this finding, the GBB Team assumed that the three primary haulers are covering nearly all route miles within the cities in order to service their market share at present.

The GBB Team did not have existing routes from the haulers to compare to the results of the routing scenarios; however typically communities can see on average 15-25% improvement in efficiency after balancing routes (assuming that the collection was made by a service provider that never routed the whole community before). Beyond the impact from route optimization, in the case of Burlington and South Burlington, it can be estimated that a consolidated collection system could result in a higher two-thirds reduction in current route miles traveled for solid waste collection since only one hauler per district will be covering nearly all route miles compared to the three service providers currently covering both cities. Based on the proposed reduction in miles traveled, the Cities' could see savings up to two-thirds in greenhouse gas emissions.

See Section 5 - [Collection Routing](#) - of this report for more information.

Recommendations for Consolidated Residential Collection System

Based on the analysis herein, the GBB Team recommends the following for a consolidated residential collection system in the Cities of Burlington and South Burlington.

Recommendation 1: The Cities should consider negotiating disposal agreements for the solid waste collected from the City of Burlington and the City of South Burlington with Casella Waste for the solid waste delivered to the Casella Waste Transfer Station by each City.

***Rationale:** The negotiation and finalization of the disposal agreements will ensure that Casella Waste does not have a competitive advantage over the other waste haulers who may be submitting proposals in response to the Request for Proposals (RFP) process. Casella Waste operates the only solid waste transfer station located in the District and the finalized disposal agreements would ensure a level playing field for all waste companies which might submit proposals.*

Recommendation 2: The City of Burlington and the City of South Burlington should consider being billed directly by CSWD for the processing of the single-stream recyclables collected from each City and have the selected contractor(s) only charge for collection services.

¹ Burlington annual system costs would increase an estimated additional \$117K for implementing a consolidated collection with a 15% opt out maximum.

² Savings would decrease by an estimated \$158K by implementing a consolidated collection system with a 15% opt out maximum.

Rationale: The direct billing of the Cities by CSWD will eliminate the market risk which the haulers who participate in the RFP process would be required to absorb over the course of a 7 to 10-year contract and encourage increased participation in the RFP process. This arrangement would also ensure that costs associated with the MRF tipping fees will be charged directly to the Cities. In addition, CSWD and the Cities of Burlington and South Burlington would be able to establish a mechanism to revise the tipping fees on a quarterly or annual basis in order to adjust for changes in market conditions associated with the resale value of the recycled materials.

Recommendation 3: The City of Burlington and the City of South Burlington should consider requesting pricing via a RFP for all customers at requested service levels, as well as a contractual opt-out maximum of 15% of households. It is recommended that the RFP process request rates for the below service options from potential contractors:

- Weekly solid waste and recyclables collection
- Weekly solid waste and every-other-week recyclables collection.
- Every-other-week solid waste recyclables collection.
- Weekly food scrap waste collection.
- Back-door service for each of the above solid waste and recyclables collection options.

It is also recommended that residents be provided with the option to opt-out from the weekly food scrap waste collection service, however, the cities will most likely need to make a similar minimum participation rate guarantee to the selected contractor in order to ensure the needed service efficiencies and obtain cost-effective pricing for the service.

Rationale: As modeled in the scenarios, a contractual opt-out maximum of 15% of households can encourage increased participation in the RFP process by ensuring revenue and cost stability for the service providers submitting proposals in response to the RFP. Requesting pricing for an all customers service option and a 15% opt-out maximum service option will ensure the Cities can make the most informed decision for service delivery to the citizens. It is recommended that residents be provided with the option to opt out from all of the above solid waste and recyclables collection service options, however, in order to provide potential contractors a basis for preparing their proposals the cities will need to agree to commit to paying the contractors a minimum participation rate of 85% in the event the opt-out component exceeds 15% in order to secure favorable service rate structures as part of the final executed contract.

Recommendation 4: It is recommended that the RFP packages be prepared based on the two cities billing residents directly through their current utility billing system.

Rationale: With this arrangement, any proposals submitted by solid waste companies responding to the RFP process should be more cost effective because they will not have to accept any accounts receivable risk associated with the collection contracts. The City of Burlington will also be able to use this process to eliminate its current system of charging all residents a solid waste fee of \$4.20 per month, which is collected by the haulers from residents and subsequently reimbursed to the City.

Recommendation 5: It is recommended that the term of the collection contracts be seven (7) years with one (1) three-year option exercised at the discretion of the Cities.

Rationale: The initial 7-year term of the contract will ensure that the companies which submit proposals will be able to obtain an adequate return on investment for the collection vehicles and equipment they must acquire to perform the collection contracts. The one (1) three-year contract option is also likely the most administratively efficient process for the Cities to amend and extend from the base term of the collection contracts.

Recommendation 6: It is recommended that CSWD take into consideration the possible expansion of the capacity of its food waste/composting facility should the collection of residential food waste be included as part of the RFP process.

Rationale: The availability of sufficient food waste recycling/disposal capacity within the District will be necessary to ensure the adequate performance of the food waste collection component of the collection contracts.

Recommendation 7: It is recommended that the Cities of Burlington and South Burlington issue separate RFP's for collection services.

Rationale: This will provide each City with sufficient flexibility to decide if they wish to proceed with finalizing the collection contracts following the completion of the RFP process.

Recommendation 8: In an effort to provide an opportunity for smaller solid waste collection companies to participate in the contract(s) for solid waste and recycling collection services which may be finalized for the Cities of Burlington and South Burlington, it is recommended that the RFP process allow for some of the specialty services such as bulk, back door and food scraps collection services be provided separately from the contracts issued for servicing all of the single-family residential units in each City. In addition, the Cities may wish to consider setting aside for small collection companies the solid waste and recycling collection services for the municipal office and facility locations throughout each city. These types of services may be better aligned with the capabilities and resources of the smaller companies.

It is recommended that the City of Burlington and the City of South Burlington review this concept, prior to proceeding, in detail with their Legal and Procurement Departments to ensure that the concept is consistent with all applicable legal requirements and established procurement policies.

Rationale: This will provide each City with sufficient flexibility to meet the needs of its residents based on a contracted price. It would be most administratively efficient for the Cities to directly bill the residents for the backdoor collection services and the residents to arrange for the on-call bulk waste collection services directly with the collection contractors and be billed directly by the contractors.

Billing

GBB recommends that both Cities discuss the method of billing internally with the Department(s) which conduct the billing services in order to estimate the additional costs and identify any items which would impact the implementation of the billing by the Cities for waste and recyclables collection services. GBB would be able to assist with such discussions and provide guidance concerning the matter to ensure a better understanding of the needed billing services. The decision regarding billing by the haulers or by the cities would then be incorporated into a future contract process, should the cities decide to move forward with a consolidation system.

See Section 5 - [Comparative Analysis of Current Utility Bills](#) - of this report for more information.

Next Steps

The immediate next step is a presentation is made to the City Councils including input from the survey and the public meetings. The Councils will decide if they want to do further study, move forward on implementation, or end consideration.

If a decision were reached to move forward on consolidated collection implementation for both cities, an additional 9-12 months of implementation assistance would be required to prepare technical and contract specifications to bid for services, evaluate the bids received, and make recommendations for award for each contract based on the qualifications of the bidders as well as the most favorable financial outcome. In addition, the cities may wish to contract for additional services to assist with the startup of the collection contracts in order to minimize any implementation and service difficulties during the initial thirty (30) days of the collection contracts.

2. Introduction to the Project

In January 2019, the Chittenden Solid Waste District (“District” or “CSWD”), on behalf of the City of Burlington and City of South Burlington, contracted Gershman, Brickner & Bratton, Inc. (GBB) and sub-contractors C2Logix, LLC and ShapardResearch (altogether “GBB Team”), to undertake a feasibility study, including a household survey, to assess the viability of consolidating residential trash, recycling, and food scraps collection services.

The District’s RFP listed the stated objectives of possible consolidated collection to the cities of Burlington and South Burlington as:

1. Reduced costs to residents and haulers through more efficient collection routes;
2. Reduced environmental costs of excess truck traffic;
3. Reduced infrastructure impacts of excess truck traffic;
4. Increased recycling through direct and consistent education to residents;
5. Reduced litter and increased recycling using wheeled carts by all residents.;
6. Increased diversion by using consolidated collection as the most cost-effective mechanism to add collection of food scraps;
7. Increased safety on local roads;
8. Reduced noise in neighborhoods and
9. Better compliance with state and local mandates.

Over the years, CSWD has investigated various new initiatives for its members. In 2012, a review was conducted of opportunities for implementing controlled District-wide residential and commercial collection services different from the long-standing tradition of open market collection services by private haulers coupled with self-hauling to the network of drop-off facilities. In 2014, the District also investigated implementing the costs of a District-wide residential organics collections program using changes to various household trash and recyclables services scenarios. This current collection contract effort with the GBB Team is being driven by the Cities of Burlington and South Burlington. Since the last evaluation of possible District-wide collection, renewed interest has been generated for the consolidation of services.

Please refer to Appendix I for trip report photos from the kickoff trip which initiated the project in March 2019.

National Context

Consolidated residential curbside collection provided by a municipality is a standard service method for solid waste collection in the United States, particularly among communities that have access to residential curbside recycling service. In the report, *2015-2016 Centralized Study on Availability of Recycling*, prepared by RRS and Moore Recycling Associates, researchers found that 73% of households in the United States had access to curbside recycling services in 2015. Of these households, 81% were served by the municipality directly or by private haulers under contract with the municipality. In contrast, residential households that contract with private haulers independently, such as the models currently implemented in the Cities of Burlington and South Burlington, are in the minority at 19%.

GBB has also performed benchmarking research on United States residential curbside collection programs in 2015. Of the 461 cities and counties that were studied, 83% of the cities provided residential curbside

collection directly through the municipalities or by private haulers under contract, while private subscription serviced 11% of the cities. The remaining 6% of the cities employed both service methods for residential curbside collections. The County of Frederick, Maryland, for example, provided curbside recycling collection services to the incorporated areas of the jurisdiction through municipalities while the unincorporated areas were serviced by subscription-based programs. Additionally, in an earlier study, *2008 American Beverage Association Community Survey*, prepared by R.W. Beck, found that 74% of households in the United States had access to curbside recycling services in 2008. Of these communities, 85% were served by the municipality or private haulers under contract, and 15% were served by private subscription programs.³

3. Definition of Household

Definition of Household

In the solid waste management industry, the term “household” generally refers to single-family homes (1 unit) and “smallplexes” which typically consists of 2-4-units each. GBB recommends that the Cities of Burlington and South Burlington consider only including 1-4-unit properties in their consolidated collection system to align with national norms given that properties of this size can use carts and be serviced in the same collection route.

As further presented in Section 5, consolidated routing scenarios were modeled for the Cities of Burlington and South Burlington. Should the decision to go forward with consolidated collection be made in one or both Cities, a variety of service options should be offered to accommodate the variety of housing types and the customer preferences in both communities.

4. Public Input & Project Survey

Overview

The GBB Team worked collaboratively to develop a survey instrument to meet the objectives of the project. In addition to basic demographic questions, the team focused on subject matter areas about which additional information would inform the feasibility study. Twenty-eight (28) questions were administered by conducting a dual frame of Random Digit Dialed landlines and cell phones to adults (age 18 and older) living in the Cities of Burlington and South Burlington. Cell phones were included due to the increasing percentage of the population that is transitioning to cell phone-only-households.

Random Digit Dialed number selection starts with identifying all telephone exchanges that serve the desired region. After identifying the prefixes to be targeted, non-working and business blocks of numbers

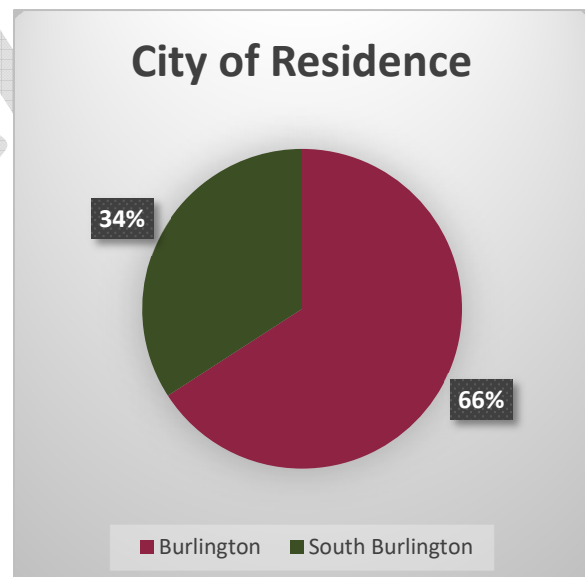


Figure 1: Demographic information of the participants in the survey – City of Residence

³ R.W.Beck.2008 American Beverage Association Community Survey. September 2009. <https://tinyurl.com/w6sxxlv>

are eliminated. After valid blocks of numbers are weighted proportionally by the number of listed phone lines, the surveyor systematically selects numbers to yield a probability sample of base numbers. Finally, random digits are added to the base number to create a random ten-digit telephone number. This same process is used for cell phones. The two samples are then blended to reflect the population at large. The data is purchased from a data firm called SSI, the world leader in Random Digit Dialed number sampling of this nature.

There were 407 verified surveys were completed and analyzed. Of those, 65.8% came from residents of Burlington, and 34.2% came from residents in South Burlington. The survey results were prepared with a confidence rating of 95%, with a margin of error of $\pm 4.68\%$. Data collection was conducted from June 3 and June 24, 2019. All responses were collected via live callers, and all were collected from residents in the Cities of Burlington and South Burlington in Chittenden County, VT.

The data collection was conducted by telephone using Computer-aided Telephone Interviewing (CATI) technology. A field director oversaw monitoring the samples, verifying interviews, and providing feedback to interviewers. Each of the interviewers received extensive training and practiced interviewing sessions before working on any project. Before calling began, every member of the data collection team was familiarized with the overall study objectives, interviewing techniques, and the survey instrument.

Survey Analysis

After the data collection process was complete, and a respondent audit had been verified, the results were stratified with multiple variants, using the U.S. Census and other sources deemed appropriate to this project. There were a few demographics that could not be weighted due to lack of stratas available for the entire population:

- **The number of apartments in the respondent's complex**
The way the Census Bureau classifies this and the way they were grouped in the study are not parallel, and responses could not be manipulated based on current data available.
- **Years lived in Chittenden County**
The way the Census Bureau classifies this and the way they were grouped in the study are not parallel, and responses could not be manipulated based on current data available.
- **Income**
30% of the respondents refused to answer this question. That is too much missing data to apply any accurate weight.

For the Burlington sample of 261, ShapardResearch weighted the results by level of education and type of household. It is not necessary to apply a weight to whether the resident rents or owns, number of residents in the household, or gender because these attributes already have a factor of 1. This means that applying a further weight would not change the outcome as it is already representative of the census stratification. Stratifications for this portion were calculated from census numbers of the City of Burlington, only.

For the South Burlington sample of 143, ShapardResearch weighted the results by level of education, whether the resident rents or owns their property, type of household, and gender. The number of residents in the household did not need to be weighted, as the unweighted results are already

representative of census totals. Stratifications for this portion were calculated from census numbers of the city of South Burlington, only.

All weights were applied using a layering format, meaning that the weights are applied one demographic at a time. Once the first weight is representative, the next weight is calculated and applied, and so on.

Please refer to the Reports attached from ShapardResearch that include the weighted data, in:

- Appendix III – ShapardResearch Project Survey Results (full): City of Burlington, and
- Appendix IV – ShapardResearch Project Survey Results (full): City of South Burlington

DRAFT

4.1.1 Results and Analysis⁴

4.1.1.1 Demographics

The figures on the following pages show the demographic information of the survey participants.

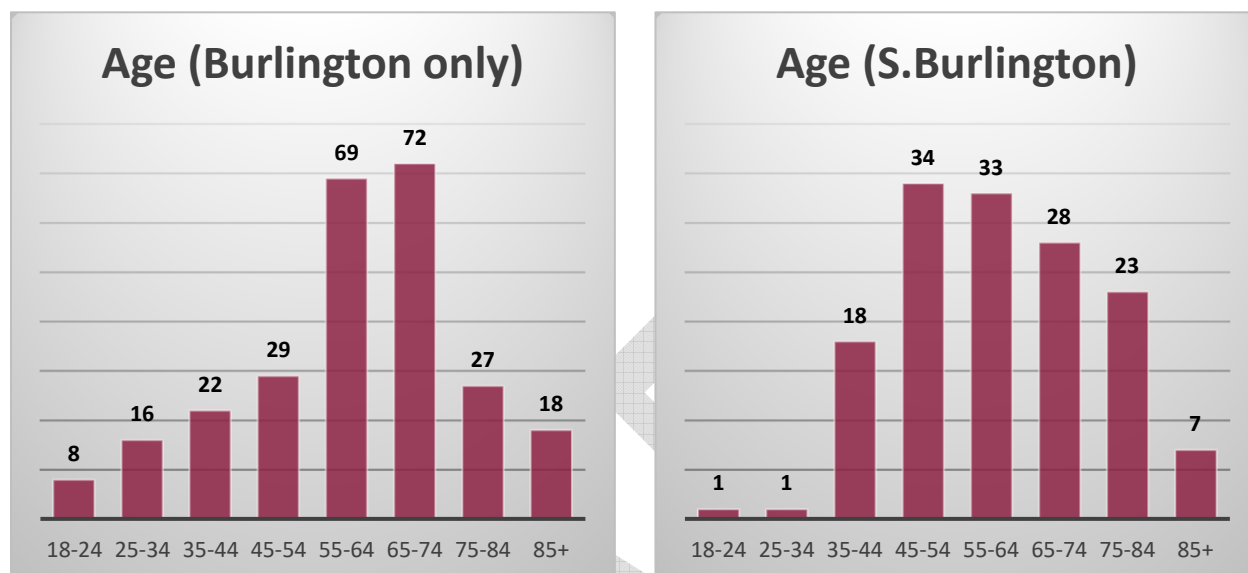


Figure 2: Demographic information of the participants in the survey – Age

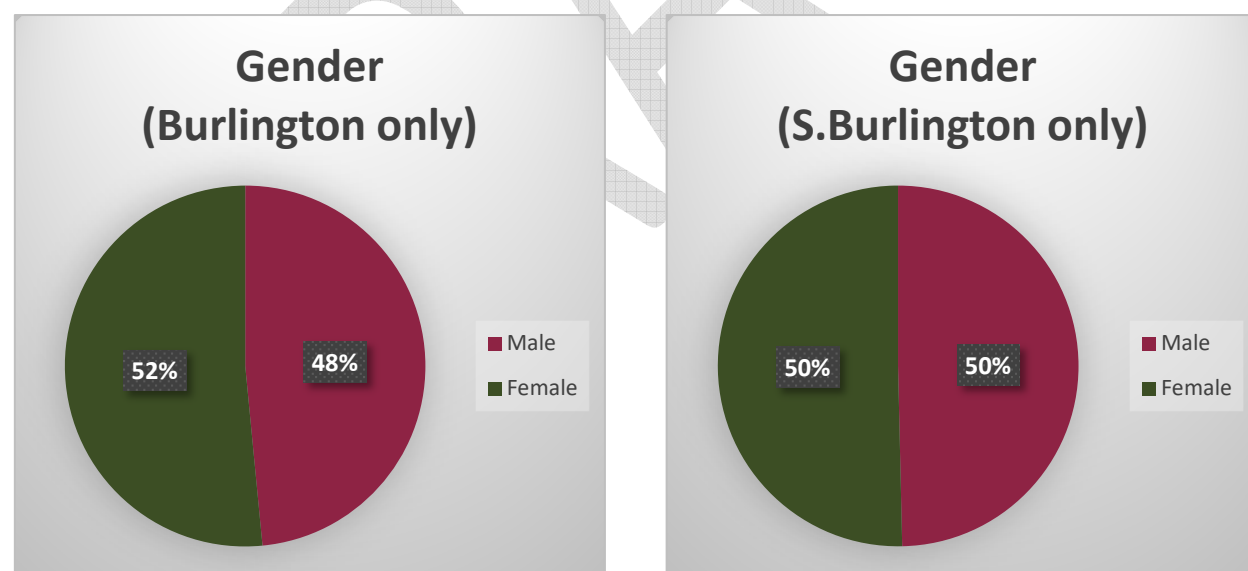


Figure 3: Demographic information of the participants in the survey – Gender

⁴ Notes are provided throughout this section on the results of Pearson's Chi Square Tests, which measure to what degree of certainty the results of the survey can be used predictively to estimate what the responses would be from a perfectly distributed population of Burlington and South Burlington.

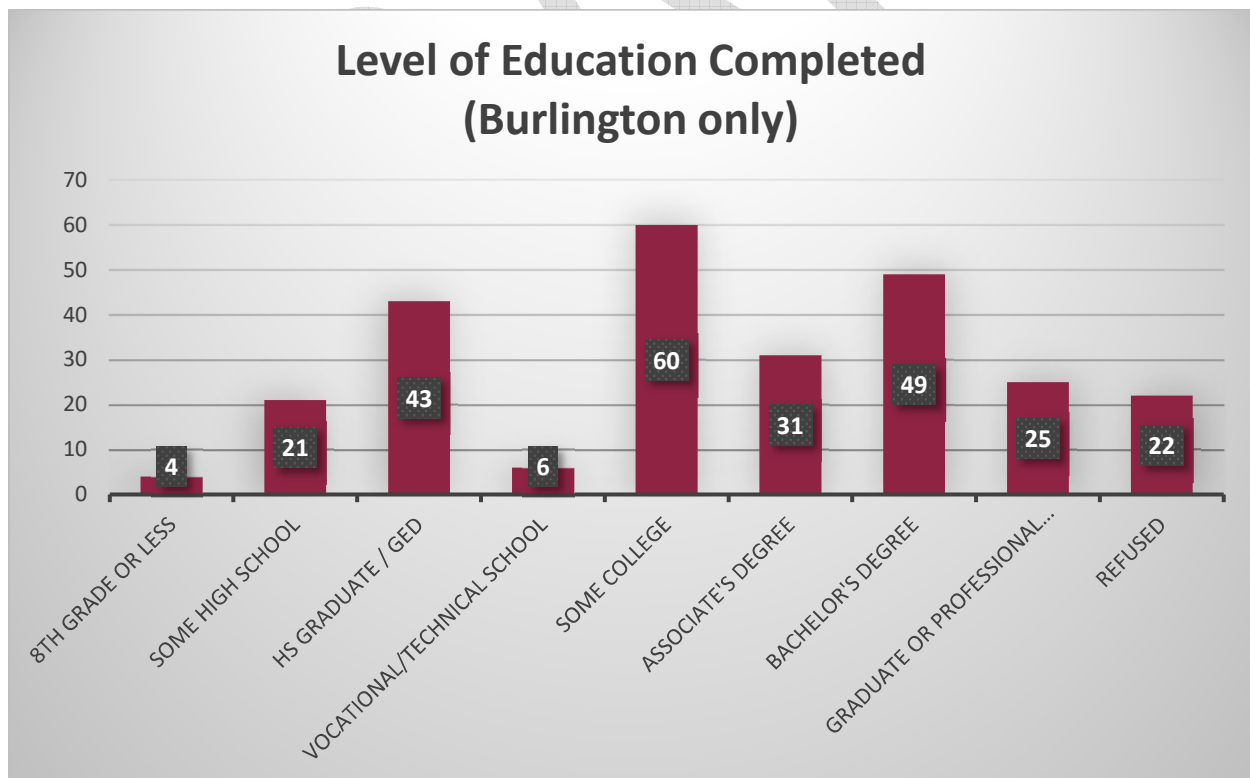
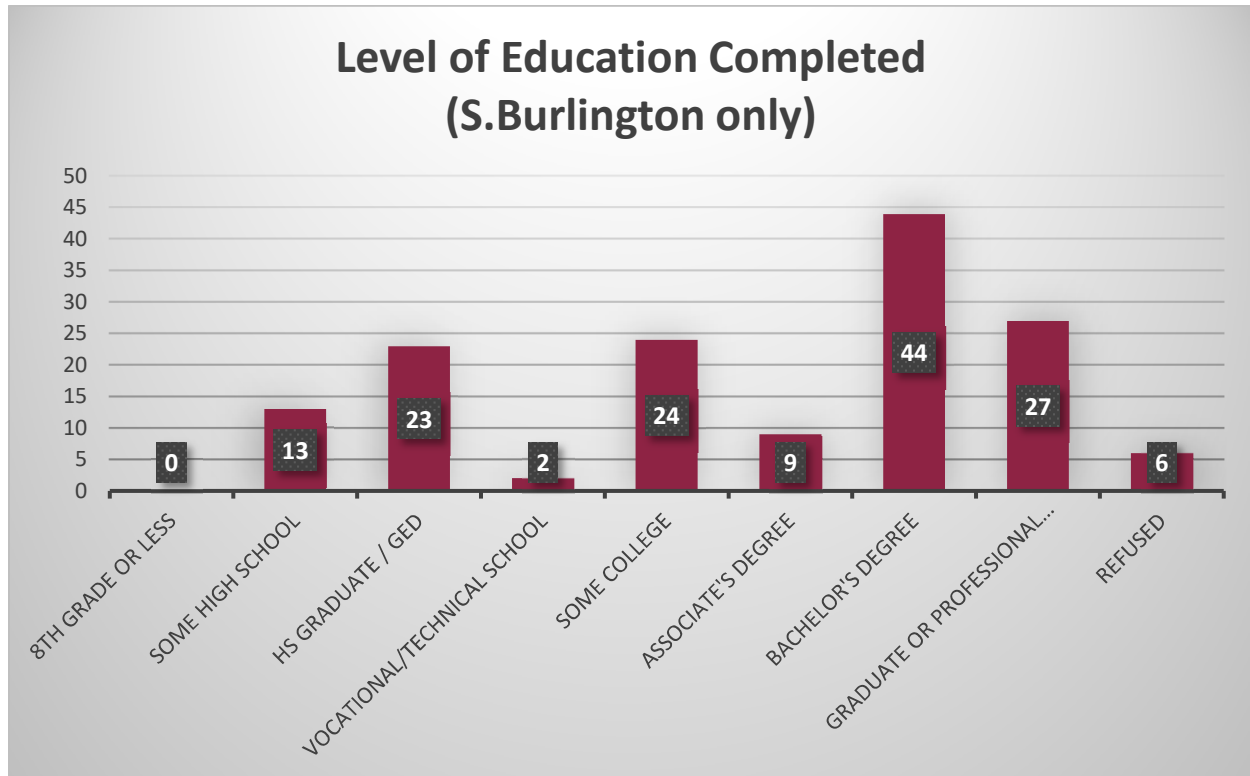
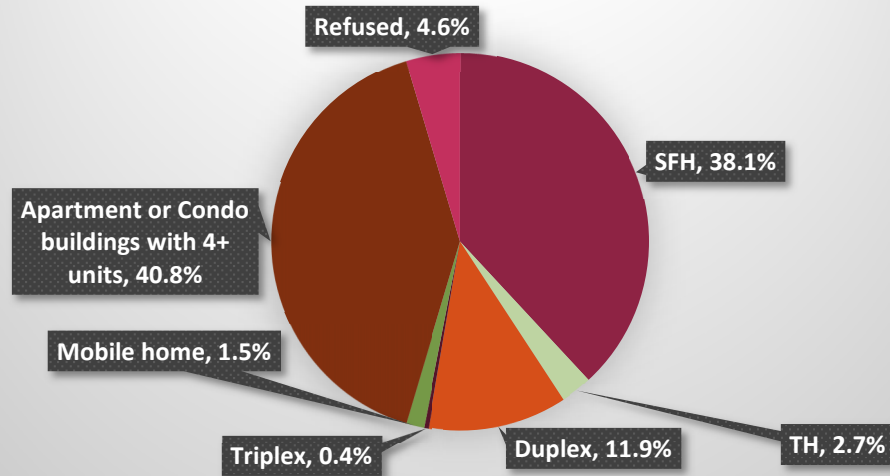


Figure 4: Demographic information of the participants in the survey – Level of Education Completed

Residence Type (Burlington only)



Residence Type (S. Burlington only)

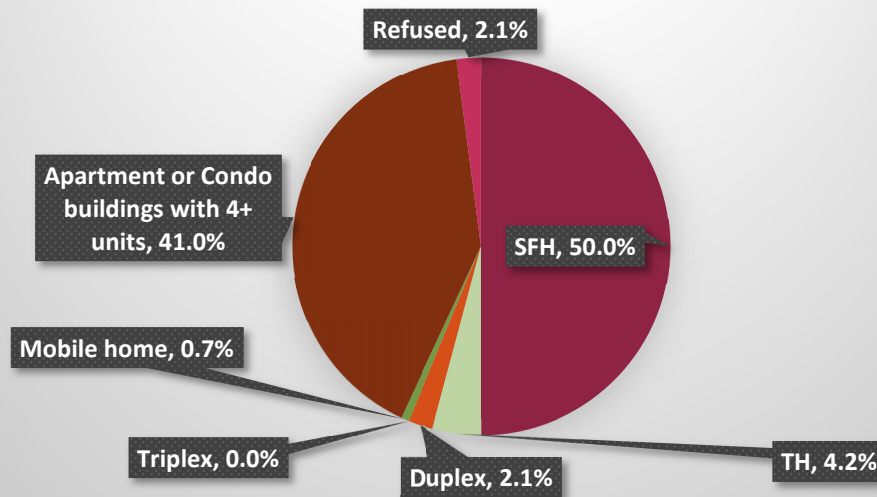


Figure 5: Demographic information of the participants in the survey – Residence Type

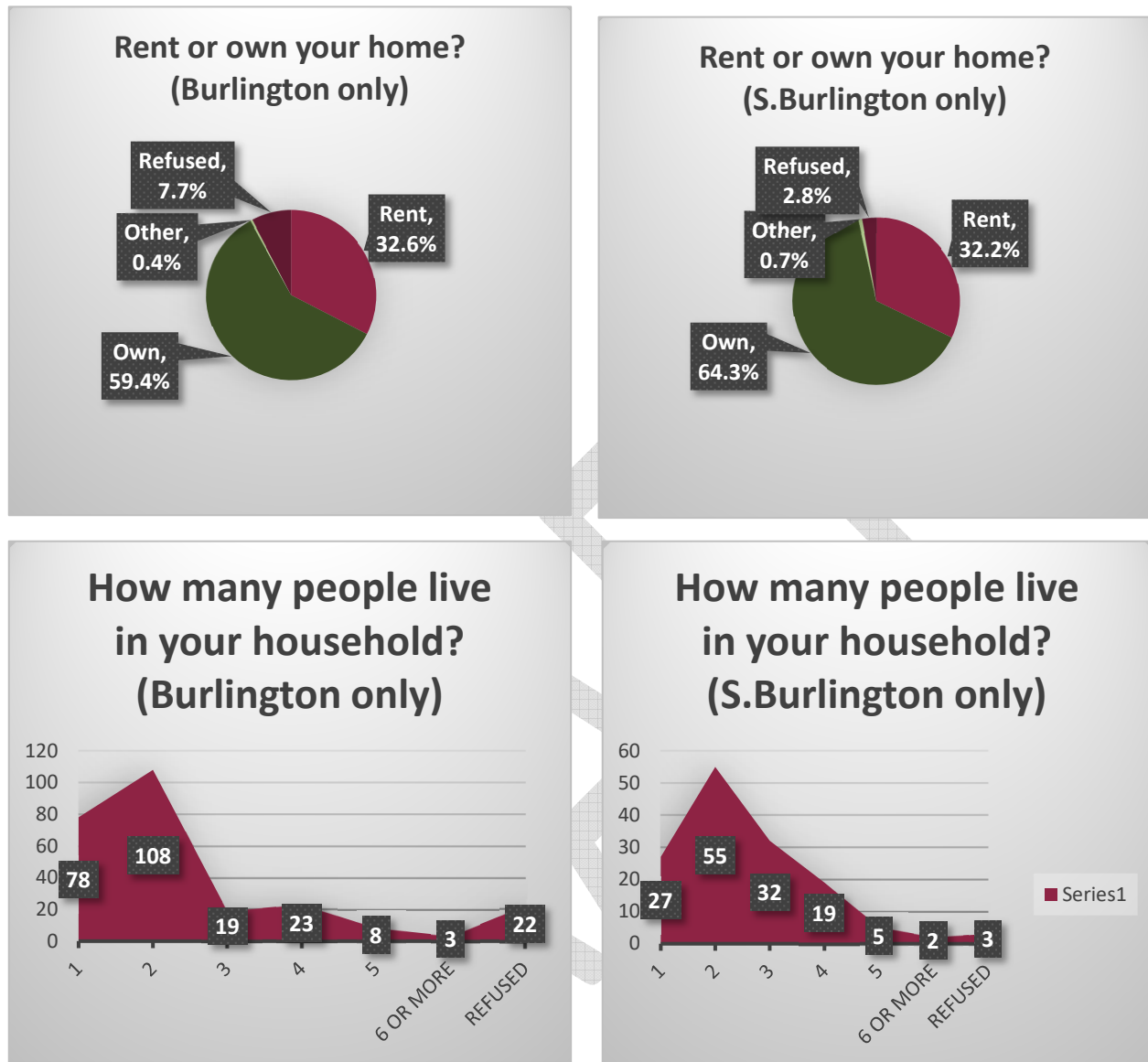


Figure 6: Demographic information of the participants in the survey – Status and Size

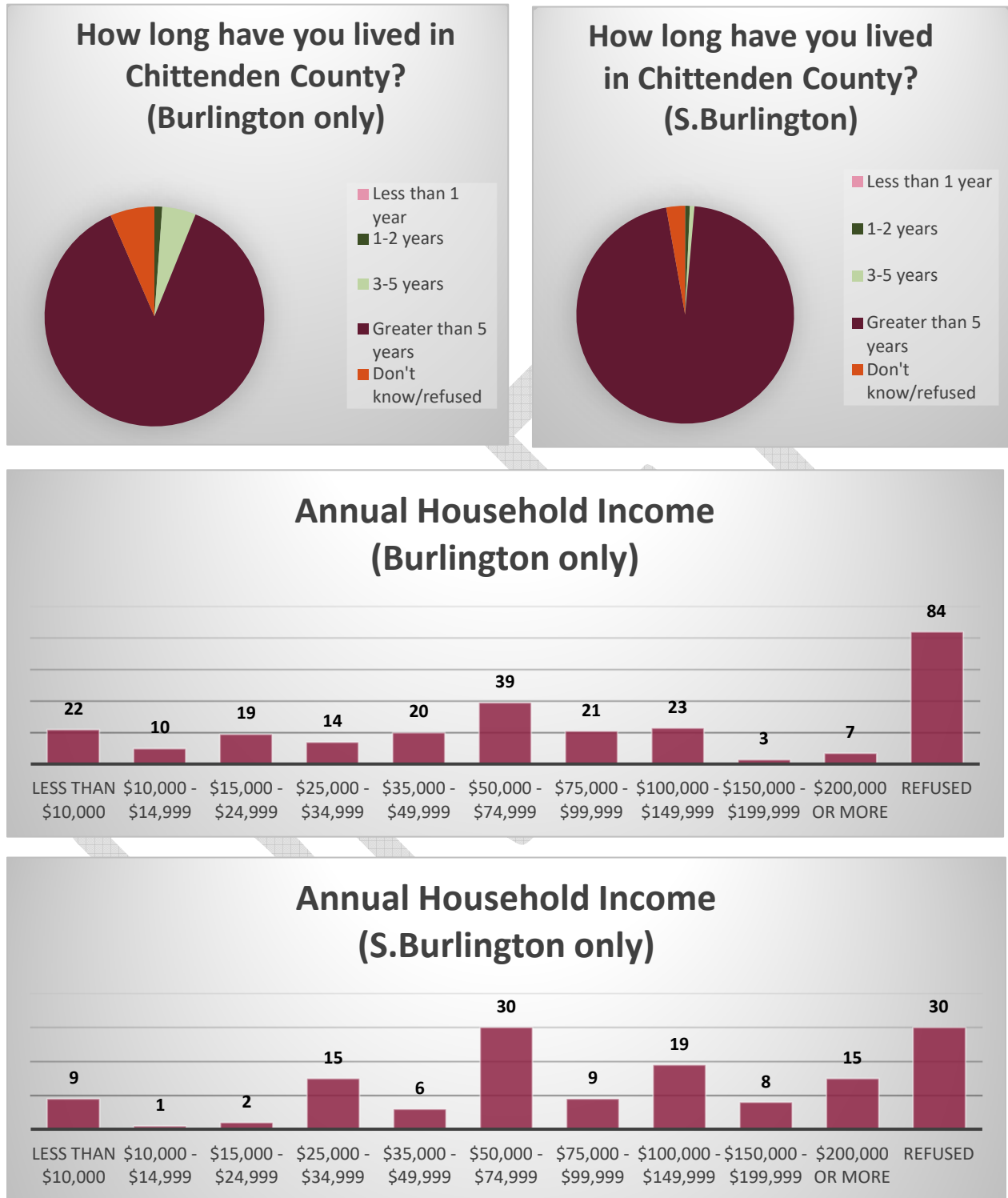


Figure 7: Demographic information of the stratified participants in the survey – Residency & Income

Figure 8 below displays participant experience with curbside collection services.

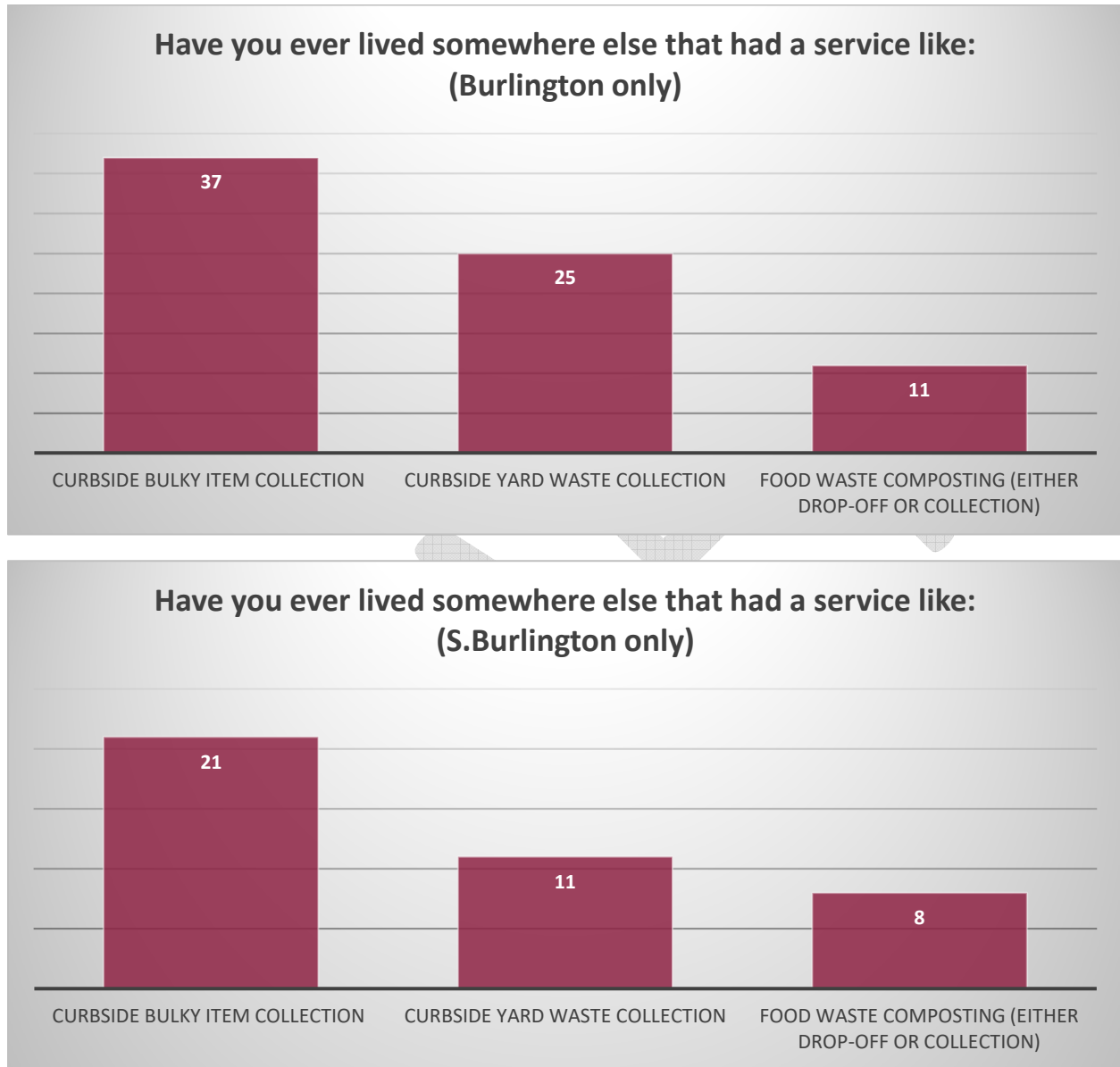


Figure 8: Participant Experience with Curbside Collection Services

4.1.1.2 Waste Destination and Collection

Figure 9 displays participant understanding of Waste Disposal Locations. Of the Burlington respondents, 73.9% have a hauler who picks up their trash and recycling, and 14.6% take their trash and recyclables to a drop-off location, also know colloquially as “the dump”. An additional 7.3% said they have a hauler for curbside collection, but they also sometimes take trash and recyclables to a drop-off location.⁵ Of the South Burlington respondents, 75% have a hauler who picks up their trash and recycling, and 17.4% take their trash and recyclables to a drop-off location. An additional 0.7% said they have a hauler for curbside collection, but they also sometimes take trash and recyclables to a drop-off location.⁶

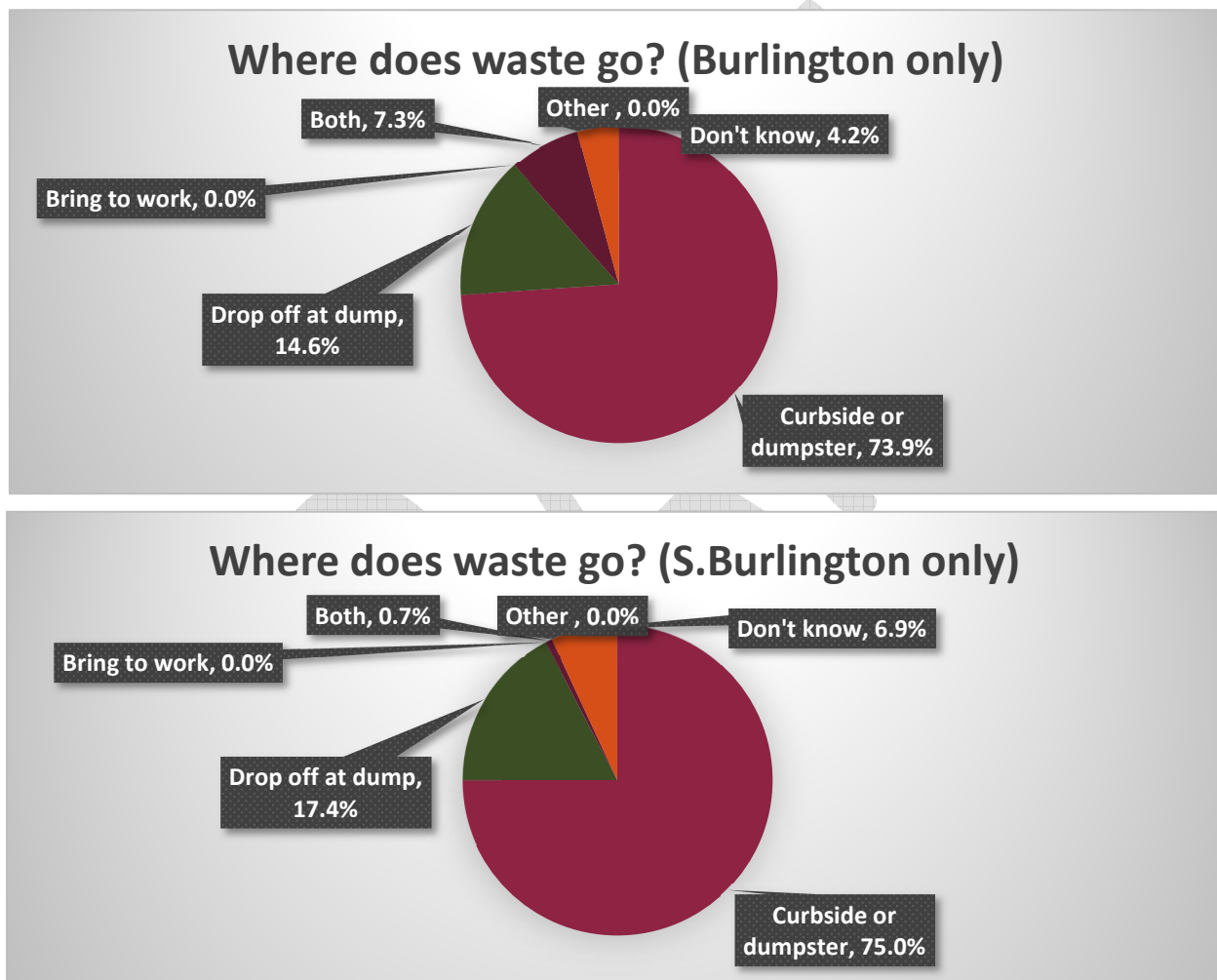


Figure 9: Participant response to, “Where does your Waste Go”?

Of the 73.9% of Burlington residents who told us they have a hauler, 64% said their hauler comes once a week to collect their trash, and 19% said the hauler comes once every-other-week to collect trash.⁷ Of the

⁵ The Chi-square statistic is significant at the .05 level.

⁶ The Chi-square statistic is significant at the .05 level.

⁷ The Chi-square statistic is significant at the .05 level.

75% of South Burlington residents who told us they have a hauler, 59% said their hauler comes once a week to collect their trash, and 19% said the hauler comes once every-other-week to collect trash.⁸ For recyclables collection in South Burlington, the most common frequency was every-other-week, at 45%, followed by once-weekly at 37%.⁹

Of the 19.4% in Burlington who said they take their trash and recyclables to a drop-off center, the plurality (48.7%) said they make the trip to the drop-off about once a week, followed closely by 30.8% who said they went about once every-other-week.¹⁰ Of the 17.4% in South Burlington who said they take their trash and recyclables to a drop-off center, the plurality (41.7%) said they make the trip to the drop-off about once a week, followed by 33.3% who said they went about once every-other-week.¹¹

Figure 10 displays participant understanding of collection of solid waste and recyclable material:

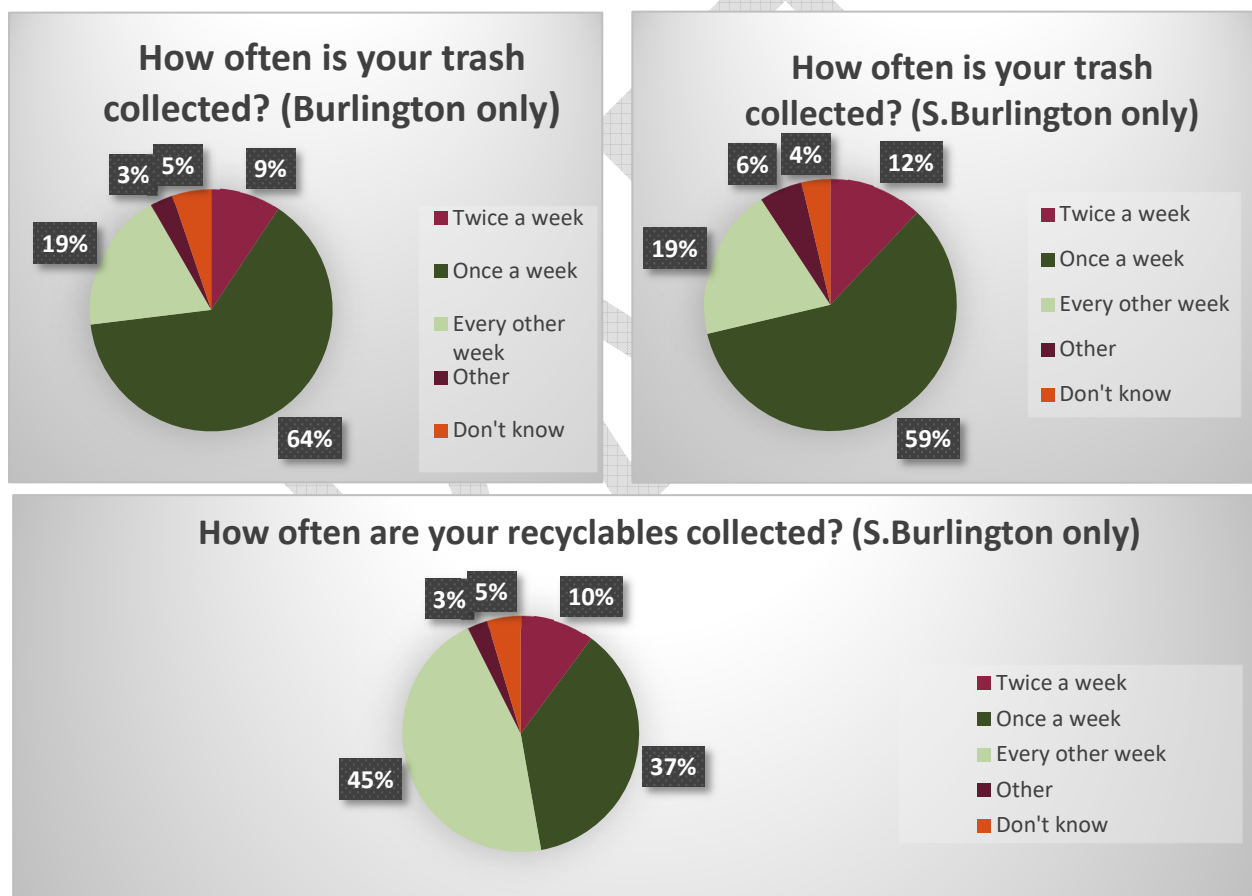


Figure 10: Participant understanding of collection of solid waste and recyclable material ¹²

⁸ The Chi-square statistic is significant at the .05 level.

⁹ The Chi-square statistic is significant at the .05 level.

¹⁰ The Chi-square statistic is significant at the .05 level.

¹¹ The Chi-square statistic is significant at the .05 level.

¹² All residents of Burlington receive City recycling service once weekly.

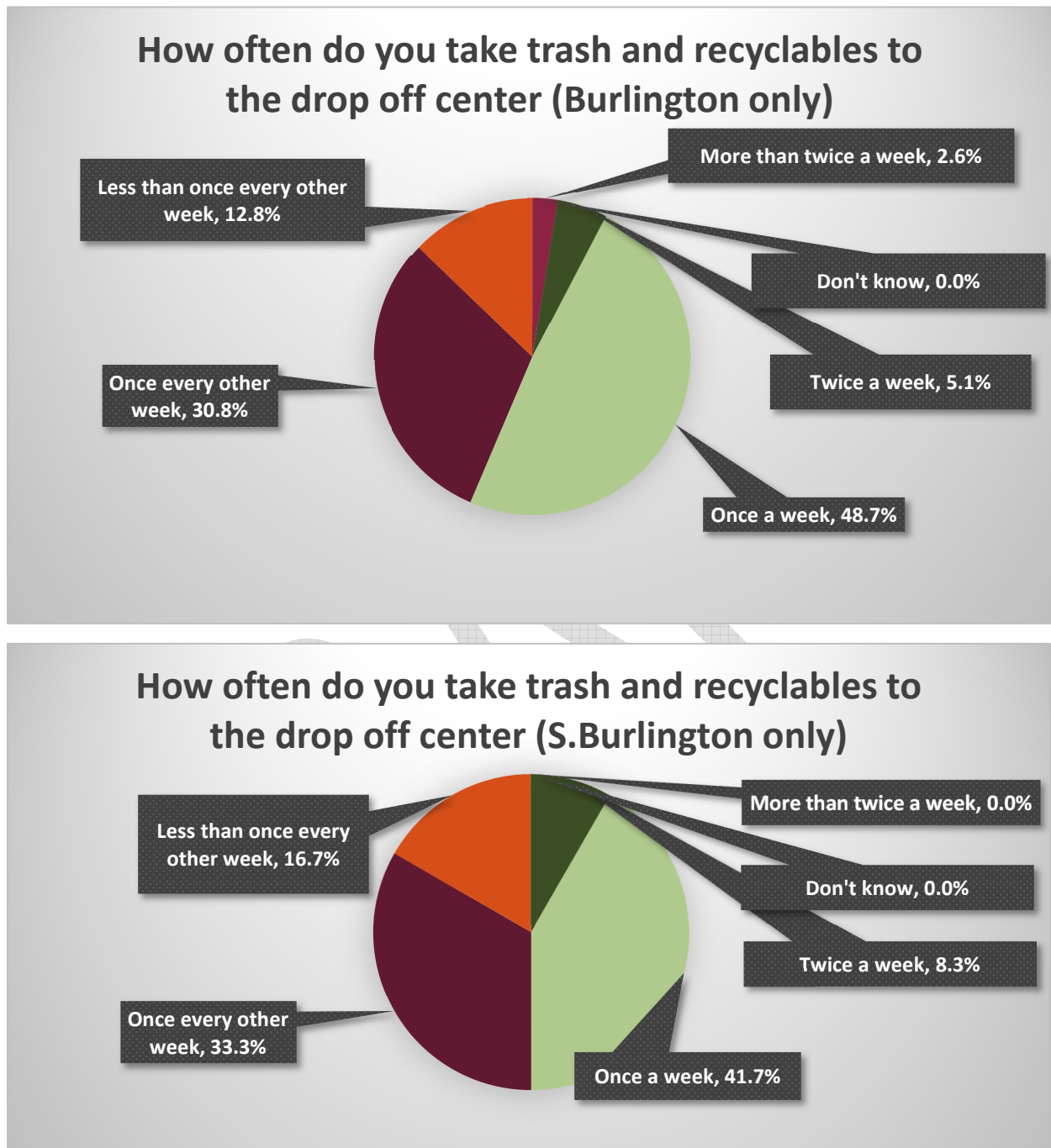
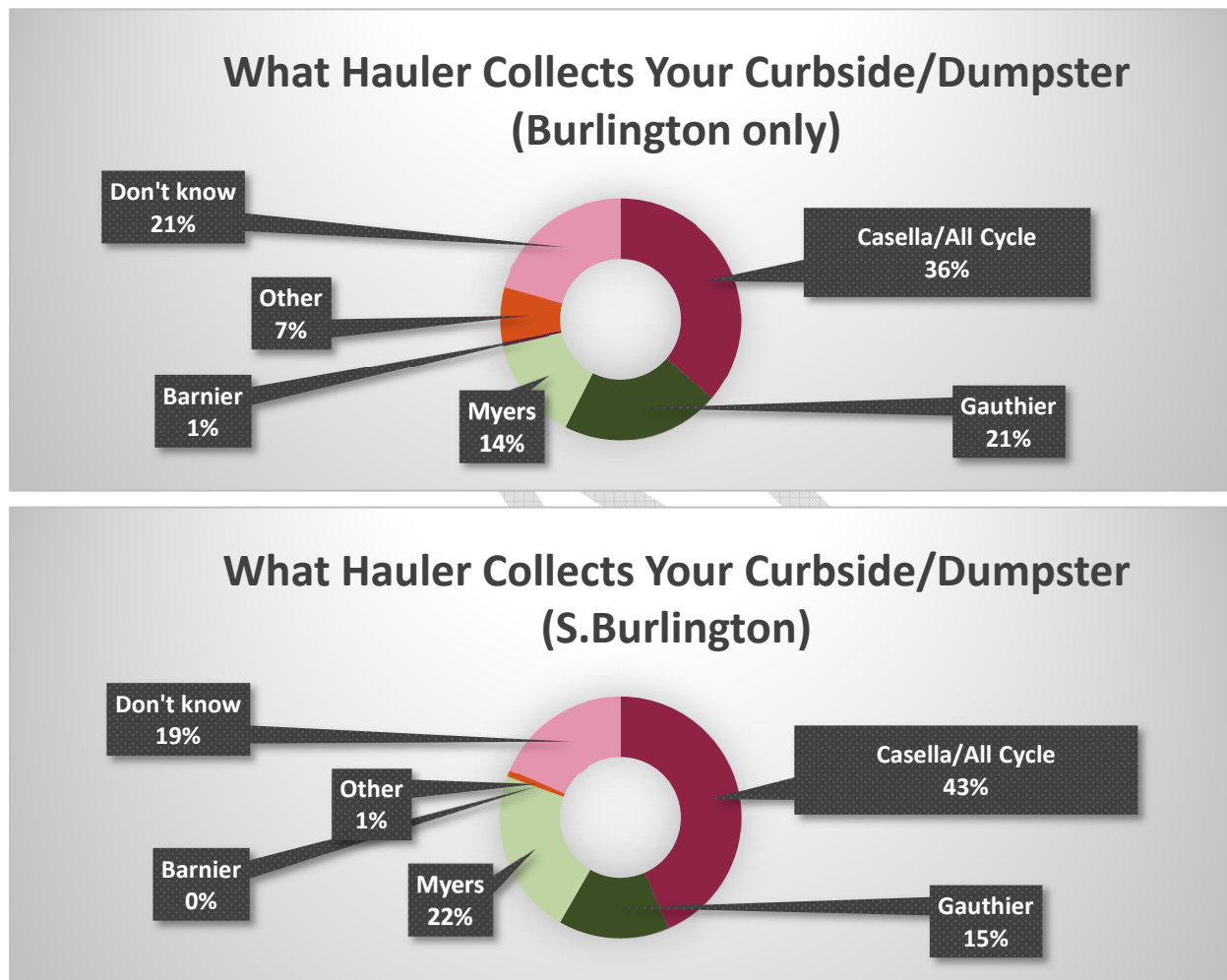


Figure 11: Response to, "How often do you bring your Waste to Drop Off"?

4.1.1.3 Which Hauler?

According to the respondents of the haulers in the Chittenden area, the hauler Casella/All Cycle has the most subscribers, with 36% in Burlington and 43% in South Burlington. The second place and third-place haulers ranked close to each other: Gauthier with 21% in Burlington and 15% in South Burlington, and Myers with 14% of respondents in Burlington and 22% in South Burlington. The next most frequent response was, “I don’t know”, at 21% in Burlington and 19% in South Burlington^{13,14}



As seen in Figure 13, residents who use a hauler were asked how much they pay per month for their services.¹⁵ Respondents were asked to give a dollar amount, and the responses were grouped into ranges.

Figure 12: Response to, “What Hauler Collects Your Curbside or Dumpster?”

¹³ The Chi-square statistic is significant at the .05 level.

¹⁴ Residents of mobile homes or apartments and condos were the most likely to respond that they did not know who their hauler is. The Chi-square statistic is significant at the .05 level; however, more than 20% of cells in the sub-tables have expected cell counts of less than five, and the minimum expected cell count is less than one; for these reasons, the Chi-square results might be invalid. The value of the responses is surer in the frequency and the context—i.e., residents of mobile homes or multi-family housing being unaware of the name of their trash hauler confirms industry experience.

¹⁵ The Chi-square statistic is significant at the .05 level.

Of those in Burlington who gave a dollar amount, there was no clear consensus. The most common value was “\$40 - \$44”, with 5.0% of the responses, and the least common amount given was “\$25 - \$29” with 1.2% of the responses. The most common response given, besides “I don’t know” or refusing to answer, was, “Nothing”, at 11.6%¹⁶ Of those in South Burlington who gave a dollar amount, there was a slightly clearer pattern, but no dollar amount represented even 10% of the responses. Of those who gave a dollar amount, the most common value was “\$40 - \$44”, with 8.2% of the responses. The next most common amount was “\$50 - \$74”, with 5.2% of responses. The least common amount given was “\$25 - \$29”, with 1.5% of responses. The most common response given, besides “I don’t know” or refusing to answer was, “Nothing”, at 13.4%. Although these results are not conclusive, they do confirm industry experience that pricing for collection service varies widely from one customer to another, even within the same town or neighborhood, due to a variety of market factors and business decisions.

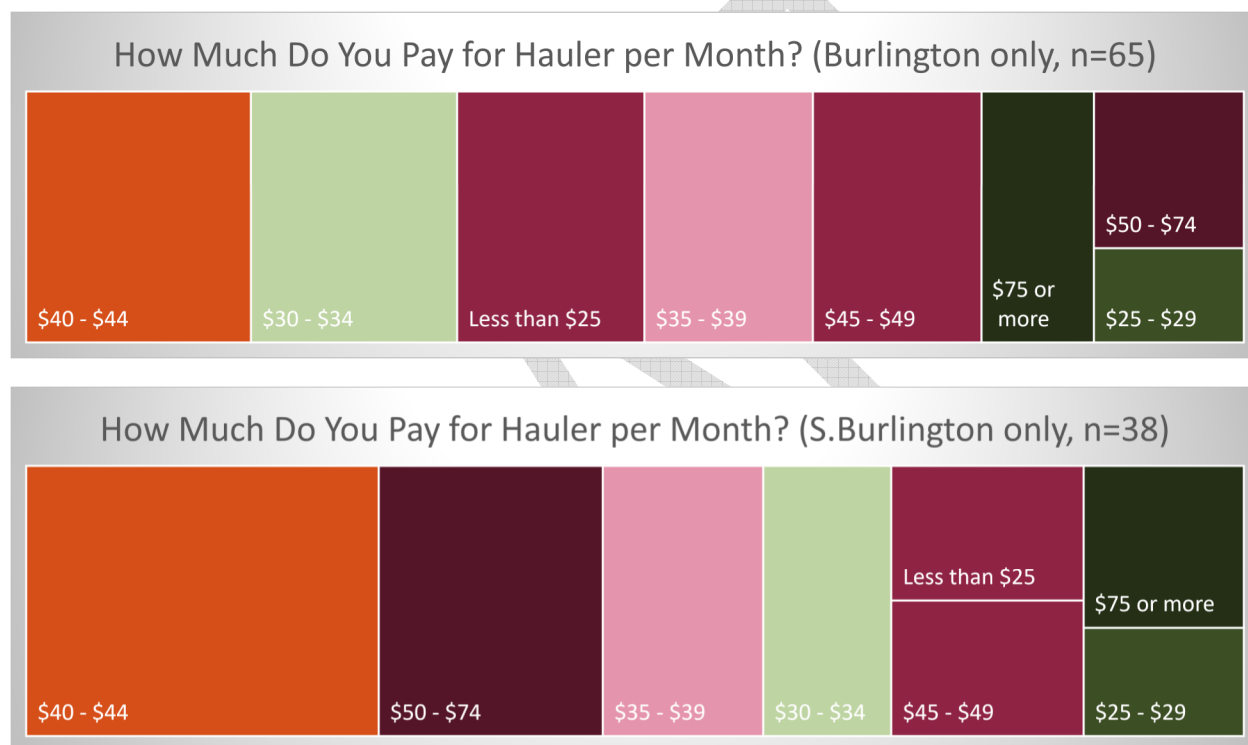


Figure 13: Response to, “How much do you pay for Trash Service per Month”?

4.1.1.4 Back-door Service

Residents were asked if their hauler offers a “back-door” service and if they use it. This is a service wherein the customer does not have to bring their carts or cans to the curb; instead, the collector comes up to the

¹⁶ In both cities, residents of townhouses, mobile homes, or apartments and condos were the most likely to respond that they pay “Nothing” for their hauler. The Chi-square statistic is significant at the .05 level; however, more than 20% of cells in the sub-tables have expected cell counts of less than five, and the minimum expected cell count is less than one; for these reasons, the Chi-square results might be invalid. The value of the responses is surer in the frequency and the context—i.e., residents of these housing types being unaware of the cost of their trash service confirms industry experience. These home types often have trash removal included in their HOA dues, condo board dues, or their monthly rent.

house or garage (usually) and brings the waste material to the truck. It is sometimes a premium service; other times, it is a courtesy accommodation for customers with mobility challenges. In Burlington, 46% of respondents said they do not use back-door service, and 40% said, “I don’t know”. Just 14% responded, “Yes”.¹⁷ In South Burlington, 61% of respondents said they do not use back-door service, and 34% said, “I don’t know”. Just 5% responded, “Yes”.¹⁸ There was no demographic group (city of residence, age, income level, education level, household size, etc.) notably or significantly more likely to use back-door service than another.¹⁹

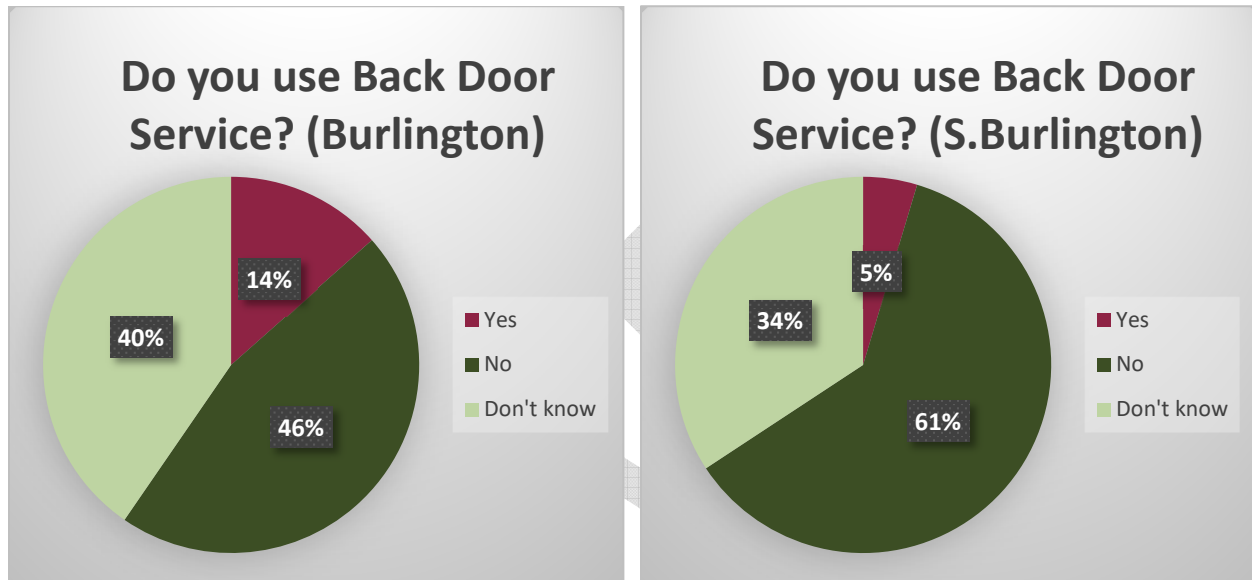


Figure 14: Response to, “Do you use “Back-door” Service”?

¹⁷ The Chi-square statistic is significant at the .05 level.

¹⁸ The Chi-square statistic is significant at the .05 level.

¹⁹ In Burlington there was a significant relationship between gender and use of back-door service; however, it is not conclusive. Each group was equally likely to say, “No.” Women were much more likely than men to say “Yes,” but men were much more likely to say, “I don’t know.”

4.1.1.5 Bulky Items

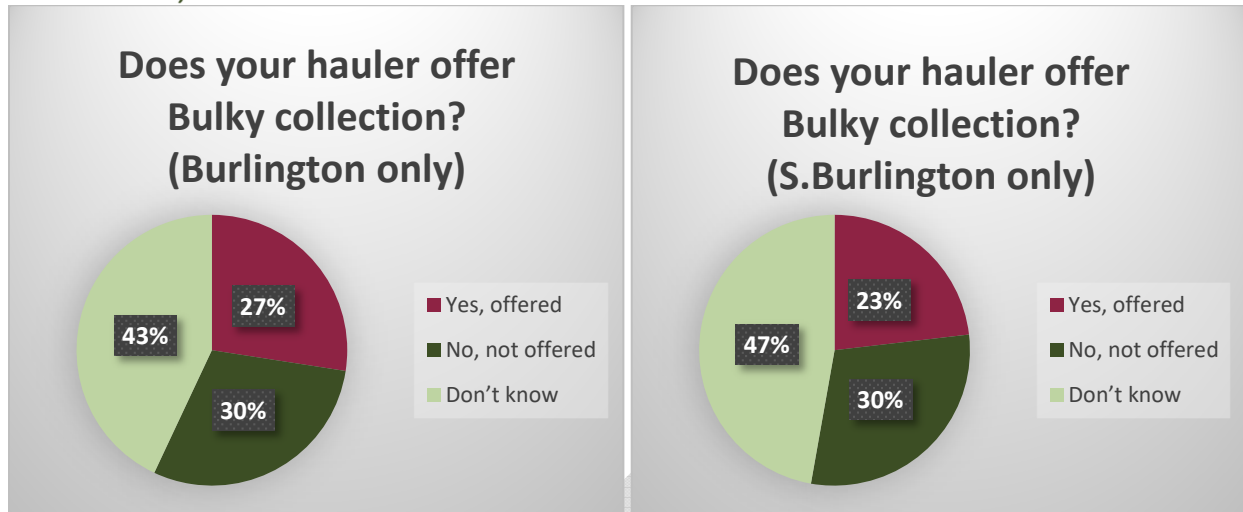


Figure 15: Response to, "Does your hauler offer bulky collection"?

Residents were asked several questions about bulky waste and what they do with it. Bulky items were described to the survey takers as, "larger items such as furniture or large appliances". The first questions were about curbside collection of these items. Most respondents did not know if their hauler collects these items; the remaining were split about evenly between, "yes, my hauler collects bulky items", and, "no, my hauler does not offer this service". This pattern was consistent across housing types.

The respondents who said their hauler does offer a curbside collection of bulky items were then asked if they use the service. In Burlington, 63% said, "No", and in South Burlington, 48% said, "No" or "I don't know". In Burlington, only 37% said, "Yes", but in South Burlington, 52% said, "Yes".

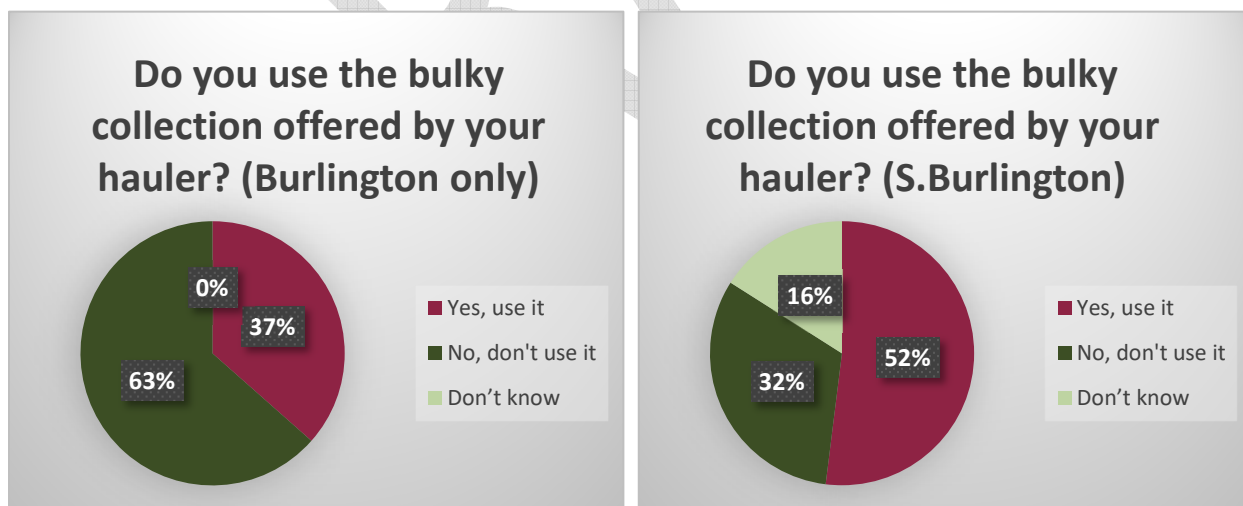


Figure 16: Response to, "Do you use the bulky collection offered by your hauler"?

Respondents who said they either do not have or do not use curbside collection of bulky items were asked what they do when they have something like that to dispose. The most common response was to take it to a drop-off center. The next most common response was to sell or give away the item, and a few

respondents said they would hire someone to remove it, like a “junk” hauler. There were no clear differences in responses among types of home; owner-occupants were much more likely to bring the item to a drop-off center than renters, they were equally likely to sell or donate an item, and renters were slightly more likely to use a junk hauler. In the survey, far more renters said, “Other” or “I don’t know”, than did owners.²⁰

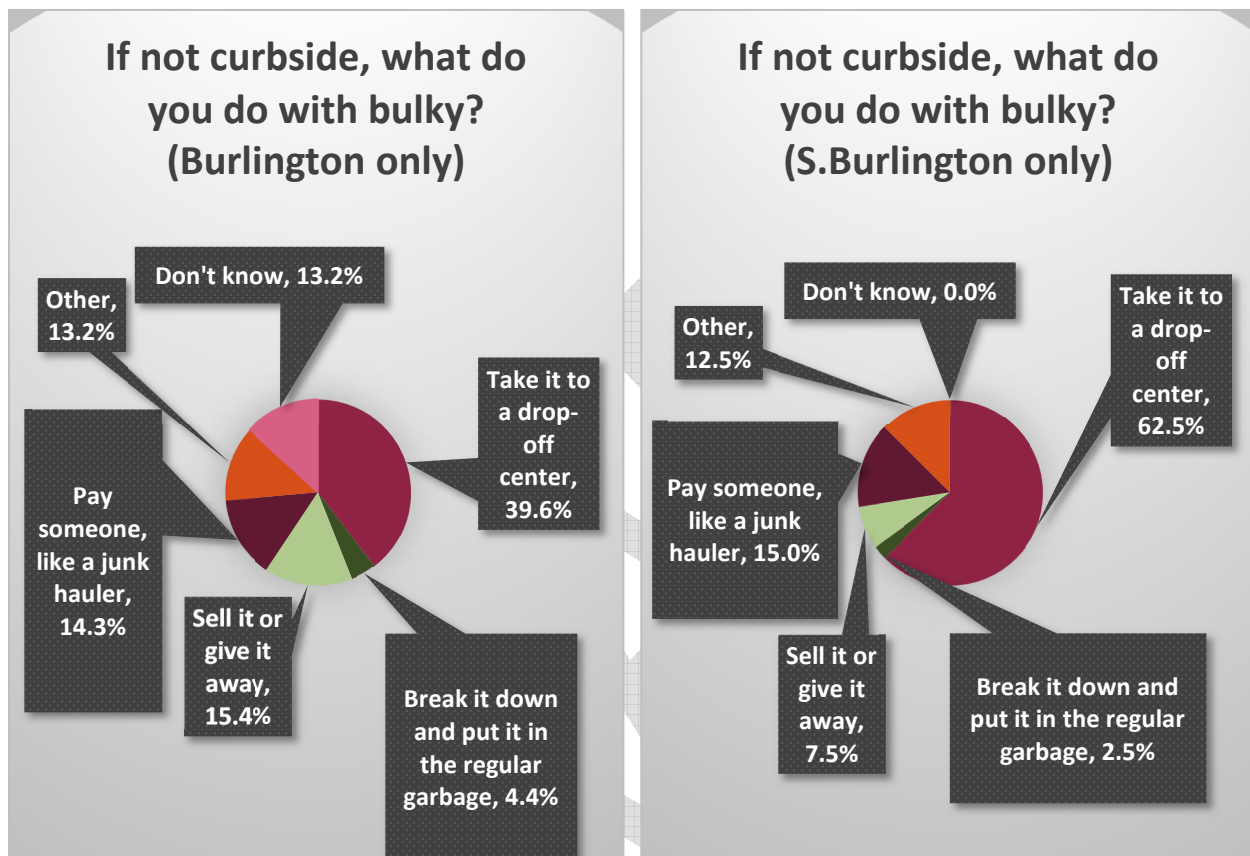
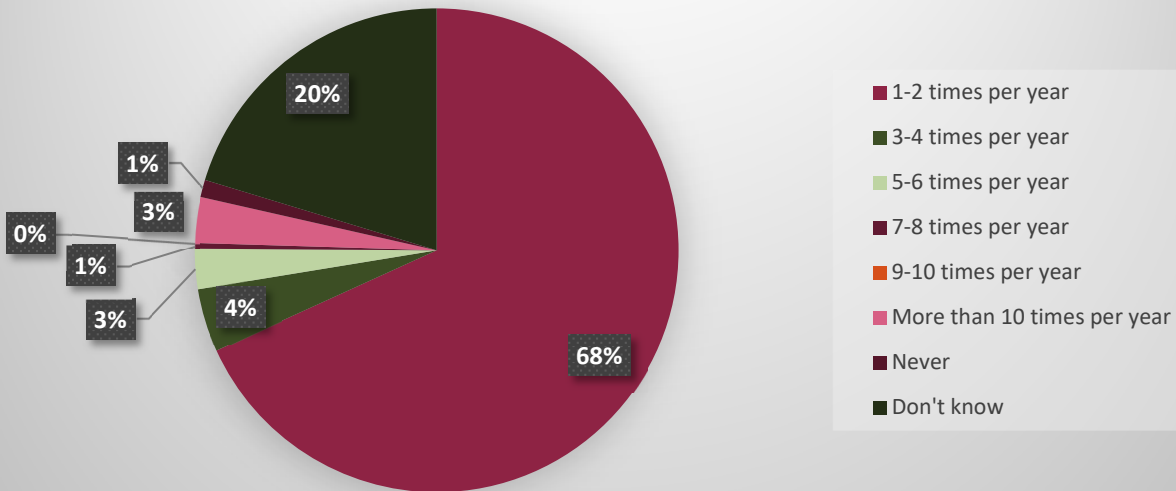


Figure 17: Response to, “If not curbside, what do you do with bulky”?

The reason relatively few residents use a curbside collection of bulky items may be that they do not dispose of these items very often. When asked how often they think they have bulky items to dispose, 68% of those in Burlington and 83% of those in South Burlington said only once or twice per year. Also, most of the people who said “other” when asked, “what do you do with bulky items?”, went on to specify that they do not have any such items. The frequency of the response, “1-2 times per year”, to this question was the same regardless of how the data were examined, and there was no demographic group (city of residence, type of housing, age, income level, education level, household size) that varied from that pattern.

²⁰ The Chi-square statistic is significant at the .05 level.

How often do you have bulky items to dispose? (Burlington only)



How often do you have bulky items to dispose? (S.Burlington only)

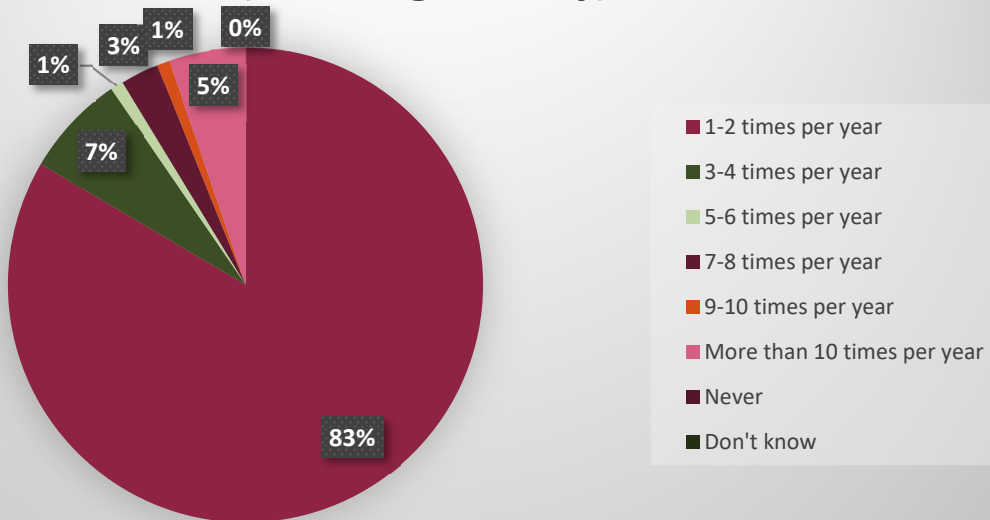


Figure 18: Response to, "How often do you have bulky items to dispose?"

4.1.1.6 Yard Trimmings

Residents were asked what they do with their yard trimmings, such as leaves and grass clippings. They could list all that apply to their activity. In Burlington, from the 261 respondents, 23.4% said they drop off the material at a designated composting location, 15% said their landscaper or maintenance company takes the material away, and 7.6% have separate yard waste collection, and 3.5% put it in their trash cans. This is a combined 49.5% in Burlington, who remove yard trimmings from their property. A combined 36.3% said they keep yard trimmings on their property, with 15.7% saying they compost at home, 19.8% saying they leave the trimmings on the lawn or ground, and 0.8% saying they burn it. Notably, 6.6% said they have no such material.

In South Burlington, from the 143 respondents, 21.1% said they drop off the material at a designated composting location, 22.7% said their landscaper or maintenance company takes the material away, and 2.5% have separate yard waste collection, and 0% put it in their trash cans. This is a combined 46.3% in Burlington who remove yard trimmings from their property. A combined 37.1% said they keep yard trimmings on their property, with 18.9% saying they compost at home, 17% saying they just leave the trimmings on the lawn or ground, and 1.2% saying they burn it. Notably, 11.9% said they have no such material.

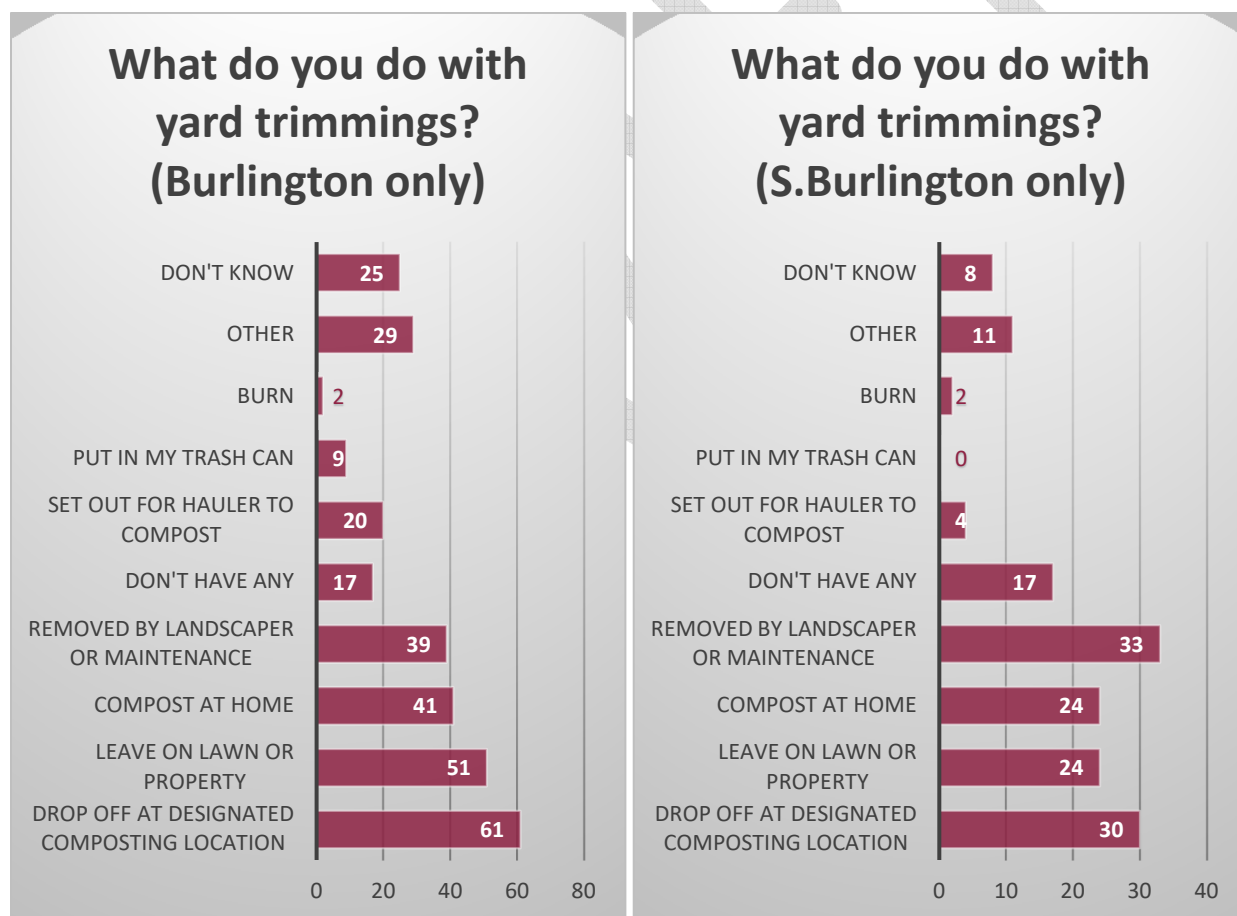


Figure 19: Response to, "What do you do with yard trimmings"?

As mentioned, some people may be both removing material from their property and keeping material on the property—for example, bagging leaves but mulching grass clippings and composting waste from the garden.

Residents of single-family homes were slightly more likely to compost at home or to use the drop-off center than residents of other types of housing. People who rely on the drop-off center for their trash and recycling, or use a combination of collection and drop-off, were notably more likely to compost at home than people with other levels of service.²¹

Figure 20 looks at who is composting at home in the combined survey population.²²

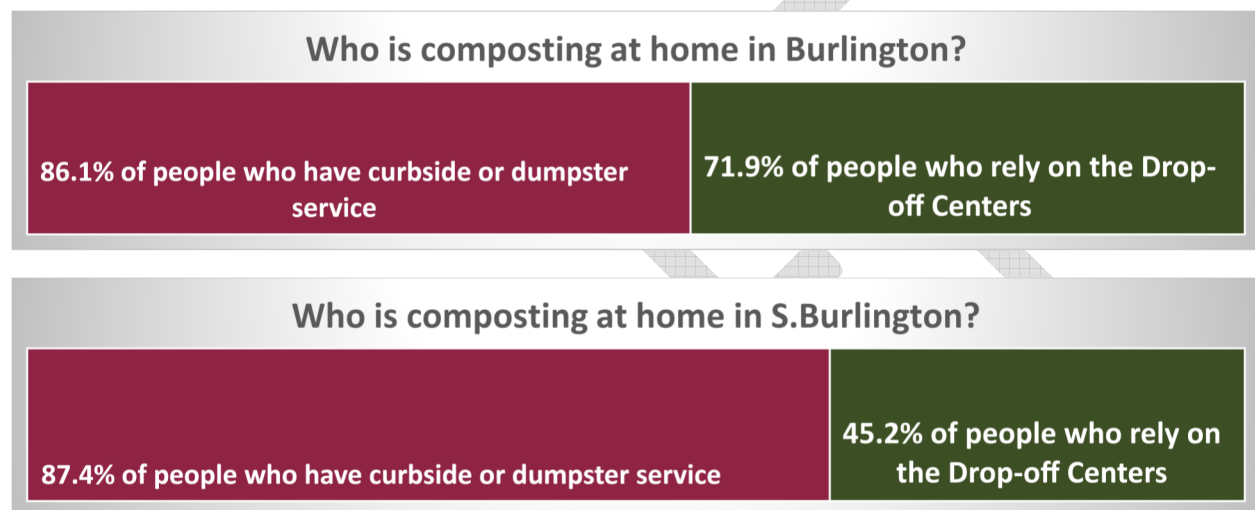


Figure 20: Frequency Results – Countywide response to, “Do you compost at home”?

Of the people who said they take yard trimmings to a drop-off center, a majority said they do that only once or twice a year. The most common amount given for delivery was six or more bags of material.

²¹ The Chi-square statistic is significant at the .05 level.

²² For Burlington, P=.069, 93.1% certainty; for South Burlington, the Chi-square statistic is significant at the .05 level.

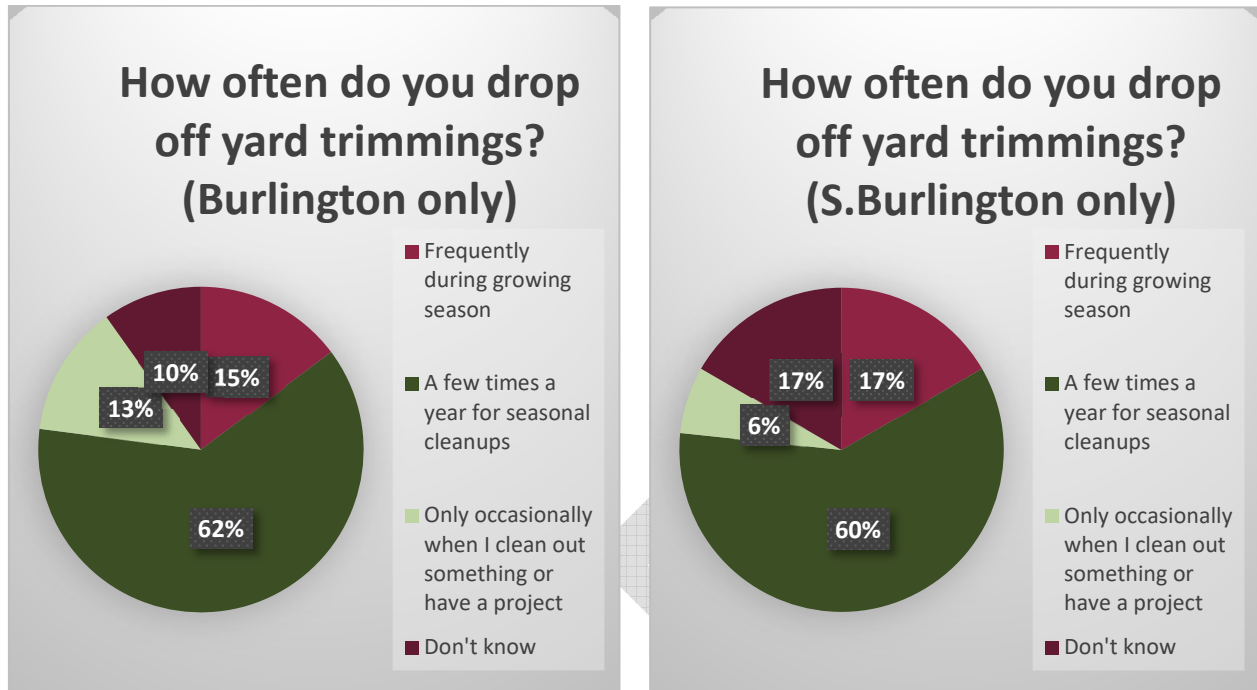


Figure 21: Response to, "How often do you drop off yard trimmings"?

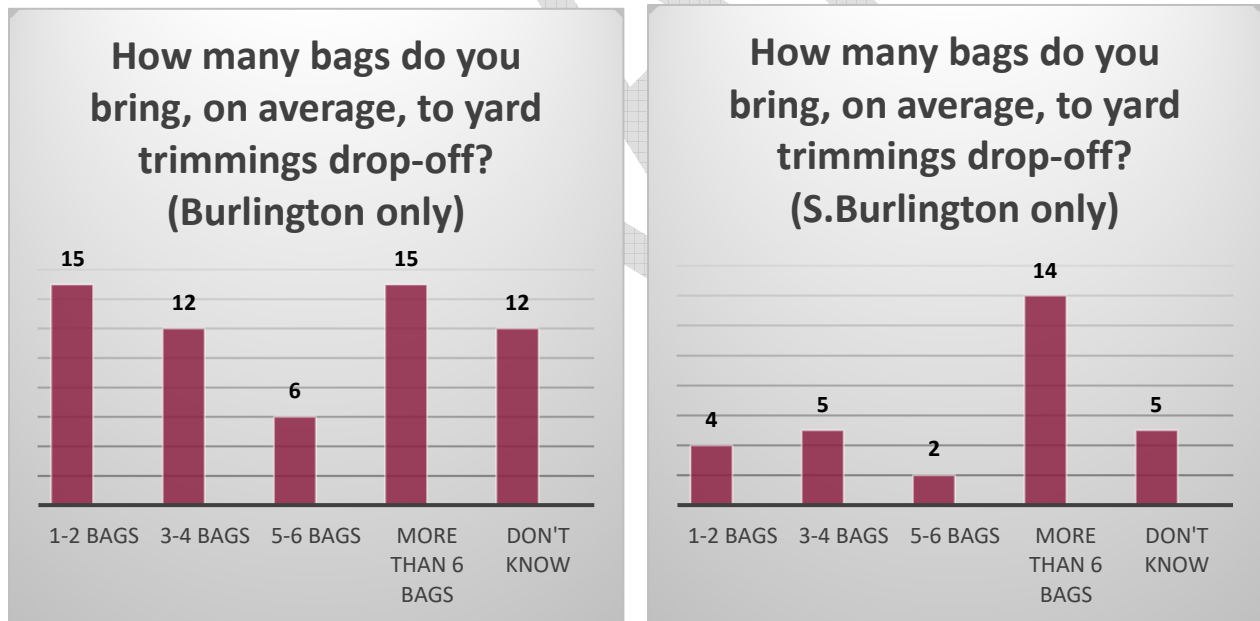


Figure 22: Response to, "On average, how many bags of yard trimmings do you bring to drop-off"?

4.1.1.7 Franchising

The callers gave a short description of the consolidated waste and recycling program being considered for implementation in the Cities of Burlington and South Burlington. Included were both the pros and cons for the residents as well as for the haulers:

In most cases in Chittenden County, if you want curbside service, you can choose which hauler comes to your home to pick up your trash and recyclables. Many other communities (including some in Vermont) have chosen to assign routes to specific haulers through a bidding process so that only one hauler services a given neighborhood. This type of system can reduce fuel and other costs, air and noise pollution, the impact of trucks on the roads, and lower the overall cost to consumers; however, curbside customers would no longer have a choice of haulers, though all haulers in the system would be required to maintain specific service standards. In addition, some of the current haulers might not win contracts.

“Would you SUPPORT or OPPOSE this type of system”?

Once they were familiar with the overall project, 39% in Burlington and 50% in South Burlington said they would support this new system. In Burlington, 23% said they oppose it, and 16% in South Burlington said they would. More than a third, combined, in Burlington said they did not know (20%) or that this was not enough information for them to decide (18%). In South Burlington, also, just over a third said they did not know (28%) or that this was not enough information to decide (6%).

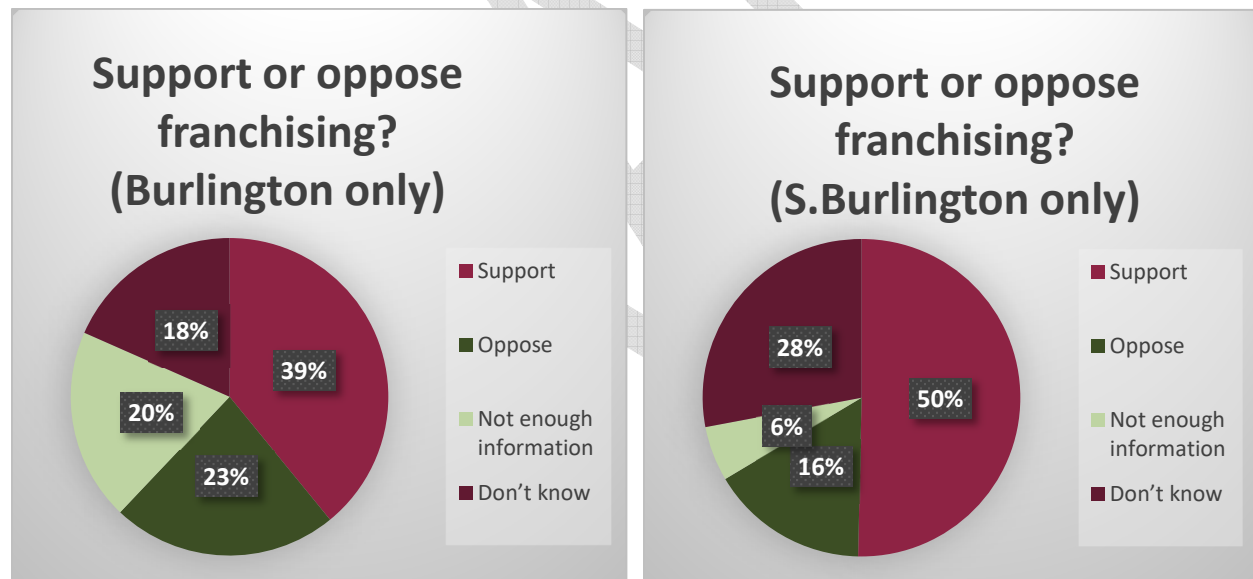


Figure 23: Response to, “Would you support or oppose franchising, as described to you today”?

Within the data of the responses to the question of supporting or opposing franchising, the following observations can be made:

- Looking at residents by home type in Burlington, townhouse dwellers support the idea of consolidation most strongly, with 84.7% in support and 15.3% opposing.²³ The idea also enjoys a

²³ The Chi-square statistic is significant at the .05 level; however, more than 20% of the cells in the sub-table have expected cell counts less than 5, so the results might be invalid.

great deal of support among residents of apartments and condos (who might be potential future homeowners) at 44.4%. Residents of single-family homes are split, with almost the same amount supporting the idea (35.6%) as opposing it (35.7%), and the remainder split evenly between saying they need more information or “I don’t know”. Among other home types (duplex, triplex, and mobile homes), there was no clear consensus.

- Looking at residents by home type in South Burlington, where overall support was stronger, Apartment dwellers support the idea of consolidation most strongly, with 58.7% in support and 1.1% opposing.²⁴ The idea also enjoys a great deal of support among residents of single-family homes, at 48.4%, and only 24.9% opposition. Townhouse residents had the least support, with just 25.5% supporting and 27.2% opposing. Among other home types (duplex, triplex, and mobile homes), there was no clear consensus.
- Between renters and owners of those who provided an answer, support in Burlington was slightly higher among owners (36.1% for renters and 44.2% for owners). Of the remaining response options, owners were more likely to express opposition (23.8% versus 19.3% among renters) and renters were more likely to say they needed more information or “I don’t know” (combined 44.6% versus 32.1% among owners). Among those who refused to say their home type or said “other”, there was no clear consensus.²⁵
- Between renters and owners in South Burlington, of those who provided an answer, support was slightly higher among renters (57.1% for renters and 49.8% for owners). Of the remaining response options, owners were more likely to express opposition (23.3% versus 1.6% among renters), and renters were more likely to say they needed more information or “I don’t know” (combined 41.2% versus 26.9% among owners). Among those who refused to say their home type or said “other”, there was no clear consensus.²⁶
- In Burlington, the longer a resident has been in Chittenden County, the more likely they were to oppose the idea or to say that they need more information, or say, “I don’t know”. Support among residents who have been in Chittenden for five years or fewer was strong, with only 1 person saying they would oppose the idea. Support among residents of longer than five years was close to the overall average with 37.6% supporting and 23.2% opposing.^{27,28}
- In Burlington, people with less income were generally supportive but less likely to lend their support, but that does not mean they were more likely to oppose; in actuality, 24.6% to 43.8% of those residents said they needed more information or, “I don’t know”. Support among the income brackets from \$25,000 to \$149,999 was largely comparable at 36.9% to 40.6%, although opposition was not as consistent. The bracket of \$75,000 to \$100,000 was an outlier, with strong support at 64% and low opposition at 21.8%. In the two highest income brackets, support was strongest, 85.0% to 94.7%, and opposition was the lowest at 15.0% to 0.0%.²⁹
- In South Burlington, nearly every income bracket expressed greater than 50% support. The exceptions were \$50,000 to \$74,999, which 44.1% support and the next answer being 28.0% at,

²⁴ P=.002, 99.8% certainty

²⁵ P=.126, 87.4% certainty

²⁶ P=.003, 99.7% certainty

²⁷ P=.028, 97.2% certainty

²⁸ In South Burlington, the results were not statistically significant when stratified by length of residence, because almost everyone who answered the question had lived in Chittenden County for more than 5 years. It is interesting to note that among those longer-term residents in South Burlington, 51.2% supported the idea, and next-most-common answer was, “I don’t know” at 27.1%.

²⁹ P=.061, 93.9% certainty

"I don't know"; and the income bracket of Less than \$25,000, where the only response with more than 8.5% was, "I don't know", at 77.2%. No bracket had greater opposition than 26%.³⁰

- In South Burlington, respondents to the survey who already have curbside or dumpster service or who rely on the drop-off supported the idea about equally (53.6% for curbside customers and 54.3% for those using drop-off). For both groups, opposition was low at less than 20%, and "I don't know" was more likely, at 22.3% for curbside customers and 28.4% for those who drop off.^{31,32,33}

Residents were then asked if there were a franchising system, how would they like to be billed for service. The responses from all respondents were varied, with 32.3% in Burlington and 41.3% in South Burlington saying, "directly from the hauler", but about as many (38.4% in Burlington and 30.4% in South Burlington) saying, "I don't know". People who said, "Other" were asked to specify, and these answers also varied, with the most common answer being through their association fees (35.2% in Burlington and 81.6% in South Burlington). Most of the remaining "Other" responses were that it should be rolled into property taxes, "free", or optional—i.e., they do not want the service and they do not want to pay.

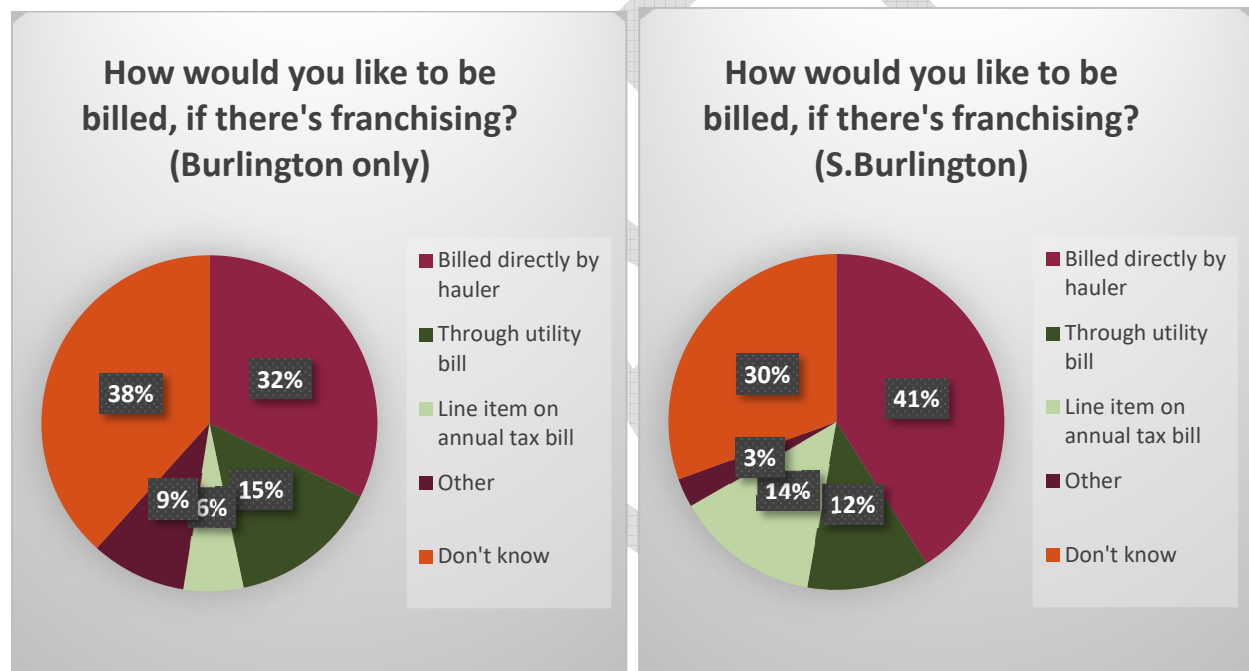


Figure 24: Response to, "How would you like to be billed, if there's franchising"?

³⁰ P=.002, 98.8% certainty

³¹ P=.007, 99.3% certainty

³² Only one person who uses both curbside and drop-off answered this question, making their response not statistically significant.

³³ In Burlington, the results were not statistically significant when stratified by type of service. Looking at frequencies, support was weaker than in South Burlington, and the frequencies of responses were inconclusive.

In Burlington,³⁴ people who already have a hauler preferred most strongly to continue to be billed by the hauler, even if there is a consolidated franchising system, the second-most common response from this group was, “I don’t know”. Among those relying on drop-off or using both curbside and drop-off, billing directly from the hauler was the most-supported option; however, “I don’t know” was the most common response from both groups. In South Burlington,³⁵ those using the drop-off centers were stronger supporters of being billed by a hauler. For those who already have a hauler, “I don’t know” was the most common answer.

For hauler bill versus a utility bill, residents of all housing types in Burlington preferred a hauler bill except townhouses, preferred a utility bill. “I don’t know”, was again a common response—in fact, the most common response except for among residents of single-family homes and triplexes.^{36,37,38}

In Burlington, there was not a strong pattern across the income brackets regarding how to be billed in a franchising system. The strongest supporters of direct billing from the hauler were in the \$25,000-\$34,999 bracket and the \$150,000-\$199,999 bracket. For the center brackets, the strongest response was, “I don’t know”. The strongest supporters for a line on the annual tax bill were in the wealthiest bracket. Support for a utility bill was more concentrated in the higher income brackets.³⁹ In South Burlington, support for a hauler bill was strong in most income brackets, and where it was not, the most popular answer was, “I don’t know”. Higher income brackets had more support for a line item on the tax bill than did lower income brackets. Support for a utility bill was low in South Burlington, across all the income brackets, with support there was concentrated in the wealthier brackets.⁴⁰

Earlier in the survey, 14.7% of respondents in Burlington and 17.1% of those in South Burlington had said they take their trash and recyclables to a drop-off center as their regular way of disposing of these materials. Those people were asked an extra question about the possible franchising. They were asked, “If this city-wide collection system was available, would you still want to go to the drop-off center to dispose of your trash and recyclables, or would you rather have curbside pickup”? The most frequent response was, “I would like to continue to take my trash to the drop-off center”, at 55.7% in Burlington and 53.5% in South Burlington, but the second most-frequent response was, “I don’t know” at 30% in Burlington and 41.7% in South Burlington. The least-common response was, “I would like to have curbside pickup”.

³⁴ The Chi-square statistic is significant at the .05 level.

³⁵ The Chi-square statistic is significant at the .05 level.

³⁶ The Chi-square statistic is significant at the .05 level.

³⁷ Only 2 people identified as residents of triplexes, and neither of them said “I don’t know.”

³⁸ In South Burlington, the results were not statistically significant when stratified by home type. Looking at frequencies, 41.3% supported a hauler bill, followed by 30.4% who said, “I don’t know.”

³⁹ The Chi-square statistic is significant at the .05 level.

⁴⁰ The Chi-square statistic is significant at the .05 level.



Figure 25: Response to, “If you currently do drop-off, would you still go to drop-off if there were a franchise, or would you rather have curbside ”?

The last few questions in the survey, before demographic information was collected, were specifically about having the collection of yard trimmings or bulky items included in a franchised curbside system. First, residents were asked if they would be interested in having curbside collection of bulky items in this service, and then they were asked how they would like to be billed—or how they would pay—for that service. Interest was divided; however, among those who were interested, most of them wanted to pay a fee if/when they used the service, not have it rolled into their rate.

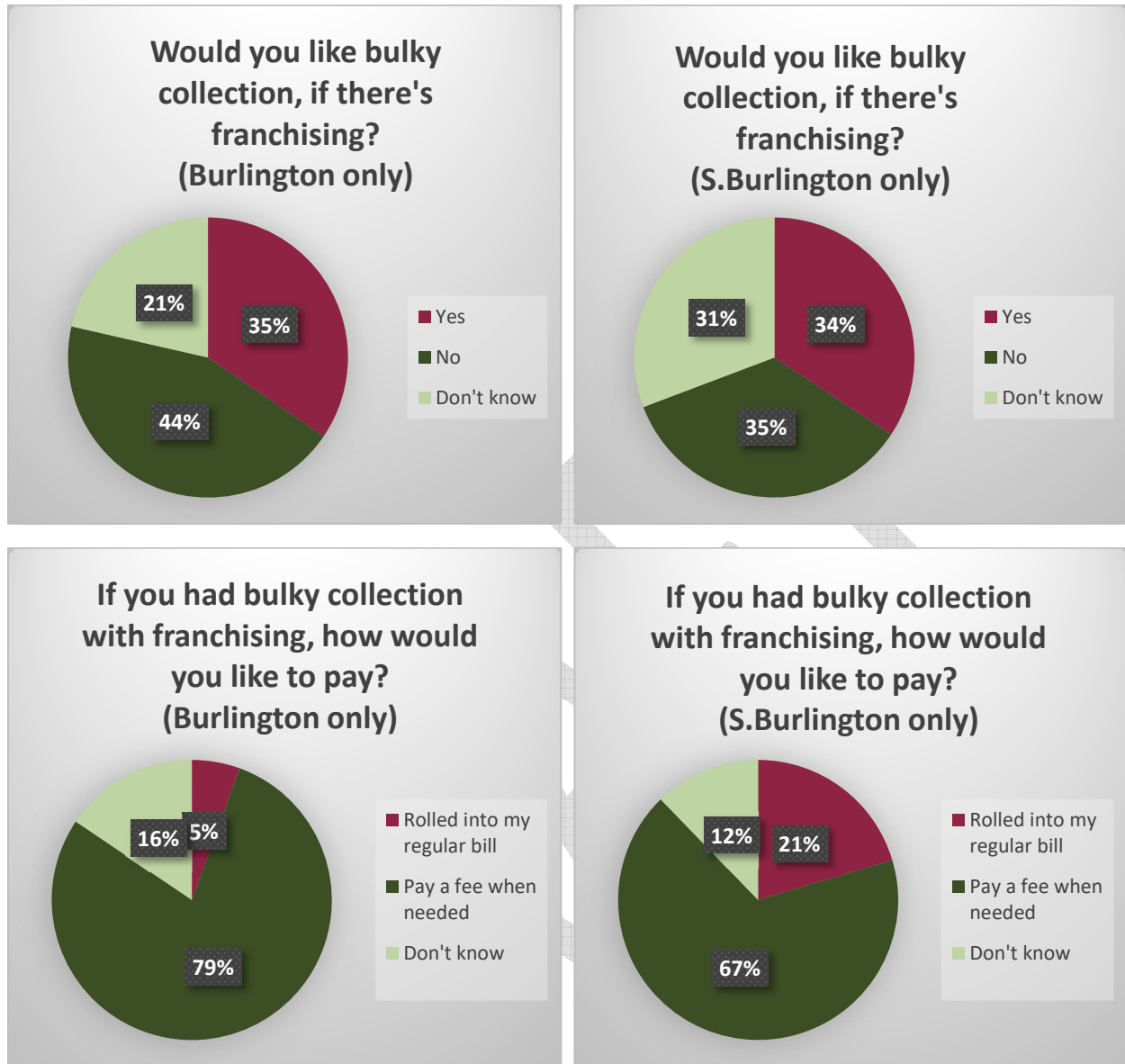


Figure 26: Response to, “Would you like bulky collection, if there's franchising”? and “If you had bulky collection with franchising, how would you like to pay”?

The residents were also asked about the possibility of having yard trimmings collection in a franchised system. Responses were divided, and in either city, only about a quarter said, “Yes”. A little more than half in Burlington saying, “No”, and a little over a third in South Burlington said, “No”, with more people saying, “I don’t know”, in South Burlington than in Burlington. This tracks with the responses about yard trimmings illustrated in Section 4.1.1.6, where the majority of respondents manage yard trimmings on their properties, through composting and leaving the trimmings on the lawn, or by a contractor such as a landscaper or maintenance company. A large percentage of residents also self-haul yard trimmings to a drop-off center.

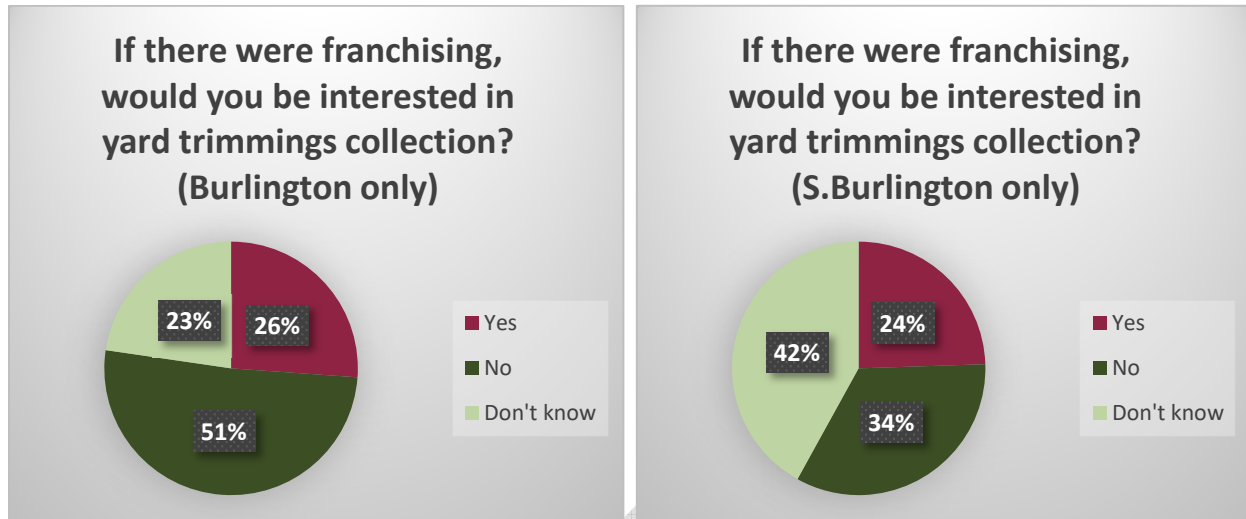


Figure 27: Response to, "If there were franchising, would you be interested in yard trimmings collection"?

In Burlington, the older a respondent was, the less they supported having yard waste collection in the franchising system. Oppositely, and the younger a respondent was, the more they supported it.⁴¹ Interestingly, in both Burlington⁴² and South Burlington,⁴³ there was more opposition than support for yard waste collection at single-family homes.

Finally, participants were asked if they would be interested in receiving collection of food scraps as part of the consolidated curbside service. Response was positive in both cities.



Figure 28: Response to, "If there were franchising, would you be interested in food scraps collection"?

⁴¹ The Chi-square statistic is significant at the .05 level.

⁴² P=.006, 99.4% certainty

⁴³ P=.016, 98.4% certainty

In Burlington, there was strong support among those ages 35 to 45, and from 65 to 74, with two-thirds saying, “Yes”. Those ages 45 to 54 had weaker support, but opposition was light—there were more, “I don’t know”, responses in this age bracket.⁴⁴ In South Burlington, support for food scraps collection was strongest among those ages 55 to 85, with younger brackets expressing uncertainty and the most popular answer was, “I don’t know”. In both cities, support was around 50% or more for both renters and owners. In South Burlington, support for adding food scrap collection was strong among those who have curbside or dumpster collection, at 60.2%. Of those relying on the drop off, 48.5% said they would not like to have the service.⁴⁵ Support was strongest among those with the least formal education and those with degrees, in South Burlington, with those in the middle expressing a lot of uncertainty.⁴⁶ People in single family homes, townhouses, and apartments in South Burlington all expressed 45% to 55% support.⁴⁷ In South Burlington, men supported food scraps collection strongly, at 68.4%. Women had more support than opposition, but the most popular response was, “I don’t know”.⁴⁸

Conclusions

- **Service subscriptions:** An estimated three-quarter of respondents reported having curbside subscription collection service at present. Among residents who currently rely on the drop-offs, 14.3% in Burlington and 4.8% in South Burlington indicated they would like to add curbside service in the franchise, for a combined 75% to 90% potential interest level⁴⁹. As indicated in the survey data, the GBB Team assumes that in a consolidated model, with more marketing and service packages, some of the residents who are now only using drop-off and not having a curbside collection subscription, would be converted to curbside customers. For the purposes of the collection modeling herein, the GBB Team has prepared model scenarios where all customers are using the service as well as scenarios where 85% of customers are using the service, hence a 15% “opt-out” rate.
- **Bulky waste:** Residents seem to have relatively few bulky items to dispose of, and most self-haul or otherwise manage it themselves. Many are not aware if they have curbside collection of bulky items, even if they have curbside trash collection. When asked about the potential to have the material collected at the curb as part of the consolidated service, there was a strong indication that people would rather pay for service as needed, rather than receive it “free” as part of their rate. This echoes the finding that people simply do not have bulky waste like appliances and furniture very often. Coupled with the interest in paying the hauler directly for services, this could be an add-on service that the franchisees sell directly to customers as needed, which is done in many cities across the U.S.
- **Food scraps:** Most respondents had a positive opinion of the idea to add food waste collection for composting to their waste management services. There was more uncertainty than opposition, except among those who rely on the CSWD drop-off centers for managing their waste. This program appealed to both renters and owners, and both apartment dwellers and those in single-family homes and townhomes. It should be made accessible to all residents.

⁴⁴ P=.007, 99.3% certainty

⁴⁵ The Chi-square statistic is significant at the .05 level.

⁴⁶ P=.001, 99.9% certainty

⁴⁷ P=.025, 97.5% certainty

⁴⁸ P=.003, 99.7% certainty

⁴⁹ The Chi-square statistic is significant at the .05 level.

- **Yard waste:** Most of the yard waste generated in Burlington and South Burlington is being managed on site or already being removed by the resident or their landscaper. Very few residents said they had yard trimmings collection right now. It is not clear if residents in Burlington included curbside leaf pick-up when they responded. While none specifically mentioned it in their responses, some did say it was collected for composting, and they may have been referring to the City program. Adding more comprehensive yard waste collection could be part of a larger organics collection program, but it is not a service that needs to be expanded beyond current services under the franchise.
- **Cost:** The cities have an opportunity to reduce collection costs through optimizing routes through route consolidation and evaluating high disposal costs. Consolidated collection can reduce the cost of solid waste collection by having one hauler service all the households within assigned section(s) of Burlington and South Burlington, as opposed to multiple haulers overlapping service within the same areas. At present, there are three primary haulers that service at least 71% of the homes in Burlington and 80% in South Burlington, with each hauler having a similar split of the market share in both cities (however, the actual proportion of their market share is likely higher due to the large number of people who responded, "I don't know"). Residents of Burlington and South Burlington have collection costs comparable to municipal areas that have an above-average cost of living.

Public Meetings

Refer to Appendix VII (forthcoming) for details on the public meetings conducted for this project.

(Remainder of page intentionally left blank.)

5. Collection Routing

Scenarios

The GBB Team evaluated the following scenarios for 1-4 units for both cities with roll carts in a consolidated model:

1. *Service frequency:*
 - a. All weekly
 - b. All every-other-week (EOW)
 - c. Weekly trash/EOW recycling
2. *Items collected:*
 - a. Trash, recycling, Food Waste
 - b. Trash, recycling
3. *Customers served:*
 - a. Opt-outs at 15% of customers
 - b. No Opt-outs

In any scenario with food waste collection, weekly collection is assumed. For any future RFP/contracting, the services such as food waste could be bid separately. Interest in food waste collection is high among residents, but for cost modeling herein, it was assumed either all customers were paying into the system or 15% were opting out. Additionally, the GBB Team modeled the 64-gallon size for solid waste as a benchmark in the consolidated routing scenarios since that service size worked in the EOW trash scenarios, with 32 gallons of trash service offered weekly⁵⁰.

For the current analysis, the route combinations evaluated are as follows:

- Base case: 1(c) + 2(b) + 3(b): Weekly solid waste/EOW recycling, No Opt-outs
- Option A: 1(c) + 2(b) + 3(a): Weekly solid waste/ EOW recycling, Opt-outs at 15% of customers
- Option B: 1(a) + 2(a) + 3(b): All weekly, solid waste, recycling, Food Waste, No Opt-outs
- Option C: 1(a) + 2(a) + 3(a): All weekly, solid waste, recycling, food waste, Opt-outs at 15% of customers
- Option D: 1(b) + 2(b) + 3(b): All EOW, solid waste, recycling, No Opt-outs
- Option E: 1(b) + 2(b) + 3(a): All EOW, solid waste, recycling, Opt-outs at 15% of customers⁵¹

C2 Logix evaluated collection routing using its Resource Estimator Tool. For this analysis, Burlington and South Burlington were routed as separate entities, and waste and recycling are routed as separate scenarios. It should be noted that the Resource Estimator Tool does not establish actual collection routes, the Tool only estimates the number of collection routes that will be needed to collect the solid waste and recyclables generated by the designated number of household units to be serviced for the scenarios indicated above. The results generated by the Resource Estimator Tool are then evaluated and utilized to establish the estimated number of collection routes which will be needed on a weekly basis as well as the

⁵⁰ In any future RFP for consolidated collection, pay-as-you-throw (PAYT) pricing should be included to match Vermont state curbside requirements.

⁵¹ Options F & G were added in the final review to indicate weekly collection without food waste, presented in Table 3 and 4.

estimated number of hours the collection routes will be operated. This information is then used to generate estimated operating costs and service price assumptions. It was also assumed that a mixed semi-automated and fully automated collection System would be needed to service the collection contracts.

The routing and operating assumptions which were used in the **base case** analysis are as follows:

For Solid waste (weekly):

- 21.00 seconds per pick up per household unit
- 33.65 lbs. per pick up per household unit
- 10-ton capacity truck

For Recycling (EOW):

- 15 seconds per pick up per household unit
- 23.50 lbs. per pick up per household unit
- 6-ton capacity truck

Routing assumptions:

- Truck went to the drop-off location at optimal point in the route
- All U turns were avoided
- Straight turns most preferred, and right turns were preferred to left turns
- All routing was done single side double pass, so the workers will not have to cross the street

Other time in the Route Summary Report:

- 30 min lunch
- 15 min pre trip
- 15 min post trip
- 20 min for each trip to the drop-off location

Collection routes were generally estimated to be within the below ranges for operating metrics.

- 650 to 800 household units serviced per route per day.
- 40 to 55 travel and route miles per route per day
- 8.0 to 9.50 operating per route per day

In any scenario with food waste collection, the following summary from the June 2014 report, which was prepared by Skumatz Economic Research Associates, Inc. for CSWD, was used to determine the estimated generation rate of 12.11 lbs. per week used in the Burlington and South Burlington route modeling.

Wayzata, MN	Hamilton, MA	Boulder, CO
• 1,300 households • Food waste collected separately weekly • 12.50 to 17.00 Lbs. per HH per week (Avg. = 14.75 Lbs.)	• 2,600 HH's • Food waste collected separately weekly • 13.0 Lbs. per HH per week	• 43,034 HH's • Food waste collected separately EOW • 8.6 Lbs. per HH per week

In addition for reference from the current hauler permit applications to CSWD, Table 1 presents the current service size offered and price range for both Burlington and South Burlington⁵².

Hauler Name	Weekly (Trash and Recycling)	Weekly (Trash and Bi-Weekly Recycling)	Biweekly (Bi-weekly Trash and Bi-weekly Recycling)	Monthly (Trash and Recycling)	Bi-weekly (Recycling and Monthly trash)	On-call (Trash and Recycling)
Hauler 1	\$28.00 to \$30.00		\$18.00 to \$24.00			
Hauler 2		32 Gallon: \$29.45-\$37.45	32 Gallon: \$26.45-\$34.45	32 Gallon: \$24.95-\$32.95		
		64 Gallon: \$36.95-\$44.95	64 Gallon: \$30.95-\$38.95	64 Gallon: \$27.95-\$35.95		
		96 Gallon: \$42.95-\$50.95	96 Gallon: \$33.95-\$41.95	96 Gallon: \$29.45-\$37.45		
Hauler 3	32 Gallon: \$29.87		32 Gallon: \$25.35	32 Gallon: \$17.25	32 Gallon: \$18.25	32 Gallon: \$17.25
	64 Gallon: \$ 44.21		64 Gallon: \$29.50	64 Gallon: \$20.25	64 Gallon: \$21.9	64 Gallon: \$20.25
	96 Gallon: \$62.66		96 Gallon: \$39.11	96 Gallon: \$25.25	96 Gallon: \$27.25	96 Gallon: \$25.25
	2-yard dumpster: \$95.35		2-yard dumpster: \$76.85	2-yard dumpster: N/A	2-yard dumpster: N/A	2-yard dumpster: N/A
Hauler 4	32 Gallon: N/A		32 Gallon: N/A			
	64 Gallon: \$36.00- \$49.00		64 Gallon: \$25.00- \$38.00			
	96 Gallon: N/A		96 Gallon: N/A			
	2-yard dumpster: \$79-\$139		2-yard dumpster: \$69-\$119			

Table 1: Private Hauler Service Levels and Pricing of Carts and Bins in CSWD permit application

⁵² The number of customers in each service type is not provided and GBB was not able to obtain this information after making a follow-up request to the haulers; however, the service price ranges are relevant as the consolidated system price ranges are modeled in the forthcoming section.

Table 2 displays the Capital Expenditure assumptions included in the consolidated collections scenario summaries for both the City of Burlington and the City of South Burlington that follow.

Table 2: City of Burlington and City of South Burlington- Consolidated Routing Scenarios - Capital Expenditure Assumptions

Interest Rate	8%
Financing Term	7 Years
Truck Depreciation Life	7 Years
Cart Depreciation Life	7 Years
Pickup Truck Depreciation Life	7 Years
Software Depreciation Life	7 Years
Truck Unit Cost	\$295,000.00
Cart Unit Cost	\$55.00
Pickup Truck Unit Cost	\$50,000.00
Routing Software Unit Cost	\$30,000.00

5.1.1 Potential Future RFP / Contract Process Specifications

5.1.1.1 Small Hauler Participation

The City of Burlington and the City of South Burlington receive solid waste and recycling collection services from multiple solid waste companies. The various companies are believed to have different levels of financial and management resources which may limit the ability of some companies to respond to a RFP process to provide solid waste and recycling collection services for all of the single-family units in each City. These limitations may consist of such items as reduced access to capital funds, limited support facility infrastructure, reduced administrative capabilities and the size of the companies' supervisory staff.

Restrictions or mechanisms that can be deployed in the bidding process to encourage small hauler participation, along with an assessment of each, include:

- a.) **Restrict how many districts/customers can be won:** In an effort to ensure small haulers have the ability to secure a collection contract, the City of Burlington may specify 2 to 3 areas of the City as separate collection districts each servicing approximately 4,335 to 6,500 residential units. The City of South Burlington may also specify 2 areas of the City as separate collection districts each servicing approximately 3,200 residential units. The Cities may then also specify within the RFP that the collection districts cannot be serviced by the same company. This RFP structure would allow for participation of multiple different haulers while ensuring that the opportunity to achieve the collection efficiencies associated with servicing all of the residential units within the designated collection districts. It should be understood, however, that this type of RFP structure must be consistent with the procurement requirements of each City. It should also be recognized that potential issues with this RFP structure may arise should the service pricing submitted by different companies as part of the RFP may result in the different pricing scenarios for each of the specified collection districts. This issue could be

- managed by developing a blended rate structure for all collection districts which would be applicable to all residential units with each City.
- b.) **Restrict bidding on certain districts to small haulers:** It is difficult at this time to determine how the concept of having bidding on certain collection districts restricted to small haulers (e.g., those serving less than a certain number of customers) through the establishment of goals and guidelines could be successfully incorporated into the RFP process since such an arrangement may result in higher pricing for the base case type of collection services within the designated collection districts. In addition, guidelines would have to be established for defining a “small hauler designation” which would need to be consistent with each City’s procurement requirements. This type of structure has been used by certain cities and counties within the United States in order to provide opportunities for disadvantaged minority and/or women owned businesses, however, the definition of such disadvantaged businesses is clearer and more established within municipal procurement procedures. A better approach to ensuring small hauler participation may include structuring the RFP process to allow for some of the specialty services such as bulk and back door collection services to be provided separately from the contracts issued for servicing all of the single-family residential units in each City. In addition, the Cities may wish to consider setting aside for small collection companies the solid waste and recycling collection services for the municipal office and facility locations throughout each city. These types of services may be better aligned with the capabilities and resources of the smaller companies.
 - c.) **Encourage bidders to use other haulers / bid cooperatively:** This concept maybe be considered problematic since it could be interpreted as encouraging collusion among several collection companies in an effort to manage the bidding process and the subsequently submitted pricing resulting in a potential illegal situation. However, the RFP process could be structured to allow sub-contracting of a limited percentage of the contracted services. The RFP process could also allow for the formal establishment of a joint venture form of a company between several small haulers in order to form an entity which would be able to service one of the collection districts as described above. The RFP process would most likely, however, need to restrict the companies which formed the joint venture from bidding on other collection districts separately.
 - d.) **Limit type of disposal permitted for trash collection (e.g., to landfill only, no incineration):** It is difficult at this time to understand how this would benefit the Cities or serve to provide for increased small hauler participation. It is recommended that the RFP process not limit the disposal options for the collected trash in any way in order to provide the opportunity for multiple bidders and expand the competitive environment for the RFP process.
 - e.) **Include knowledge of local area or familiarity with collection routes in Chittenden County as one of the selection criteria:** This selection criteria will need to specify familiarity and experience with the collection of solid waste and recyclables within the Cities of Burlington and South Burlington since they will be the designated collection areas and not the entire County. This requirement should not, however, be a significant factor in the selection process.
 - f.) **Allow for specialty services to be provided separately:** In an effort to provide an opportunity for smaller solid waste collection companies to participate in the contract(s) for solid waste and recycling collection services which may be finalized for the Cities of Burlington and South Burlington, it is recommended that the RFP process allow for some of the specialty services such as bulk, back door and food scraps collection services be provided separately from the contracts issued for servicing all of the single-family residential units in each City.

- g.) **Set aside collection to municipal offices/facilities for small haulers:** The Cities may wish to consider setting aside for small collection companies the solid waste and recycling collection services for the municipal office and facility locations throughout each city. These types of services may be better aligned with the capabilities and resources of the smaller companies.

Commerce Clause Review

It is difficult to determine the applicability of the Commerce Clause to the City of Burlington and the City of South Burlington RFP process since the Commerce Clause pertains to the regulation by the United States Congress of the flow of interstate commerce. The Commerce Clause has been applied to the transportation of solid waste across state lines and has generally prevented interference in such transportation by state and local ordinances with the exception of specific, defined situations. The need to ensure a fair and open bidding process as part of the RFP process is most likely required to be consistent with existing State of Vermont law and the procurement requirements of the City of Burlington and the City of South Burlington.

Definition of Commerce Clause

The Commerce Clause authorizes Congress to regulate commerce in order to ensure that the flow of interstate commerce is free from local restraints imposed by various states. When Congress deems an aspect of interstate commerce to be in need of supervision, it will enact legislation that must have some real and rational relation to the subject of regulation. Congress may constitutionally provide for the point at which subjects of interstate commerce become subjects of state law and, therefore, state regulation.

Acts Constituting Commerce

Whether any transaction constitutes interstate or intrastate commerce depends on the essential character of what is done and the surrounding circumstances. The courts take a commonsense approach in examining the established course of business in order to distinguish where interstate commerce ends and local commerce begins. If activities that are intrastate in character have such a substantial effect on interstate commerce that their control is essential to protect commerce from being burdened, Congress may not be denied the power to exercise that control. The power of Congress to regulate commerce also extends to contracts that substantially relate to interstate commerce. For example, Congress may regulate the rights and liabilities of employers and employees, as labor disputes adversely affect the free flow of commerce. Otherwise, contracts that do not involve any property or activities that move in interstate commerce are not ordinarily part of interstate commerce. Congress acts within its power when it regulates transportation across state lines. The essential nature of the transportation determines its character. Transportation that begins and ends within a single state is intrastate commerce and is generally not within the scope of the Commerce Clause.

Review with Legal and Procurement Departments

It is recommended that the City of Burlington and the City of South Burlington review possible small hauler participation mechanisms in detail with their Legal and Procurement Departments, prior to proceeding with RFP planning, to ensure that the most desired concept is consistent with all applicable legal requirements and established procurement policies.

5.1.1.2 Container Size Options

To comply with local and state law requirements for unit-based rates, any future RFP/contract process must be structured to specify that the selected contractor must provide different container size options for solid waste and recycling collection services such as 64-gallon and 32-gallon containers in order to provide residents with options which best meet the needs of the individual residents. The different container sizes will also allow residents to select the size which best matches the type of housing unit being serviced and the quantity of solid waste and recyclables which are generated by each residential unit.

The RFP can also request pricing for the different size container service options in effort to obtain favorable service rates for the Cities' residents for the smaller containers. It should be recognized, however, that by necessity there will be a limit to the different container sizes options due to the need to simplify the service structure to realize the potential service efficiencies and savings provided by the selected contractor.

In summary, the options for any future RFP/contracting for consolidated collection to maintain customer choice and preferences include:

- Option to elect curbside service⁵³
- Choice of adding organics collection
- Choice of back door service
- Choice of container size for solid waste and recycling

⁵³ If opt-outs are chosen instead of no opt-outs, opt-outs will need to be capped in the RFP terms. GBB suggestion is 15% of customers as opt-out maximum.

City of Burlington

5.1.2 Review of Current Collection System

The City currently provides once per week single-stream recyclables collection services to single-family and multi-family units. The recyclables collection is conducted utilizing three semi-automated trucks with a crew of one driver each. The three trucks service a combined total of approximately 1,500 homes per day and the recyclables are collected in 35-, 65- or 95-gallon rolling carts which can be purchased from the City. The pricing for purchasing the carts is provided below:

Bins available at \$5.00 each (not directly from City)	• 35-Gallon Cart - \$10.00 per cart.	• 65-Gallon Cart - \$20.00 per cart.	• 95-Gallon Cart - \$25.00 per cart.
--	--------------------------------------	--------------------------------------	--------------------------------------

The collected recyclables are delivered to the CSWD MRF. The collection program results in the diversion of a total of approximately 5,940,000 pounds or 440 pounds per household of recyclable materials on an annual basis.

Solid waste collection services are provided on a subscription basis by four primary collection companies: Casella Waste, Barnier Waste, Myers Container Service Corp. and Gauthier Trucking, Inc. In any future consolidated collection system, existing recycling carts may be able to be utilized, at the discretion of the city and its program requirements.

5.1.3 City of Burlington, Consolidated Collections Scenarios—Summary Report

Table 3: City of Burlington -Consolidated Collections Scenarios- Summary Report

BURLINGTON						SOLID WASTE							RECYCLING							FOOD WASTE							TOTAL	TOTAL
	Solid waste - 64 gal	Recycling - 64 gal	Food waste - 15 gal	Opt-Outs	Customers	Seconds per pick up per HH unit	lbs. per pick up per HH unit	Truck capacity (tons)	Routes Per Week	Resident cost per year (with disposal costs)	Tons per week	Tipping fee (\$/ton)	Seconds per pick up per HH unit	lbs. per pick up per HH unit	Truck capacity (tons)	Routes Per Week	Resident cost per year (with MRF tipping fees)	Tons per week	Processing fee (\$/ton)	Seconds per pick up per HH unit	lbs. per pick up per HH unit	Truck capacity (tons)	Routes Per Week	Resident cost per year (with composting tipping fees)	Tons per week	Processing fee	Resident cost per month	Annual Cost (\$) per Household
Base case	Weekly	EOW	NA	None	13,005	21	33.65	10	16	\$208.27	218.83	\$137.75	15	23.85	6	8	\$69.63	77.55	\$65.00								\$23.16	\$277.90
Option A	Weekly	EOW	NA	15%	11,054	21	33.65	10	15	\$212.38	186.07	\$137.75	15	23.85	6	7	\$76.01	65.94	\$65.00								\$24.03	\$288.39
Option B	Weekly	Weekly	Weekly	None	13,005	21	33.65	10	16	\$208.27	218.83	\$137.75	15	23.85	6	16	\$101.58	77.52	\$65.00	15	12	10	14	\$94.61	78.04	\$60.00	\$33.71	\$404.46
Option C	Weekly	Weekly	Weekly	15%	11,054	21	33.65	10	15	\$212.38	186.07	\$137.75	15	23.85	6	14	\$107.62	65.912	\$65.00	15	12	10	12	\$97.50	66.35	\$60.00	\$34.79	\$417.50
Option D	EOW	EOW	NA	None	13,005	21	33.65	10	8	\$175.79	218.86	\$137.75	15	23.85	6	8	\$69.63	77.55	\$65.00								\$20.45	\$245.42
Option E	EOW	EOW	NA	15%	11,054	21	33.65	10	7	\$178.34	186.09	\$137.75	15	23.85	6	7	\$76.01	65.94	\$65.00								\$21.20	\$254.35
Option F	Weekly	Weekly	NA	None	13,005	21	33.65	10	16	\$208.27	218.83	\$137.75	15	23.85	6	16	\$101.58	77.52	\$65.00								\$25.82	\$309.85
Option G	Weekly	Weekly	NA	15%	11,054	21	33.65	10	15	\$212.38	186.07	\$137.75	15	23.85	6	14	\$107.62	65.912	\$65.00								\$26.67	\$320.00

Note: In some cases, there may be a difference between the number of routes specified above vs the number of routes indicated by the Routes Summary Reports due to a recommended combination of 1 to 2 routes per scenarios in order to achieve possible operating efficiencies.

Refer to City of Burlington, Consolidated Collections Routing Summaries for further details in Appendix V.

City of South Burlington

5.1.4 Review of Current Collection System

The City does not currently provide solid waste and recyclables collection services to its residents, and all such services are provided by private haulers such as Casella Waste, Barmier Waste, Gauthier Trucking Co. Inc. and Myers Container Service Corp. on a subscription basis. The City of South Burlington generally is comprised of more suburban single-family homes than the more densely populated urban communities observed within the City of Burlington.

5.1.5 City of South Burlington, Consolidated Collections Scenarios—Summary Report

Table 4: City of South Burlington -Consolidated Collections Scenarios- Summary Report

SOUTH BURLINGTON						SOLID WASTE							RECYCLING							FOOD WASTE							TOTAL	TOTAL
	Solid waste - 64 gal	Recycling - 64 gal	Food waste - 15 gal	Opt-outs	Customers	Seconds per pick up per HH unit	Lbs. per pick up per HH unit	Truck capacity (tons)	Routes Per Week	Resident cost per year (with disposal)	Tons per week	Tipping fee (\$/ton)	Seconds per pick up per HH unit	Lbs. per pick up per HH unit	Truck capacity (tons)	Routes Per Week	Resident cost per year (with MRF tipping fee)	Tons per week	Processing fee (\$/ton)	Seconds per pick up per HH unit	Lbs. per pick up per HH unit	Truck capacity (tons)	Routes Per Week	Resident cost per year	Tons per week	Processing fee	Resident cost per month	Annual Cost (\$) per Household
Base case	Weekly	EOW	NA	None	6433	21	33.65	10	8	\$210.48	108.235	\$137.75	15	23.85	6	4	\$71.66	38.36	\$65.00								\$23.51	\$282.14
Option A	Weekly	EOW	NA	15%	5468	21	33.65	10	8	\$215.23	91.81	\$137.75	15	23.85	6	4	\$78.38	32.54	\$65.00								\$24.47	\$293.61
Option B	Weekly	Weekly	Weekly	None	6433	21	33.65	10	8	\$210.48	108.235	\$137.75	15	11.92	6	8	\$109.66	38.41	\$65.00	15	12.00	10	7	\$96.48	38.60	\$60.00	\$34.72	\$416.62
Option C	Weekly	Weekly	Weekly	15%	5468	21	33.65	10	8	\$215.23	91.81	\$137.75	15	11.92	6	7	\$114.82	32.52	\$65.00	15	12.00	10	6	\$94.39	32.74	\$60.00	\$35.37	\$424.44
Option D	EOW	EOW	NA	None	6433	21	33.65	10	4	\$177.20	108.25	\$137.75	15	23.85	6	4	\$71.66	38.36	\$65.00								\$20.74	\$248.86
Option E	EOW	EOW	NA	15%	5468	21	33.65	10	4	\$195.13	91.82	\$137.75	15	23.85	6	4	\$78.38	32.54	\$65.00								\$22.79	\$273.51
Option F	Weekly	Weekly	NA	None	6433	21	33.65	10	8	\$210.48	108.235	\$137.75	15	11.92	6	8	\$109.66	38.41	\$65.00								\$26.68	\$320.14
Option G	Weekly	Weekly	NA	15%	5468	21	33.65	10	8	\$215.23	91.81	\$137.75	15	11.92	6	7	\$114.82	32.52	\$65.00								\$27.50	\$330.05

Note: In some cases, there may be a difference between the number of routes specified above vs the number of routes indicated by the Routes Summary Reports due to a recommended combination of 1 to 2 routes per scenarios in order to achieve possible operating efficiencies.

Refer to City of South Burlington, Consolidated Collections Routing Summaries for further details in Appendix VI.

Consolidated Routing Observations

In the modeling presented above for both cities, note that current CSWD Materials Recovery Facility and Casella Transfer Station gate rates were used for collection routing pricing estimates. It is assumed that negotiated rates would be more favorable to the ratepayer; in this way, the rate estimates for service packages on the summary table are conservative. As indicated, the most-cost effective scenarios are based on 100% participation by all the single-family units in each of the Cities. This is an indication of the current collection system's inefficiency, further discussed in the recommendations section.

Regarding the comparison of estimated annual system costs for current and potential future service in both cities, there are significant potential savings.

Current Cost of Solid Waste Collection in the City of Burlington and South Burlington:

Using bi-weekly/EOW solid waste and recycling as the comparative service level⁵⁴:

- From Table 1 above, residents of both Burlington and South Burlington pay between \$25.00 and \$38.95 per month for bi-weekly solid waste and recycling services from private haulers.
 - Assuming that all eligible households use this service level, the City of Burlington's annual system cost would range between \$3.9M and \$6M per year for collection services.
 - Assuming that all eligible households use this service level, the City of South Burlington annual system cost would range between \$1.9M and \$3M per year for collection services.

Future Cost of Solid Waste Collection in the City of Burlington and South Burlington in a Consolidated model:

Using bi-weekly/EOW solid waste and recycling as the comparative service level:

- From Table 3 and Table 4 above, the GBB team estimates:
 - Residents of Burlington would pay \$20.45 per month for bi-weekly solid waste and recycling services. Assuming that all eligible households use this service level, the City of Burlington system cost would be \$3.2M per year for collection services.
 - Residents of South Burlington would pay \$20.74 per month for bi-weekly solid waste and recycling services. Assuming that all eligible households use this service level, the City of Burlington system cost would be \$1.6M per year for collection services.

Potential Savings to the Solid Waste Collection Systems of the City of Burlington and the City of South Burlington if Consolidated Collection is implemented:

Using bi-weekly/EOW solid waste and recycling as the comparative service level, assuming all residents were participating in the system:

- City of Burlington: The annual system cost savings could be between \$700K to \$2.8M.⁵⁵
- City of South Burlington: The annual system cost savings could be between \$300K to and \$1.4M.⁵⁶

⁵⁴ Using weekly solid waste and recycling as the comparative service level, the savings estimates presented in the section that follows would increase by at least 20%.

⁵⁵ Burlington annual system costs would decrease an estimated additional \$380K for implementing a consolidated collection with 15% opt out maximum.

⁵⁶ Savings would decrease by an estimated \$158K by implementing a consolidated collection system with a 15% opt out maximum.

Greenhouse Gas Impact

5.1.6 Greenhouse Gas Impact Summary

Below is a summary table of CO₂E (Carbon Dioxide Equivalent) emissions for the Consolidated Collection Scenarios for Burlington and South Burlington. Notes, assumptions, and overarching methodology of CO₂E emissions calculations are included in this section. *Refer to Appendix II for detailed calculations.*

Table 5: CO₂E Emissions for Consolidated Collection Model (Pounds of CO₂E per week and per year)

City	Consolidated Collection Scenarios	# of Trucks in Fleet	Pounds of CO ₂ E per Fleet per week	Pounds of CO ₂ E per Fleet per year
City of Burlington	Solid Waste Collection (Weekly)	3	3,501	182,043
	Recycling Collection (EOW)	2 ⁵⁷	3,990	103,745
City of South Burlington	Solid Waste Collection (Weekly)	2	2,039	106,021
	Recycling Collection (EOW)	2	2,155	56,023

Abbreviations:

- “CO₂E”: Carbon Dioxide Equivalent
- “pgd”: per gallon diesel
- “mpg”: mile per gallon

Common Conversions and Assumptions

- 1 metric ton= 2,205 pounds
- Assumed Averaged Fuel Economy of a Refuse Truck = 3.5 miles pgd ⁵⁸(Source: Sam Lybrand)
- Assumed Fuel Type of Refuse Trucks = Diesel

Model Notes:

- The GBB Team used US EPA’s Calculation Equivalent for metric tons of CO₂ per gallon of diesel fuel: 10.180 × 10⁻³ metric tons CO₂ pgd; if converted into grams = 10,180 grams CO₂ pgd⁵⁹
- The GBB Team used EPA Equivalent for metric tons of CO₂E to calculate ratio of CO₂ emissions to total vehicle greenhouse gas emissions = 1 CO₂, CH₄, and N₂O/0.988 CO₂ ⁶⁰

⁵⁷ The current City of Burlington collection uses three trucks. Based on the route scenarios modeled for the City of Burlington, in Table 3, we are estimating that it would take two trucks to cover the population.

⁵⁸ Source: Trucks per fleet for all scenarios were provided by Sam Lybrand, September 3, 2019

⁵⁹Source: www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references, See section, “Gallons of diesel consumed”

⁶⁰Source: 3) Average Carbon Dioxide Emissions Resulting from Gasoline and Diesel Fuel. February 2005. Reference retrieved from: www.chargepoint.com/files/420f05001.pdf

- *Further Explanation: Ratio based on Intergovernmental Panel on Climate Change (IPCC) guidelines that requires an oxidation equivalent when calculating fuel emissions. According to EPA, an oxidation factor of ~.99 is used for oil-based fuels and products to account for the portion of fuel that is not oxidized. ("99% of the carbon in the fuel is eventually oxidized, while 1% remains un-oxidized").⁶¹*
- The GBB Team used US EPA GHG Calculation for CO₂E emitted from passenger vehicle but adjusted it for a refuse truck. To adjust for a refuse truck, we substituted the metric tons of CO₂ for a gallon of diesel (10.180×10^{-3}) and the average fuel economy for a refuse truck (3.5 miles mpg):⁶²
 - *Base Equation: 8.89×10^{-3} metric tons CO₂/gallon gasoline $\times 1/22.0$ miles per gallon car/truck average $\times 1$ CO₂, CH₄, and N₂O/0.988 CO₂ = 4.09×10^{-4} metric tons CO₂E/mile*
 - *In other words: Metric tons CO₂/gallon fuel $\times$ average fuel economy per gallon vehicle $\times 1$ CO₂, CH₄, and N₂O/0.988 CO₂ = Total metric tons CO₂E/mile*
 - *For a refuse truck: 10.180×10^{-3} Metric tons CO₂/gallon fuel $\times 3.5$ miles pgd $\times 1$ CO₂, CH₄, and N₂O/0.988 CO₂ = Total metric tons CO₂E/mile*

5.1.7 Observations/Conclusions regarding Greenhouse Gas Impact

From the Project Survey respondents, three (3) haulers served 75% of the residential units of the cities; however, none served greater than 50%. From this finding, the GBB Team assumed that the three primary haulers are covering nearly all route miles within the cities in order to service their market share at present

The GBB Team did not have existing routes from the haulers to compare to the results of the routing scenarios; however typically communities can see on average 15-25% improvement in efficiency after balancing routes (assuming one service provider who has never routed before).

Beyond the impact from route optimization, in the case of Burlington and South Burlington, it can be estimated that a consolidated collection system could result in a higher two-thirds reduction in current route miles traveled for solid waste collection since only one hauler per district will be covering nearly all route miles compared to the three service providers currently covering both cities. Based on the proposed reduction in miles traveled, the Cities' could see savings up to two-thirds in greenhouse gas emissions.

Recommendations for Consolidated Residential Collection System

Based on the analysis herein, the GBB Team recommends the following for a consolidated residential collection system in the Cities of Burlington and South Burlington.

Recommendation 1: The Cities should consider negotiating disposal agreements for the solid waste collected from the City of Burlington and the City of South Burlington with Casella Waste for the solid waste delivered to the Casella Waste Transfer Station by each City.

***Rationale:** The negotiation and finalization of the disposal agreements will ensure that Casella Waste does not have a competitive advantage over the other waste haulers who may be submitting proposals in response to the RFP process. Casella Waste operates the only solid waste transfer*

⁶¹ Average Carbon Dioxide Emissions Resulting from Gasoline and Diesel Fuel. February 2005. Reference retrieved from: www.chargepoint.com/files/420f05001.pdf

⁶² Miles driven by the average passenger vehicle www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references, See section, "Miles driven by the average passenger vehicle"

station located in the District and the finalized disposal agreements would ensure a level playing field for all waste companies which might submit proposals.

Recommendation 2: The City of Burlington and the City of South Burlington should consider being billed directly by CSWD for the processing of the single-stream recyclables collected from each City and have the selected contractor(s) only charge for collection services.

***Rationale:** The direct billing of the Cities by CSWD will eliminate the market risk which the haulers who participate in the RFP process would be required to absorb over the course of a 7 to 10-year contract and encourage increased participation in the RFP process. This arrangement would also ensure that costs associated with the MRF tipping fees will be charged directly to the Cities. In addition, CSWD and the Cities of Burlington and South Burlington would be able to establish a mechanism to revise the tipping fees on a quarterly or annual basis in order to adjust for changes in market conditions associated with the resale value of the recycled materials.*

Recommendation 3: The City of Burlington and the City of South Burlington should consider requesting pricing via a RFP for all customers at requested service levels, as well as a contractual opt-out maximum of 15% of households. It is recommended that the RFP process request rates for the below service options from potential contractors:

- Weekly solid waste and recyclables collection.
- Weekly solid waste and every-other-week recyclables collection.
- Every-other-week solid waste recyclables collection.
- Weekly food scrap waste collection.
- Back-door service for each of the above solid waste and recyclables collection options.

It is also recommended that residents be provided with the option to opt-out from the weekly food scrap waste collection service; however, the cities will most likely need to make a similar minimum participation rate guarantee to the selected contractor in order to ensure the needed service efficiencies and obtain cost-effective pricing for the service.

***Rationale:** As modeled in the scenarios, a contractual opt-out maximum of 15% of households can encourage increased participation in the RFP process by ensuring revenue and cost stability for the service providers submitting proposals in response to the RFP. Requesting pricing for an all customers service option and a 15% opt-out maximum service option will ensure the Cities can make the most informed decision for service delivery to the citizens. It is recommended that residents be provided with the option to opt out from all of the above solid waste and recyclables collection service options, however, in order to provide potential contractors a basis for preparing their proposals the cities will need to agree to commit to paying the contractors a minimum participation rate of 85% in the event the opt-out component exceeds 15% in order to secure favorable service rate structures as part of the final executed contract.*

Recommendation 4: It is recommended that the RFP packages be prepared based on the two cities billing residents directly through their current utility billing system.

***Rationale:** With this arrangement, any proposals submitted by solid waste companies responding to the RFP process should be more cost effective because they will not have to accept any accounts receivable risk associated with the collection contracts. The City of Burlington will also be able to*

use this process to eliminate its current system of charging all residents a solid waste fee of \$4.20 per month, which is collected by the haulers from residents and subsequently reimbursed to the City.

Recommendation 5: It is recommended that the term of the collection contracts be seven (7) years with one (1) three-year option exercised at the discretion of the Cities.

***Rationale:** The initial 7-year term of the contract will ensure that the companies which submit proposals will be able to obtain an adequate return on investment for the collection vehicles and equipment they must acquire to perform the collection contracts. The one (1) three-year contract option is also likely the most administratively efficient process for the Cities to amend and extend from the base term of the collection contracts.*

Recommendation 6: It is recommended that CSWD take into consideration the possible expansion of the capacity of its food waste/composting facility should the collection of residential food waste be included as part of the RFP process.

***Rationale:** The availability of sufficient food waste recycling/disposal capacity within the District will be necessary to ensure the adequate performance of the food waste collection component of the collection contracts.*

Recommendation 7: It is recommended that the Cities of Burlington and South Burlington issue separate RFP's for collection services.

***Rationale:** This will provide each City with sufficient flexibility to decide if they wish to proceed with finalizing the collection contracts following the completion of the RFP process.*

Recommendation 8: In an effort to provide an opportunity for smaller solid waste collection companies to participate in the contract(s) for solid waste and recycling collection services which may be finalized for the Cities of Burlington and South Burlington, it is recommended that the RFP process allow for some of the specialty services such as bulk, back door and food scraps collection services be provided separately from the contracts issued for servicing all of the single-family residential units in each City. In addition, the Cities may wish to consider setting aside for small collection companies the solid waste and recycling collection services for the municipal office and facility locations throughout each city. These types of services may be better aligned with the capabilities and resources of the smaller companies.

It is recommended that the City of Burlington and the City of South Burlington review this concept, prior to proceeding, in detail with their Legal and Procurement Departments to ensure that the concept is consistent with all applicable legal requirements and established procurement policies.

***Rationale:** This will provide each City with sufficient flexibility to meet the needs of its residents based on a contracted price. It would be most administratively efficient for the Cities to directly bill the residents for the backdoor collection services and the residents to arrange for the on-call bulk waste collection services directly with the collection contractors and be billed directly by the contractors.*

6. Comparative Analysis of Current Utility Bills

City of Burlington

Currently, residents of Burlington receive one monthly utility bill for Stormwater, Sewage, and Water Services. As seen in Figure 29, the combined monthly utility bill includes usage information and summary of charges for these three utilities and a franchise fee.



BURLINGTON, VT
WATER RESOURCES
www.burlingtonvt.gov/dpw
802-863-4801

SERVICE LOCATION:	[REDACTED]
ACCOUNT NUMBER:	[REDACTED]
PREVIOUS BALANCE:	\$ 0.00
TOTAL CURRENT:	\$ 69.51
PLEASE PAY:	\$ 69.51

AMOUNT ENCLOSED: _____

[REDACTED ADDRESS]

BURLINGTON VT 05408-1203





10451500000 00000006951 4

Please return this stub with payment

ACCOUNT #: 10451500-00

USAGE INFORMATION

BILLING DATE	
7/30/2019	
USAGE PERIOD	
6/3/2019 - 7/1/2019	

METER READING IN CUBIC FEET

PRESENT	PREVIOUS	USAGE
139900	139300	600

MONTHLY USAGE COMPARISON

CUBIC FEET THIS YEAR	DAYS
600	28
CUBIC FEET LAST YEAR	DAYS
500	32

STORMWATER

IMPERVIOUS SURFACE UNITS	
FLAT FEE	

SERVICE LOCATION: [REDACTED] HARDY AVE

SUMMARY OF CHARGES

WATER DUE	\$25.86
WASTEWATER DUE	\$34.92
STORMWATER DUE	\$6.60
FRANCHISE FEE	\$2.13
TOTAL CURRENT	\$69.51
PREVIOUS BALANCE	\$0.00
PLEASE PAY	\$69.51

DUE DATE

8/28/2019

PAYMENTS SINCE LAST BILLING: \$48.55

Messages:

Rate Change: The water rate is increasing from \$4.31 to \$4.44 per 100 CF and the wastewater rate is increasing from \$5.82 to \$6.20 per 100 CF. This change is effective on 7/1/19 and will be reflected in your August bills. The increase is intended to ensure sufficient resources for our near and long term capital needs as well as continued improvements to the revenue assurance program which is vital for utility financial health.

Please make checks payable to DPW - Water Resources
Payment Mailing Address: P.O. Box 1758, Albany, NY 12201-1758
All Other Correspondence: P.O. Box 878, Burlington, VT 05402-0878
802-863-4501 (P) 802-864-8233 (F) www.burlingtonvt.gov/dpw/water

Figure 29: Burlington Combined Utility Bill with Stormwater, Sewer, and Water Fees

For electric charges in Burlington, below is a sample summer monthly bill:



See back for customer comment section and explanation of terms

Account Name: JANE DOE
Service Address: 1234 ABC ST #567
 Thank you for your payment(s): \$18.50

Bill Date: 07/11/19



Meter Information

Reading Period: 06/08/19 to 07/08/19 **Days:** 30

KILOWATT HOURS

Summary of Charges					
CUSTOMER CHARGE					\$8.21
INITIAL BLOCK	87.00	X	\$0.108068	=	\$9.40
ENERGY EFF. CHG.-KWH	87.00	X	\$0.009520	=	\$0.83
	Total cost for electricity used				\$18.44
CITY FRANCHISE FEE 3.5%					\$0.29
					\$18.73
					\$0.00
					\$18.73

Rate RS

Customer ID 11089XX

Location ID 45XXX

Please Pay **\$18.73**

Questions?
 Call us at:
 (802) 865-7300

Hours: Mon. - Fri.,
 8am - 5pm

Figure 30: City of Burlington Electric Bill

City of South Burlington

On average, a typical single-family household in South Burlington pays **annual** fees of approximately \$330.00 for Sewage, \$250.00 for Water, and \$80.00 for Stormwater services.

Conclusion

The estimated collection charges noted in the consolidated routing (Section 5) indicate an estimated solid waste, recycling and possibly food waste annual charge that could be expected compared to other contracted service in the region, and which is quite reasonable given the current charges for service, as well as the cities' other utility charges and the cost of collection service nationally.

GBB recommends that both Cities discuss the method of billing internally with the Department(s) which conducts the billing services in order to estimate the additional costs and identify any items which would impact the implementation of the billing by the Cities for waste and recyclables collection services. GBB would be able to assist with such discussions and provide guidance concerning the matter to ensure a better understanding of the needed billing services. The decision regarding billing by the haulers or by the cities would then be incorporated into a future contract process, should the cities decide to go toward consolidation.

The actual costs associated with the billing of residential units located within the City of Burlington and the City of South Burlington by contracted waste and recyclables collection companies is expected to represent a minimal amount of the estimated total collection costs, whether billing were done through the haulers or by the cities.

For potential hauler billing, this assumption is based on the below factors:

- The waste and recyclables collection companies currently servicing the Cities on a subscription basis already have in place billing systems, processes and personnel performing billing associated functions. Therefore, the need to expand these billing functions in order to bill all or a significant amount of the single-family residential units located within Cities would most likely be incurred only on a limited and incremental cost basis.
- It is also assumed that the waste and recyclables collection companies servicing the Cities on a subscription basis have accounts receivables procedures and processes in place to manage receipt of payments and pass due accounts. In addition, the presence of having a contract or contracts in place for the collection of waste and recyclables with the Cities would be expected to minimize the alternatives for such services by other companies for residential units who did not pay the contracted companies.

GBB received feedback from the haulers that they would prefer the cities to do billing. The actual costs associated with the billing of residential units located within the City of Burlington and the City of South Burlington by the Cities through their current billing system are difficult to estimate at this time without additional information concerning the system and the utilized processes.

7. Implementation Steps and Timeline

Next Step

The immediate next step is a presentation is made to the City Councils including input from the survey and the public meetings. The Councils will decide if they want to do further study, move forward on implementation, or end consideration.

Implementation Schedule

If a decision were reached to move forward on consolidated collection implementation for both cities, an additional 9-12 months of implementation assistance is outlined below to prepare technical and contract specifications to bid for services, evaluate the bids received, and make recommendations for award for each contract based on the qualifications of the bidders as well as the most favorable financial outcome. In addition, the cities may wish to contract for additional services to assist with the startup of the collection contracts in order to minimize any implementation and service difficulties during the initial thirty (30) days of the collection contracts.

Task #	Implementation Assistance: Task name	Current Project	Implementation Month #									
			1	2	3	4	5	6	7	8	9	10-12
	Feasibility Study completed											
	Presentations to City Councils (Decision: further study, implement or end consideration)											
Task 1	Task 1: Prepare technical and contract specifications to bid for services											
Task 2	Task 2: Release RFB and assist answering questions											
Task 3	Task 3: Receive and Evaluate the bids received											
Task 4	Task 4: Make recommendations for award for each contract; assist with contracting as necessary											

(Page left intentionally blank.)

Appendix I – Project Kickoff Trip Report Photos

On the following pages, please see the Project Kickoff Trip Report Photos.

(Remainder of page left intentionally blank.)

Appendix II – GHG Calculations for Consolidated Collection Scenarios

Consolidated Collections Scenario Calculations:

City of Burlington (Weekly Solid Waste Collection)

Scenario Assumptions:

Assumed number of miles travel per week by a fleet = 539 miles

Assumed number of miles travel per year by a fleet = 28,049 miles

Assumed number of trucks per fleet = 3

- Step 1: $.010180 \text{ metric tons CO}_2\text{E pgd} / 3.5 \text{ miles pgd} / .988 = 0.0029439 \text{ Metric tons CO}_2\text{E per truck per mile}$
- Step 2: $0.0029439 * 2,205 = 6.5 \text{ Pounds of CO}_2\text{E per truck per mile}$
- Step 3: $6.5 * 539 \text{ miles} = 3,501 \text{ Pounds of CO}_2\text{E per fleet per week}$
- Step 4: $6.5 * 28,049 \text{ miles} = 182,043 \text{ Total Pounds of CO}_2\text{E per fleet per year.}$

City of Burlington (Recycling Every Other Week Collection)

Scenario Assumptions:

Assumed number of miles travel per week by a fleet = 615 miles

Assumed number of miles travel per year by a fleet = 15,985 miles

Assumed number of trucks per fleet = 2

- Step 1: $.010180 \text{ metric tons CO}_2\text{E pgd} / 3.5 \text{ miles pgd} / .988 = 0.0029439 \text{ Metric tons CO}_2\text{E per truck per mile}$
- Step 2: $0.0029439 * 2,205 = 6.5 \text{ Pounds of CO}_2\text{E per truck per mile}$
- Step 3: $6.5 * 615 \text{ miles} = 3,990 \text{ Pounds of CO}_2\text{E per fleet per week}$
- Step 4: $6.5 * 15,985 \text{ miles} = 103,745 \text{ Pounds of CO}_2\text{E per fleet per year.}$

CITY OF SOUTH BURLINGTON (Weekly Solid Waste Collection)

Scenario Assumptions:

Assumed number of miles travel per week by a fleet = 314 miles

Assumed number of miles travel per year by a fleet = 16,336 miles

Assumed number of trucks per fleet = 2

- Step 1: $.010180 \text{ metric tons CO}_2\text{E pgd} / 3.5 \text{ miles pgd} / .988 = 0.0029439 \text{ Metric tons CO}_2\text{E per truck per mile}$
- Step 2: $0.0029439 * 2,205 = 6.5 \text{ Pounds of CO}_2\text{E per truck per mile}$
- Step 3: $6.5 * 314 \text{ miles} = 2,039 \text{ Pounds of CO}_2\text{E per fleet per week}$
- Step 4: $6.5 * 16,336 \text{ miles} = 106,021 \text{ Pounds of CO}_2\text{E per fleet per year.}$

CITY OF SOUTH BURLINGTON (Recycling Every Other Week Collection)

Scenario Assumptions:

Assumed number of miles travel per week by a fleet = 332 miles

Assumed number of miles travel per year by a fleet = 8,632 miles

Assumed number of trucks per fleet = 2

- Step 1: $.010180 \text{ metric tons CO}_2\text{E pgd} / 3.5 \text{ miles pgd} / .988 = 0.0029439 \text{ Metric tons CO}_2\text{E per truck per mile}$
- Step 2: $0.0029439 * 2,205 = 6.5 \text{ Pounds of CO}_2\text{E per truck per mile}$
- Step 3: $6.5 * 332 \text{ miles} = 2,155 \text{ Pounds of CO}_2\text{E per fleet per week}$
- Step 4: $6.5 * 8,632 \text{ miles} = 56,023 \text{ Pounds of CO}_2\text{E per fleet per year.}$

Appendix III – ShapardResearch Project Survey Results (full): City of Burlington

On the following pages please see the full survey results from ShapardResearch for the City of Burlington.

(Remainder of page left intentionally blank.)

Appendix IV – ShapardResearch Project Survey Results (full): City of South Burlington

On the Following pages please see the full survey results from ShapardResearch for the City of South Burlington.

(Remainder of page left intentionally blank.)

Appendix V – C2 Logix Routing Scenario file: City of Burlington

On the Following pages please see the full Routing Scenario files from C2Logix for the City of Burlington.

(Remainder of page left intentionally blank.)

Appendix VI – C2 Logix Routing Scenario file: City of South Burlington

On the following pages please see the full Routing Scenario files from C2Logix for the City of South Burlington.

(Remainder of page left intentionally blank.)

Appendix VII - Addendum Documenting Discussions at Public Meetings and City Council Meetings (*forthcoming*)

DRAFT

(Forthcoming)

A special ***“Thank you!”*** to:

THE CITY
OF BURLINGTON



southburlington
VERMONT



**SOLID WASTE
MANAGEMENT
CONSULTANTS**

Gershman, Brickner & Bratton, Inc.
2010 Corporate Ridge
Suite 510
McLean, Virginia 22102
703-573-5800
www.gbbinc.com



To: DPW Commission

From: Megan Moir, Water Resources Division Director
Jessica Lavalette, Water Resources Customer Care and Finance Manager
Jenna Olson, Water Quality Program and Policy Manager

Date: April 21, 2021

Re: Request for Support for the Water Resources Division Rate Restructuring and Affordability Program Proposal (Revised 4/20/21)

Request

The Department of Public Works (“DPW”) and its Water Resources Division seeks the official support and recommendation of the Public Works Commission that the City Council approve and adopt the proposed Rate Restructuring and Affordability Programs.

Background

Recognizing the need for future water, sewer, and stormwater rate increases due to aging infrastructure, operational needs and new regulatory challenges, in April 2019 the Burlington City Council requested the Water Resources Division to consider alternative rate structures, revenue sources, and affordability frameworks.

The Division engaged Raftelis, our on-call financial and utility management consultant, to assist in this process. Raftelis is a leading consulting firm providing utility rate and management solutions. The Division and Raftelis worked together throughout 2019 and early 2020 to propose modified rate structures and policies. In order to gather stakeholder input about the proposed changes, several meetings and events were held including: an open house in October 2019, presentations to the Neighborhood Planning Assemblies, and meetings with City Council and Mayor Weinberger. The City Council last heard a presentation on proposed changes during a work session meeting on March 9th, 2020. The following week, the Covid-19 pandemic hit Vermont. Given the significant uncertainties presented during the early phase of the pandemic and our ability to develop a tight COVID-era FY21 budget without rate increases, we determined that we needed to temporarily suspend the rate study.

Given the importance of this project to ensuring sustainable funding for the water resources utilities while simultaneously addressing rate payer affordability, we restarted the project in January of this year. We briefed the Board of Finance (with Councilors invited) and then the Public Works Commission, and the Transportation, Energy and Utilities Committee with an update on the project and a few changes from our 2020 proposals (see “Evolution of Proposal”). Burlington Water Resources staff have conducted extensive public outreach throughout the project (see Appendix A: List of Outreach Efforts).

This memo presents the most up to date evolution of the proposal and includes updated revenue needs and, correspondingly, updated rates and two additional customer assistance programs, a rebate program to assist property owners with the costs of filming and inspecting their private sewer lateral and a rebate program for WaterSense plumbing fixtures. It also discusses our Division’s commitment to evaluating additional affordability options for more of Burlington’s renters.

We are proposing to bring this to the City Council for approval in May with implementation on July 1, 2021.

Impetus for Changes to the Division’s Rates

The Division of Water Resources provides water, wastewater, and stormwater service to approximately 10,000 customers and 42,000 residents. The Division provides essential services including water treatment and distribution, fire protection, water quality protection, wastewater collection and treatment, stormwater collection and pollution management, and billing and customer service. The Division is organized as three separate enterprise funds for water, wastewater, and stormwater.

The Division faces on-going financial pressure to continue providing these services at an ever-higher regulatory standard while maintaining and upgrading aging infrastructure. While the Administration and City Council have supported initiating a generational reinvestment in City water resources infrastructure over the last five years, a significant infrastructure deficit remains for many water resources assets which are beyond their calculated useful life. In order to balance the need for rate increases to sustainably fund water resources services, in an April 2019 Resolution (<http://bit.ly/RateAffordability>) the City Council charged the Division with developing the following:

- Alternative rate structures, including progressively priced tiers to protect access to “essential” water;
- Alternative revenue sources;
- Affordability frameworks, including discounts for certain qualifying rate payers, water conservation programs and grants and loans for upgrades to service lines; and
- An initial stakeholder process to educate and solicit input on Water Resources rates and a follow-up stakeholder process reporting on the proposed solutions.

In addition to the direct charge from Council, the Division had some of its own goals for the study, which are as follows:

- Ensure affordability of rates
- Apply outside perspective and experience on the long-term financial health of the utilities and pursue potential cost saving and efficiency initiatives
- Develop rate structures that improve financial health and sustainability, and increase revenue predictability
- Ensure utility funds are recouping the costs of all services provided in an equitable manner and in accordance with industry standards:
 - All customers pay a “ready to serve” charge via a fixed fee
 - Customers receiving additional service may need to pay additional cost e.g. private fire protection (building fire suppression supply, private hydrants)
 - Staff and administration costs for new/redevelopment project review (water and sewer connection review, meter sizing, stormwater management plans); note this is still in development

Financial Needs of the Water Resources Division

The Department’s proposed FY22 budget for the Water, Wastewater and Stormwater requires revenue increases of 6%, 6% and 5% respectively, which would represent a 5.96% increase on the bill for a typical single-family residence that uses 400 cubic feet (cf) per month. This is a slight decrease from the 6%, 7% and 5% revenue requirement presented in January, which would have resulted in a 6.4% increase for the typical single-family residential customer. These increases cover required operation and maintenance of systems; debt service and bond coverage covenants; a prudent mix of cash and debt funding of capital projects; and funding for the Water Resources Assistance Program for qualifying income burdened residential and non-profit multifamily customers. The Division is extremely pleased to report that this proposed budget also meets the additional goals we presented in January: budgeted capital reserve contributions of \$50K each for Water and Stormwater and \$100K for Wastewater and funding for sewer filming rebates and WaterSense fixture installations. Additionally, the Wastewater budget includes a small planned budget surplus to replenish its operating reserve which is the lowest proportionally of the three funds.

Proposed Rate Structure & Policy Changes

The Division has worked with Raftelis to finalize a new rate structure and suite of affordability measures that accomplish the Division’s and Council’s goals of financial health, affordability, conservation, and equity among customer classes. This iteration incorporates community comments as well as additional modifications generated by the project team to improve the reach of affordability benefits and in recognition of the financial impact of the pandemic on commercial customers who, in general, will be seeing increases in charges due to the cost of service realignment.

Table 1. Proposed Rate Structural Changes to Water and Wastewater Rates

Rate Proposals	What is it?	Why do it?
Fixed Charges by Meter Size	A water and wastewater fixed charge that increases based on the size of the customer's water meter	- Is industry best practice – reflects cost of service for infrastructure to be “ready to serve” - Improves revenue stability and predictability - Encouraged by bond rating agencies - Recovers 10% of revenue; future goal is 20% to match actual ratio of fixed to volumetric costs
Class-Based Rates	Different rates for different classes of customers	- Justified based on the strains each customer type puts on the utility's infrastructure - Provides framework for realignment of water rates with the higher cost of service for non-residential customers - Can now apply specific affordability based pricing of essential, residential water usage into the future
Irrigation Rate	A separate, higher rate for those who solely use water for irrigation (with the exception of community gardening initiatives)	- Irrigation often contributes to peak water use, which necessitates system expansion and associated costs - Sends price signal to conserve water when use is not for basic needs
Private Fire Protection Charges	A separate, fixed, monthly charge that escalates with connection size for those who have private fire service or hydrants	- Water Resources has invested in system capacity to serve private properties during a fire event, thus the customers who benefit from this service should pay for that capacity - Will be phased in over 5 years

Tables 2 - 3. Proposed Rate Affordability and Customer Assistance Measures



Proposals	What is it?	Why do it?
Lifeline Rate Tier	"Essential" water consumption (below median usage) is charged at a lower rate; only applicable to single-family, duplex, triplex residential account holders	- Discounts the first 400, 600 and 900 cubic feet of water for single family, duplex and triplex, respectively. - Incentivizes efficient water use, since water above the median usage is charged at a higher rate
Fixed-Fee Waiver	Waives the proposed fixed monthly water and wastewater charge for residential customers at or below 185% of the Federal Poverty Level.	Provides relief to single-family households who meet income or age eligibility criteria, and non-profit affordable senior housing developments
Flexible Payment Terms	Encompasses existing payment plan options, but adds 'budget billing' option.	Ensures customers have access to resources and assistance that will allow them to afford services and pay their bills
Type	Program	Details
Infrastructure Assistance	Up to \$250 rebates for residential customers to cover costs of filming a private sewer lateral - Residential property owners eligible for \$200 rebate - Income qualified customers eligible for full rebate up to \$250	- Funds to support 160-200 laterals/year - Helps property owners understand condition of lateral and plan for replacement costs - Gives City data to develop future possible loan/grant programs for sewer lateral replacement
Conservation Assistance	Up to \$75 rebates for residential customers towards purchase of WaterSense plumbing fixtures	- Reduces water usage through installation of low flow faucets, shower heads, and low flow and dual flush toilets 200 rebates available
Stormwater Management Assistance	Implementing BLUE® BTV residential stormwater management grant program	- Provides "Lake Friendly" home evaluations to residential properties - Provides grants towards the costs of roof gutters, rain gardens, permeable pavers etc.

Evolution of Proposal

Several adjustments and additions have been made over the course of the project in order to mitigate the magnitude of the impact on commercial customers while maintaining affordability benefits for residential customers; the impact of the fixed meter charge on fixed income seniors with low water usage; and the impact of the fixed meter charge and fire protection charge on low-income and senior multi-family housing. The latest addition includes several customer assistance programs and the addition of lifeline rate tiers for duplex and triplex properties. Those adjustments are:

1. The percentage of revenues recovered from fixed charges was reduced to 10% (from 15% proposed in original March 2020 proposal) to aid affordability by keeping the fixed portion of customer bills as low as is reasonably possible. Fixed expenses represent approximately 20% of the total expenses of the Water and Wastewater expenses; as such, these fixed fees will be reviewed each year and ideally gradually aligned with the true proportion of fixed costs.
2. Private fire protection charges are set to be phased in over a 5 year period to reduce “rate shock” for customers who will be charged for private fire service for the first time. We will recoup 20% of the cost of service allocated to customers with private fire protection in FY22 with each subsequent year increasing an additional 20% until the full charge is realized in FY26.
3. The commercial rate was lowered and is now equal to other non-residential rates to mitigate the magnitude of bill impacts (fixed fees and private fire protection) on businesses. Commercial properties, in general, will still be seeing an increase in their bills (average 9%).
4. The multi-family volumetric rate was reduced from early cost of service based proposals since the project team acknowledged the potential impact on rental costs.
5. The WRAP program was expanded to include, at a minimum, non-profit multifamily low-income and senior housing developments (e.g., Burlington Housing Authority, Champlain Housing Trust, etc.) and senior-owned single-family residential properties. Eligible accounts will have their water and wastewater fixed charge waived.
6. Customer infrastructure assistance (Sewer Filming rebates) and conservation assistance (WaterSense fixture rebate) and stormwater assistance (BlueBTV) programs were added in April 2021 as part of the FY22 proposed budget.
7. Lifeline rate tiers were added for duplex and triplex properties to ensure those classifications of residential properties would benefit from the affordability improvements. Like the single-family tier breakpoint, the tier thresholds for the duplex and triplex lifeline rates are tied to the median usage for those property types which are 600 and 900 cf/month respectively. Multi-unit properties often use less per unit than single family homes due to shared yard space and smaller size of units which can translate into fewer people using water.

Future: Addressing Affordability for More Renters

Water utilities across the U.S. have struggled with how to ensure that water affordability programs benefit renters, particularly those in multi-family properties. The WRAP proposal will certainly benefit single-family homeowners, especially those who are income qualified. It will also benefit renters in single-family homes, and some duplex, triplex properties that have separately metered units (not common) where the landlord has put the water resources bill in the tenants name, but the program is not currently available to many renters. We acknowledge that this is a current gap in our proposed program given that 64% of properties in Burlington are rentals and that rental costs (which often include water, sewer, stormwater and other utility costs) are high. This is a program gap that water utilities across the U.S. have struggled to address, and Burlington is not alone.

The underlying challenge is the fact that most renters are not the direct account holders for water and wastewater and can only be so if 1) they are in a separately metered unit and 2) the landlord agrees to put the account in their name (but also agrees to be responsible for charges). Most multi-family properties (including many duplexes and triplexes) share a meter. With these constraints, even if the Division were to pass on a fixed fee waiver (or some other type of discount) to the property owner if they had income qualifying renters, there is no mechanism in place to require that the property owner pass this savings on to the tenants. Additionally, in multi-family properties with multiple units sharing a meter, the fixed fee waiver might not provide a financially significant

benefit; a rental unit specific discount may be more applicable. One important goal of our program was to keep administration costs low, as the Division is not adding additional staff for these programs.

There are several developments that the Division is monitoring in relation to this issue 1) the launch of a rental water bill assistance program by DC Water in Washington D.C. that appears could provide a model for Burlington and 2) the creation of the Low-Income Household Water Assistance Program (LIHWAP) by the Biden administration.

The Division is committed to evaluating options to address the needs of income-constrained renters. As the above programs develop and after a minimum 18 month initial implementation of our currently proposed WRAP program, we believe that we can develop additional recommendations for review by stakeholders. We propose to submit a report by April 2023 that will evaluate options for a possible expansion of the program as necessary.

Proposed FY 22 Water, Fire Protection, Wastewater, and Stormwater Rates

The proposed changes to the Division's rates, including the increased revenue requirements for FY22, result in the rates shown in Table 2. The proposed FY22 rates are compared against the current FY21 rates. Note that currently there is no charge for private fire protection. Stormwater rates will see an estimated 5% across-the-board increase based on revenue requirements but does not have any proposed structural changes. Please note that there may be some small shifts in the final proposed rates listed as we finalize QA/QC activities on customer data and the FY22 budget.

Table 2. Current FY 21 and Proposed FY 22 Water, Wastewater, and Fire Rates

	Water		Wastewater		Private Fire	
	FY 21 Current	Proposed	FY 21 Current	Proposed	FY 21 Current	Proposed
<u>Fixed Charge per Month</u>						
5/8"	\$0.00	\$3.28	\$0.00	\$4.67	-	\$9.30
3/4"	\$0.00	\$4.92	\$0.00	\$7.00	-	\$9.30
1"	\$22.73	\$8.20	\$31.74	\$11.67	-	\$9.30
1.5"	\$45.51	\$16.39	\$63.55	\$23.35	-	\$9.30
2"	\$72.68	\$26.23	\$101.49	\$37.36	-	\$9.30
3"	\$145.32	\$49.18	\$202.93	\$70.05	-	\$9.30
4"	\$248.28	\$81.96	\$346.70	\$116.75	-	\$9.30
6"	\$454.12	\$163.92	\$634.14	\$233.50	-	\$27.00
8"	-	-	-	-	-	\$57.54
10"	-	-	-	-	-	\$103.48
Private Fire Hydrant	-	-	-	-	-	\$27.00
<u>Volumetric Rate (per 100 CF)</u>						
Single-Family Residential	\$4.44	-	\$6.20	-		
Tier 1 (0-400 CF)	-	\$2.48	-	\$6.07		
Tier 2 (401 CF and higher)	-	\$6.19	-	\$6.07		
Duplex	\$4.44	-	\$6.20	-		
Tier 1 (0-600 CF)	-	\$2.48	-	\$6.07		
Tier 2 (601 CF and higher)	-	\$6.19	-	\$6.07		
Triplex	\$4.44	-	\$6.20	-		
Tier 1 (0-900 CF)	-	\$2.48	-	\$6.07		
Tier 2 (901 CF and higher)	-	\$6.19	-	\$6.07		
Multi-Family Residential	\$4.44	\$4.24	\$6.20	\$6.07		
Mixed Residential & Commercial	\$4.44	\$4.24	\$6.20	\$6.07		
Commercial	\$4.44	\$4.24	\$6.20	\$6.07		
City	\$4.44	\$4.24	\$6.20	\$6.07		
Irrigation/Heating/Cooling	\$4.53	\$7.43	-	-		

Note: 1" customers and above currently pay a fixed charge in the form of a "minimum" charge. This charge includes a usage allowance. Under the new (lower) fixed charge structure all customers would pay a "ready to serve" charge (lower for 1" and above customers than they currently pay) but will not get a usage allowance.

Customer Impacts of Proposed Rate Structure

The projected need for water, wastewater and stormwater rates to increase by 6%, 6%, and 5% respectively would result in an across the board overall customer bill increases **without** the proposed structural rate changes. For a typical single-family customer that uses 400 cf/month, they would see approximately a 5.96% in their overall water resources bill if we kept our current rate structure. The impact of the new structural changes will vary from customer to customer as any increases or decreases in overall bill will be determined by a combination of meter size, future water usage, eligibility for the WRAP program, customer class and the existence of private fire services or hydrants. As such, one of the critical components of our customer outreach will be the advertisement of a variety of methods for requesting an estimate of a customer's bill under the new proposal. Overall, however, we are pleased to project that the typical single-family customer (using 400 cf/month) will benefit from the structural changes and will see no increase to their water resources bill. Typical duplex (using 600 cf/month) and the typical triplex (using 900 cf/month) properties will see an overall decrease. Qualifying low-income or senior owned single-family residential customers will see a significant decrease on their bill with the new WRAP program (if they continue to use the same amount of water). Table 3 compares the estimated FY21 annual water, wastewater, stormwater, and fire charges to the expected FY22 totals using the proposed changes for several hypothetical customer groups using the CY19 water usage data.

*Table 3. Current and Proposed Annual Water Resources Bill Under Proposed FY 22 Rates
(For non-residential customers, the bill is calculated using water usage from CY19)*

	Hypothetical Customer Type	A	B	C	D
		FY 2021	FY 2022 Proposed		
		Bill (\$)	Bill (\$)	\$ Change	% Change
	Single Family Residential				
1	Low Volume - 200 CF	\$343	\$394	\$51	14.7%
2	WRAP - Low Volume - 200 CF	\$343	\$299	(\$44)	-13.0%
3	Median Volume - 400 CF	\$608	\$606	(\$2)	-0.3%
4	WRAP - Median Volume - 400 CF	\$608	\$511	(\$97)	-15.9%
5	High Volume - 600 CF	\$872	\$911	\$39	4.5%
6	WRAP - High Volume - 600 CF	\$872	\$815	(\$57)	-6.5%
	Duplex				
7	Low Volume - 300 CF	\$475	\$500	\$25	5.3%
8	Median Volume - 600 CF	\$872	\$818	(\$54)	-6.2%
9	High Volume - 900 CF	\$1,268	\$1,275	\$7	0.6%
	Triplex				
10	Low Volume - 600 CF	\$884	\$831	(\$53)	-6.0%
11	Median Volume - 900 CF	\$1,280	\$1,150	(\$130)	-10.2%
12	High Volume - 1300 CF	\$1,809	\$1,759	(\$50)	-2.8%
	Multi-Family Residential				
13	Low Income Housing	\$66,078	\$65,660	(\$418)	-0.6%
14	Senior Housing	\$39,159	\$38,368	(\$791)	-2.0%
	Commercial				
15	Technology Company	\$17,471	\$20,379	\$2,908	16.6%
16	Retail Company	\$27,234	\$29,843	\$2,609	9.6%
	Institutions				
17	University	\$1,785,532	\$1,968,841	\$183,309	10.3%
18	UVMMC	\$745,027	\$839,246	\$94,218	12.6%
19	School District	\$127,477	\$141,906	\$14,429	11.3%

Table 3 represents only a sample of estimated bill impacts. As mentioned above, although this table represents many of the City’s customers and customer types, there will be a variety of impacts to customers depending on the specifics of that customer.

We encourage all rate payers to visit the [project page](#)¹ where they can complete a [proposed rate summary impact review](#)² and also review details on [actions](#)³ they can take to mitigate any impact of the proposed changes.

Additional information about the project and remaining project approval and implementation steps can be found in the attached presentation (Appendix B).

Summary of Benefits:

In support of our request for your recommendation, we offer the following overall benefits for your consideration:

- The Wastewater, Water and Stormwater proposed FY22 budget is built to ensure proper operation and sustainable stewardship of infrastructure, with targeted funding for customer assistance programs
- Without the rate restructuring and affordability changes, all residential rate payers would see approximate 5.9% increase on their bill
- With the proposed changes:
 - › Income qualified ratepayers and seniors will see a decrease in their overall water resources bill (on average \$97/year for someone who uses 400 cu. ft./month) from this year
 - › Over 63% of single family residential ratepayers will see benefit on their water resources bill (i.e. less than a 5.9% increase)
 - › Median single family users (400 cf./month) will see no increase in their bill
 - › Median duplex (600 cf/month) and triplex (900 cf/month) properties will see decreases in their bill
 - › Will have established a customer class based rate structure which will allow for specific affordability based pricing of essential, residential water usage into the future

MOTIONS:

The Department of Public Works’ Water Resources Division respectfully requests that the Public Works Commission approve the following motion:

1. “To recommend that the City Council approve and adopt the 2021 Water Resources Rate Restructuring and Affordability Program Proposal.”

¹ <https://www.burlingtonvt.gov/DPW/Water/AffordabilityProject>

² <https://www.burlingtonvt.gov/DPW/water/accountimpact>

³ https://www.burlingtonvt.gov/sites/default/files/tiles/Rate%20Change%20%26%20Opportunity%20Summary_FINAL.pdf

Remaining Project Schedule

April - June 2021 | Continuous Improvement & QA/QC of Data

- o QA/QC of all fire service data
- o Develop Draft WRAP Policy
- o Propose any ordinance changes necessary

April - June 2021 | Approvals

- o Public Works Commission (4/21/21) – request for recommendation to Council
- o TEUC (4/27/21) – request for recommendation to Council
- o Board of Finance & City Council vote to approve rate structure and affordability programs
- o City Council vote on FY22 Mayoral Budget & Water Resources rates

July - August 2021 | Implementation

- o Additional educational outreach to customers on upcoming changes
- o Changes take effect July 1, 2021
- o Will be reflected in bills mailed starting in August 2021

Completed Events

April 2021 | Public Outreach

- o April 8-13, 2021: Informational postcard mailed to all addresses in Burlington
- o April 14, 2021: Zoom Public Meeting for all users

March 2021 – January 2021 | Public Outreach 2.0

- o March 2021: Message on all water bills
- o 2021 NPA Meetings
 - o Wards 1 & 8 - 1/13/2021
 - o Wards 2 & 3 - 2/11/2021
 - o Wards 4 & 7 - 2/24/2021
 - o Ward 5 - 1/21/2021
 - o Ward 6 - 2/4/2021
- o January 25, 2021: Presentation to the Transportation, Energy, and Utilities Commission
- o January 20, 2021: Presentation to Public Works Commission
- o January 4, 2021: Presentation to Board of Finance

March 2020 – December 2020 | PANDEMIC HIATUS

March 2020 – October 2019 | Public Outreach

- o March 9, 2020: Presentation to City Council
- o 2019 NPA Meetings
 - o Wards 1 & 8 - 11/13/19
 - o Wards 2 & 3 - 11/14/19
 - o Ward 5 – 12/19/19
 - o Ward 6 – 11/7/19
 - o Wards 4 & 7 – 11/20/19
- o November 20, 2019: Presentation to Public Works Commission
- o October 29, 2019: Kick Off Open House Event

CITY OF BURLINGTON

Water Resources Division

Rate & Affordability Project
DPW Commission

April 21, 2021



Project Team



Megan Moir

Division Director, Water Resources
Burlington Water Resources



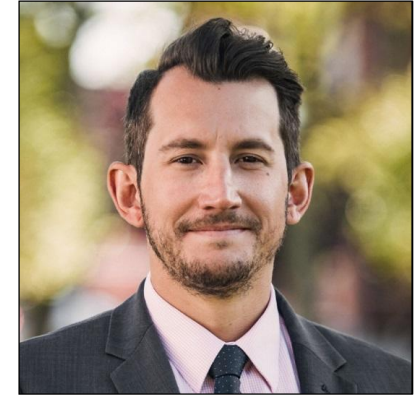
Jessica Lavalette

Customer Care & Finance Manager
Burlington Water Resources



Jenna Olson

Water Policy & Programs Manager
Burlington Water Resources



Dave Fox

Senior Project Manager
Raftelis



Rates & Affordability Refresher



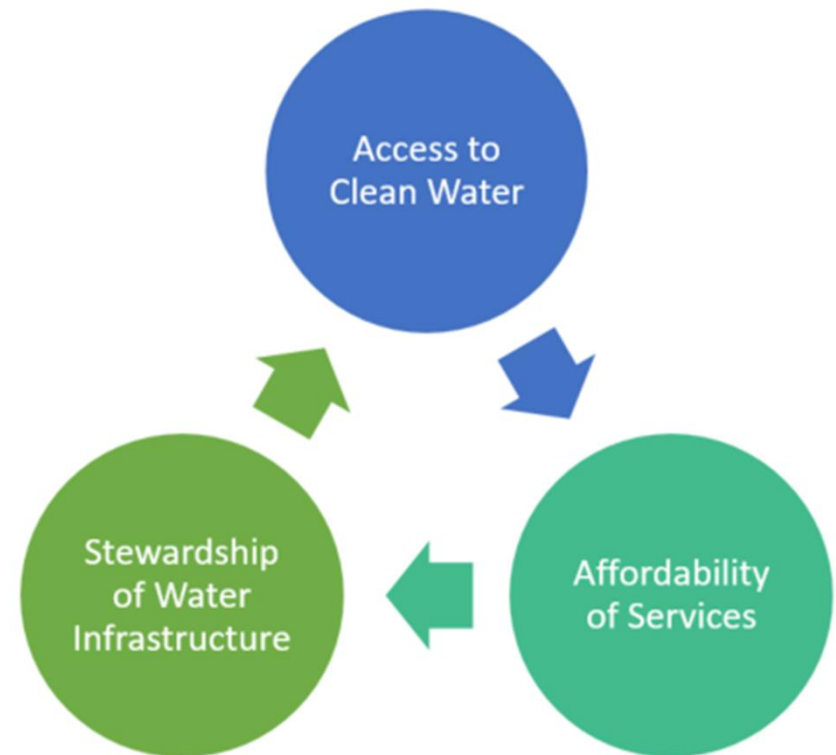
- Studied rate options keeping three objectives in mind:
 - › Ensure affordability of rates
 - › Improve financial health & sustainability, along with revenue stability
 - › Ensure rates are recouping the cost of service provided in an equitable manner



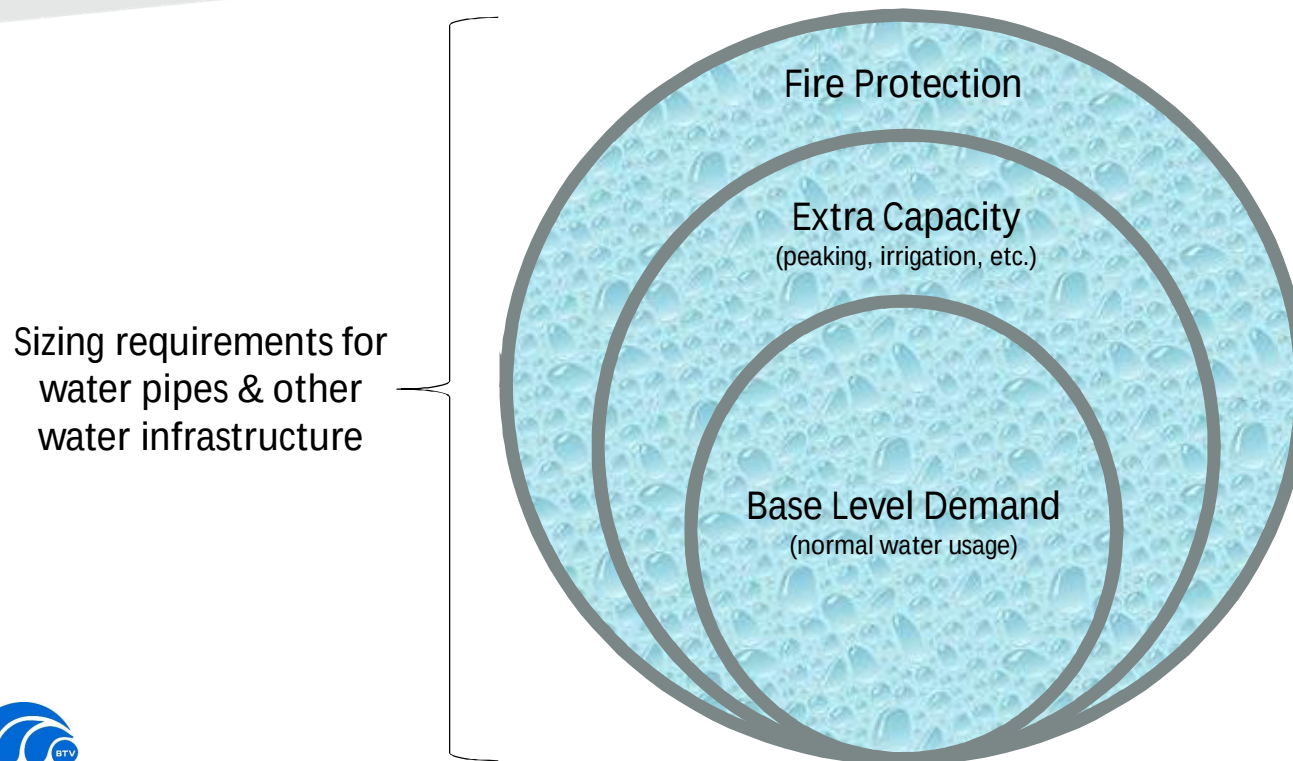
Crossroads: Core Values & Existing Rate Structure

Sustainable funding is crucial to ensuring [access to clean water](#). We need money to take care of the infrastructure that produces and delivers clean, safe drinking water and collects, treats and manages wastewater and stormwater before it drains to our rivers and the lake.

When utility costs are not [affordable](#) then rate payers may not have equal access to the essential amount of water needed to live.



Goal 1 - EQUITY



All customers are currently paying the same rate.

This is not consistent with the burden specific uses place on the City's infrastructure.



Proposed Rate Structure Changes

Rate Proposals		What is it?	Why do it?
Fixed Charges by Meter Size	A water and wastewater fixed charge that increases based on the size of the customer's water meter		• Is industry best practice – reflects cost of service for infrastructure to be “ready to serve” • Improves revenue stability and predictability • Encouraged by bond rating agencies • Recovers 10% of revenue; future goal is 20% to match actual ratio of fixed to volumetric costs
Class-Based Rates	Different rates for different classes of customers		• Justified based on the strains each customer type puts on the utility's infrastructure • Provides framework for realignment of water rates with the higher cost of service for non-residential customers • Can now apply specific affordability based pricing of essential, residential water usage into the future
Irrigation Rate	A separate, higher rate for those who solely use water for irrigation (with the exception of community gardening initiatives)		• Irrigation often contributes to peak water use, which necessitates system expansion and associated costs • Sends price signal to conserve water when use is not for basic needs
Private Fire Protection Charges	A separate, fixed, monthly charge that escalates with connection size for those who have private fire service or hydrants		• Water Resources has invested in system capacity to serve private properties during a fire event, thus the customers who benefit from this service should pay for that capacity • Will be phased in over 5 years



Goal 2 - AFFORDABILITY

Existing Assistance Options To Date

Interest-Free Payment Plans

Stormwater Credits for 'Directly Assessed' Properties

It was clear we could do more to assist customers who needed it.



Proposed Rate Affordability Options



Proposals	What is it?	Why do it?
Lifeline Rate Tier	"Essential" water consumption (below median usage) is charged at a lower rate; only applicable to single-family, duplex, triplex residential account holders	• Discounts the first 400, 600 and 900 cubic feet of water for single family, duplex and triplex, respectively. • Incentivizes efficient water use, since water above the median usage is charged at a higher rate
Fixed-Fee Waiver	Waives the proposed fixed monthly water and wastewater charge for residential customers at or below 185% of the Federal Poverty Level.	• Provides relief to single-family households who meet income or age eligibility criteria, and non-profit affordable senior housing developments
Flexible Payment Terms	Encompasses existing payment plan options, but adds 'budget billing' option.	• Ensures customers have access to resources and assistance that will allow them to afford services and pay their bills

Note: Existing programs will remain in addition to these options.



Proposed Assistance Programs

Type	Program	Details
Infrastructure Assistance	Up to \$250 rebates for residential customers to cover costs of filming a private sewer lateral - Residential property owners eligible for \$200 rebate - Income qualified customers eligible for full rebate up to \$250	- Funds to support 160-200 laterals/year - Helps property owners understand condition of lateral and plan for replacement costs - Gives City data to develop future possible loan/grant programs for sewer lateral replacement
Conservation Assistance	Up to \$75 rebates for residential customers towards purchase of WaterSense plumbing fixtures	- Reduces water usage through installation of low flow faucets, shower heads, and low flow and dual flush toilets 200 rebates available
Stormwater Management Assistance	Implementing BLUE[®] BTV residential stormwater management grant program	- Provides “Lake Friendly” home evaluations to residential properties - Provides grants towards the costs of roof gutters, rain gardens, permeable pavers etc.



Addressing Affordability for More Renters

- Currently proposed WRAP Fixed Fee Waiver applies to:
 - › Single-family properties and other individually metered residential units where the occupant is the account holder
 - › Non-profit affordable or senior housing accounts
- Generally renters in **multi-family rentals** will not have access in this phase, Why?
 - › If City provides Fixed Fee Waiver to landlords, some landlords might not pass on affordability measure to tenants
 - › Multi-family units often share meter, so current fixed fee waiver structure not beneficial to an individual rental unit



Affordability for Renters, cont.

- Water utilities across the country are struggling to address this gap
 - › Most utilities don't have a renter specific program
 - › DC Water and NYC Water have only recently launched programs we are monitoring
- Burlington Water Resources will evaluate options for consideration by stakeholders and City Council by April 2023



Current & Proposed Rates

	Water		Wastewater		Private Fire	
	FY 21 Current	Proposed	FY 21 Current	Proposed	FY 21 Current	Proposed
<u>Fixed Charge per Month</u>						
5/8"	\$0.00	\$3.28	\$0.00	\$4.67	-	\$9.30
3/4"	\$0.00	\$4.92	\$0.00	\$7.00	-	\$9.30
1"	\$22.73	\$8.20	\$31.74	\$11.67	-	\$9.30
1.5"	\$45.51	\$16.39	\$63.55	\$23.35	-	\$9.30
2"	\$72.68	\$26.23	\$101.49	\$37.36	-	\$9.30
3"	\$145.32	\$49.18	\$202.93	\$70.05	-	\$9.30
4"	\$248.28	\$81.96	\$346.70	\$116.75	-	\$9.30
6"	\$454.12	\$163.92	\$634.14	\$233.50	-	\$27.00
8"	-	-	-	-	-	\$57.54
10"	-	-	-	-	-	\$103.48
Private Fire Hydrant	-	-	-	-	-	\$27.00
<u>Volumetric Rate (per 100 CF)</u>						
Single-Family Residential	\$4.44	-	\$6.20	-		
Tier 1 (0-400 CF)	-	\$2.48	-	\$6.07		
Tier 2 (401 CF and higher)	-	\$6.19	-	\$6.07		
Duplex	\$4.44		\$6.20	-		
Tier 1 (0-600 CF)	-	\$2.48	-	\$6.07		
Tier 2 (601 CF and higher)	-	\$6.19	-	\$6.07		
Triplex	\$4.44		\$6.20	-		
Tier 1 (0-900 CF)	-	\$2.48	-	\$6.07		
Tier 2 (901 CF and higher)	-	\$6.19	-	\$6.07		
Multi-Family Residential	\$4.44	\$4.24	\$6.20	\$6.07		
Mixed Residential & Commercial	\$4.44	\$4.24	\$6.20	\$6.07		
Commercial	\$4.44	\$4.24	\$6.20	\$6.07		
City	\$4.44	\$4.24	\$6.20	\$6.07		
Irrigation/Heating/Cooling	\$4.53	\$7.43	-	-		



Snapshot of Possible Customer Impacts



Caveat! These are estimated customer bills based on CY19 customer class trends (Pre-Covid).

Actual bills will vary based on water consumption.

Meter size, private fire service size and # of private hydrants affects bills.

Includes a 5% increase to stormwater for all customers.

Customers should complete an "Account impact summary request form" to understand the impact to their specific bill(s).

Without rate restructuring, the typical single family home would see a bill increase of 5.9%



	Hypothetical Customer Type	A	B	C	D
		FY 2021 Bill (\$)	FY 2022 Proposed		
			Bill (\$)	\$ Change	% Change
	Single Family Residential				
1	Low Volume - 200 CF	\$343	\$394	\$51	14.7%
2	WRAP - Low Volume - 200 CF	\$343	\$299	(\$44)	-13.0%
3	Median Volume - 400 CF	\$608	\$606	(\$2)	-0.3%
4	WRAP - Median Volume - 400 CF	\$608	\$511	(\$97)	-15.9%
5	High Volume - 600 CF	\$872	\$911	\$39	4.5%
6	WRAP - High Volume - 600 CF	\$872	\$815	(\$57)	-6.5%
	Duplex				
7	Low Volume - 300 CF	\$475	\$500	\$25	5.3%
8	Median Volume - 600 CF	\$872	\$818	(\$54)	-6.2%
9	High Volume - 900 CF	\$1,268	\$1,275	\$7	0.6%
	Triplex				
10	Low Volume - 600 CF	\$884	\$831	(\$53)	-6.0%
11	Median Volume - 900 CF	\$1,280	\$1,150	(\$130)	-10.2%
12	High Volume - 1300 CF	\$1,809	\$1,759	(\$50)	-2.8%
	Multi-Family Residential				
13	Low Income Housing (with WRAP waiver)	\$66,078	\$65,660	(\$418)	-0.6%
14	Senior Housing (with WRAP waiver)	\$39,159	\$38,368	(\$791)	-2.0%

Snapshot of Possible Customer Impacts



Caveat! These are estimated customer bills based on CY19 customer class trends (Pre-Covid).

Actual bills will vary based on water consumption.

Meter size, private fire service size and # of private hydrants affects bills.

Includes a 5% increase to stormwater for all customers.

Customers should complete an "Account impact summary request form" to understand the impact to their specific bill(s).

Hypothetical Customer Type	FY 2021	FY 2022 Proposed		
	Bill (\$)	Bill (\$)	\$ Change	% Change
Commercial				
15 Technology Company	\$17,471	\$20,379	\$2,908	16.6%
16 Retail Company	\$27,234	\$29,843	\$2,609	9.6%
Institutions				
17 University	\$1,785,532	\$1,968,841	\$183,309	10.3%
18 UVMCC	\$745,027	\$839,246	\$94,218	12.6%
19 School District	\$127,477	\$141,906	\$14,429	11.3%



Customer Impacts of New Rate Structure

- ❓ All bills will vary based on actual water consumption, meter size and private fire protection
- ✓ Complete an Account Impact Summary Request to understand your specific impacts
- 💡 Think about what mitigation opportunities apply to your property

Key Drivers	Opportunities To Lower Bill	Who Is Eligible?
Fixed Meter Charge	Apply for WRAP	Single Family Households Meeting Income or Age Criteria; Non Profit Housing Developments Providing Affordable or Senior Living Units
	Request a Meter Sizing Review	All Customers with Meters Sized at 3/4" or Larger
	Evaluate Meter Removal	All Customers
Consumption Above 400 CF	Implement Conservation Strategies	All Customers
	Investigate for Internal Plumbing Leaks	
Private Fire Protection Charge	Request Verification of Pipe Diameter	All Customers with Protective Fire Infrastructure
Irrigation Rate	Evaluate Meter Removal	All Customers
	Implement Conservation Strategies	
Stormwater Rate	Apply for Stormwater Fee Credit	All Directly Assessed Customers Who Have Installed Stormwater Management Measures



Highlights

- The Wastewater, Water and Stormwater proposed FY22 budget is built to ensure proper operation and sustainable stewardship of infrastructure, with targeted funding for customer assistance programs
- Without the rate restructuring and affordability changes, all residential rate payers would see approximate 5.9% increase on their bill
- With the proposed changes:
 - › Income qualified ratepayers and seniors will see a decrease in their overall water resources bill (on average \$97/year for someone who uses 400 cf/month) from this year
 - › Over 63% of single family residential ratepayers will see benefit on their water resources bill (i.e. less than a 5.9% increase)
 - › Median single family users (400 cf./month) will see no increase
 - › Median duplex (600 cf/month) and triplex (900 cf/month) properties will see decreases in their bill
 - › Will have established a customer class based rate structure which will allow for specific affordability based pricing of essential, residential water usage into the future



Next Steps

q Continuous Improvement (April 2021-July 2021)

- Ø Incorporate feedback from all stakeholders
- Ø Review, validate and respond to impact summary requests
- Ø Ongoing QA/QC with data and required updates to billing system
- Ø Draft WRAP policy and any needed ordinance changes

q Approvals (April 2021-June 2021)

- Ø DPW Commission (4/21/21)
- Ø Transportation, Energy and Utility Committee (4/27/21)
- Ø City Council approval of rate & fee structure changes including WRAP (5/10/21)
- Ø City Council approval of budgets & rates for FY 22

q Implementation (July 2021-August 2021)

- Ø Changes will be effective beginning July 2021 and reflected on August bills
- Ø Additional round of outreach to all customers in advance of August bills





Burlington School District Travel Plan

CITY OF BURLINGTON, DEPARTMENT OF PUBLIC WORKS (DPW)

4/21/2021

PHILLIP PETERSON EI, ASSOCIATE ENGINEER

Purpose and Goals



- ▶ Complete Travel Plan for all Nine (9) Burlington Public Schools
 - ▶ Significant changes to local schools since the last update in 1990's
- ▶ Individual Traffic Control Plans
 - ▶ Enhance Safe Travel
 - ▶ Maximize Walking & Biking Opportunities
 - ▶ Minimize Traffic Impacts to Local Neighborhoods



Existing Conditions



- ▶ Existing Conditions
 - ▶ GIS Data Collection & Mapping
 - ▶ School Information
 - ▶ Active Transportation Data
 - ▶ Roadway Network Data
 - ▶ Transit Data
 - ▶ Land Use Data
 - ▶ Demographic Data
- ▶ Site visits by project team



Walk Audits



THE PROJECT TEAM NEEDS TO HEAR FROM YOU!

Participate in a survey and/or conduct a walk / bike audit:

- ▶ PreK-8th Grade Travel Surveys
- ▶ High school Travel Survey
- ▶ Walk/Bike Audits via your cellphone or printable paper form

CCRPC Project website: bit.ly/BSDDTravelPlan



Next Steps

- ▶ Travel & Traffic Control Plan Drafts
- ▶ Final Report
- ▶ Final Plans
 - ▶ Traffic Regulation Changes
 - ▶ Potential Construction Projects





Contact:
Phillip Peterson E.I., Associate Engineer
Department of Public Works
Desk: 802.598.8356
Email: ppeterson@burlingtonvt.gov

The logo for DuBois & King inc. is displayed within a light blue circle. The text "DuBois & King" is in a white serif font, with "inc." in a smaller font to the right. The entire logo is set against a dark grey rectangular background.

DuBois
& King^{inc.}

CCRPC Project website: bit.ly/BSDTravelPlan



CONSOLIDATED COLLECTION EVALUATION

Public Works Commission
April 21, 2021

Study of Franchise Model: Conducted by our consultant Gershman, Brickner, and Bratton Inc. (GBB) on behalf of the City of Burlington, and South Burlington.

Study of Municipal Model: Conducted by DPW staff evaluating the creation of a municipally-operated consolidated collection program.

- ▶ There are many ways communities coordinate the collection of trash, recyclables and food scraps.
- ▶ In our City, individual residential property owners subscribe with a local hauler for solid waste services or bring their trash to one of the County's Drop-Off Centers.
- ▶ According to a survey of 461 communities nationwide, this subscription arrangement occurs only in approximately 11% of communities.
- ▶ Consolidated collection, on the other hand, is the much more common approach with 83% of the communities having the municipality either collecting waste streams itself or contracting with private haulers.

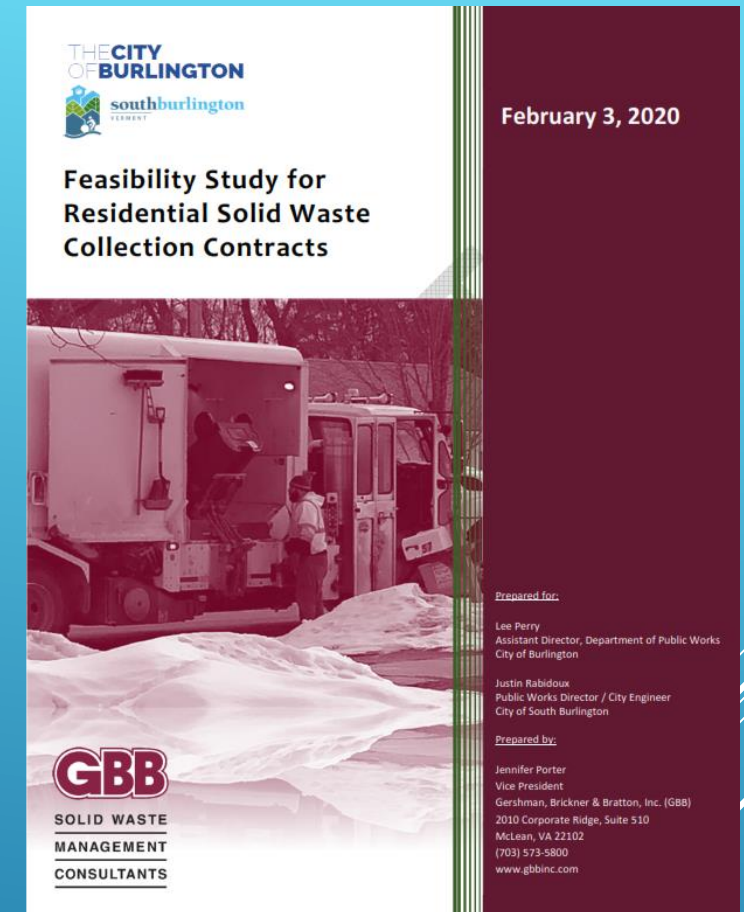
BACKGROUND

- ▶ Consolidated collection has been explored in our region for decades including a county-wide evaluation that ended in 2015.
- ▶ In April 2018, the City Council passed a resolution requesting the Department of Public Works to undertake a citywide consolidated collection feasibility study with the City of South Burlington and Chittenden Solid Waste District.
- ▶ Funding for this study were supported through the General Fund recycling budget and split between FY19 and FY20.
- ▶ The report evaluated a franchised collection model utilizing private haulers. Past materials can be found at:

<https://www.burlingtonvt.gov/dpw/Maintenance/Consolidated>

BACKGROUND

- ▶ Reduced costs to residents through more efficient collection routes.
- ▶ Reduced environmental costs of excess truck traffic (Up to two thirds reduction in greenhouse gasses).
- ▶ Reduced impacts on City infrastructure.
- ▶ Reduced litter using wheeled, covered carts by all residents.
- ▶ Reduced noise in neighborhoods by reducing excess truck traffic.

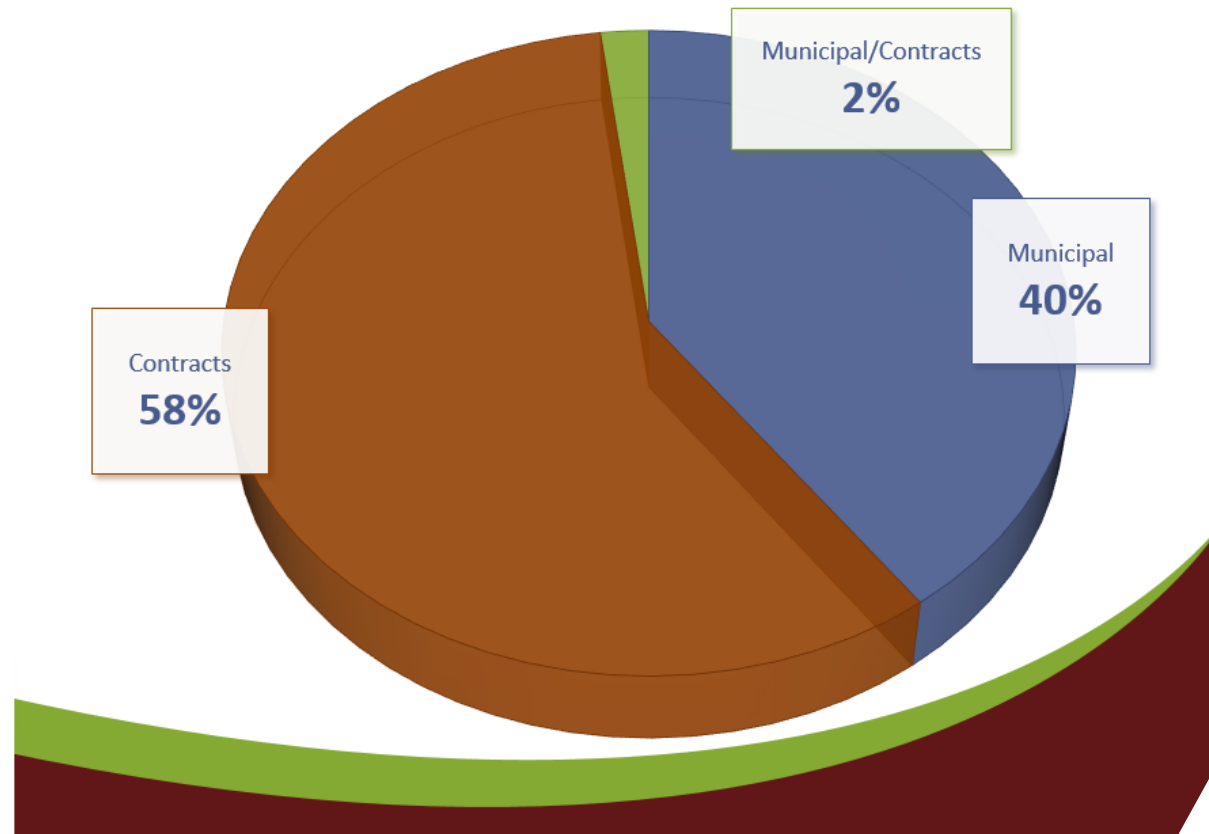


SUMMARY OF RESULTS FROM THE GBB CONSOLIDATED COLLECTION STUDY

- Increased recycling through direct and consistent education to residents.
- Increased diversion by using consolidated collection as the most cost-effective mechanism to add collection of food scraps.
- Increased safety on local roads through a reduction in excess truck traffic.
- Increased Compliance with state and local mandates.
- Bidding process could offer the opportunity for small haulers to bid for districts.
- Program could allow residents to “opt out” and self-haul to a drop off center. The “opt out” allowance could be capped.

GBB FINDINGS CONTINUED

Breakdown of the 83%: Cities through municipality / private haulers under contract



*Chart based on survey information provided by the consultant.

CITY OF BURLINGTON MUNICIPALLY-OPERATED CONSOLIDATED COLLECTION EVALUATION

- City, CSWD and GBB presented findings of GBB study based on a franchised model to the City Council's Transportation, Energy & Utilities Committee (TEUC) in Summer 2020
 - TEUC requested supplemental study of a municipally-operated model
 - City staff completed the analysis and developed a conceptual budget over the fall and winter
 - Presented to the TEUC in March 2021
- 
- A series of three parallel white diagonal lines extending from the bottom right towards the top right of the slide.

- ▶ A municipally-operated consolidated collection model can provide similar environmental and cost benefits that were outlined in the GBB study of a franchised model.
- ▶ The City would need to create a new division or department to support a municipally-operated collection program.
- ▶ Projected to require 14 new full-time employees, ranging from CDL licensed drivers, manger, customer service/billing personnel, fleet technician, and public outreach/enforcement specialist.
- ▶ Upfront Capital Cost between 5.9M and \$6.7M
 - ▶ \$1.4M for fleet vehicles
 - ▶ \$3.6M - \$4.0M for a facility
 - ▶ \$900K - \$1.2M for equipment, toters, etc.
- ▶ Billing / customer services would need to be provided – explored conceptual option of using Water Resources' Harris Flexi-bill software

STAFF FINDINGS FOR A MUNICIPALLY-OPERATED CONSOLIDATED COLLECTION MODEL

Options	Municipal Model 195-201 Flynn Ave 0% Opt Out	Municipal Model 339 Pine St. 15% Opt Out	Municipal Model 339 Pine St. 25% Opt Out	Franchise Model 0% Opt Out	Franchise Model 15% Opt Out	Franchise Model 25% Opt Out
Households Served Weekly	13,005	11,054	9,754	13,005	11,054	9,754
Resident Annual Cost	\$414.38	\$457.30	\$494.92	\$410.03	\$422.98	\$422.80
Resident Monthly Cost	\$34.53	\$38.11	\$41.24	\$34.17	\$35.25	\$35.23

**The consultant ran the franchise model originally at 0% and 15% opt out. City staff has updated the costs based on updated tip fees and made some initial assumptions on the 25% opt out but are awaiting confirmation from our consultant. The overall cost figures for this 25% opt out scenario are preliminary.*

Current Subscription Monthly Price Range Data Collected By Consultant:

64 Gallon Weekly Trash/Recycling: \$28-\$49

*These costs do not include the pick-up and disposal of food scraps.

COST ASSUMPTIONS & COMPARISON

NEXT STEPS

- ▶ April 27: TEUC Meeting - Update
 - ▶ Additional Research on Operating Models
 - ▶ May 19: DPW Commission Meeting – Council recommendation
 - ▶ May 25: TEUC Meeting – Council recommendation
 - ▶ June: Council presentation with GBB and recommendation
- 
- A series of three parallel white diagonal lines in the bottom right corner of the slide, extending from the middle of the right edge towards the bottom left.

THANK YOU!

If you have any questions, please call or email Lee Perry at

Lperry@burlingtonvt.gov

Phone: 802-316-7568

Several thin, parallel white lines of varying lengths and orientations are positioned in the bottom right corner of the slide, creating a modern, abstract graphic element.

**DEPARTMENT OF PUBLIC WORKS
645 PINE STREET
BURLINGTON, VERMONT 05401
COMMISSION MEETING APRIL 21, 2021
FINAL MINUTES**

Commissioners Present: Commissioner Archambeau, Commissioner Barr, Commissioner Hogan (Chair), Commissioner O'Neill-Vivanco (Vice-Chair), Commissioner Overby.

Commissioners Absent: Commissioner Bose and Commissioner Gilman

ITEM 1 – CALL TO ORDER

Commissioner Hogan called meeting to order at 6:32 p.m.

ITEM 2 – AGENDA

Commissioner Overby asked to pull Item C off the agenda for more discussion as she had an email exchange about this item off-line.

Commissioner Barr made a motion to accept the agenda with pulling Item C off and making it Item 4.1

Commissioner O'Neill-Vivanco seconded

Unanimous approval

ITEM 3 – PUBLIC FORUM –

Jason Van Dreische spoke at Public Forum in reference to upcoming Commission review of City Engineer Baldwin. Van Dreische said that while CE Baldwin loves Burlington, he is too cautious on safety improvements; project implementation has been substandard and there have been delays in implementing safety improvements. He does not believe CE Baldwin should be re-appointed and wanted the Commission to factor this in to their recommendation to the Mayor for re-appointment.

ITEM 4 – CONSENT AGENDA

A – Update to Free Employee Parking Policy

B – Parking Request for Lakewood Parkway GSII Project

Commissioner Barr made a motion to accept consent agenda for Items A and B

Commissioner O'Neill-Vivanco seconded

Unanimous approval

ITEM 4.1 – DESIGN VEHICLE GUIDELINES

DPW Engineer Olivia Darisse stated that with the growing need for intersection design standards that meet the needs and objectives specific to the City of Burlington, an Intersection Design Vehicles Guidance document has been developed as a resource for engineers and designers. Existing design resources provide general guidance that lacks consideration for unique downtown settings and pedestrian safety. This document standardizes the intersection design process for the City of Burlington and will be used as a design resource for city staff and consultants to balance the needs of various road users and modes of travel. This is not to change any existing and functioning intersections but rather provide guidance when intersections are undergoing a capital project redesign or reconstruction.

Commissioner Overby's concern is that this document does not mention the use of roundabouts and is only focused on traditional intersection treatments.

DPW Engineer clarified that this resource really only addresses existing intersections.

Discussion ensued about incorporating language offered by Commissioner Overby.

Chair Hogan clarified that no action was required for this item.

City Engineer Baldwin stated that the need for this resource grew out of the St. Paul Street implementation where an intersection was designed to be narrower and more pedestrian friendly. However, the public felt like we went too far in that direction. This resource is meant to address and clarify existing intersections.

DPW Engineer Darisse stated that in the future there will be supplemental guidance for roundabouts as there are no resources to cater to the city.

Commissioner Overby stated that intersections are an issue in Burlington and roundabouts need to be considered as an option.

DPW staff pulled this item and will bring it back after further internal deliberation.

ITEM 5 – WATER RESOURCES RATE RECOMMENDATIONS

Division Director Megan Moir shared a power point presentation. She stated that her team has done extensive outreach, including going to multiple NPA meetings and mailing post cards to all residents with the new rate structure. Updates include irrigation rates, fire service fees, a fixed fee and flexible payment plans. Division Director Moir also addressed next steps for implementation.

Commissioner Archambeau offered compliments for the hard work of Water Resources.

Commissioner Barr echoed these sentiments and underscore how important help will be for those who need financial assistance.

Commissioner O'Neill-Vivanco shared that she sat in on the citywide meeting and requested an impact summary which she received. Asked about whether those with automatic sprinklers may complain and wondering what strategies DPW will use to deal with pushback. Division Director Moir stated that letters are being sent to people who have irrigation and fire service accounts so they are prepared for the changes.

Commissioner Overby offered compliments for the amount of work that went into the outreach and work. Underscored how important it is letting people know about the true cost of water. Offered support for the changes.

Chair Hogan asked clarifying questions about the presentation, such as what "meter removal" might indicate, given the importance of having a meter.

Commissioner Barr made a motion to approve with the language in the packet.
Commissioner O'Neill Vivanco seconded.
Unanimous approval

ITEM 6 – CONSOLIDATED COLLECTION STUDY UPDATE

Division Director Lee Perry provided a power point presentation on the steps the City has taken to study Consolidated Collection. This includes the results of the franchise study AND the municipal model that DPW has evaluated.

Vice-Chair O'Neill-Vivanco suggested if the city takes on this increased capacity then perhaps priorities shift if trash and compost are added to responsibilities. Concerned the City may not have the capacity to take this on and if this is where priorities should be focused. Also asked about enforcement options if we do undertake the municipal model.

Division Director Perry stated that performance indicators would be language written into a RFP to ensure proactive standards are met. DD Perry said that we would play the role one way or another.

Commissioner Overby said that the control over cost and quality is an important consideration and that we lose an advantage here if things are privatized. Asked clarifying questions about number of households who "opt-out." Director Spencer said that, according to the survey from consultant, approximately up to 25% in Burlington opt out. Commissioner Overby also wants the focus to be on how to reduce waste generated by residents.

Commissioner Archambeau stated that he is a big fan of consolidation. Suggests that equity is an important consideration in how we move forward. For instance, safety considerations can be factored in more stringently with city control. Recommends that if we do go private, that we work with haulers who have a good working history with the City; don't accommodate violators. He is a fan of the municipal option – it's about equity, including retirement, livable wages, etc.

Commissioner Barr agreed with most of the comments and is a fan of consolidated pick up. However, with rising municipal costs in a variety of areas, too high of a cost can push people out of the City. Is probably leaning toward the franchise model. Put in RFP to set specific guidelines like minimum wages, etc.

Chair Hogan wanted to clarify if a single cart would be used for all 3 services and if all services would be handled on the same day. Director Perry stated there would be a split body truck for trash and compost, recycling would still be done in a similar manner. Also underscored the need to write performance standards into the contract.

Gene Bergman spoke during public comment and supports a change to a consolidated system, specifically a public system. It is the most in the public interest. Democratic, public control can take other priorities into account beside cost, which includes ratepayer interests, the environment and workers. Privatization is not in the public interest.

from the public stated solid waste collection is essential to fight climate system. Public consolidation system is most in public interest. Need to give the public greater control over the rates, be more flexible.

ITEM 7 – BSD SCHOOL TRAVEL PLAN KICKOFF

Associate Engineer Philip Peterson shared a power point presentation on an ongoing project to conduct a holistic survey of Burlington School District travel conditions.

Commissioner Overby asked for more clarity on the end result of this project, what is driving the project.

Associate Engineer Peterson stated that it is a comprehensive evaluation of the transit and transportation network around the schools – including how do kids get to school, how can safety be improved, etc.

Director Spencer stated we have heard of the need to make improvements at certain schools, curb pick up, sidewalk and bike routes. DPW will work with the school district and there will be independent plans for each school. We want total involvement from schools, parents and students.

Commissioner Barr asked about the Safe Routes to School position with BSD and whether it's filled?

City Engineer Baldwin stated that Nicole Losch is working with the School Department for safer route to schools and evaluating conditions where parents see problems.

Vice Chair O'Neill-Vivanco stated that the crosswalk at Union and Main Street has not been fixed yet. Make sure to prioritize the most vulnerable users. Make plans to fit into the walk/bike plan. Keep in mind the high school will be in the downtown for next 3 years.

Chair Hogan requested a check-in on the project in summer or fall and to have some material ahead of time to evaluate.

ITEM 8 – ANNUAL DOWNTOWN PARKING REPORT

Division Director Padgett provided material ahead of time and offered to answer questions on the parking report.

Commissioner Archambeau thanked DD Padgett for the effort.

Commissioner Barr appreciated the data.

Vice Chair O'Neill-Vivanco asked about the auditing of the businesses through the free employee parking program. DD Padgett described how the monthly process works to validate employee parking.

Commissioner Overby stated that the wayfinding sign was not working at Marketplace.

ITEM 9 - APPROVAL OF DRAFT MINUTES

Commissioner Overby had changes to March's minutes. The Commission decided to defer this item until the next month when staff can present changes to minutes in a way more conducive to Zoom.

ITEM 10 – DIRECTOR'S REPORT

Director Spencer referred the Commission to his submitted report.

ITEM 11 – COMMISSIONER COMMUNICATIONS

Commissioner O'Neill-Vivanco read a letter from a concerned citizen about recycling and how it has been blowing all over the place making the Henry Street and Loomis Street neighborhood full of trash on windy days. People who do not have bins have

been using boxes to put recycling in and this makes the stuff blow around even more. He understands that toters are being recommended for apartment buildings but would like to see them for the city as this would cut down on trash blowing around. This was on See Click Fix.

Commissioner Overby had some questions about the goals and objectives but stated she would contact Director Spencer later this week and discuss this with him.

Commissioner Archambeau offered support to the City Engineer. The City struggles with a lot of voices from within city and he is not convinced the problem is with the City Engineer but with trying to balance multiple, competing voices.

Commissioner Hogan asked about where things will land with how some streets during Covid 19 last year were dedicated to local traffic only. He would like to see this a permanent fixture in some neighborhoods in the city.

ITEM 12 – ADJOURNMENT AND NEXT MEETING DATE – MAY 19, 2021

Commissioner Barr made a motion to adjourn
Commissioner O’Neill-Vivanco seconded
Unanimous approval

Meeting adjourned at 9:32 p.m.