



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

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

Chapin Spencer
DIRECTOR OF PUBLIC WORKS

M E M O R A N D U M

To: Hannah Cormier, Clerks Office
From: Chapin Spencer, Director
Date: December 14, 2017
Re: Public Works Commission Agenda

Please find information below regarding the next Commission Meeting.

Date: **December 20, 2017**
Time: 6:30 – 9:00 p.m.
Place: **645 Pine St – Main Conference Room**

A G E N D A

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 Traffic Status Report
 - B Burlington Free Press Parking Agreement

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 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 865-7145.

- 5 20 Min FY'18 Bike Projects & Willard Parking Flip
A Communication, E. Gohringer & N. Losch
B Commissioner Discussion
C Public Comment
D Action Requested –Vote
- 6 40 Min Great Streets Standards Approval
A Oral Presentation, L. Wheelock & M. Tuttle
B Commissioner Discussion
C Public Comment
D Action Requested – Vote
- 7 15 Min Plumbing Code Revisions
A Communication, N. Baldwin
B Commissioner Discussion
C Public Comment
D Action Requested – None
- 8 20 Min Traffic Calming/Traffic Requests Presentation
A Communication, N. Baldwin & C. Spencer
B Commissioner Discussion
C Public Comment
D Action Requested – None
- 9 5 Min Approval of Draft Minutes of 11-15-17
- 10 10 Min Director's Report
- 11 10 Min Commissioner Communications
- 12 **Adjournment & Next Meeting Date – January 17, 2018**



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Chapin Spencer
DIRECTOR OF PUBLIC WORKS

MEMORANDUM

TO: PUBLIC WORKS COMMISSION
FM: CHAPIN SPENCER, DIRECTOR
DATE: DECEMBER 14, 2017
RE: PUBLIC WORKS COMMISSION MEETING

Enclosed is the following information for the meeting on December 20, 2017 at 6:30 PM
at **645 Pine St – Main Conference Room**

1. Agenda
2. Consent Agenda
3. FY' 18 Bike Projects & Willard Parking Flip
4. Plumbing Code Revisions
5. Traffic Calming/Traffic Request Presentation
6. Approval of Draft Minutes of 11-15-17

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Chapin Spencer
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M E M O R A N D U M

To: Hannah Cormier, Clerks Office
From: Chapin Spencer, Director
Date: December 14, 2017
Re: Public Works Commission Agenda

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- 12 **Adjournment & Next Meeting Date – January 17, 2018**



MEMORANDUM

December 7, 2017

TO: Public Works Commission

FROM: Phillip Peterson, DPW Engineering Technician *PWP 12/7/17*

CC: Norm Baldwin P.E., City Engineer

RE: Traffic Request Status Report

Number of Requests 11/09/17 =	64
New Requests since 11/09/17 =	5
Requests closed since 11/09/17 =	1
Number of Requests 12/07/17 =	60

RFS BREAKDOWN BY TYPE*

		Last Month	Change
Accessible Space:	3		
Resident Only Parking:	6		
Crosswalks:	23	24	-1
Driveway Encroachments:	2		
Signage:	12	11	+1
Loading Zone:	3		
Area/Intersection Study:	4		
Parking Prohibition:	6	3	+3
Bus Stop:	1	0	+1
Geometric Issues:	3		
Parking Meters:	1		
Other:	0		
TOTAL:	64		



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Chapin Spencer
DIRECTOR OF PUBLIC WORKS

Date: December 14, 2017

To: DPW Commission

From: Patrick Mulligan, Assistant Director

RE: Parking Agreement with Burlington Free Press

Attached is a new parking agreement with the Burlington Free Press. Previously, the BFP had a contract that provided 35 parking spaces, this new agreement is a reduction to 25 spaces in the Lake View Garage and College Street Garage at the market rate of \$80.00 per month for Monday – Friday.

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Parking Agreement

This parking agreement is entered into by the City of Burlington ("City"), by and through its Department of Public Works ("DPW"), and The Burlington Free Press ("BFP") a Vermont for-profit corporation with a principal place of business at 100 Bank Street, Burlington, Vermont. In consideration of the respective mutual responsibilities to be undertaken, the Parties agree as follows:

1. City shall provide to BFP parking licenses for 25 designated BFP employees for those employees' use at the City's College Street or Lakeview parking garages at the standard monthly rate being offered by the City at the time, a rate of \$80 per month for a Monday to Friday license. Such license may be indicated via a card, decal, hangtag, entry on a license plate registry or other means of identifying authorized permit holders to the Parking and Revenue Control System in effect at the time. This rate shall remain in effect for one (1) year, commencing as of January 1, 2018
2. BFP agrees that the billable term of each issued license begins on the day that license is issued to BFP.
3. Monthly parking licenses are restricted to Monday through Friday. No overnight parking is permitted as part of this agreement. Only currently registered vehicles that are legally allowed to be operated on the public streets and ways are licensed by the monthly parking license issued under this agreement to be parked within these garages. A vehicle may be removed at the owner's expense as long as reasonable efforts were made by the City to notify the owner about the need to remove the vehicle from the premises within a reasonable time.
4. A monthly parking license authorizes designated BFP employees to self-park and lock one vehicle in an available, not-being-used, parking space in these garages. The City reserves the right to manage parking in its facilities in the best interests of the City; BFP acknowledges and agrees that this may require some of its employees' vehicles to use another parking facility or be relocated if necessary. BFP license holders who are unable to park in the Lakeview or College Street garages due to full occupancy in those garages will be authorized to park in the Marketplace Garage at no additional cost. In the event all City garages are at capacity the City and BFP will work together to develop a plan for parking in City surface lots until capacity becomes available. This agreement does not reserve any particular parking space for monthly parking license holders. The City does not guarantee the availability of a space by reason of this agreement and on those occasions when the all garages and surface lots are full, monthly patrons shall either wait their turn to gain entrance or find alternative parking.
5. Parking is at the BFP employee's sole risk. The City does not guard or assume care, custody or control of the vehicle or its contents and is not responsible for fire, theft, damage or loss not directly resulting from the willful misconduct or negligence of the City. No bailment is created.
6. BFP agrees that as a condition of the issuance of a license the employee license holder shall report to DPW any damage that the cardholder's vehicle causes to the facility, including but not limited to the leaking of any chemicals, oil, gas or antifreeze. If it is determined that a vehicle is leaking, the vehicle may be removed at the owner's expense as long as reasonable efforts were made by the City to notify the owner about the leak and the requirement to remove the vehicle from the premises within a reasonable time, such time to be stated in the notice and to correspond to the circumstances of the leak. Notwithstanding this notice requirement, in the event of a threat of imminent danger to life or property, a vehicle may be removed at owner's expense without notification of the owner. After the discovery of a leak, the license to park the vehicle in the garages shall be suspended until DPW is

provided with written proof that the necessary repairs to the vehicle were made to prevent further leakages. Vehicles whose license to park is suspended may be removed at the owner's expense if the vehicle is found in a garage while the license is suspended. The suspension of the license to park shall not suspend the obligation of BFP to pay the fee for the license.

8. Monthly parking licenses are for the exclusive use of the assigned license holder. Licenses shall not be loaned, altered, transferred or sold. BFP agrees that misuse of a license shall be deemed as theft of services and the licensee shall be locked out and parking privileges in the garages rescinded.

9. BFP understands and will inform its employees that compliance with instructions for the use of licenses is a condition of its use. If a license holder fails to properly comply with use instructions the maximum daily fee will be assessed.

10. This agreement will remain in effect for one (1) year from January 1, 2018 Both DPW and BFP may terminate this agreement with thirty (30) days written notice.

11. This agreement may not be modified except by a written instrument executed by both parties.

Dated this ____ day of _____, 2017 in Burlington, VT.

BFP

City of Burlington

By:

By:

Duly Authorized

Chapin Spencer, Director
Department of Public Works
City of Burlington, VT



December 20, 2017

TO: Public Works Commission

FROM: Nicole Losch, Senior Transportation Planner
Elizabeth Gohringer, Associate Planner

RE: planBTV Walk Bike Implementation for 2018
Part 1: Willard Street parking lane / bike lane switch

Recommendations

Staff recommends that the Commission adopt:

- Repeal "No Parking" on the east side of Willard Street between Maple Street and North Street
- No parking on the west side of Willard Street between Maple Street and North Street
- Motorcycle parking in the first parking space north of Maple Street; in the first parking space north of Main Street; and in the first parking space north of Brookes Avenue.

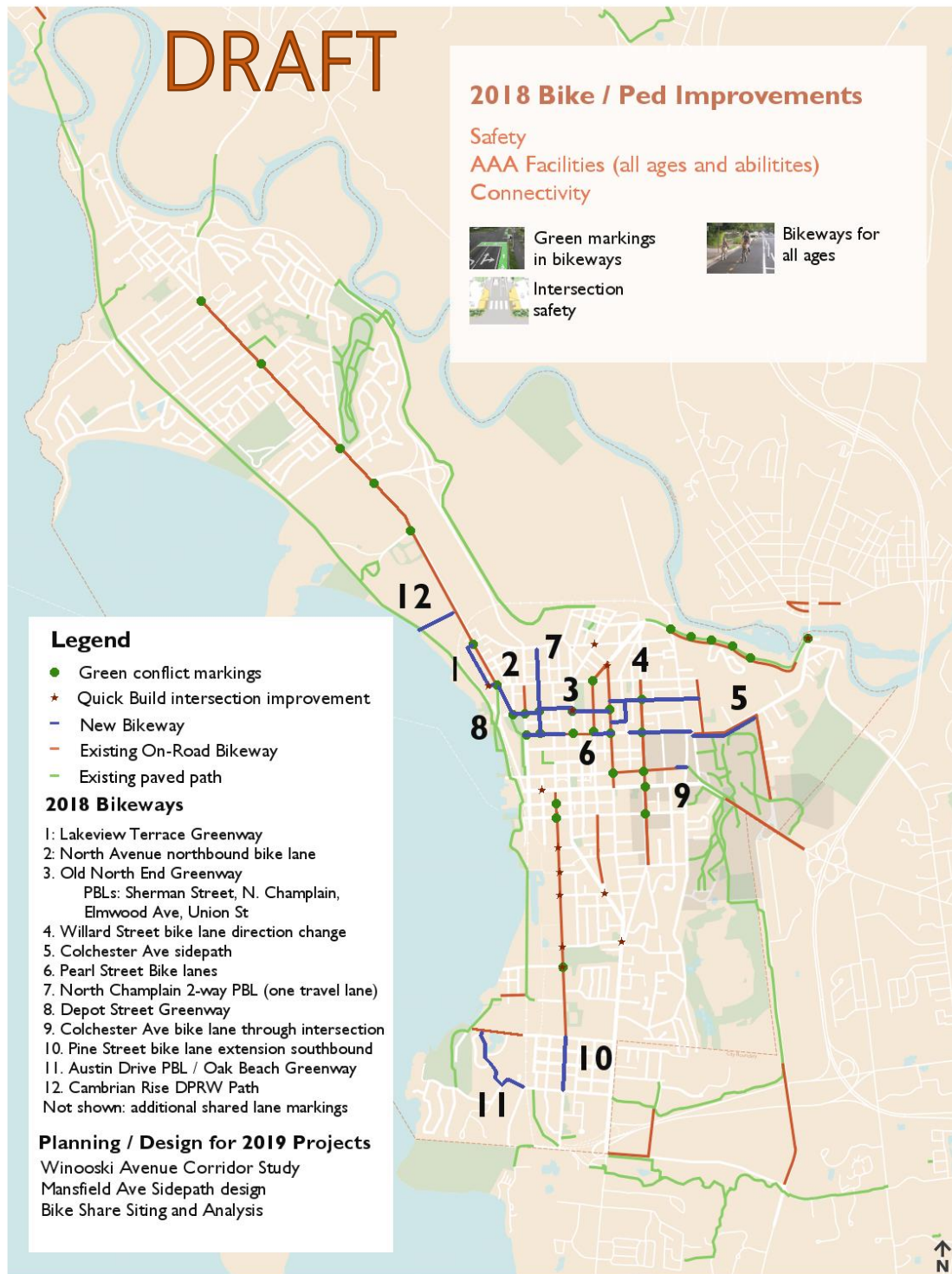
Background

In April 2017, the City Council approved PlanBTV Walk Bike, Burlington's road map to improve walking and biking in Burlington. PlanBTV's two goals are to create safer streets for everyone and to make walking and biking a viable way to get around town. During the community outreach for PlanBTV Walk Bike, the top priorities identified by the public were implementing more protected bike lanes and creating a more connected and continuous bicycle network with safer and easier intersection crossings.

2018 will see substantial investment in new facilities for walking and biking as we implement planBTV Walk Bike. The focus is to:

1. Improve safety
2. Build AAA facilities for all ages and abilities
3. Connect the network
4. Use quick-build strategies for widespread rapid implementation

Plans for people walking will focus on safety: shorter crossings, better visibility at crosswalks, and slower vehicle turning at intersections. Curbside amenities will also be included. Plans for people biking will focus on safety, AAA facilities, and connectivity.



Of the projects planned for implementation in 2018, some have already been considered by the Commission, some can be implemented with only minor adjustments (no regulatory changes), and small projects needing regulatory changes will return to the Commission in January or February. While staff is currently assessing

options at each location and just beginning community outreach, the other projects may include a section of lower Pine Street, a section of Austin Drive, and two sections of Pearl Street.

Project Description

To ensure substantial projects can be included in the January 2018 base bid for contractors, the Willard Street Parking Lane / Bike Lane Switch is currently presented for the Commission's consideration. Late in the PlanBTV Walk Bike planning process, the idea of turning Willard Street into a southbound bike lane was brought up by an Old North End resident. This idea quickly gained support and was soon added to the plan. The project is located on Willard Street between Maple and North Street and consists of moving parking from the west side of Willard Street to the east side; applying parking standards to these blocks; and moving the northbound bike lane to be a southbound bike lane.

Observations of Willard Street between Maple and North Streets

1. Willard Street is a two-way arterial street, a truck route, and State Route 7. It is 34-feet wide.
2. This section of Willard Street is primarily residential, with institutional use in the southern section. Staff visited Momo's Market at the corner of Willard / North Streets and spoke with the owner Erin Malone, who supports the proposed switch but would like bike parking to be placed in her place of business.
3. There is currently parking on the west side and a northbound 5-foot wide bike lane on the east side of Willard Street. Standard parking setbacks of 50-feet from intersections are not consistently applied. With intersection setbacks applied consistently, the proposed project will result in a net loss of 3 car parking spaces and a net gain of 3 motorcycle spaces.

	Maple Street to Pearl Street	Pearl Street to North Street
Current parking	◦ 85 parking spaces ◦ 83 parking spaces when standard parking setbacks from intersections are applied	◦ 44 parking spaces ◦ 41 parking spaces when standard parking setbacks from intersections are applied
Proposed parking	86 parking spaces and 2 motorcycle parking spaces*	35 parking spaces and 1 motorcycle parking space
Net parking with intersection setbacks applied	+3 parking spaces +2 motorcycling parking	-6 parking spaces +1 motorcycle parking

*Motorcycle parking has been proposed where extra space exists that cannot accommodate a standard parking space.

4. The east side of Willard Street has a steeper slope and carriage stops within the greenbelt of some sections. Staff considered restricting parking in front of the carriage stops or removing the carriage stops. However, it was determined that, due to the historic nature of the carriage stops, they should remain. Additionally, parking will be allowed in front of carriage stops, and drivers should use their best judgement when parking their car to avoid a conflict between passenger doors and the carriage stops (shown in red in the attached plan set). This will provide an option for people to use the stairs as they may currently. Carriage stops in steep greenbelts also exist on College Street east of Union Street.

5. This project is within the Willard Street Historic District. Historically-significant properties exist on both the east and west sides of North and South Willard Street (map attached).
6. The north/south bicycle network in this area is fragmented. Union Street is one block to the west and also has a northbound bike lane. Prospect Street one block east has no dedicated bicycle facilities. Switching the Willard Street bike lane to be southbound in this section will provide a north/south pair with the Union Street bike lane.
7. The decision to have the bike lane end at Maple Street was made for several reasons:
 - a. There is a clear origin and destination with Champlain College campus at Maple / Willard.
 - b. Maple Street is lower-volume than Main Street, making for a less stressful ride if anyone bicycling is trying to connect between the north and south bike routes.
 - c. Future plans for South Union Street include extending the bicycle lane to the south.
 - d. South of Maple Street, a curb extension is built into the roadway at a mid-block crosswalk. This section is also steeper in the northbound direction than other blocks of Willard Street to the north. Potential changes to the bike lane / parking lane between Maple Street and Cliff Street may be pursued at a later time.

Public Engagement

Public Engagement Plan application. This project falls under "Involve" on the Spectrum of Engagement:

1. *Who is positively impacted?*

- People bicycling north and south in the Hill, Old North End east, and campus neighborhoods will now have a designated southbound route where none previously existed.
- People walking, biking or driving will have improved visibility when exiting driveways and side streets on the west side of Willard Street.
- People living on the east side of Willard Street will have on-street parking that may be more convenient.

2. *Who may be negatively impacted and for how long?*

- People living on the west side of Willard Street may now have to cross Willard Street after parking on-street. This will be a permanent impact.
- People walking, biking or driving will have reduced visibility when exiting driveways and side streets on the east side of Willard Street. This will be a permanent impact.

3. *What are the main concerns, issues and interests of the community?*

- The community is interested in having a southbound bike lane rather than two northbound bike lanes on parallel streets (as discussed in the planning process for *planBTV Walk Bike*).
- Preservation Burlington is interested in maintaining clear view of the city's carriage stops and historic homes.
- On-street parking throughout Burlington is a finite and competitive resource.
- Concern over bicyclist safety if riding northbound on Willard without a bike lane.
- Access to the carriage steps may be impacted if cars are parked next to them.
- Visibility impacts on pedestrians attempting to cross the street between parked cars, as well as drivers pulling out of driveways on the east side of Willard St.

4. *Will any individuals, institutions or groups be disproportionately impacted?*

- There are no known groups that may be disproportionately impacted by this change.
5. *Was the project recommended in earlier planning studies which included public engagement? Is additional public input needed or required?*
- This project was recommended in planBTV Walk Bike, which included public engagement.
 - Additional public engagement was conducted through a mailing in June 2017 to residents and a second mailing to residents and owners in November 2017 in the project area.*
 - Staff met with residents who are concerned about potential impacts this project may have on historic sites.
6. *Are there any linguistic or cultural barriers to engaging with impacted residents?*
- The project area is not located within the parts of Burlington that are known to have higher levels of non-native English speakers.

June 2017 mailing to residents – responses attached

November 2017 mailing to residents and owners – responses attached

*This memo was also distributed to the Burlington Walk Bike Council and Local Motion, who both represent groups and individuals with vested interest in biking-related projects.

*City Councilors were also notified about the project.

Conclusions:

In order to complete this project, DPW recommends switching parking from the west side to east side of Willard Street from Maple Street to North Street to create a southbound bike lane. There will be approximately 3 parking spots lost with this switch. This reconfiguration will create a more connected network for people bicycling.

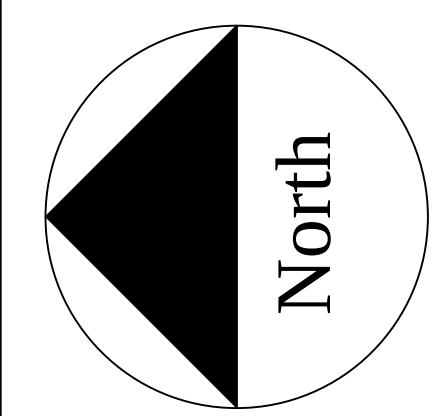
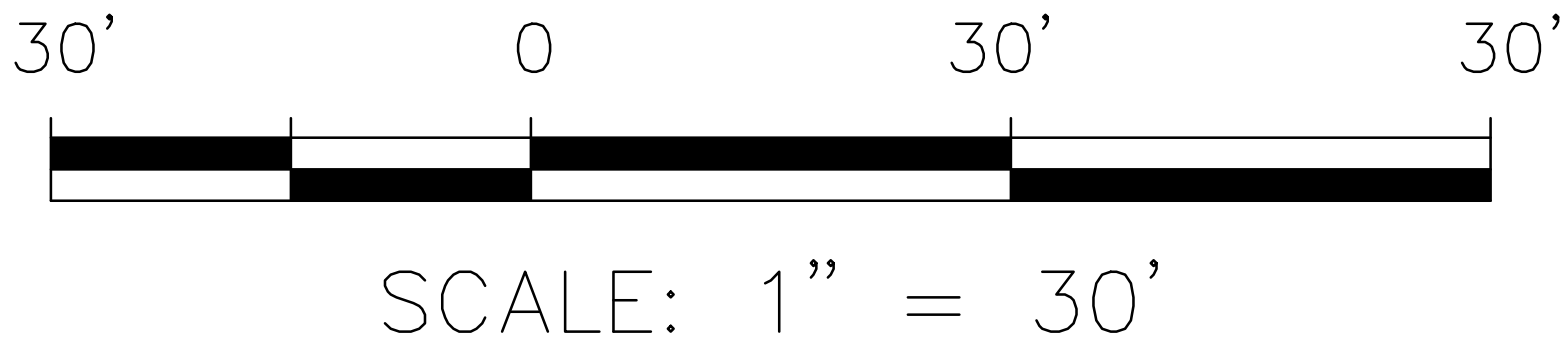
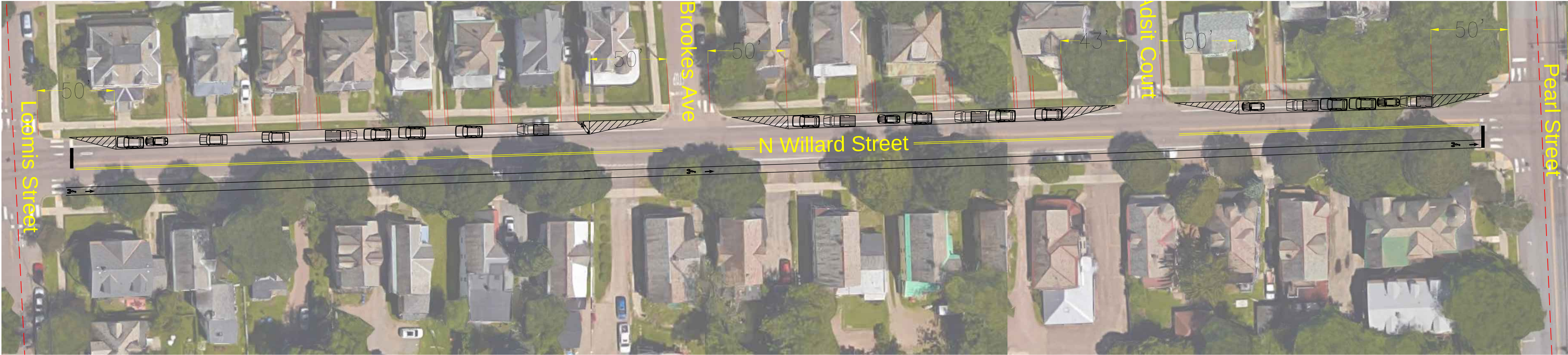


Legend

- ||| 2' Driveway Encroachment
- ▴ No Parking
- Bike Lane Symbol
- 🚗 Vehicle

Parking Spaces - North St - Pearl St

(Removing) South Bound Parking - 44
North Bound Parking - 35
Motorcycles - 1



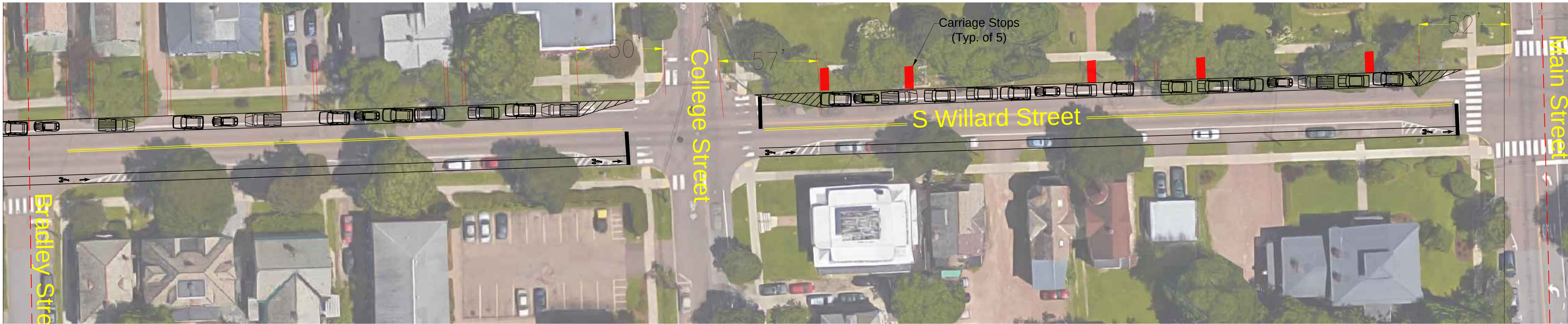
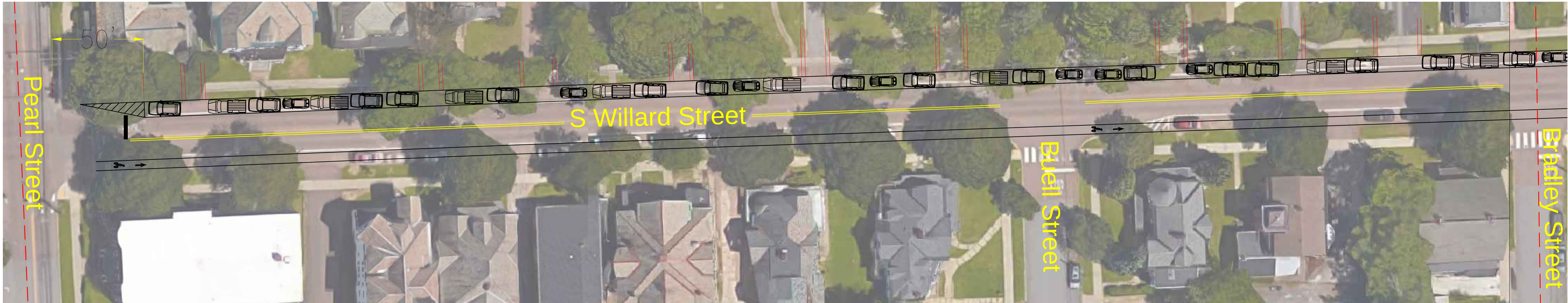
WILLARD ST PARKING & BIKE LANE SWITCH
NORTH ST - PEARL ST.



**BURLINGTON
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ENGINEERING DIV.**

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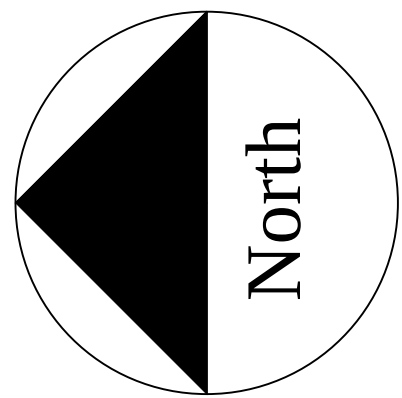
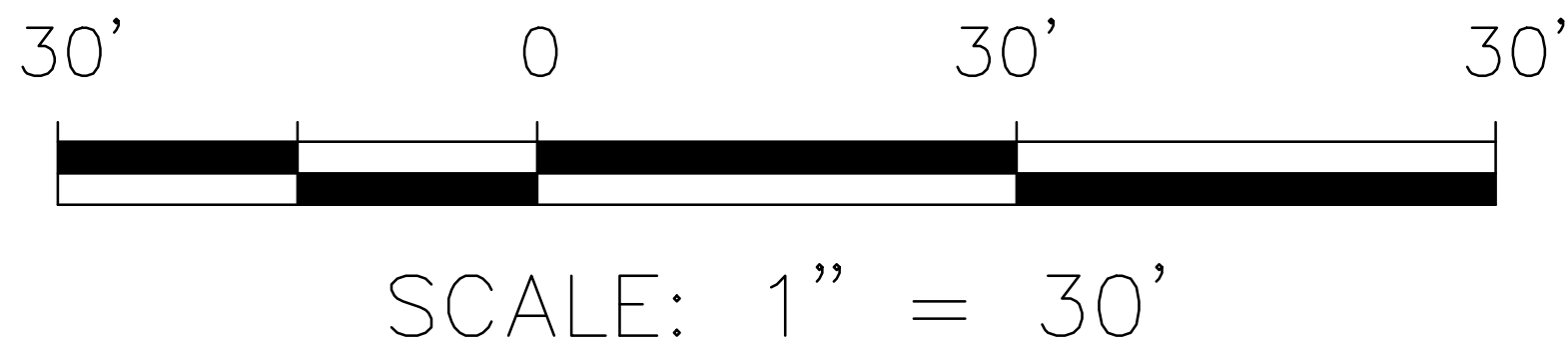
DESIGNED ANT	RFS NO. XXXX
DRAWN ANT	SCALE 1"=30'
CHECKED XXX	DRAWING NO.
DATE 11/14/17	SHEET 1 OF 2



Legend

- 2' Driveway Encroachment
- No Parking
- Bike Lane Symbol
- Vehicle

Parking Spaces - Pearl St - Maple St
(Removing) South Bound Parking - 85
North Bound Parking - 86
Motorcycles - 2



WILLARD ST PARKING & BIKE LANE SWITCH
PEARL ST. - MAPLE ST.



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DESIGNED ANT	RFS NO. XXXX
DRAWN ANT	SCALE 1"=30'
CHECKED XXX	DRAWING NO.
DATE 12/12/17	SHEET 2 OF 2

Tuesday, May 23, 2017 - Email

Hi Anna,

My partner and I would like to provide some feedback in support of the proposed changes to Willard Street in making this street and the surrounding area more bike friendly. Thank you for the time that you and others are putting into this important effort in making Burlington an easier place to lead a healthy, more sustainable lifestyle. We appreciate it!

Good luck with the project!
Laura Heil and Eli Rosenblatt

Thursday, June 01, 2017 – Phone Call

Staff received a call from Dave Wark, who owns property on 196 South Willard Street. Dave was mixed about the proposed switch and believed that there was already a south bound bike lane on Winooski and therefore unnecessary to switch the lane on Willard Street.

Tuesday, June 06, 2017 – Email

Ms Wyner,

As resident of Willard st I wanted to share my thoughts on the upcoming proposal to switch the sides of the bike lane and parking. Your Google survey link was not working.

While on paper this seems to be a logical move, the difference in height between Prospect, Willard and Union means that this will not change any behavior of bikers. Currently you quite often see bikers headed southbound without a bike lane as Willard is the most direct path to get to their destination. This situation will exist in the northbound direction if the bike lane gets taken away except doorings will increase as bikers speed will be drastically increased. No one is going to ride out of their way up or down a hill just to use a bike lane especially if that means riding on a high risk street like Pearl.

There is no easy solution, but a bold solution would be moving parking and using the cars as a protected bike lane on this and many other streets in the city. At minimum "bike may take full lane" signs and sharrows painted on the street should accompany any changes to ensure that drivers understand bikes have a right to the road. Also some speed enforcement on Willard is necessary as drivers and motorcyclists floor it between stop signs from North to Pearl.

Thanks for all that you do.

Chris Remuzzi

Thursday, June 08, 2017 – Phone Call

Staff received a call from Ann Picard on June 8th, who owns property on 216 South Willard Street. Ann was against the bike lane in general, has no problem with the parking change but is against biking in that area.

Thursday, June 08, 2017 –Site Visit and Phone Call

Staff visited Willard Street Market on the corner of Willard and North Street but the owner Erin Malone was not there at that time. Staff called Erin and spoke with her on the phone. She

supported the proposed parking lane and bike lane switch and was interested in getting bike parking in her place of business. See follow up email below:

Erin,

Thanks so much for talking to me this afternoon. I'm glad to hear you support planBTV Walk Bike for Burlington. As you mentioned a more connected network for people bicycling is a good thing. You asked for bicycle parking on Willard and North Street adjacent to your business so patrons of your business have a place to park. I have cc'd this email to our transportation planning team. Feel free to contact me should you have any other concerns or questions.

Kind Regards,

Phillip Peterson, Engineering Technician
Burlington Department of Public Works
645 Pine Street
Burlington, VT 05402
802-865-5832 (phone)
ppeterson@burlingtonvt.gov

Thursday, June 08, 2017 - Email

Dear Ms. Wyner -

I am a resident of 186 S Willard Street and am writing in objection to the plan to switch parking from the West Side to the East Side of S Willard St between Maple St and Main St.

There are three historic "Carriage Steps" in front of 216, 196, and 186 South Willard St, on the East side of the street. The plan to put parking on that side of the street would block these steps from community view. Also, if a passenger were to open the door on the "sidewalk" side of the East side of the street, the passenger would likely damage the passenger door.

The bike path currently runs in front of Champlain College on the East Side of S Willard Street up to Maple St.

Why would you switch it for the one block beyond Maple Street, obscuring three historic 19th Century Carriage Steps, potentially/eventually damaging the historic objects and private car owners passenger doors?

I am a member of the Burlington Historic Preservation Society, and I will be informing the society of this potential plan.

Please contact me if you have questions.

Thank you for your consideration and for bringing my concerns forward to others working on this project.

I would appreciate your confirming receipt of this e mail.

Sincerely,

Paul G. and Nancy S. Cotton
186 S Willard Street
Burlington, VT
802-860-0161
802-238-8601 (cell)
Paul.Cotton@uvm.edu

Elizabeth Gohringer

From: mhlmvl@aol.com
Sent: Thursday, November 30, 2017 8:09 AM
To: dpwplanning
Subject: Willard Street bike and parking

My wife and I live at the corner of Main and South Willard Streets. It is our primary residence. I was interested to receive your letter regarding proposed upcoming parking changes. Our home at 144 South Willard has carriage steps in front of our house going down to the street.

We have a major concern regarding our carriage steps and the proposed changes. We use them frequently to move around and go to the mail box across the street. They are in usable shape if not perfect. When I envision cars parked along the east side of South Willard, the first thing that comes to mind is that the normal access to the sidewalk is interrupted. One has to climb a steep bank to get to the sidewalk. The carriage steps have always been a lovely and useful artifact to our house and anything which detracts from that is undesirable in our view.

Really, the parking along South Willard is best left where it is on the west side. The abutting land there is at the right level for passengers to exit the parked car and get to the sidewalk easily, whereas the east side of the road has a steep bank which makes it uncomfortable for passengers to exit from the car and essentially forces departed passengers from getting to the sidewalk easily because of the steep bank on the east side, especially in winter.

I might also note that the street traffic in that area moves quickly and I am always concerned I might be hit as I move to get out of the road. Especially as it is so difficult to get to the sidewalk and out of the roadway. This may require more thought.

MARTIN V (Marty) LAVIN
350 Main Street
Burlington, VT 05401
attorney, consultant, and expert witness
practice only in factory built housing
mhlmvl@aol.com martylavin@aol.com
802-238-7777 cell 802-660-8888 office

Elizabeth Gohringer

From: Michael Long <mjlong@burlingtontelecom.net>
Sent: Thursday, November 30, 2017 10:08 PM
To: dpwplanning
Subject: Southbound Willard Street Bike Lane

Anna,

We were not aware of the May mailing, but support this reversal to create a southbound bike lane on the west and relocate the parking lane on the east. This seems eminently sensible and may alleviate some of the wrong way bike lane traffic on Union.

Thanks,

Michael & Caryn Long

Elizabeth Gohringer

From: Tricia Lisa Gray <tricianlisa@yahoo.com>
Sent: Monday, December 11, 2017 3:28 PM
To: dpwplanning
Cc: Erik Gray; shortsail45@gmail.com
Subject: South Willard St Parking

Follow Up Flag: Follow up
Flag Status: Completed

To whom it may concern,

We are strongly opposed to the switching of parking and bike lanes on South Willard Street for several safety reasons:

1. The utility poles are on the east side of the street and they obscure sight lines of the road as we pull out on to the roadway. Adding parking to the east side of the street, in addition to utility poles, will add another layer of sight obstruction. This will cause it to be more dangerous and difficult to safely pull out onto the roadway. There are no utility poles on the west side of the street.
2. The properties on the east side of South Willard are on an uphill slope. Driveway entrances are sloped. In order to perform a safety stop to see beyond parked cars on the east side of the street, drivers will be forced stop on the driveway slopes. During winter months, with snowy and icy conditions, drivers will potentially lose control and slide into parked cars, pedestrians or traffic, a very dangerous situation.
3. Visibility is also severely reduced when large vehicles are parked on the street. This problem is particularly acute during peak move in times occurring in the spring and fall with the addition of numerous moving vans. RV's and campers pose a similar problem and they have become a relatively common site recently as people appear to be living in them, especially during summer months.
4. These safety issues were clearly demonstrated in the past. Previous to prohibiting parking on the east side of the street, numerous crashes and many near misses occurred at our location.(78 and 80 South Willard) Fortunately, none of them were serious.
5. A potentially grave threat to pedestrian safety will be created. Large numbers of pedestrians cross the street, frequently from the multi unit properties at 68 and 74 South Willard, and continue down the hill via Bradley Street. Currently, pedestrians are visible as they begin to cross due to the lack of cars parked on the east side. If parking is restored, pedestrians will exit the east sidewalk between parked cars into the busy street. A similar situation exists at the top of Buell st.

In summary, we believe that attempting to remove one set of problems by switching the bike lanes and parking areas will create new ones. South Willard between Main and Pearl Streets is part of US routes 2 and 7. It is a very busy road and has a substantial amount of truck traffic. Perhaps the complete prohibition of parking between Main and Pearl would be a better solution. The added travel surface would allow for the addition of turn lanes at the intersections of Main, College and Pearl Streets. This would go a long way towards easing congestion at these intersections, most particularly during peak hours.

Thank you for considering our input.

Sincerely,
Erik & Tricia Gray
78 South Willard Street
802-864-1938

Tricia Lisa Gray 

phone #802-864-1938

tricianlisa@yahoo.com

Elizabeth Gohringer

From: Rich Bassett <richbassetvt@gmail.com>
Sent: Wednesday, December 06, 2017 5:54 PM
To: dpwplanning
Subject: Willard street parking

Follow Up Flag: Follow up
Flag Status: Completed

Things to consider if the bike path is moved on Willard street.

I live at 76 north Willard. I'm between loomis and brooks, and both have resident only. Willard does not. I find it nearly impossible to park as Willard street does not have resident only parking and we are a target for both Uvm and medical center commuters as well as shoppers and commuters who do not want to pay for parking. At a minimum Willard street should become resident only or lift the resident only on brooks, loomis and others so that Willard is not swamped with commuters.

I personally do a lot trailering and would find that very difficult to park in my driveway with parking changed to the opposite side of the road from the current position.

Sincerely,

Rich Bassett

Tuesday, December 12, 2017 – Phone Call

Staff received a phone call from Paul Cotton who expressed his concern over the parking switch. Parked cars would negatively impact the views of the sites that are designated as historic landmarks.

Elizabeth Gohringer

From: Chris Remuzzi <cremuzzi@gmail.com>
Sent: Tuesday, December 12, 2017 9:04 PM
To: dpwplanning
Subject: Willard St bike lanes feedback

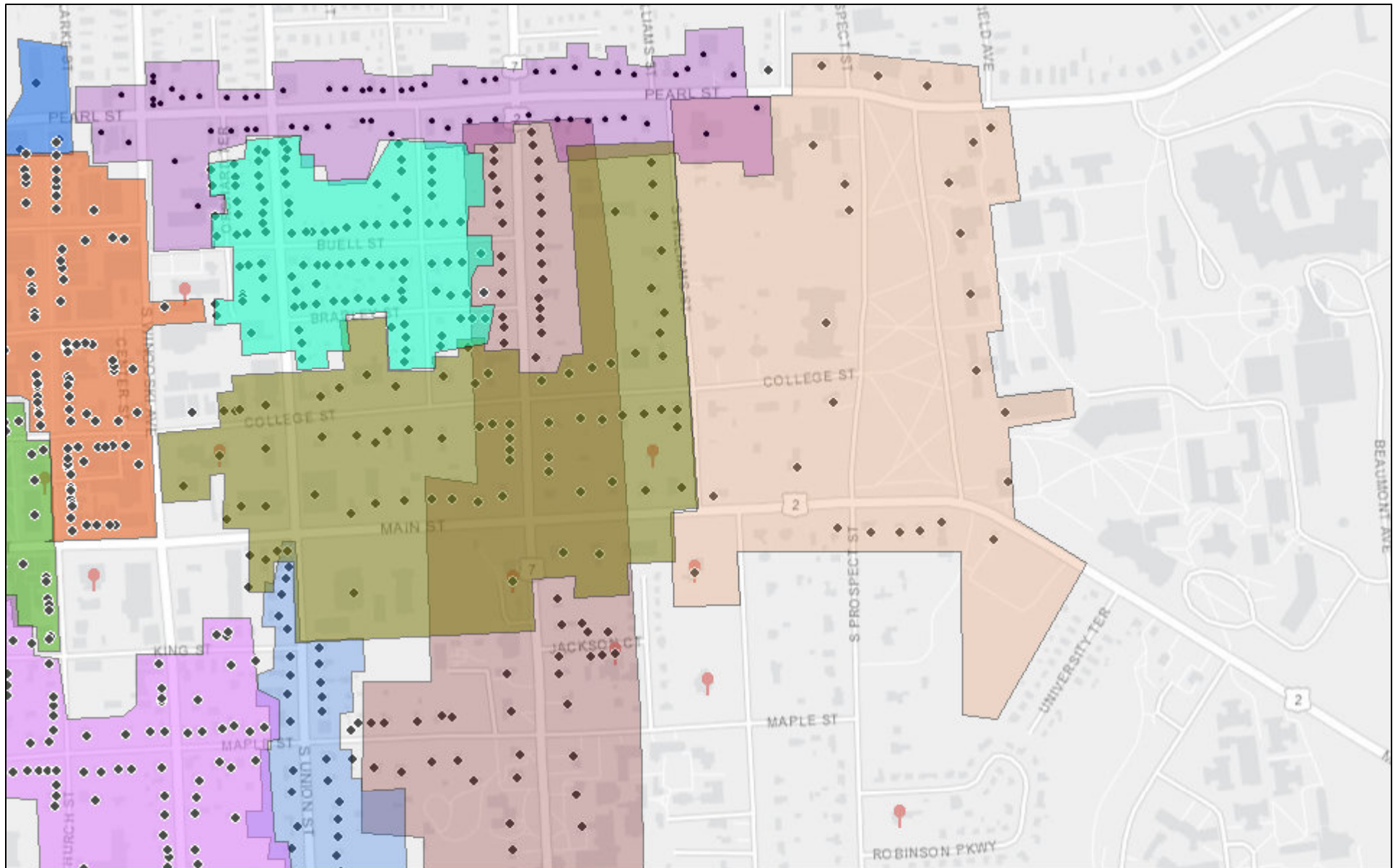
As a resident of Willard st and frequent bike commuter we've logged thousands of trips on foot, bikes and in cars over the area in question. Due to the grade change between Willard and either Prospect or Union, bikers will naturally continue to use Willard even without bike facilities as they frequently do today in the southbound direction. Why not try - even if as a temporary test - using the parked cars to protect the bike lane and making it bi-directional. Without the stress of car traffic, biker in opposite directions will be able to easily pass each other and Willard will be able to function as a bike backbone in both directions.

The flaw in the current plan will have unprotected bikes flying down the hill on Willard squarely in the door zone with an accident sure to occur.

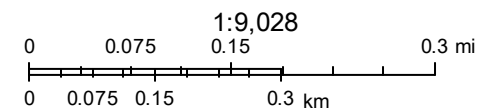
Thanks

Chris Remuzzi
68 N willard st.

National Register of Historic Districts and Sites - Willard Street District



December 13, 2017



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS

OFFICE OF PLANNING
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

NORMAN J. BALDWIN, P.E.
ASSISTANT DIRECTOR OF PUBLIC WORKS

Date: December 13, 2017

To: Public Works Commission

From: Norman J. Baldwin, P.E. *NJB*
City Engineer/Ass't Director of Public Works

C.C. Chapin Spencer, Director of Public Works
Eugene Bergman, Assistant City Attorney
Ned Holt, Chief Building Inspector
John Ryan, Plumbing and Mechanical Inspector

Subject: Burlington Code of Ordinance revisions to Chapter 25 Plumbing

The Department is seeking to advance a number of initiatives to improve our Trades Inspection Permitting Process. One initiative, is to review and to propose amendments to our local Burlington Code of Ordinances for the three relevant Chapters.

- Chapter 25 Plumbing,
- Chapter 12, Electricity
- Chapter 8, Buildings and Building Construction

Chapter 25, Plumbing is the first Chapter in the latest round of BCO revisions that are being brought to the License Committee and City Council. Staff is currently working on draft revisions for Chapter 8, Building and Chapter 12, Electricity.

Staff believes periodic review of these Chapters is necessary to identify archaic or dated information, to simply and build on our working knowledge and experiences in order to improve our level of service to the public.

It is important that the Commission be kept informed of our efforts. The process to review amend and approve of these changes is vetted through the City Councils Ordinance Committee and to City Council for final approval.

- Chapter 25, Plumbing revisions have had its first reading before the City Council on September 9, 2017
- and is scheduled to be presented to the License Committee on Tuesday, December 19, 2017. The Licenses Committee will deliberate on the proposed changes and can amend, accept or reject the proposed changes.
- If the Proposed changes to Chapter 25, Plumbing receives the Committees support the revisions will be placed on the next available space on the City Councils Agenda, likely in January 2018. The proposed changes to Chapter 25, Plumbing could again be amended, adopted or rejected.

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).

We welcome your comments and participation in this process. I apologize for not getting this to the Public Works Commission earlier on in the process of adoption, for future amendments I will give you more advance notice of the changes that are being proposed so the Commission can participate and provide comment to the Ordinance Committee.

I will note the changes to Chapter 25, Plumbing in my opinion are:

- Removing dated and unnecessary State Adopted national code references with specific deletions and insertions that are dated and we have replaced in ordinances wording that allows for automatic adoption of the States Adopted Code and eliminated the potential of inconsistencies and confusion for the public.
- There is the consolidation of the appeals references to point to the appeal process described in Chapter 8, Buildings and Building Construction.
- Clarification of the Inspectors responsibilities to pursue a search warrant if her or she is denied access to the property.
- Permit expiration form three years to 1 year, with an ability for the inspector to extend in year increments for as long as the extensions are consistent with Zoning requirements. This avoids or limits the growth in the number of open permits.

I am attaching for your consideration the Chapter 25, Plumbing Revisions and documents included in the December 19, 2017 License Committee Packet.

If there are any further questions please feel free to give me a call. I will be at the meeting to answer any questions you may have.



OFFICE OF THE CLERK/TREASURER

City of Burlington

City Hall, Room 20, 149 Church Street, Burlington, VT 05401

Voice (802) 865-7000

Fax (802) 865-7014

TTY (802) 865-7142

Chip Mason
Sharon Boshop
Ali Dieng

MEMORANDUM

TO: Ordinance Committee Members

FROM: Lori Olberg, Licensing, Voting and Records Coordinator

DATE: September 22, 2017

SUBJECT: 09/18/17 CITY COUNCIL ORDINANCES

Enclosed please find copies of five ordinances that were referred to your Committee.

Please keep these as part of your records.

Thank you.

CITY OF BURLINGTON

ORDINANCE 4.2

Sponsor: Department of Public
Works

Public Hearing Dates: _____

First reading: 09/18/17

Referred to: Ordinance Committee

Rules suspended and placed in a
stages of passage: _____

Second reading: _____

Action: _____

Date: _____

Signed by Mayor: _____

Published: _____

Effective: _____

In the Year Two Thousand Seventeen

An Ordinance in Relation to

PLUMBING—
Chapter 25 Revisions

It is hereby Ordained by the City Council of the City of Burlington as follows:

1 That Chapter 25, Plumbing, of the Code of Ordinances of the City of Burlington be and hereby is amended
2 read as follows:

3 4 ARTICLE I. IN GENERAL

5 6 Sec. 25-1. Plumbing code adopted.

7 (a) For the purpose of ~~To provide for~~ providing and maintaining the public health and safety and to
8 establish rules and regulations for the installation of plumbing systems for safe sanitary use and human
9 consumption to all ~~and fixtures~~ in all buildings, the issuance of plumbing permits and the imposition of
10 penalties, ~~there is hereby adopted that certain plumbing code known and designated as the BOCA National~~
11 ~~Plumbing Code, the 1990 edition thereof (hereinafter noted as the "BOCA Code"), as it now exists, with t~~
12 ~~exceptions listed in subsection (b)), and the same is~~ the plumbing rules and the plumbing code currently
13 adopted by the state of Vermont are hereby adopted and incorporated in whole as fully as if herein set out
14 length.

15 (b) All plumbing installations shall comply with the ~~1990 BOCA National Plumbing Code and Rules~~
16 currently adopted by the state of Vermont, ~~except as specified as amended in this section to meet the~~
17 ~~individual needs of the City of Burlington:~~

18 ~~Sections: P 109.2, P 112.4, P 114.2, P 115.1, P 115.2, P 117.4, P 118.2, P 122.0, P 303.0, P 308.3, P 309.0,~~
19 ~~and article 16, Individual Water Supply.~~

20 (1) ~~Delete section P 110.7, Annual Report from BOCA.~~

21 (2) ~~Delete section P 201.0, Definition of "full open valve" and replace with the following: "Full Open~~
22 ~~Valve: A shutoff valve that in the full position has a straight through flow passageway equal to the normal~~
23 ~~pipe size of the connected pipe."~~

24 ~~(3) Delete in part Table P 402.4, Water Service Pipe, by deleting reference to asbestos cement pipe and~~
 25 ~~copper type M & WM.~~

26 ~~(4) Add new section "P 402.5.1 Below Grade Copper Pipe: Copper, type M & WM, pipe used for water~~
 27 ~~distribution pipe shall not be used below grade."~~

28 ~~(5) Delete in part Table P 403.3, Building Sewer Pipe, by deleting reference to asbestos cement pipe,~~
 29 ~~bituminized fiber pipe, PVC SDR 26 and vitrified clay pipe.~~

30 ~~(6) Amend section P 406.3, Copper or Tubular Brass Traps, by replacing phrase "...not less than 17 gage~~
 31 ~~thickness" with phrase "not less than 20 gage thickness."~~

32 ~~(7) Amend section P 518.1, Prohibited Joints and Connections, by adding the following sentence at the~~
 33 ~~of the section, "6. Acetal fittings used with polybutylene pipe and tubing."~~

34 ~~(8) Amend section P 701.1.1, Food Handling, by deleting "Exception: This requirement shall not apply~~
 35 ~~dishwashing and open culinary sinks."~~

36 ~~(9) Amend section P 1001.4, Design of Traps, by adding the following sentence: "Fixture traps without~~
 37 ~~slip joints shall have an easy means of cleaning."~~

38 ~~(10) Amend section P 1502.2, Separation of Water Service and Building Sewer/Drain, by replacing the~~
 39 ~~phrase "...shall be a minimum of 12 inches..." with the phrase "...shall be a minimum of 18 inches..."~~

40 ~~(11) Delete the following sections in whole from the BOCA National Plumbing Code:~~

41 ~~Sections: P 109.2, P 112.4, P 114.2, P 115.1, P 115.2, P 117.4, P 118.2, P 122.0, P 303.0, P 308.3, P 30~~
 42 ~~and article 16, Individual Water Supply.~~

43 (c) Should there be a conflict between the State plumbing rules and the City Code of Ordinances, the
 44 ordinances shall prevail.

45 **Sec. 25-2. Definitions.**

46 For the purpose of this chapter, the following terms shall have the meanings ascribed to them in this section.
 47 All terms not herein defined shall have the meanings ascribed to them in the BOCA Code Plumbing Code
 48 and Plumbing Rules currently adopted by the state of Vermont.

49 (a) The term "master plumber" shall mean a person who assumes responsible charge and direction of the
 50 installation of plumbing and drainage and is skilled in the planning, superintending and the practical
 51 installation of plumbing and drainage. Each master plumber shall furnish to the plumbing inspector a list of
 52 journeyman plumbers employed by them and shall keep such list current at all times.

53 (b) The term "journeyman plumber" shall mean a person who performs the work of installing plumbing,
54 and drainage under the direction of a master plumber.

55 (c) An "apprentice" shall mean any person who is engaged in learning and assisting in the installation of
56 plumbing and drainage under an apprenticeship program properly registered with the Vermont State
57 Apprenticeship Council.

58 (d) "Public building" shall be as defined in 21 V.S.A. sec. 251(a).

59 (e) Foundation drainage for a structure is not considered plumbing.

60 **Sec. 25-3. Licensing of plumbers required.**

61 No person, except as otherwise provided, shall ~~carry on the business of~~ engage in plumbing of house
62 ~~drainage~~ in the city until he/she shall have first obtained and holds a valid Master Plumber license ~~therefor~~
63 from the State of Vermont Plumbers' Licensing Board.

64 **Sec. 25-4. Owners not required to be licensed.**

65 An owner shall be permitted to install plumbing in a single-family owner-occupied residence without a
66 license; provided, that a plumbing permit has been obtained, except for plumbing that is exempt from
67 needing a permit by section 25-13 of this chapter, and that all such plumbing installed by the owner shall
68 comply with the provisions of this chapter and the BOCA Code plumbing code and rules currently in
69 adopted by the state of Vermont.

70 **Sec. 25-5. Inspector to investigate and report violations.**

71 The plumbing inspector shall ~~require and~~ report to the city attorney ~~for prosecution~~ all violations of this
72 chapter and the city attorney may invoke a proper legal or equitable remedy in aid of powers of the plumbing
73 inspector.

74 **Sec. 25-6. Stop work order.**

75 (a) Upon notice from the plumbing inspector that plumbing work on any building or structure is being
76 conducted contrary to the provisions of this ~~code~~ chapter or in an unsafe and dangerous manner, such work
77 shall be immediately stopped. The stop work order shall be affixed to the building indicating the violation.
78 A copy of the written stop work order shall also be provided either to the owner of the property involved,
79 the owner's agent, or to the person doing the work or posted in a prominent location on the structure/building
80 accessible to the public. Any person who continues any plumbing work in or about the structure after having
81 been served with a stop work order shall be liable for a fine of up to five hundred dollars (\$500.00) and each
82 day that the work continues in violation shall be a separate offense.

83 (b) A report that a stop work notice has been issued shall be filed with the State of Vermont Plumbers'
84 License Board.

85 **Sec. 25-7. Reserved.**

86 **Sec. 25-8. Plumbing work to be done under direction of inspector.**

87 The plumbing and drainage of all buildings, public or private, and all additions and alterations thereto, shall
88 be executed under the direction of the plumbing inspector if required by the applicable code and/or rule
89 effect.

90 **Sec. 25-9. Plans of proposed plumbing and drainage work to be submitted to inspector as required**

91 The master plumber, licensed engineer or architect in charge of the work or, in the case of an owner-
92 occupied single-family residence, the owner who may be doing the work shall submit to the plumbing
93 inspector proper drawings as the inspector may required, which may include, both plan and elevation views
94 showing all piping and fixtures, giving all details as to sizes and distances of fixtures from stacks and vent
95 Plans for private sewage disposal and individual water supply systems shall be designed to the requirements
96 of ~~the BOCA Code~~ and the State of Vermont Agency of Natural Resources Department of Environmental
97 Conservation rules and regulations.

98 **Sec. 25-10. Permit to be issued upon approval of plans; notice of rejection.**

99 If the plans which are filed with the plumbing inspector are approved by the inspector, a permit shall be
100 issued to the master plumber contracted to do the work. If rejected, notice shall be given either verbally or
101 marking up the submitted plans and returning them to the owner within ten (10) working days.

102 **Sec. 25-11. Changes in plans prohibited; exception.**

103 If the plans are approved by the plumbing inspector, no change or additions shall be allowed except upon
104 approval of the plumbing inspector. This approval may be noted by an inspector's signature on the revised
105 documents.

106 **Sec. 25-12. Work not to begin until permit received and fee paid.**

107 (a) No work shall be commenced until the permit shall have been received by the party submitting the
108 application and the permit fee has been paid. The permit fee shall be at a rate of eight dollars and fifty cents
109 (\$8.50) for every one thousand dollars (\$1,000.00) of the ~~estimated~~ cost of the work. There shall be a
110 minimum charge of ~~twenty (\$20.00)~~ thirty (\$30.00) dollars, which includes the land records recording fee
111 per permit. The fee submitted with the application shall be based on the estimated cost of the work. On the
112 completion of the work, the applicant shall furnish the inspector with a correct statement of total actual cost

113 of the work and shall pay the fee on difference between the estimated and actual cost of the work. When
114 actual total cost is less than the estimated cost, there shall be a refund of the excess of the estimated cost
115 the actual cost, provided that the refund does not reduce the fee to less than the minimum charge.

116 (b) When the plumbing inspector enforces the provisions of this chapter and a plumbing permit is required
117 a result, there shall be an administrative processing fee added to the permit fee set above to recoup the
118 administrative costs associated with enforcement. This processing fee shall be thirty dollars (\$30.00) when
119 the estimated cost of the work as the plumbing inspector may approve is less than or equal to three thousand
120 dollars (\$3,000.00). When the estimated cost of construction is three thousand dollars (\$3,000.00) or greater,
121 this processing fee shall be equal to one (1) percent of the estimated cost of the work as the plumbing
122 inspector may approve. No processing fee shall be added to the permit when a permit is required to abate
123 condition deemed an emergency by the plumbing inspector if the inspector determines that the owner is not
124 responsible for the circumstances that led to the emergency.

125 c) Notwithstanding the fees set forth above, no permit fee shall be required for the portion of the estimated
126 cost of any work and construction that is to be owned by a department of the City of Burlington.

127 **Sec. 25-13. Provisions not applicable to certain repair work and maintenance work.**

128 (a) A permit is not required for repairs which involve only the working parts of a faucet or valve, clearing
129 of stoppages, or repairing or replacement of defective faucets or valves, a water closet, a lavatory, or a
130 kitchen sink, and replacement of traps two (2) inches in diameter or less provided alterations are not made
131 to the existing piping or fixtures.

132 (b) Repairs and maintenance shall not include a change in design, configuration, performance, or material
133 a plumbing system, except as set forth in (a) above.

134 **Sec. 25-14. Right to enter and inspect.**

135 In performance of his/her duty the plumbing inspector shall, at all reasonable times, have access to and the
136 right to enter any building with the owner or authorized representative of the owner. No person shall in any
137 way hinder the work of the plumbing inspector in the performance of his/her duty. The plumbing inspector
138 may waive the presence of the licensee who filed the work permit for rough and final inspections. If the
139 inspector is refused the right to inspect or is denied reasonable access to the premises, the inspector shall
140 seek a search warrant from the Vermont Superior Court for the purpose of conducting such an inspection.

Sec. 25-15. Certificate of inspection.

When the work has been approved by the plumbing inspector, through the required inspections or through a waiver of an inspection issued by the plumbing inspector, the inspector shall file a final inspection report file the status of the permit as closed which shall be made available to the public upon request.

Sec. 25-16. Inspection of existing buildings authorized.

(a) Whenever the plumbing inspector has reason to believe, through complaint or otherwise, that the sanitary condition of any building, in regard to the plumbing or house drainage, is not in compliance with the regulations of this chapter or is in any way a menace to the health of the occupants or tenants thereof, or to the public health, it shall be the inspector's duty to visit such building or premises and examine such plumbing or drainage. If, in the opinion of the plumbing inspector, repairs, alterations or additions are needed to place the premises in a sanitary condition, the inspector shall serve notice in writing upon the owner or person in charge of such building directing such repairs, alterations or additions as he/she deems necessary to place the plumbing therein in sanitary condition, and in such notice shall state a reasonable time allowed to the owner or person in charge of such building to make such repairs, alterations or additions.

(b) The plumbing inspector is hereby empowered to order the discontinuance of water service to any structure found to be dangerous to the Public Water System or life or property until such danger has been abated.

(c) If the inspector is refused the right to inspect or is denied reasonable access to the premises, the inspector shall seek a search warrant from the Vermont Superior Court for the purpose of conducting such an inspection.

Sec. 25-17. Appeals.

Appeals by a person aggrieved by an action of the plumbing inspector taken under this chapter shall be taken pursuant to the provision of section 8-8 of the codes of ordinances.

~~(a) A person aggrieved by an action of the plumbing inspector taken under this chapter may appeal therefrom to the public works commission. A request for the appeal shall be made by filing with the director of the department of public works within ten (10) days of receiving actual notice of the order complained of a notice of appeal setting forth in detail his/her grievances. The director of the department of public works shall notify the chair of the commission of the notice of appeal forthwith. The commission shall meet upon notice of the chair within ten (10) days of the filing of the notice of appeal. All hearings shall be public and all interested parties shall be given an opportunity to be heard and present evidence and arguments.~~

173 ~~(b) Four (4) members of the commission must be present to constitute a quorum. The commission shall~~
174 ~~affirm, modify or reverse an action aggrieved from by a majority vote of the members present. A tie vote~~
175 ~~shall be an affirmance of the decision from which the appeal is taken. The commission shall give written~~
176 ~~notice of its decision, which shall include findings of facts and all necessary orders, to all interested parties~~
177 ~~not later than thirty (30) days after the date of the hearing. The plumbing inspector may take action in~~
178 ~~accordance with the decision of the commission immediately upon the sending of the written decision to~~
179 ~~interested parties.~~

180 ~~(c) A member of the commission shall not pass on any question in which that member had any fiduciary~~
181 ~~personal or financial interest, or which otherwise constitutes a conflict of interest.~~

182 ~~(d) Any interested person may appeal a decision of the commission by instituting relief in the Chittenden~~
183 ~~Superior Court under V.R.C.P. 74.~~

184 **Sec. 25-18. Duration of permit.**

185 Plumbing permits shall be invalid after ~~three (3) years~~ one calendar year from the date of issuance. The
186 plumbing inspector shall have the discretion to approve extensions of time beyond the ~~three-one --year~~ limit
187 provided that all extensions are in writing and are for a specified duration which is consistent with the
188 permits issued by the department of planning and zoning for the subject permit.

189 **Sec. 25-19. Penalty for violations.**

190 (a) The penalty for a violation of any provision or section of this chapter shall be punishable by a fine of
191 fifty dollars (\$50.00) to five-hundred dollars (\$500.00). Each day that the violation continues shall be a
192 separate offense.

193 (b) In addition to the penalty provided in subsection (a), the city may in addition seek injunctive or
194 equitable relief to prohibit or to prevent the continuation of unlawful construction, alteration or repairs or
195 prevent the occupancy of a structure or premises or to prevent an illegal use in or about the structure or
196 premises.

197 **Secs. 25-20.—25-30. Reserved.**

198 **ARTICLE II. STANDARDS AND REQUIREMENTS**

199 **Sec. 25-31. Pipes and fittings.**

200 (a) ~~Installation to meet BOCA specifications. All soil and vent pipes and fittings within a building, and~~
201 ~~a distance of five (5) feet outside the foundation wall, shall, except as otherwise specified in this chapter,~~
202 ~~installed in accordance with the materials and standards specified in the BOCA Code. Installation of~~

203 plumbing and drainage shall be done in order to meet specifications of the plumbing rules and adopted c
204 currently in effect in the state of Vermont. All soil and vent pipes and fittings within a building, and for a
205 distance of ten (10) feet outside the foundation wall, shall, except as otherwise specified in this chapter, b
206 installed in accordance with the materials and standards specified in the currently adopted plumbing code
207 and rules.

208 (b) ~~Materials to comply with plumbing, fire prevention and building code rules.~~ Materials shall comply
209 with all applicable plumbing, fire prevention and building code rules. Plumbing materials shall comply w
210 the State of Vermont plumbing rules approved materials list. All plastic pipe materials shall meet the
211 standards of the ~~Vermont Fire Prevention and Building Safety Code~~ plumbing rules currently in effect in
212 state of Vermont, as referenced in section 8-2.

213 (c) *Special wastes.* Special wastes shall be treated and installed in accordance with the BOCA plumbing
214 code currently in effect in the state of Vermont, and the materials used for drain waste and vent piping to
215 convey special wastes shall be approved by the plumbing inspector. ~~When plastic pipe is used in a building~~
216 ~~minimum standards set forth in the Fire Prevention Code of Vermont must be met.~~

217 (d) *Lead pipe.* Lead pipe shall not be used to convey potable water to the building or to serve as the water
218 distribution pipe within or under the building.

219 (e) *Installation of pipes and fittings.* All pipes and fittings shall be installed in accordance with the
220 manufacturer's recommendations for installation, except where more stringent standards are required by t
221 article.

222 (f) *Protection from freezing in climates with freezing temperatures.* Plumbing piping in exterior building
223 walls or areas subjected to freezing temperatures shall be protected against freezing by insulation, heat or
224 both.

225 (g) *Energy factors for storage water heaters.* All storage water heaters shall have an energy factor not l
226 than the value shown in the Guidelines for Energy Efficient Construction for the City of Burlington.

227 (h) *Grease interceptors.* All grease interceptors shall be designed in accordance with the ~~BOCA Code a~~
228 the 1990 State of Vermont Plumbing Rules and plumbing code currently in effect.

229 **Sec. 25-32. Main drain and sewer pipe.**

230 (a) The main drain and sewer pipe into any building shall be of sufficient size to properly care for all
231 plumbing fixtures of such building in accordance with the plumbing code currently in effect in the state of
232 Vermont BOCA Code.

233 (b) Only rigid style fittings shall connect underground piping as approved by city plumbing inspector.

234 **Sec. 25-33. Reserved.**

235 **Sec. 25-34. Main Y, building trap, fresh air inlet.**

236 A Y shall be placed in the main drain close to and inside the cellar wall. The branch of the Y shall be used
237 to continue the house sewer and the end of the Y shall be used as a straight line for a clean out to the street.

238 Building (house) traps shall be installed on all sewer connections to the combined sewer systems or when
239 specifically required by the plumbing code official. Each building trap, when installed, shall have two (2)
240 cleanouts. A relief vent or fresh air intake shall be installed on the inlet side of the trap which need not be
241 larger than one-half the diameter of the drain of which it connects. Such relief vent or fresh air intake shall
242 be carried above grade and terminate in a screened outlet located outside the building. Fresh air inlets shall not
243 have any other use.

244 **Sec. 25-35. Reserved.**

245 **Sec. 25-36. Rainwater leaders.**

246 (a) In areas serviced by separated sewers, all rainwater leaders, sump pumps and foundation drains shall
247 connect to the separate storm sewer system. In areas serviced by separated sewers, all rainwater leaders and
248 foundation drains shall connect to a separate storm sewer system. In areas serviced by combined sewers,
249 approval for connection shall be required from the city engineer or duly authorized waste water official and
250 is contingent upon a determination of sufficient capacity in the collection and treatment system.

251 (b) No roofs, paved areas, yards, courts or courtyards shall be connected directly to a foundation drain
252 system. Any connection made to the foundation drain line shall be made on the outlet side of the drain line
253 a minimum distance of ten (10) feet downstream from the foundation drain system. Such connections shall
254 be made with long sweep connectors and approved by the plumbing inspector prior to installation.

255 **Sec. 25-37.—25-39. Reserved.**

256 **Sec. 25-40. ~~Refrigerator drips.~~ Reserved.**

257 ~~Refrigerator drips shall conform to the BOCA Plumbing Code and State of Vermont State Health~~
258 ~~Department regulations.~~

259 **Sec. 25-41. Water closets.**

260 (a) *Ventilation.* Water closets shall not be located in any room which has no direct connections with the
261 external air by window with at least three (3) square feet of glass, unless such room is equipped with a forced
262 ventilating system.

263 (b) *Location in sleeping or eating rooms and basements restricted.* No water closet shall be located in
264 sleeping room or any room used for preparing food. No plumbing fixtures shall be located in a cellar,
265 basement, or any location that will be subject to backflow from the public sewer without proper backflow
266 protection and approval from the plumbing inspector.

267 (c) *Tenement houses.* A separate water closet shall be provided for each family occupying a tenement
268 house or other building.

269 (d) *Shops, factories, mills, etc.* Sufficient water closet accommodations shall be provided in all shops,
270 factories, mills and restaurants in accordance with the ~~BOCA Code~~ and Vermont Department of Health
271 Regulations and the plumbing code and rules currently in effect in the state of Vermont.

272 (e) *Construction site facilities.* Toilet facilities shall be provided in accordance with the ~~BOCA Code~~ and
273 Vermont Occupational Safety and Health Rules for workers during construction and the plumbing code a
274 rules currently in effect in the state of Vermont.

275 **Sec. 25-42. Connection to sewer.**

276 The plumbing in every building shall be separately and independently connected with the public sewer,
277 except that no waste from a sprinkler system shall be connected to the sewer without approval from the
278 plumbing inspector.

279 **Sec. 25-43. Buildings used by public.**

280 The general sanitary accommodations of any building used by the public shall be constructed so that no
281 nuisance shall be created affecting public health. Proper toilets and urinal facilities shall be required in an
282 buildings generally used by the public. All floors and walls within five (5) feet of toilet and urinal fixtures
283 any building generally used by the public shall be constructed of materials impermeable to water. All
284 drinking fountains in such buildings shall be separate units and shall not be installed in restrooms.

285 **Sec. 25-44. Materials and workmanship.**

286 All materials used shall be of good quality and free from defect, and the work shall be executed in a thor
287 and workmanlike manner and according to the manufacturer's instructions.

288 **Sec. 25-45. Test; inspection.**

289 A water or air pressure test shall be made of all soil, waste and vent lines and traps. This test shall include
290 joints in the above-named pipes, traps and bends. No joints or pipes shall be covered until the same have
291 been examined and approved by the plumbing inspector. A second test shall, upon the request of the
292 plumbing inspector, be made upon completion of the work. Said second test can be either water or air and

293 at the discretion of the plumbing inspector. The contractor or owner shall furnish all tools, material and t
294 necessary labor to apply the tests. Notice shall be given to the plumbing inspector when the work is
295 sufficiently advanced for said tests and shall be in writing if required by the plumbing inspector. The
296 plumbing inspector shall condemn and order the removal of any defective material or work not done in
297 accordance with the provisions of this chapter. If required by the plumbing inspector, one or more of the
298 named in this section shall be applied to additional work in old or new buildings.

299

300

301

302 * Material stricken out deleted.

303 ** Material underlined added.

304

305

306

307

308 lb/EMB/Ordinances 2017/PLUMBING, Chapter 25 Revisions

309 9/13/17



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

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To: DPW Commissioners
Fr: Chapin Spencer, Director
Re: **Status Report on Traffic Calming and Traffic Request Process Improvement**
Date: December 13, 2017

This memo is an update on DPW's effort to improve our services for members of the public who request changes to the City's public rights-of-way – and to solicit initial feedback from the Commission on the concept of delegated authority for certain types of requests. Thank you to the Commission for endorsing this process improvement effort at the September 20, 2017 meeting.

As you know, DPW has operated traffic calming and traffic request programs for many years. The programs have responded to traffic and parking-related issues raised by members of the public and have provided processes where issues are evaluated, recommendations are developed, and changes are implemented. While the programs have helped residents realize many traffic and parking improvements within the City over the years, we have heard comments from Commissioners, staff, and members of the public that the programs could benefit from a review and update. Staff discussed this preliminary feedback and decided to launch a process improvement effort. After a competitive selection process, Cope and Associates was engaged in late 2016 to lead this effort.

GOALS:

The initial goals of this effort were to:

-) Identify all of the processes involved in each program
-) Streamline the process, improve our responsiveness, and improve the quality, efficiency, and transparency of our work
-) Improve internal coordination and alignment with the City's vision
-) Reduce the backlog of requests

We are endeavoring to achieve these goals through program redesign, process improvement, and enhanced communication.

SWOT ANALYSIS:

Our consultants conducted 10 interviews with Commissioners, staff and members of the public who have requested a traffic or parking change. Out of these interviews, Cope & Associates developed a report of our existing programs' strengths, weaknesses, opportunities, and threats (SWOT). A staff synthesized summary is below.

Strengths:

- Strong community voice through current processes
- Safety minded process
- High quality technical expertise
- Motivated and experienced staff are accessible and listen
- DPW is a supportive environment

Weaknesses:

- Too many intake avenues and non-value added steps

- Unclear prioritization process and long wait times
- Inconsistent escalation of decision-making and Commission support
- City vision and related DPW work not well understood
- Lack of DPW staff capacity and empowerment

Opportunities:

- City Council and DPW Commission collaboration (align city vision)
- Delegate certain decisions to Staff rather than Commission
- Adopt clear policy for public input and for internal reviews
- Balance needs of the community and build transparency and trust
- Apply traffic changes proactively and in a consistent timeframe

Threats:

- Backlog of requests lead to poor communication
- Perception of inequality for traffic requests and traffic calming
- Commission process can be unclear and lead to delays
- DPW Commission, Staff and Council may not have goals aligned
- Politics sometimes trumps technical recommendations

PROCESS EVALUATION:

With our consultant, staff mapped out workflows for 3 processes: traffic requests, traffic calming requests and residential permit parking requests. Each process included dozens of steps and staff started an evaluation of strategies that could achieve redesign goals above. Working with the consultant, staff identified draft recommendations.

A number of the draft process improvement recommendations can be initiated and implemented by staff. Examples include:

-) **Merging the programs together** into a more flexible process that could simultaneously explore regulatory changes (traffic requests) and roadway design changes (traffic calming) without bouncing customers between two processes.
-) **Cross-training staff to manage** these requests so that staff resources can be best allocated to current needs and we are not reliant on one person to complete key project tasks
-) **Creating a formal intake form**, preferably online, to capture sufficient information up front
-) **Having a cross-disciplinary team** (including planners and engineers) review requests in the beginning to determine the proper path for the request and prioritize it based on criteria

Other process improvement recommendations require Council or Commission action. The biggest such recommendation relates to the question of authorities and jurisdiction. Currently, most regulatory changes to traffic and parking require Commission approval. Staff spends significant time compiling, formatting and presenting items for the Commission and the Commission, in turn, spends significant time reviewing, deliberating and acting on each request.

We would like to explore with the Commission whether there are specific regulatory decisions that the Commission would consider having delegated to staff. Our consulting team has asked us whether there are certain areas of traffic and parking regulation where the City Engineer could make a regulatory decision based on data, policy, and public input – and the Commission could serve as a body to hear any appeals of these decisions.

The Commission serves a vital role in providing a public forum and a deliberative body for complex issues where there are significant impacts and divergent opinions. Based on the SWOT analysis,

there seems to be an openness to explore ways that the Commission could focus more on issues that can benefit from a public forum and a decision from an appointed body – and less on more routine items that could be addressed by technical and professional staff. At the upcoming meeting we can discuss some possible regulatory areas where authority could potentially be delegated.

Again, this is a very preliminary conversation, and there is no need for imminent action. This said, it would be helpful to understand the Commission's general receptivity to exploring the concept of delegated authority for certain regulatory items before staff progresses further with this overall process improvement effort. We look forward to the conversation at the upcoming Commission meeting.

Please don't hesitate to contact me with any questions.

Burlington Department of Public Works Commission Meeting
Draft Minutes, 15 November 2017
645 Pine Street

Commissioners Present: Robert Alberly; Tiki Archambeau (Chair); Jim Barr; Solveig Overby; Jeff Padgett; Justine Sears (Vice Chair) (*arrives at 6:35pm*). **Commissioners Absent:** Chris Gillman (Clerk).

Item 1 – Call to Order – Welcome – Chair Comments

Chair Archambeau calls meeting to order at 6:30pm and makes opening comments.

Item 2 – Agenda

DPW Director Chapin Spencer requests amending Agenda Item 9 to clarify no decision is needed at this meeting. Commissioner Barr makes motion to accept agenda, with requested amendment, and is seconded by Commissioner Padgett.

Action taken: motion approved;
“Ayes” are unanimous.

Vice Chair Sears arrives

Item 3 – Public Forum (3 minute per person time limit)

Brian Fleisher, Ward 2, speaks on “No Parking” signs at intersection of Isham St and Hickok Pl.
Jackie Schultz, Ward 4, speaks on street maintenance operations.
Jenny Morse, Church Street Marketplace Marketing Intern, speaks on Agenda Item 6.
Amanda Hannaford, Ward 3, speaks on Agenda Item 6.

Item 4 – Consent Agenda

- A. Traffic Status Report
- B. Champlain College Eagles Landing Parking Revision
- C. UVMCMC Parking Agreement

Commissioner Alberly makes motion to approve Consent Agenda and is seconded by Commissioner Barr.

Action taken: motion approved.
“Ayes” are unanimous.

Item 5 – Amtrak Storage & Servicing Study

A) Presentation by Director Spencer and VHB Managing Director David Saladino who speak on the Amtrak Storage & Servicing Study.

B) Commission Questions

Vice Chair Sears and Commissioners Barr and Padgett ask questions on Item 5 with Director Saladino answering.

C) Public Comment

Melinda Moulton, CEO of Main Street Landing, speaks on Item 5, introducing written statement, collected testimony, and DVD for the record.

Lisa Steele, President of Main Street Landing, speaks on Item 5, introducing written statement for the record.

Michelle Farkas, legal counsel for Main Street Landing, speaks on Item 5.

Laura Allen, Ward 3, speaks on Item 5.

Brian Fleisher, Ward 2, speaks on Item 5.

Scott Burbank, VHB Structural Project Manager, speaks on Item 5.

Dr. Phelan Fretz, ECHO Executive Director, speaks on Item 5.

D) Commissioner Discussion

Chair Archambeau, Vice Chair Sears, Commissioners Alberry, Overby and Padgett, Director Spencer, Director Saladino, and Ms. Moulton engaged in a discussion over Item 5.

E) Action Requested – None.

Item 6 – Enforcement Hour Changes to Meter Parking

A) Communication by Director Spencer, DPW Assistant Director for Parking & Traffic Patrick Mulligan, and BBA Special Projects Manager Derik Wrightson who speak on enforcement hour changes to meter parking, utilizing a Power Point presentation and introducing it for the record.

B) Commission Questions

Chair Archambeau, Vice Chair Sears, and Commissioners Barr, Overby, and Padgett ask questions on Item 6 with Director Spencer, Assistant Director Mulligan, and Manager Wrightson answering.

C) Public Comment

D) Commissioner Discussion

E) Motion made by Commissioner Barr to accept staff's recommendations: delay morning on-street enforcement until 9am at all parking meters; move back evening on-street enforcement to 9pm in the Downtown Core; and convert 15-minute meters to 30-minute meters.

Seconded by Commissioner Padgett.

Discussion

Commissioner Padgett talked of Director Spencer's ability to immediately implement these changes as a pilot, through his office's authority, before the changes can be made permanent.

Action taken: motion approved;

"Ayes" are unanimous.

Item 7 – Sale of Pearl Street Lot

A) Communication by CEDO Director Noelle Mackay who speaks on the sale of Pearl Street lot, utilizing a Power Point presentation and introducing it for the record.

B) Commission Questions

Commissioners Overby and Padgett ask questions on Item 7 with Director Spencer, Director Mackay, and Richard J Bove, Jr. answering.

C) Public Comment

D) Commissioner Discussion

Chair Archambeau, Director Spencer, and Director Mackay engaged in a discussion over Item 7.

E) Motion made by Commissioner Alberry to accept staff's recommendation: recommend to the City Council the sale of the City Parking Lot at 70 Pearl Street to Richad J. Bove, Jr. as 70 Pearl Street, LLC as proposed.

Seconded by Commissioner Padgett.

Discussion

Chair Archambeau and Commissioner Overby talked of how they would vote on the motion.

Action taken: motion approved;

Commissioner Alberry: aye

Chair Archambeau: nay

Commissioner Barr: aye

Clerk Gillman: *not present*

Commissioner Overby: aye

Commissioner Padgett: aye

Vice Chair Sears: aye

Item 8 – Driveway Standards

A) Communication by City Engineer and DPW Assistant Director for Technical Services Norm Baldwin who speaks on driveway standards.

B) Commission Questions

Chair Archambeau, Vice Chair Sears, and Commissioner Padgett ask questions on Item 8 with City Engineer Baldwin answering.

C) Public Comment

D) Commissioner Discussion

E) Motion made by Commissioner Alberry to accept staff's recommendations: the City will make use of the most current Vermont Agency of Transportation, "Access Management Program Guidelines," "Standards for Residential and Commercial Driveways, Standards B-71" as guiding documents in our review and permitting of driveway cuts; the public will be provided an opportunity to appeal staff decisions related to access management to the City Engineer.

Seconded by Commissioner Barr.

Discussion

Commissioner Padgett talked on flexibility of staff and commission to revisit and revise issues presented to them.

Action taken: motion approved;

"Ayes" are unanimous.

Item 9 – Great Streets – Standards Presentation

A) Presentation by DPW Engineer Laura Wheelock and Planning & Zoning Principle Planner for Comprehensive Planning Meagan Tuttle who speak on Great Streets – Standards Presentation.

B) Commission Questions

Commissioner Barr asks questions on Item 9 with City Engineer Baldwin, Engineer Wheelock, and Planner Tuttle answering.

C) Public Comment

D) Commissioner Discussion

E) Action Requested – None.

Item 10 – Approval of Draft Minutes of 10-18-17

Commissioner Alberry makes motion to approve draft minutes of 10-18-17 and is seconded by Commissioner Padgett.

Action take: motion approved;

Commissioner Alberry: aye

Chair Archambeau: aye

Commissioner Barr: *abstains*

Clerk Gillman: *not present*

Commissioner Overby: aye

Commissioner Padgett: aye

Vice Chair Sears: aye

Item 11 – Director's Report

Director Spencer reports on DPW Public Engagement Plan being brought to City Council's next meeting, Green Mountain Transit's (GMT) upcoming presentation of their Next Generation Service Analysis, noting Chair Archambeau and Commissioner Alberry being present for the Gazo Outfall tour, and 16 November 2017's press conference at the newly renovated College Street Parking Garage with Chair Archambeau commenting.

Item 12 – Commissioner Communications

Commissioner Overby comments on the parking situation along the corner of Pine St and College with City Engineer Baldwin and Engineer Wheelock responding and also comments on the upcoming GMT analysis; Commissioner Barr comments on the upcoming GMT analysis and a constituent's concern regarding parking on Germain St; Commissioner Sears comments on parking on the sidewalk at an Old North End business with Director Spencer, City Engineer Baldwin, and Assistant Director Mulligan responding; Commissioner Padgett comments on any further sweeping before winter with Director Spencer responding; Chair Archambeau comments on the Champlain Parkway aspect of the Director's Report with Director Spencer responding, comments on the Germain St parking issue with Director Spencer and City Engineer Baldwin responding, and comments on Traffic Request historical data with City Engineer Baldwin responding.

Item 13 – Adjournment & Next Meeting Date – December 20, 2017

Motion to adjourn made by Commissioner Barr and seconded by Commissioner Padgett.

Action taken: motion approved;

“Ayes” are unanimous

Meeting adjourned at 9:08pm.



**CITY OF BURLINGTON
DEPARTMENT OF PUBLIC WORKS**

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To: DPW Commissioners
Fr: Chapin Spencer, Director
Re: **Director's Report**
Date: December 13, 2017

Happy Holidays!

WATER/WASTEWATER BILLING ERROR

I want to provide an update after my initial December 5 email to the Commission where I shared the memo Megan and I provided to the Board of Finance. As discussed in the memo, our staff discovered a 2006 billing error that has resulted in a cumulative net overcharge in excess of \$2 million dollars to UVM. An error of this significance requires swift and deliberate action. Since the 12/1/17 Board of Finance memo, we have:

-) Secured Board of Finance approval on 12/4 for the contract with KPMG to conduct the compound meter and overall meter-to-bill review.
-) Began working with KPMG on-site on 12/11 and have conducted an intensive project kick-off preparing us for the compound meter inspections.
-) Continued to work with our Water Resources team to strengthen our policies and procedures for compound meter installation and billing set-up.
-) Responded to four media requests on the topic to demonstrate our responsiveness and openness as we actively manage this issue.

We will provide the Mayor, City Council, the Public Works Commission and our customers a full update report on our findings and progress resolving any outstanding issues prior to the end of 2017. We will report every 60 days thereafter until we close out any remaining items on our punch list. The customer is at the core of all we do. Team DPW is fully resolved to find the problems, address all identified issues, and work diligently to never let them happen again. We do want to acknowledge DPW Water Resources staff for their effort to uncover and report these issues and quickly move to implement additional controls to strengthen our metering and billing systems. We can discuss more at the December meeting as desired. Contact: Chapin Spencer or Megan Moir.

PUBLIC ENGAGEMENT PLAN

Thank you for all the feedback on the draft Public Engagement Plan. We presented the plan to City Council on 12/11/17 and received favorable responses. The Council packet and the latest version of the plan can be viewed at the City Council's BoardDocs link below. This is a departmental plan that we expect to continually update as we move forward. Contact: Rob Goulding.
<http://www.boarddocs.com/vt/burlingtonvt/Board.nsf/goto?open&id=ATTLLU572010>.

HOLIDAY PARKING PROMOTION:

In partnership with the Church St Marketplace and the Burlington Business Association, we are offering 2+ hours of free on-street parking at downtown meters every Saturday during the holiday season through the use of ParkMobile. A smartphone is not necessary. In addition to their App, ParkMobile allows parkers to pay via a toll-free phone number as well.



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Department of Public Works
Water Resources Division
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Chapin Spencer
PUBLIC WORKS DEPARTMENT DIRECTOR

Megan Moir
WATER RESOURCES DIVISION HEAD

MEMORANDUM

To: Board of Finance
Fr: Chapin Spencer, Director
Megan Moir, Assistant Director – Water Resources
Re: Water & Wastewater Billing Issue – Third Party Assessment
Date: December 1, 2017

Overview:

Approximately 2 weeks ago, in the course of investigating the University of Vermont (UVM)'s request for a review of the compound meter at University Heights – South Complex, DPW staff identified an apparent billing error. For explanation, compound meters have two meter heads to handle the continuum of flows (ranging from small to large) typical of larger buildings and commercial customers. Based on our current understanding, it seems that when the University Heights – South Complex account was established in 2006, the radio box identification numbers for the small and large meter heads were transposed when entered into our billing systems. Preliminarily, it appears that this 2006 error has resulted in a substantial net overcharge over \$2 million in total to UVM for these metered accounts for Water and Wastewater. We have notified UVM of this issue, as well as the City's auditor and our credit rating agency. While a significant issue, the total overbilling accumulated over a number of years and the City's credit rating agency chose to upgrade the City's credit rating to A2 even after being alerted to this issue.

A billing issue of this significance demands a full and timely response. DPW management immediately alerted the City Attorney's Office, the interim Chief Administrative Officer, and the Mayor's Office after uncovering the 2006 error. At the direction of the Mayor, DPW has moved quickly to procure an independent third-party assessment of our compound meter system, conducted an intensive investigation into this issue, and reviewed and improved internal operational procedures. This comprehensive review by a third party as well as DPW staff will determine whether any additional compound meter issues exist and implement enhanced controls moving forward to protect against these errors.

Central to the full system review is contracting with a financial services firm to:

- Provide an independent, third-party assessment of DPW's meter-to-bill practices and procedures.

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- Conduct a comprehensive review of meter configurations and billing account set-up for the 99 existing compound meters in our system -- with an initial priority on UVM's 25 compound meters.

Procurement:

We reached out to three auditing firms and requested letters of engagement to immediately undertake the bulleted scope of work above. The three firms were:

- KPMG
- Melanson Heath
- Sullivan & Powers

Melanson Heath responded that they did not have the capacity to initiate the work in the near future. We received proposals from the remaining two firms. The proposals were reviewed by DPW Assistant Director – Water Resources Megan Moir, Chief of Staff Brian Lowe, Interim Chief Administrative Officer Beth Anderson, and City Attorney Eileen Blackwood. After reviewing the proposals, we are recommending the KPMG proposal for the following reasons:

- Their project lead has 20 years of utility and meter-to-bill experience, with extensive experience in utility billing
- Their team is able to start right away
- Their proposal was clear and the scope was well-defined
- They successfully completed a similar billing review for BED in 2014

KPMG's cost proposal is \$63,250. We propose to pay for this expense through use of fund balance in both Water and Wastewater funds.

Future Communication:

We will provide the Mayor, City Council, the Public Works Commission and our customers a full update report on our findings and progress resolving any outstanding issues prior to the end of 2017. We will report every 60 days thereafter until we close out any remaining items on our punch list.

The customer is at the core of all we do. Team DPW is fully resolved to find the problems, address all identified issues, and work diligently to never let them happen again. We do want to acknowledge DPW Water Resources staff for their effort to uncover and report these issues and quickly move to implement additional controls to strengthen our metering and billing systems.

We respectfully request the Board of Finance consider the following motions:

- To award the DPW Water Resources Compound Meter & Billing Review bid to KPMG and authorize Chapin Spencer, DPW Director, to execute a contract with KPMG in the amount of \$63,250, with an additional authorization to amend the contract and expend contingency funds in the amount up to \$10,000 if contingency funds are needed to complete the project, provided that all these authorizations are contingent on the contract and any amendment thereto having the prior approval of the City Attorney and Chief Administrative Officer.
- To authorize DPW Water Resources to pay for the Compound Meter & Billing Review from fund balance in the Water and Wastewater funds.

Please don't hesitate to contact us with any questions. Thank you.



3 Building Great Streets

Dimensions, Assemblies & Placemaking

Transforming Burlington's rights-of-way into "Great Streets" requires standards for design.

This section should be consulted as the starting point for any construction project within Burlington's downtown rights-of-way, in order to ensure project design meets all required standards. This section provides standard cross-sections for streets based on the recommended curb-to-curb dimensions, guidance on the layout of elements within the right-of-way and at intersections, and the minimum required and preferred dimensional standards for all of the "zones" of the right-of-way. This section draws on both state and local requirements, as well as industry guidance and best practices. Finally, this section provides guidance for "placemaking" options when the right-of-way is constrained, thus making it difficult to incorporate the preferred dimensions for each of these zones. A summary chart of *"Existing and Proposed ROW and Curb-to-Curb Dimensions"* on page 62 outlines all of the streets within the downtown core for quick reference.



Zabby and Elf's on College St. (Photo credit Voyages Végé)

Modal Hierarchy

A clear hierarchy of transportation modes is critical to inform design and operation decisions in the public right-of-way. This hierarchy will influence cross-sections, intersection design, signal timing, maintenance scheduling, and other operations. These standards are based on the adopted policies in *planBTV Downtown @ Waterfront* and the *Municipal Development Plan* that state that the "pedestrian is king." This means that while streets are designed to improve the quality and functionality for all modes, design solutions that improve safety and accessibility for people who walk-- the most vulnerable users of our streets-- should be prioritized.

To achieve this, the following hierarchies should guide the design of streets based on their role within the downtown core:

Pedestrian > Bicycle > Transit > Automobile along a bicycle priority street with bikeways or a bike corridor

Pedestrian > Transit > Bicycle > Automobile along a major transit corridor

Pedestrians

Most trips begin and end on foot and great street design should embrace this notion. Pedestrians are the life of city streets. Downtowns, with their shopping districts, entertainment areas, and civic institutions, typically bring high volumes of pedestrian activity and require high quality walking environments to go with them.

People who walk are extremely vulnerable to injury when forced to compete for space with vehicles; therefore, the design and operation of streets and intersections must protect them. The needs of pedestrians should always be considered first when designing streets with limited right-of-way. This means optional elements within the ROW should not compromise the minimum required clear sidewalk space. Sidewalks, crosswalks, pedestrian signals, and other pedestrian facilities must accommodate pedestrians of all abilities and comply with the Americans with Disabilities Act (ADA). And finally, all street design, even in cases where pedestrians are not the predominant user, should provide for quality space where people can walk, stroll, or simply sit.

Bicycles

Like pedestrians, bicyclists are vulnerable users of public space who benefit from reduced traffic speed and dedicated facilities. However, bicyclists are significantly different from pedestrians. They travel faster than pedestrians but more slowly and less visibly than automobiles. Their skill level varies greatly, resulting in a wide range of speeds and behaviors. Also, bicycling is a social activity, and people often ride side-by-side or in groups. Bicycle facility selection requires an understanding of the street condition; bicycle usage, volumes, speeds and routes;

and automobile level of service. Generally, great street design embraces the notion that vehicles should travel at slower speeds, which allows bicycles to share the right-of-way with other modes, unless *planBTV Walk/Bike* has identified that a specific bike facility is necessary.

Transit

Buses extend the range of access for Burlington residents and visitors. They provide connections to essential services, jobs, housing and recreation and reduce the demand for automobile trips. Buses are a critical element of street design given their size and operational characteristics. The considerations for street design include lane width, intersection design, signal timing (often adjusted to give transit an advantage, transit-signal priority), pedestrian access (street crossings at bus stops), sidewalk design (making room for bus shelters), bus stop placement and design (farside/nearside at intersections, bus pullouts, or bulb outs), and bike lane crossings.

Automobiles

Private automobiles are an integral part of Burlington's circulation system. Even though they have been placed fourth in the modal hierarchy, they are still the first mode choice for most residents and visitors, and as such must be accommodated. However, as vehicles are the least vulnerable to injury, and as technology changes the way the personal vehicle is used, they should be considered within the constraints of lower speeds that encourage more prudent driving. Commercial vehicles will be given more leeway, as the efficient delivery of goods and services is paramount to supporting a healthy economy and meeting needs of local businesses.



"Pedestrian is King" modal hierarchy diagram
(walking, cycling, public transit, private vehicle)

Balancing Right-of-Way Zones

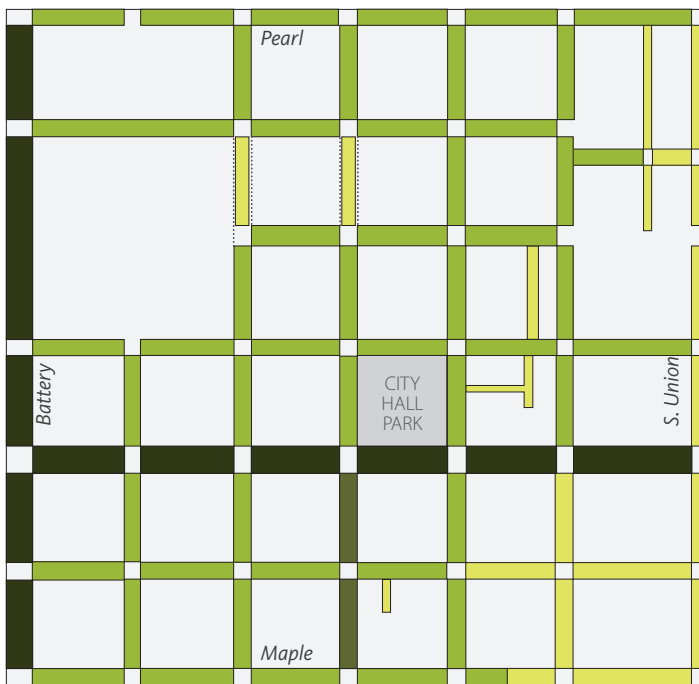
Public Right-of-Way

In designing any street in downtown Burlington, the first critical dimension to determine is the width of the ROW, and any encroachments within it. In downtown Burlington street right-of-way is defined as the public space between private property lines, and **there are two prevailing dimensions: 99' and 66'** (see chart on [page 62](#) for detailed legal and actual ROW widths). Designers should note that the ROW may change from block to block along a given corridor. Further, the effective ROW may be slightly irregular even within a single block. In some cases, this is due to encroachments from older structures that may have been built before modern surveying, or from more recent encroachments by accessory structures such as terraces, staircases, or ramps. In other cases, building faces which are set back from the property line may give the impression of a wider ROW, even though the legal dimension remains the same.

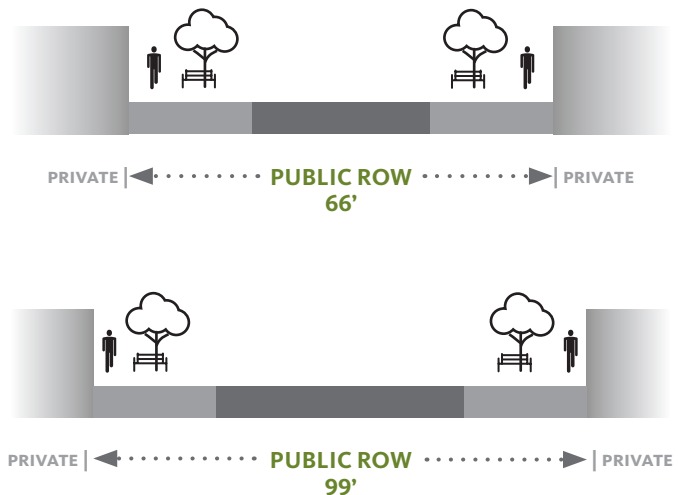
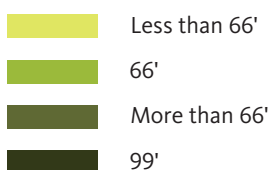
While the right-of-way designation can be changed through legal action, this is relatively rare, and is extremely costly and legally complicated. The critical variable for creating Great Streets is the relative width of the Roadway and Pedestrian Zones within the right-of-way, and ensuring that the

proportions of these zones create a balance that achieves the Great Streets principles. Unless otherwise directed, designers may view the right-of-way dimension as permanent parameter of the street design, and seek ways to optimize the dimensions of the prescribed zones by considering the relocation of curbs (see the following sections regarding pedestrian and roadway zones).

The City may wish to consider widening the public ROW along key corridors in order to allow for a more sufficient ROW width to accommodate the corridor's design considerations. This strategy should be pursued selectively, as expanding the legal ROW does not have the automatic result of creating the physical space to construct a preferred street cross-section. Instead, this will produce an incremental result, with additional space for the pedestrian zone gained as buildings and sites affected by the new ROW dimensions are redeveloped. This should only be considered when existing development patterns would allow for wider ROW without major disruptions to the existing building fabric (i.e. a street has many contiguous properties with buildings setback from the road) and where an entire block/several blocks can be widened together to provide continuity in the streetscape.



Existing ROW Width



There are two prevailing ROW widths in downtown Burlington: 66' and 99'. The standard cross sections assume that the ROW dimension is fixed.

Roadway and Pedestrian Zones

The second critical dimension for street design is the Roadway Zone width—the distance between the curb face on one side and the curb face on the other—and the resulting width of the Pedestrian Zone on either side of the street.

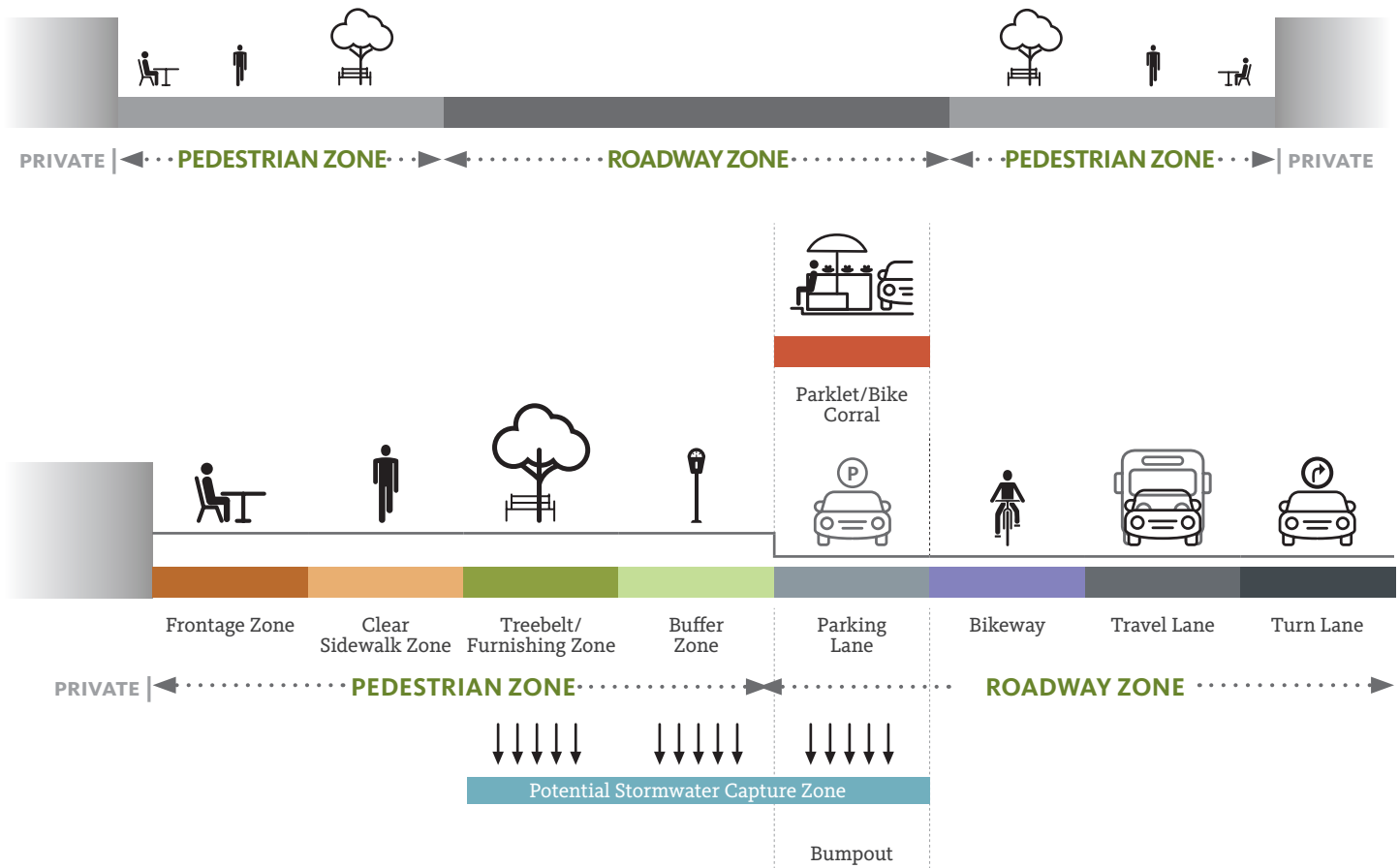
For the purpose of these standards, zones are organized as follows:

- The **Roadway Zone** includes turn lanes, travel lanes, parking lanes, and bicycle lanes. Although parklets function as an extension of the pedestrian zone, they typically occupy space in the parking zone.
- The **Pedestrian Zone** includes the curb, stormwater/raingardens, buffer zones, tree belt/furnishing zones, clear sidewalk zones, and frontage zones (special circumstances may call for a cycle track to be incorporated into the pedestrian zone).

In "*Roadway & Pedestrian Zone Options*" on page 64, the minimum and recommended dimensions for the Roadway and Pedestrian Zones are based on the individual street types described. While there are some outliers due to larger or smaller ROW, in general the application of these standards will result in the following proportions:

- 40' roadway zone yields 13.5' pedestrian zone
- 36' roadway zone yields 15' pedestrian zone
- 35' roadway zone yields 15.5' pedestrian zone
- 30' roadway zone yields 18' pedestrian zone

Elements within Roadway & Pedestrian Zones



Balancing Roadway & Pedestrian Zones

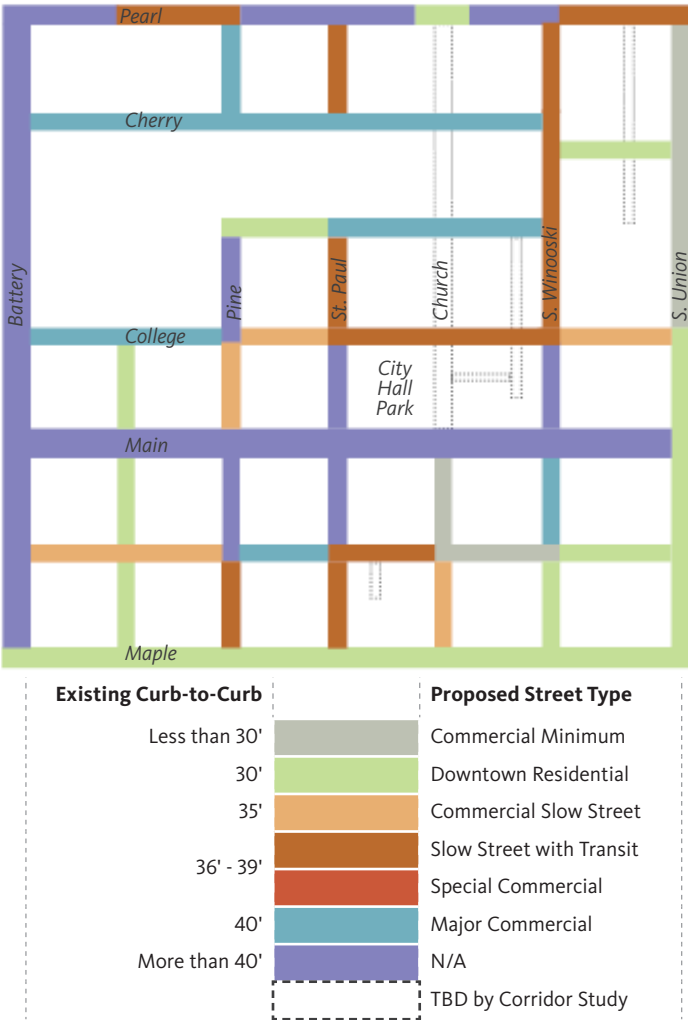
In Burlington, for downtown commercial streets with building faces at the property line, 13' Pedestrian Zones are considered to be insufficient, as they limit what can be accomplished outside of the Roadway Zone. Therefore, these standards propose that 15' pedestrian zones should be considered the desirable dimension on commercial streets. Since the 35' roadway width yields 15.5' pedestrian zones, these standards recommend that existing 35' roadways remain in place. The standards also recommend that where the existing roadway is greater than 35' wide, it be narrowed in order to achieve this preferred dimension. While this strategy does narrow the Roadway Zone, more than 50% of the ROW remains dedicated to the movement of vehicles, transit and bikes.

Changing the width of the roadway usually involves moving the curb and gutter and its associated systems. The curb location usually determines, or at least indicates, other critical locations such as underground utilities which run parallel to the roadway, and their junctions with “lateral” lines which connect

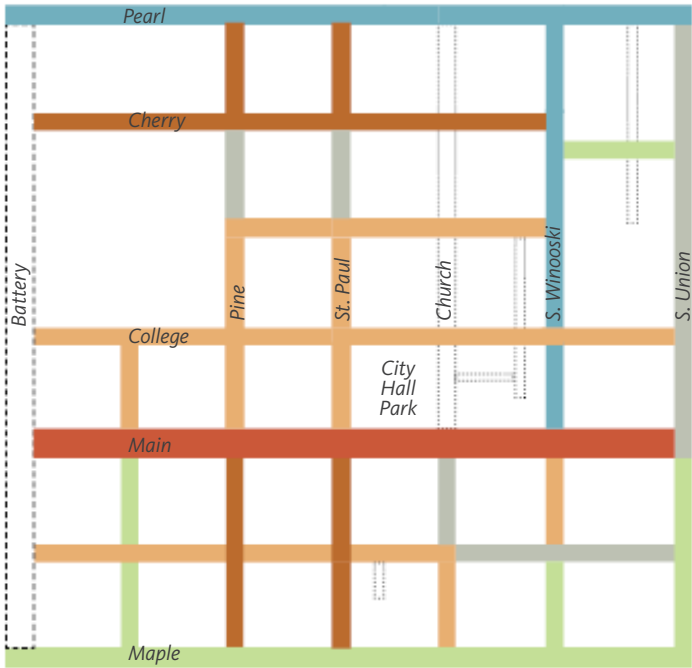
services to adjacent private property. The curb also typically establishes the location for the gutter, storm drains, and sewer system. Changing curb locations is usually more complex and costly than merely moving striped lanes within the roadway, or moving street furnishings within the sidewalk zone. However, in some cases moving the curb location (along with associated stormwater facilities and utility lines) is an essential design tool to rebalance the proportion of roadway to usable pedestrian space for other purposes than vehicular movement, and is significantly less costly and challenging than expanding the ROW.

When a project boundary includes an entire block face or more, designers should work with the City to investigate opportunities for relocating the curb to meet the preferred dimension for Roadway and Pedestrian Zones. In some cases, utility relocation, cost, or other unique constraints may prevent the complete redevelopment of the street, but it should be explored as a starting point in all project design.

Curb-to-Curb: Existing



Curb-to-Curb: Recommended



Recommended curb-to-curb widths are based on known design considerations. For those streets for which a unique master plan is recommended, the recommended roadway width may be subject to change.

Existing and Proposed ROW and Curb-to-Curb Dimensions

Street	From/To	Existing ROW	Existing Curb-to-Curb	Proposed Curb-to-Curb
Streets with Typical 99' ROW				
Main Street	Union - Winooski, St. Paul - Battery	99'	50'	38'
	Winooski - Church	99'	64'	38'
	Church - St. Paul	99'	50'	38'
	St. Paul - Pine	99'	64'?	38'
Battery Street	@ Pearl St. Intersection	99'	59'	TBD
	@ Cherry St. Intersection	99'	46'	TBD
	Cherry - Main	99'	48-49'	TBD
	Main - King	99'	50'	TBD
	King - Maple	99'	45'	TBD
Streets with Typical 66' ROW				
Pearl Street	Union - Winooski	66'	37' (45' @ bus berth)	40'
	@ Winooski Intersection	66'	48'	40'
	@ Church Intersection	66'	44' (30' @ curb extension)	40'
	@ St. Paul Intersection	66'	48'	40'
	Pine - S. Champlain	66'	39'	40'
	S. Champlain - Battery	66'	45'	40'
Cherry Street	Winooski - Battery	66'	40'	36'
Bank Street	Winooski - St. Paul	66'	40'	36'
	St. Paul - Pine	66'	30'	35'
College Street	Union - Winooski	66'	35'	35'
	Winooski - St. Paul	66'	39' (30' @ Church St)	35'
	St. Paul - Pine	66'	35'	35'
	Pine - Battery	66'	40'	35'
King Street	Union - Winooski	50'	30'	28'
	Winooski - Church	40'	27'	28'
	Church - St. Paul	66'	38'	35'
	St. Paul - Pine	66'	40'	35'
	Pine - Battery	66'	35'	35'
Maple Street	Union - Winooski	57.75'	30'	30'
	@ Winooski Intersection	61.75' (west side), 72.75' (east side)	30'	30'
	Church - Battery	66'	30'	30'
S. Winooski Avenue	Pearl - College	66'	39'	40'
	College - Main	66'	44'	40'
	Main - King	57.75'	40'	35'
	King - Maple	57.75'	30'	30'
Church Street	Pearl - Main (Marketplace)	66'	39'	N/A
	Main - King	66'	27'	N/A
	King - Maple	66'	35'	35'
St. Paul Street	Pearl - Cherry	66'	Transit Center	N/A
	Cherry - Bank	To be established @ 60'	N/A	28'
	Bank - College	66'	39'	36'
	College - Main	66'	52'	36'
	Main - King	99' (82.5')	52'	36'
	King - Maple	99' (82.5')	38'	36'

Street	From/To	Existing ROW	Existing Curb-to-Curb	Proposed Curb-to-Curb
Streets with Typical 66' ROW Continued				
Pine Street	Pearl - Cherry	66'	40'	36'
	Cherry - Bank	To be established @ 60'	N/A	28'
	Bank - College	66'	43'	35'
	College - Main	66'	34'	35'
	Main - King	66'	43'	36'
	King - Maple	66'	37'	36'
S. Champlain Street	College - Main	66'	30'	35'
	Main - Maple	66'	30'	30'
Streets with Other ROW Dimensions				
S. Union Street	Pearl - College	49.5'	26'	28'
	College - Main	49.5'	30'	28'
	Main - Maple	49.5'	30'	30'
Lake Street	ADD	ADD	ADD	ADD
Buell Street		60'	28' - 29'	30'
Center Street		36'	24'	N/A
Orchard Terrace		35'	20'	N/A
Browns Court		30'	20'	N/A

Roadway & Pedestrian Zone Options

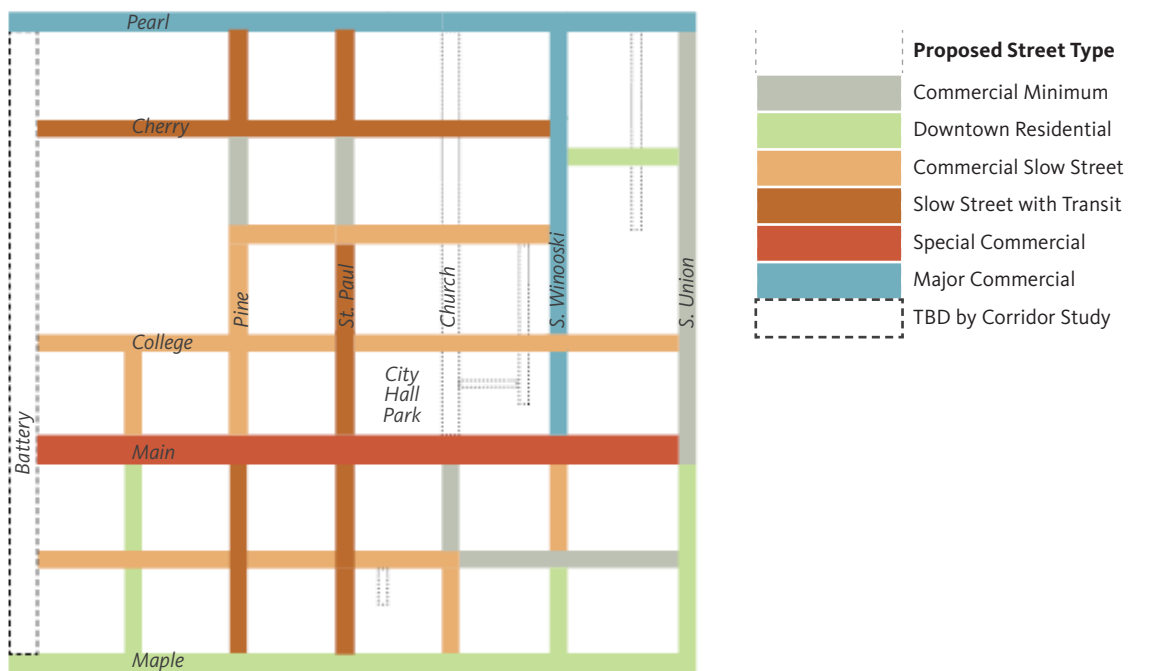
Great Street Types

This section provides cross sections and Pedestrian & Roadway Zone options for the following Great Street types.

Each Great Street Type includes a typical cross section, options for the layout of laneways in the Roadway Zone, and minimum and recommended elements within the Pedestrian Zone. The street types are based on the assumption that a typical 66' or 99' right-of-way exists; where the actual right-of-way varies from these dimensions, designers should work with the City to determine the most appropriate way to allocate the right-of-way between the Roadway and Pedestrian Zones.

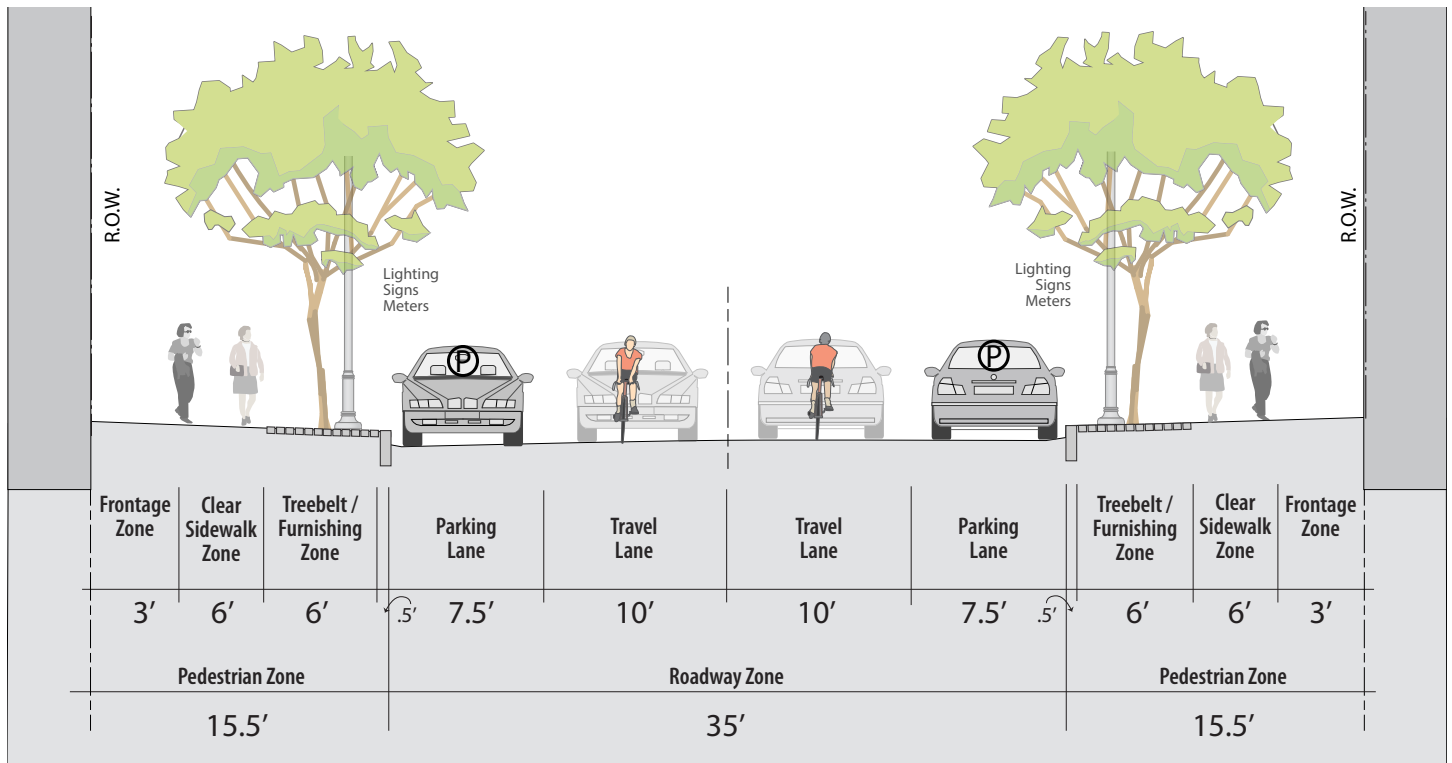
Options for these zones have been provided based on the standard zone dimensions for "*Roadway Zones*" on page 96 and "*Pedestrian Zones*" on page 99. Selection of these options should be informed by the design considerations found in Chapter 2, or by the outcome of a scoping study or other project development process.

Commercial Slow Street (66' ROW, 35' Roadway)
Commercial Slow Street with Transit (66' ROW, 36' Roadway)
Minimum Commercial Street (66' ROW, 28' Roadway)
Major Commercial Street (66' ROW, 40' Roadway)
Special Commercial Street (99' ROW, 38' Roadway)
Downtown Residential Street (66' ROW, 30' Roadway)



Commercial Slow Street (66' ROW, 35' Roadway)

35' Roadway Zone—31' Pedestrian Zone



Roadway Zone Options

Options for zone arrangements within the roadway based on streets' unique characteristics and identified plans.

Note: Arrows indicate direction of travel.

Typical Cross Section				
				
	Park 7.5'	Travel 10'	Travel 10'	Park 7.5'

Alternative Options				
				
	Bike 5' + 2.5'	Travel 10'	Travel 10'	Bike 2.5' + 5'

			
			
Park 7.5'	Travel 10'	Travel 10'	Bike 2.5' + 5'

Pedestrian Zone Options

Options for zone arrangements outside the curb based on streets' unique characteristics and adjacent land uses.

					
15.5 FEET					
	Curb	Buffer Zone *	Tree Belt/ Furnishing Zone	Clear Sidewalk Zone **	Frontage Zone ***
Preferred	6"	0'	6'	6'	3'
Minimum	6"	0'	6'	5'	0'

* A 12" buffer is required in addition to the 6" curb, in order to meet the 18" minimum setback from curb face to vertical obstructions when adjacent to parking. When there is no buffer zone, no vertical elements can be within the outermost 12" of the tree belt.

**The Minimum Clear Sidewalk Zone dimension is the most critical dimension to be maintained when the ROW is constrained. In extremely constrained environments, the placement of elements within the Tree Belt/Furnishing Zone may allow for a portion of this zone to be utilized to accommodate the minimum clear sidewalk dimension. ADA minimum walkway standards may be applied only upon approval of the City Engineer.

*** Minimum 1' Frontage Zone required next to built structure.

General Notes

Design speed: ≤ 20 MPH

Traffic types: private vehicle, bike, ped, local deliveries, limited thru traffic, transit.

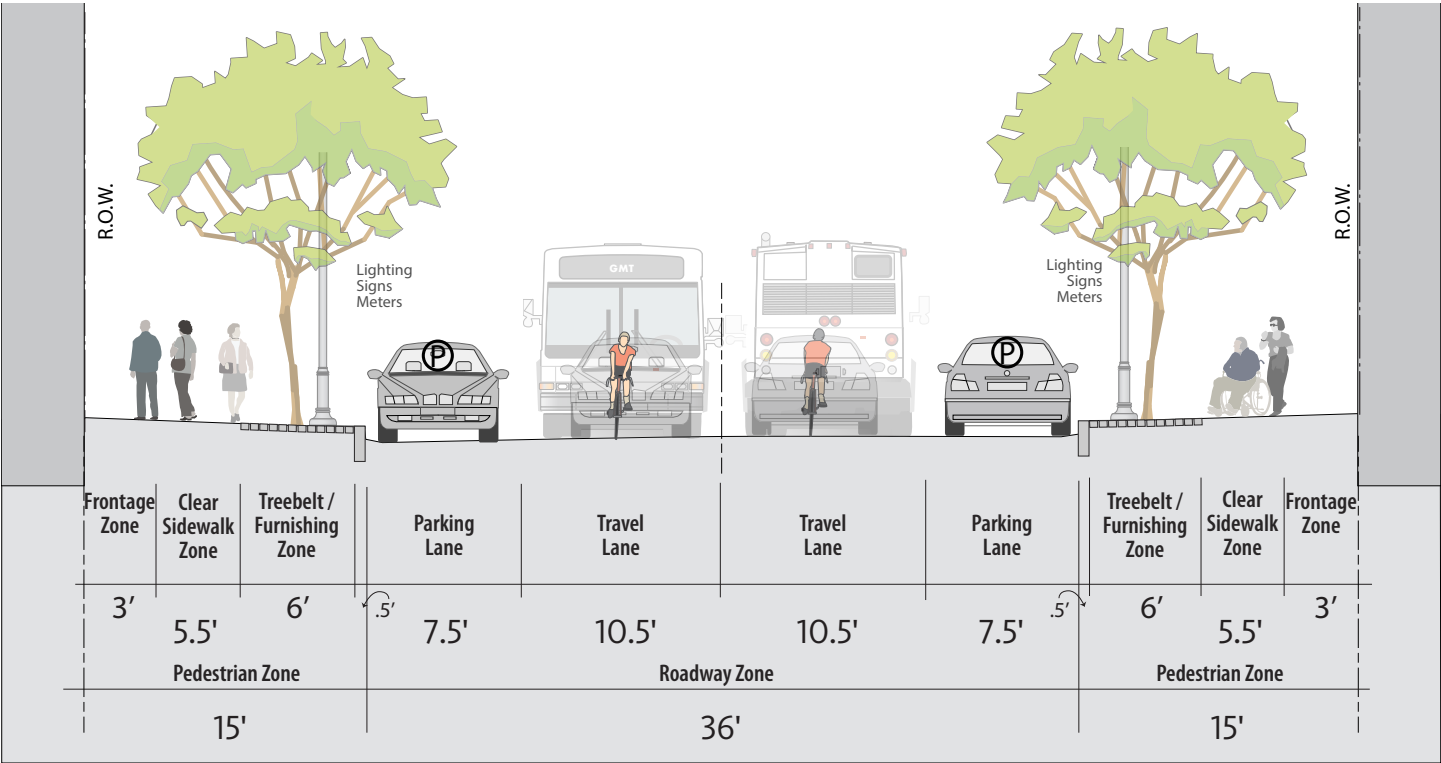
Typical parking type: parallel

Typical bike facility: shared right-of-way, except where noted

Typical travel lane: 10' preferred

Commercial Slow Street with Transit (66' ROW, 36' Roadway)

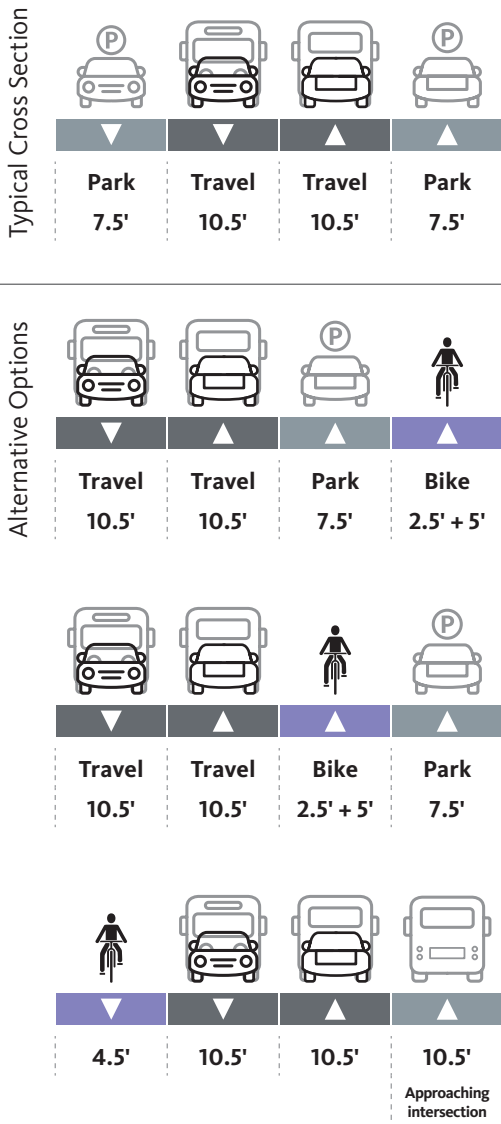
36' Roadway Zone—30' Pedestrian Zone



Roadway Zone Options

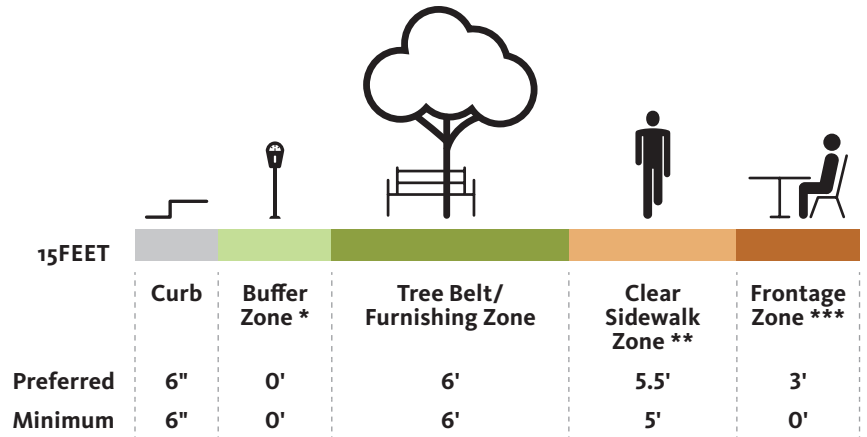
Options for zone arrangements within the roadway based on streets' unique characteristics and identified plans.

Note: Arrows indicate direction of travel.



Pedestrian Zone Options

Options for zone arrangements outside the curb based on streets' unique characteristics and adjacent land uses.



* A 12" buffer is required in addition to the 6" curb, in order to meet the 18" minimum setback from curb face to vertical obstructions when adjacent to parking. When there is no buffer zone, no vertical elements can be within the outermost 12" of the tree belt.

**The Minimum Clear Sidewalk Zone dimension is the most critical dimension to be maintained when the ROW is constrained. In extremely constrained environments, the placement of elements within the Tree Belt/Furnishing Zone may allow for a portion of this zone to be utilized to accommodate the minimum clear sidewalk dimension. ADA minimum walkway standards may be applied only upon approval of the City Engineer.

*** Minimum 1' Frontage Zone required next to built structure.

General Notes

Design speed: ≤ 20 MPH

Traffic types: transit, private vehicle, bike, ped, local deliveries, thru traffic

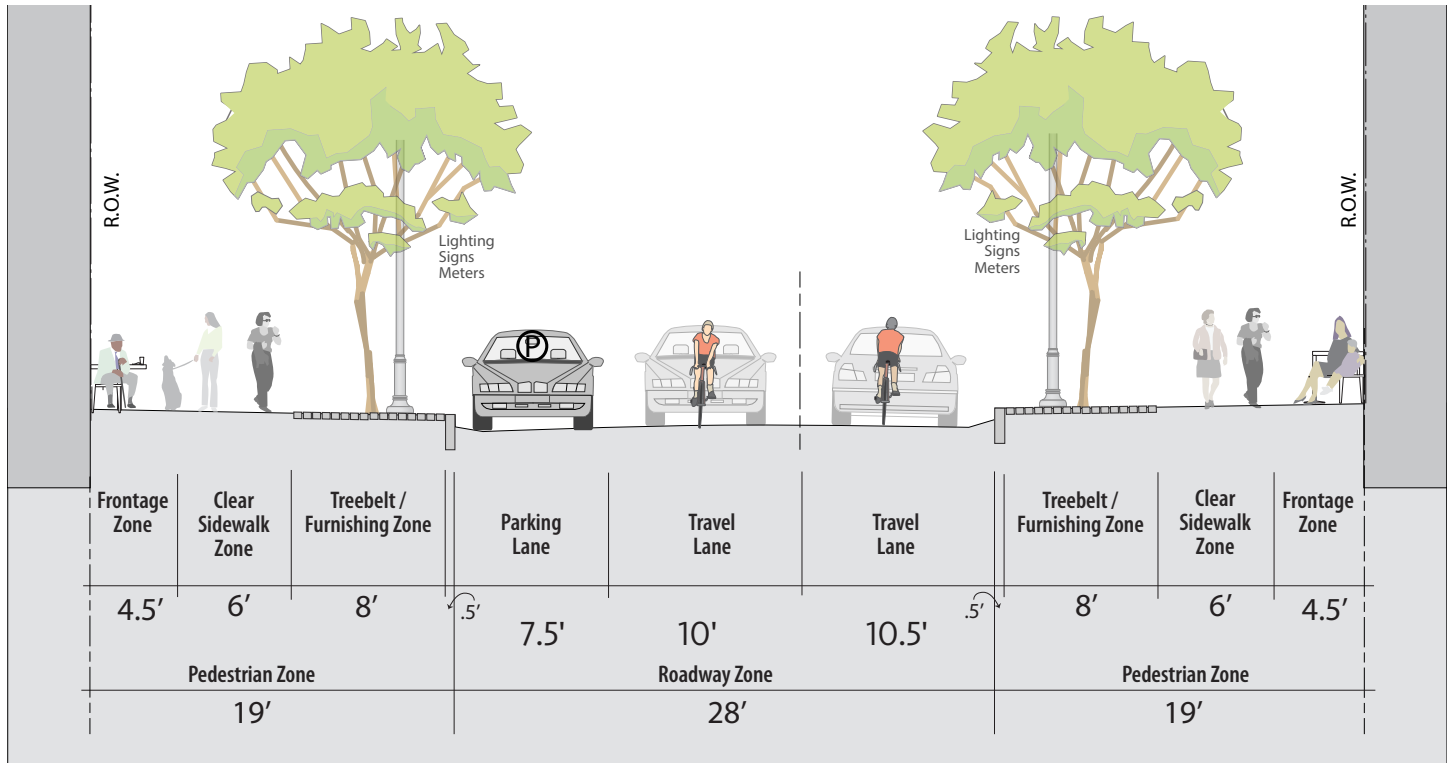
Typical parking type: parallel

Typical bike facility: shared right-of-way, except where noted

Typical travel lane: 10.5'

Minimum Commercial Street (66' ROW, 28' Roadway)

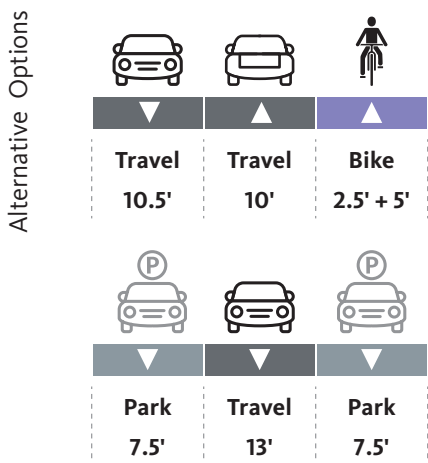
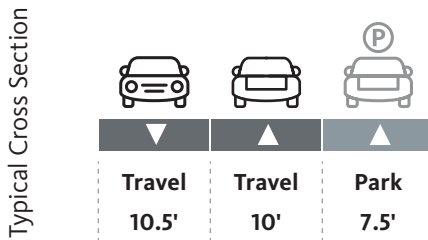
28' Roadway Zone—38' Pedestrian Zone



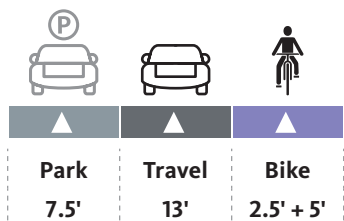
Roadway Zone Options

Options for zone arrangements within the roadway based on streets' unique characteristics and identified plans.

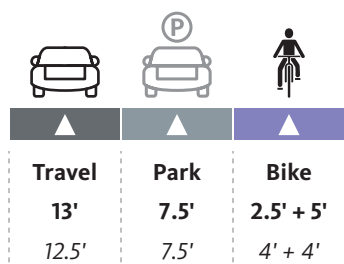
Note: Arrows indicate direction of travel.



Can also accommodate all modes of travel in opposite direction.



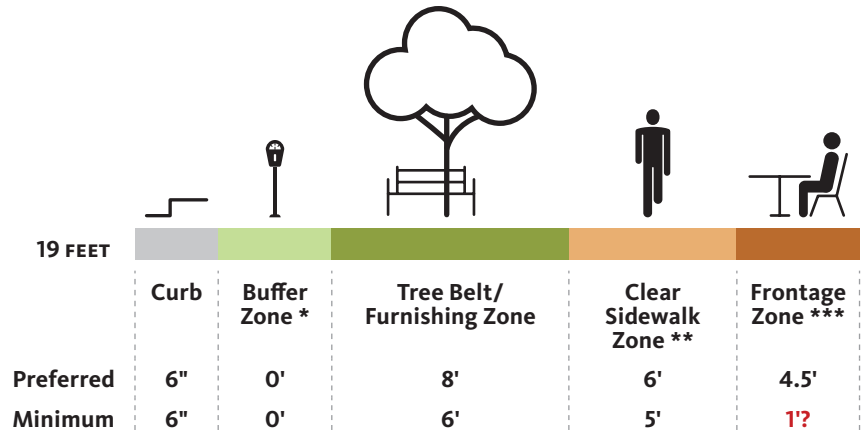
Can also accommodate all modes of travel in opposite direction.



Italics represent option for two-way bike way with no buffer.

Pedestrian Zone Options

Options for zone arrangements outside the curb based on streets' unique characteristics and adjacent land uses.



* A 12" buffer is required in addition to the 6" curb, in order to meet the 18" minimum setback from curb face to vertical obstructions when adjacent to parking. When there is no buffer zone, no vertical elements can be within the outermost 12" of the tree belt.

**The Minimum Clear Sidewalk Zone dimension is the most critical dimension to be maintained when the ROW is constrained. In extremely constrained environments, the placement of elements within the Tree Belt/Furnishing Zone may allow for a portion of this zone to be utilized to accommodate the minimum clear sidewalk dimension. ADA minimum walkway standards may be applied only upon approval of the City Engineer.

*** Minimum 1' Frontage Zone required next to built structure.

General Notes

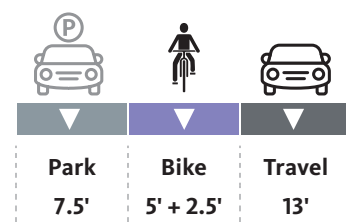
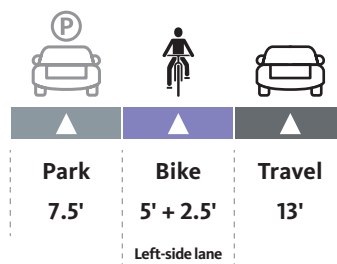
Design speed: ≤ 20 MPH

Traffic types: private vehicle, bike, ped, limited deliveries, thru traffic, limited transit.

Typical parking type: parallel

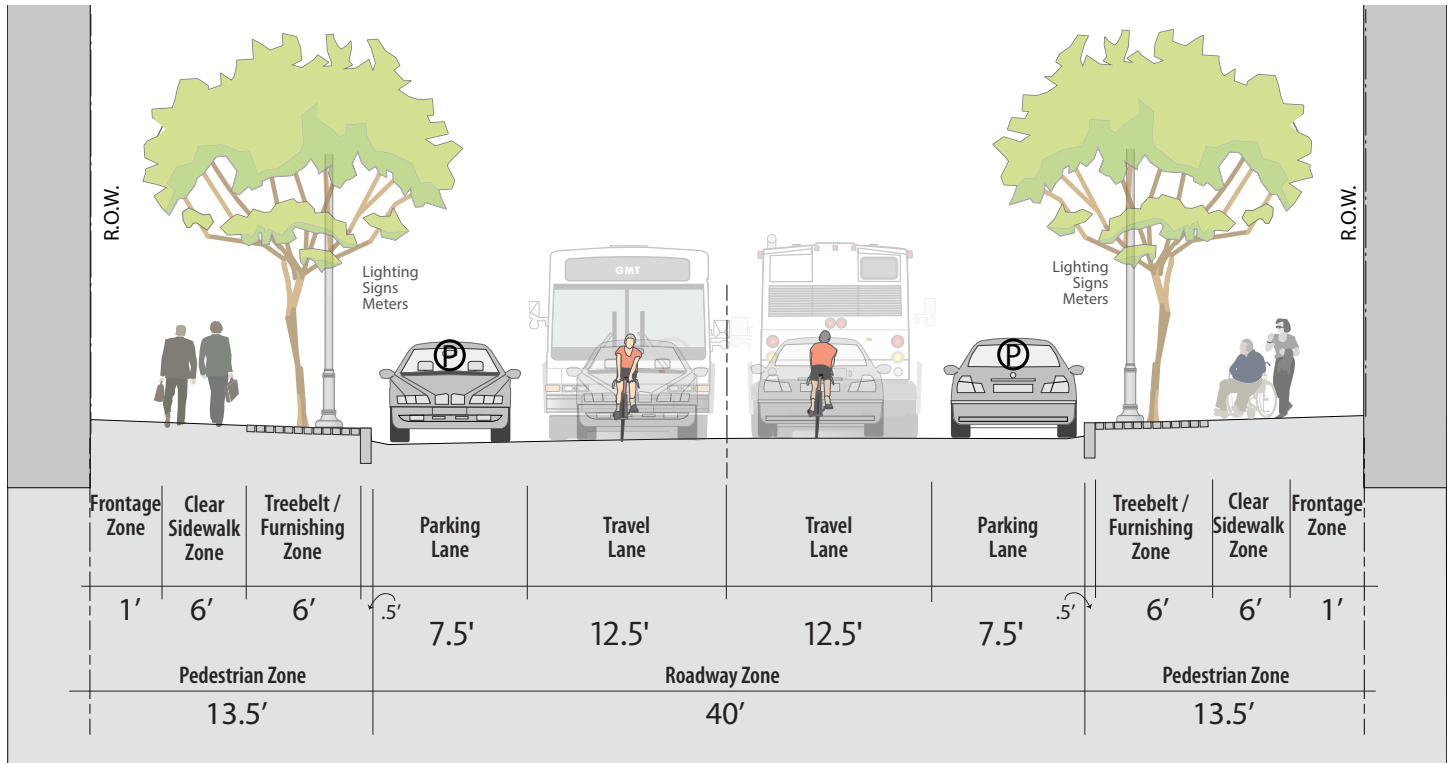
Typical bike facility: shared right-of-way or separated facility; see street design considerations

Typical travel lane: 10' - 10.5' preferred; **9.5' min.**



Major Commercial Street (66' ROW, 40' Roadway)

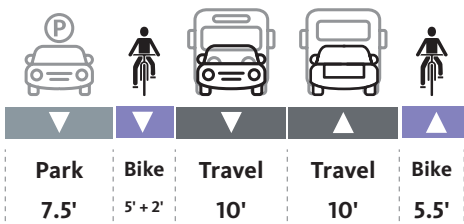
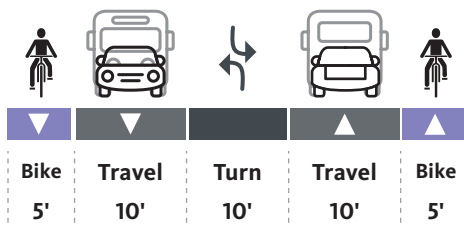
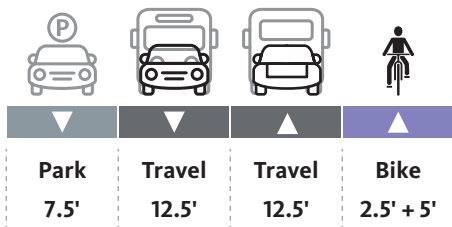
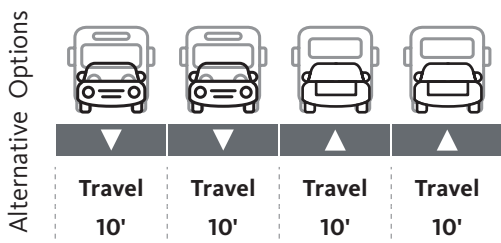
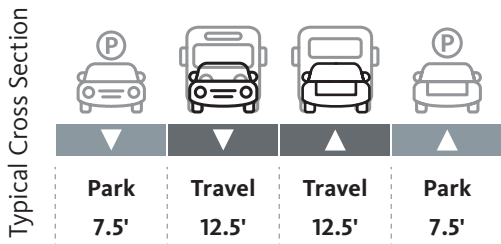
40' Roadway Zone—27' Pedestrian Zone



Roadway Zone Options

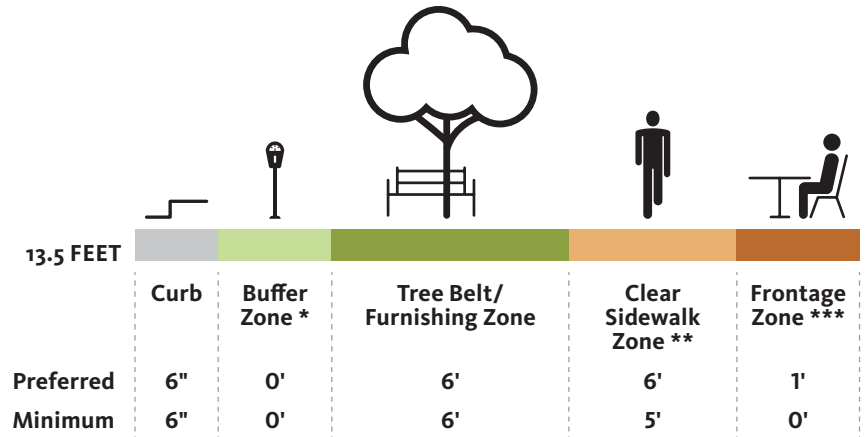
Options for zone arrangements within the roadway based on streets' unique characteristics and identified plans.

Note: Arrows indicate direction of travel.



Pedestrian Zone Options

Options for zone arrangements outside the curb based on streets' unique characteristics and adjacent land uses.



* A 12" buffer is required in addition to the 6" curb, in order to meet the 18" minimum setback from curb face to vertical obstructions when adjacent to parking. When there is no buffer zone, no vertical elements can be within the outermost 12" of the tree belt.

**The Minimum Clear Sidewalk Zone dimension is the most critical dimension to be maintained when the ROW is constrained. In extremely constrained environments, the placement of elements within the Tree Belt/Furnishing Zone may allow for a portion of this zone to be utilized to accommodate the minimum clear sidewalk dimension. ADA minimum walkway standards may be applied only upon approval of the City Engineer.

*** Minimum 1' Frontage Zone required next to built structure.

General Notes

Design speed: ≤ 20 MPH

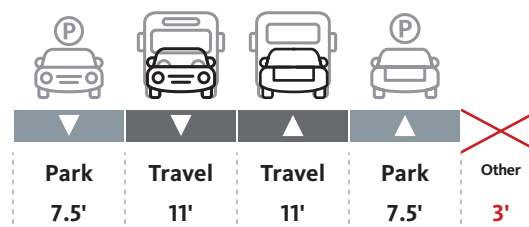
Traffic types: transit, private vehicle, bike, ped, local deliveries, thru traffic

Typical parking type: parallel

Typical bike facility: separated bike facility per street design considerations

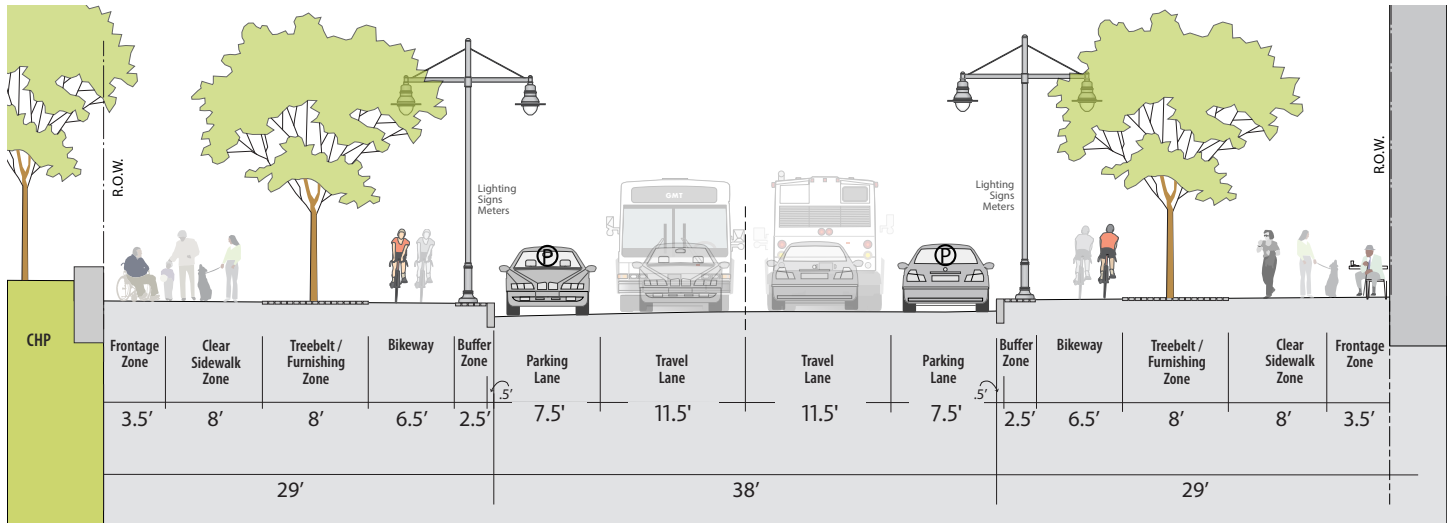
Typical travel lane: 10'–12.5'

Additional Options: See the Stormwater Toolkit for "[Roadway Zone](#)" on [page 196](#) for additional Roadway Zone Options, particularly when the opportunity to reduce the Roadway width is available. (See diagram below.)



Special Commercial Street (99' ROW, 38' Roadway)

38' Roadway Zone—58'+ Pedestrian Zone



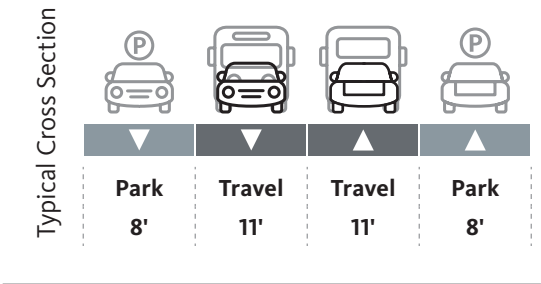
Note: Cross section illustrates Main Street at City Hall Park.



Roadway Zone Options

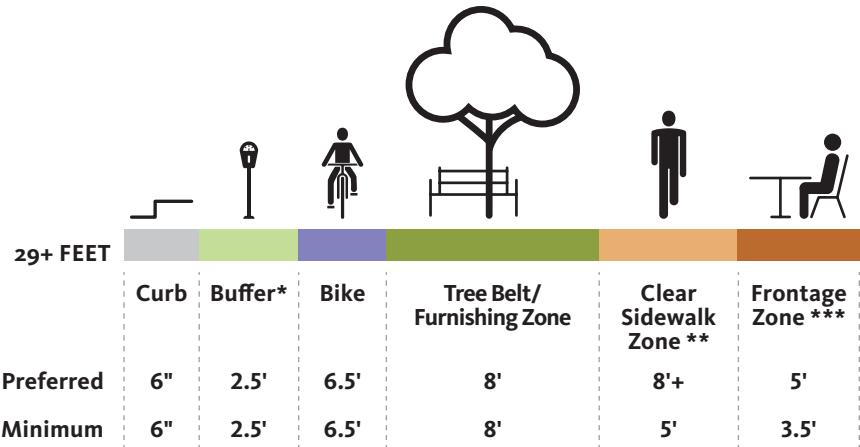
Options for zone arrangements within the roadway based on streets' unique characteristics and identified plans.

Note: Arrows indicate direction of travel.



Pedestrian Zone Options

Options for zone arrangements outside the curb based on streets' unique characteristics and adjacent land uses.



* A 12" buffer is required in addition to the 6" curb, in order to meet the 18" minimum setback from curb face to vertical obstructions when adjacent to parking. When there is no buffer zone, no vertical elements can be within the outermost 12" of the tree belt.

**The Minimum Clear Sidewalk Zone dimension is the most critical dimension to be maintained when the ROW is constrained. In extremely constrained environments, the placement of elements within the Tree Belt/Furnishing Zone may allow for a portion of this zone to be utilized to accommodate the minimum clear sidewalk dimension. ADA minimum walkway standards may be applied only upon approval of the City Engineer.

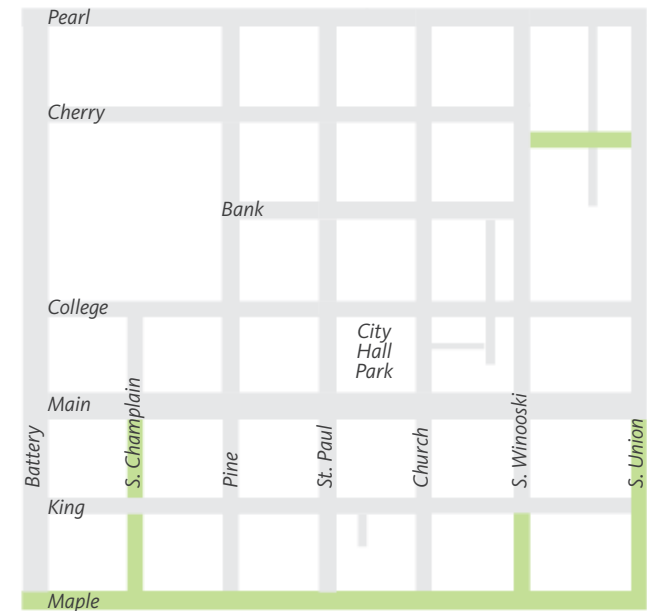
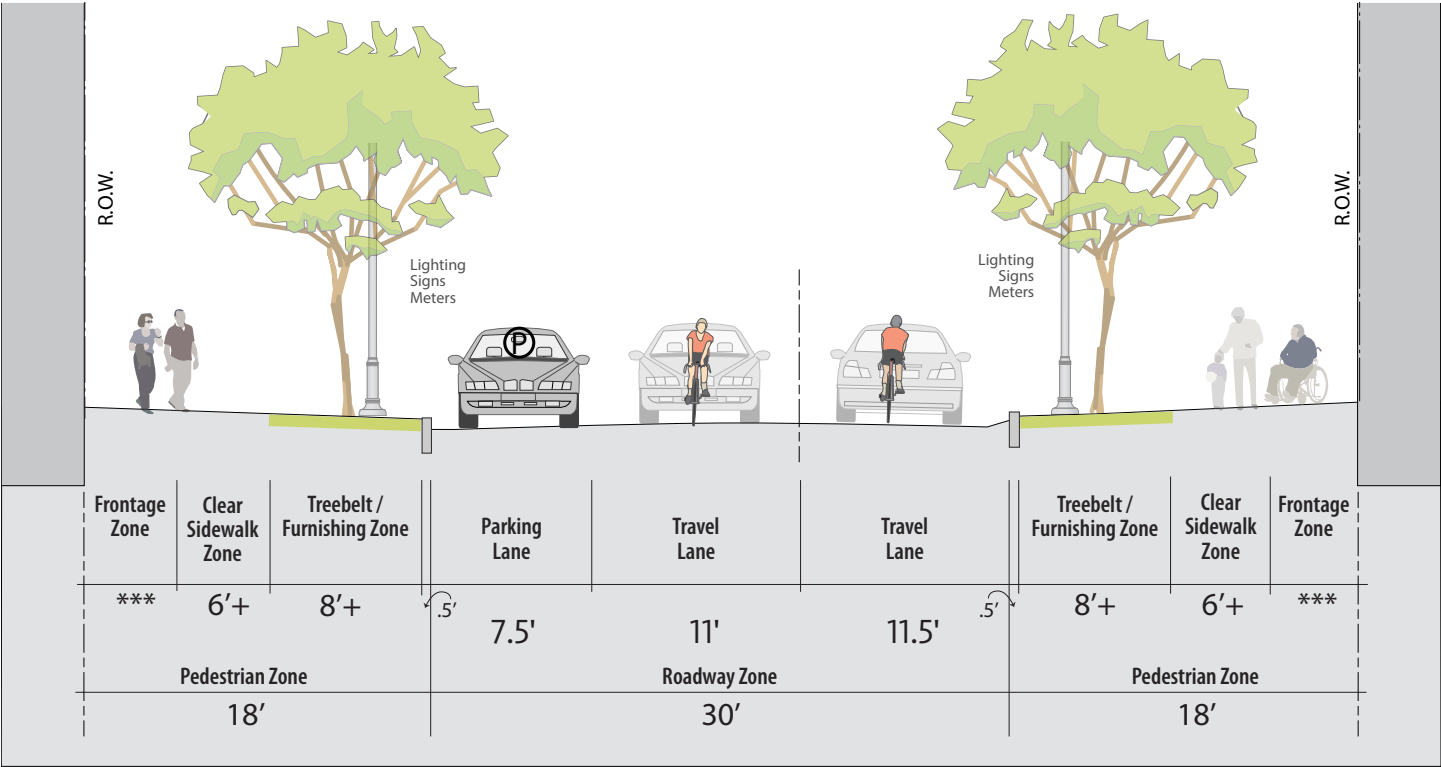
*** Minimum 1' Frontage Zone required next to built structure.

General Notes

- Design speed: ≤ 20 MPH
- Traffic types: transit, private vehicle, bike, ped, local deliveries, thru traffic.
- Typical parking type: parallel
- Typical bike facility: raised cycle track
- Typical travel lane: 11'+ preferred

Downtown Residential Street (66' ROW, 30' Roadway)

30' Roadway Zone—36' Pedestrian Zone

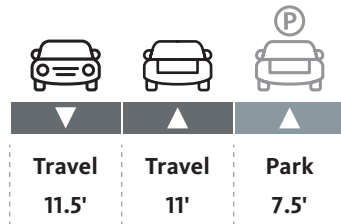


Roadway Zone Options

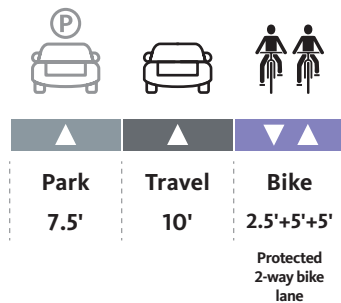
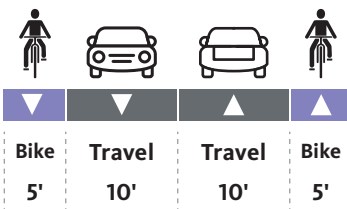
Options for zone arrangements within the roadway based on streets' unique characteristics and identified plans.

Note: Arrows indicate direction of travel.

Typical Cross Section

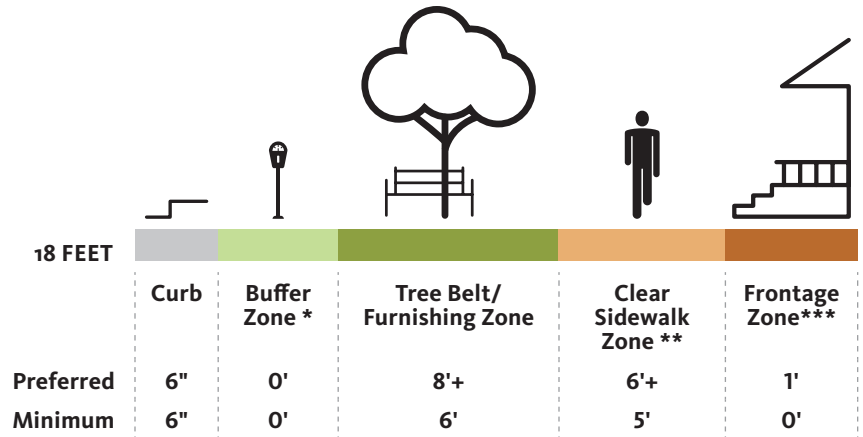


Alternative Options



Pedestrian Zone Options

Options for zone arrangements outside the curb based on streets' unique characteristics and adjacent land uses.



* A 12" buffer is required in addition to the 6" curb, in order to meet the 18" minimum setback from curb face to vertical obstructions when adjacent to parking. When there is no buffer zone, no vertical elements can be within the outermost 12" of the tree belt.

**The Minimum Clear Sidewalk Zone dimension is the most critical dimension to be maintained when the ROW is constrained. In extremely constrained environments, the placement of elements within the Tree Belt/Furnishing Zone may allow for a portion of this zone to be utilized to accommodate the minimum clear sidewalk dimension. ADA minimum walkway standards may be applied only upon approval of the City Engineer.

*** Minimum 1' Frontage Zone required next to built structure.

General Notes

Design speed: ≤ 25 MPH

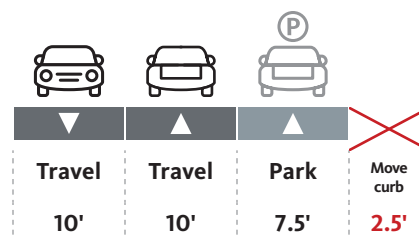
Traffic types: private vehicle, bike, ped, local deliveries, thru traffic, limited transit.

Typical parking type: parallel

Typical bike facility: shared right-of-way, except where noted

Typical travel lane: 11'

Additional Options: See the Stormwater Toolkit for "[Roadway Zone](#)" on [page 196](#) for additional Roadway Zone Options, particularly when the opportunity to reduce the Roadway width is available. (See diagram below.)



Street & Intersection Assemblies

Assembling Great Streets

33% of the land area within downtown Burlington is made up of public rights-of-way. Streets and sidewalks are truly public space. They are the paths that everyone travels, the place in the city where everyone comes together, where people see and talk to each other. The organization and placement of elements within this public space should reinforce these characteristics and reflect that streets are an important space in the city.

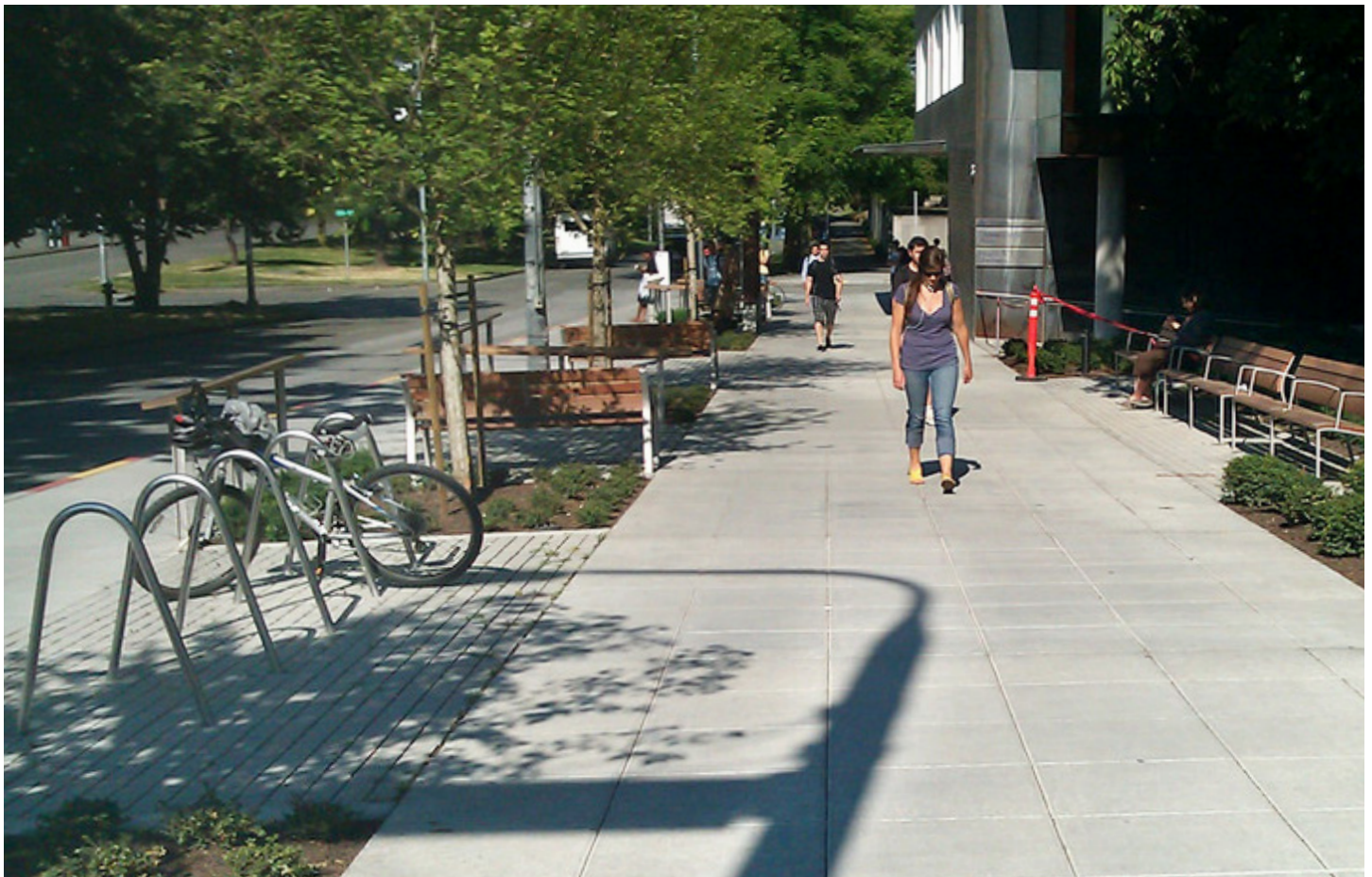
The goal of this section is to illustrate how all streetscape improvements, large or small, contribute to the creation of consistent, vibrant, livable, and walkable streetscapes when placed appropriately. While each streetscape element has its own specific recommendations, this section includes general placement guidelines to ensure a consistent character and quality of streets, especially with regard to the requirements of the Americans with Disabilities Act (ADA).

The illustrations on the following pages should inform the selection of elements that are to be located on commercial or residential streets, and where those elements should appear within the block (mid-block or at an intersection). It should

be noted that not every streetscape element is appropriate for every street. Indeed, these elements should be located appropriate to the scale, character, and function of a particular street.

While certain elements, such as paving or tree species, will tend to be applied consistently along a street, others (benches and info kiosks for example) may be applied only in areas with more concentrated pedestrian activity or key destinations. In some cases, custom elements (art driven efforts, for example) may be considered to create a distinctive treatment. Otherwise, the elements specified here provide the flexibility to respond to a range of contexts while ensuring a consistent design vocabulary for downtown.

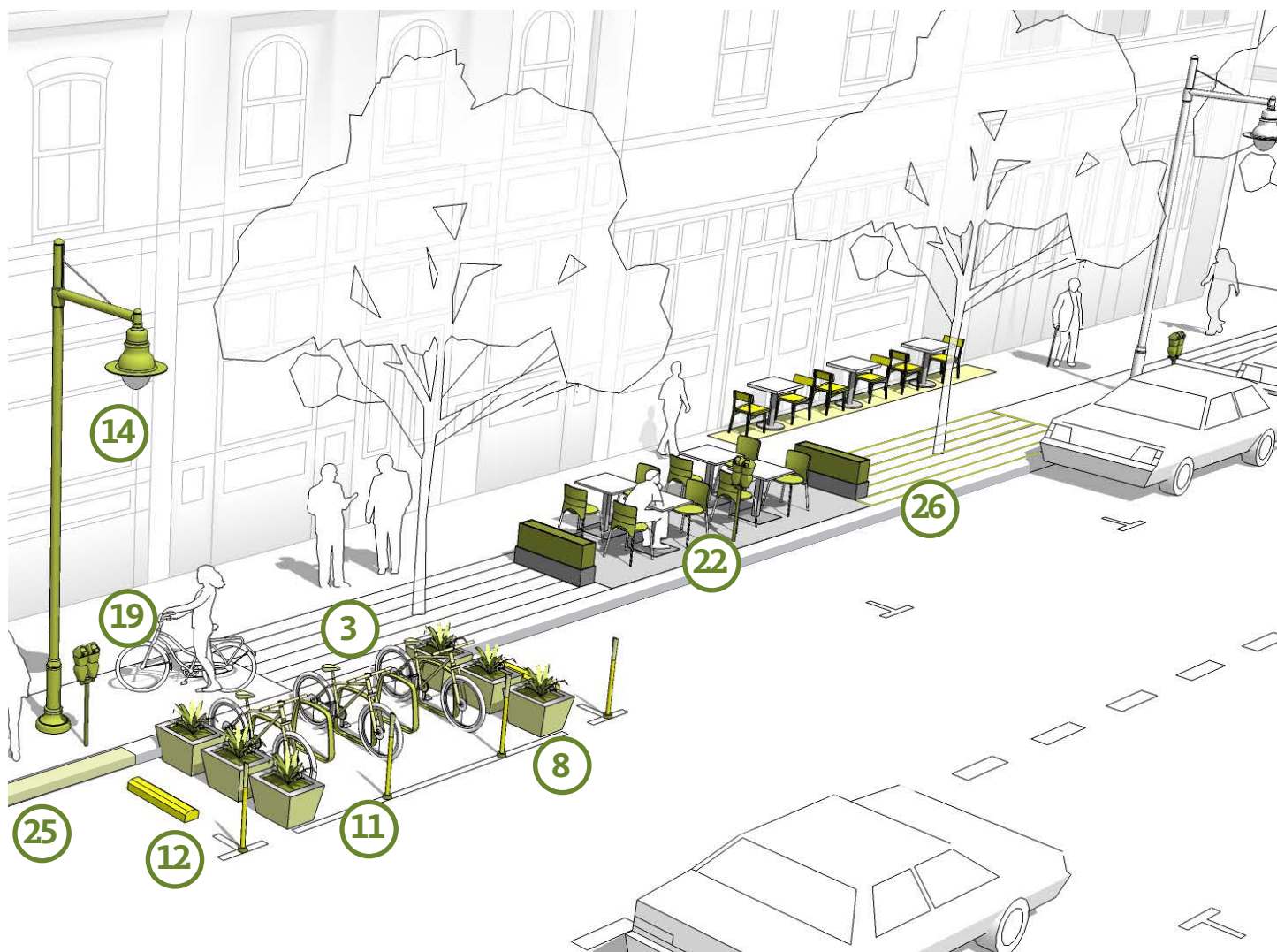
Detailed considerations for placement of these elements within the ROW are located in *"Standard Dimensions & Siting Considerations"* on page 94 and should be consulted in conjunction with these illustrations. Specific streetscape standard elements can be found in the *"Materials & Furnishings Palette"* on page 247 and in *Appendix section A-8*.



Commercial Street within 66' ROW

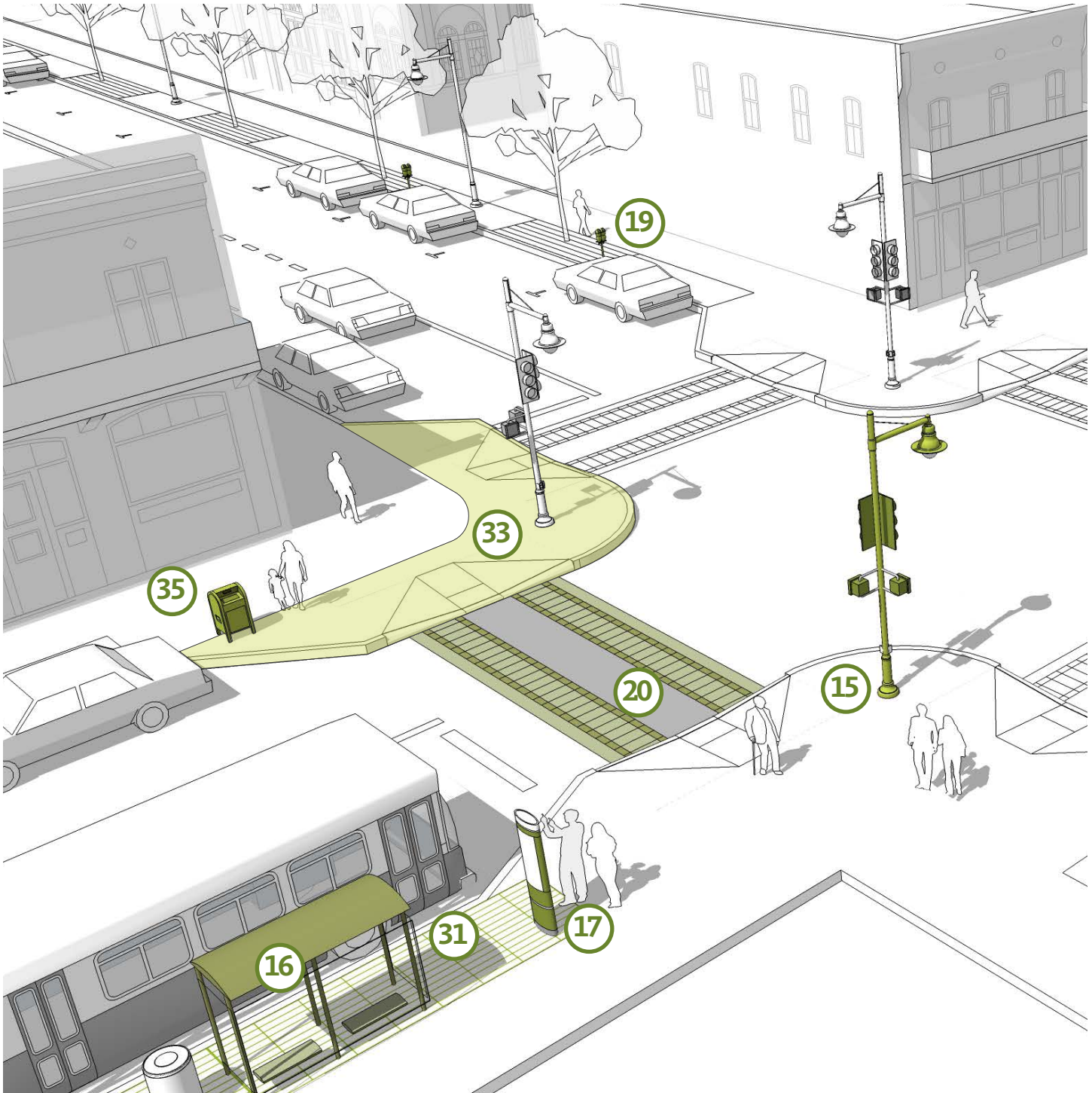
MIDBLOCK ASSEMBLIES

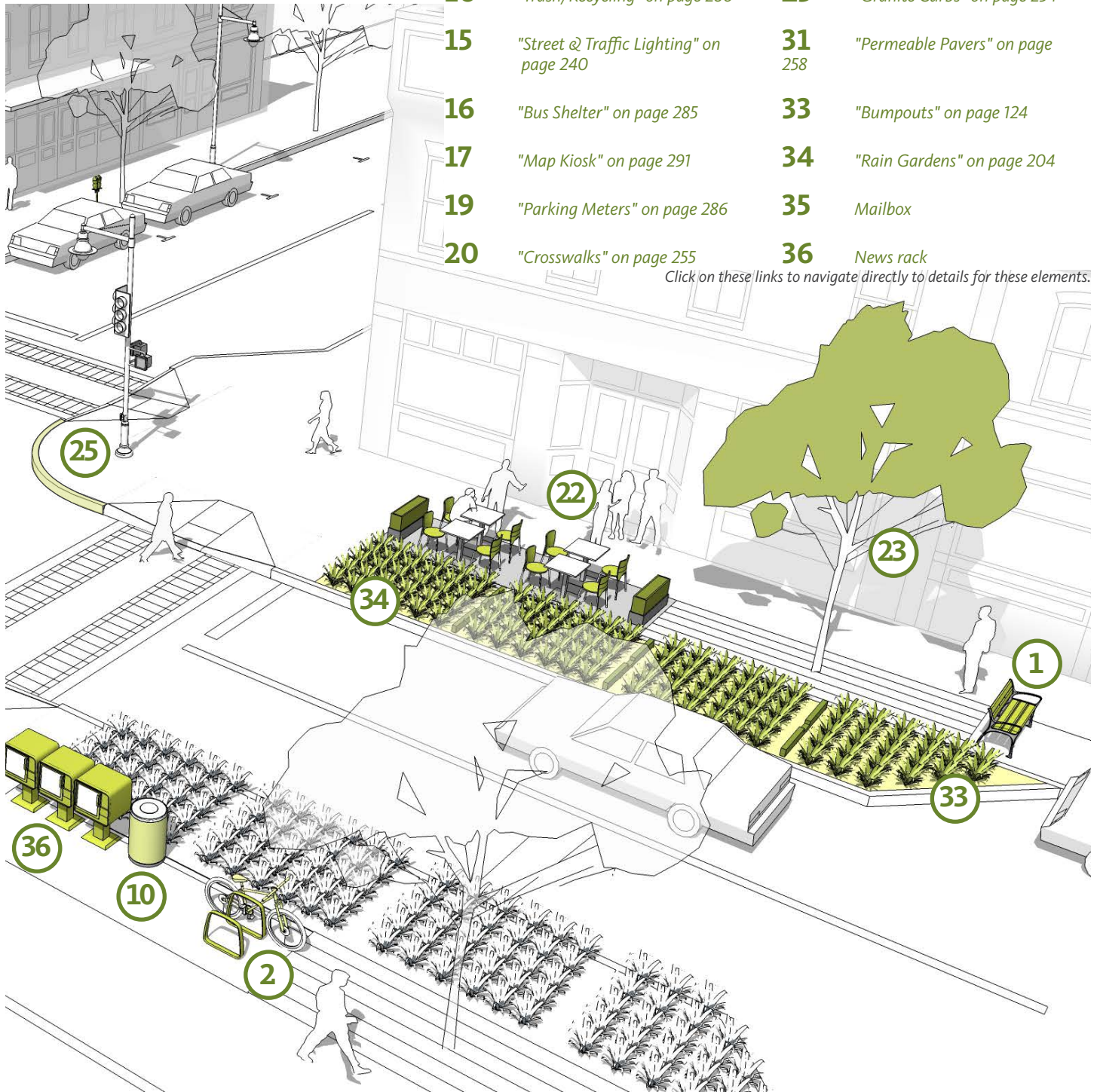


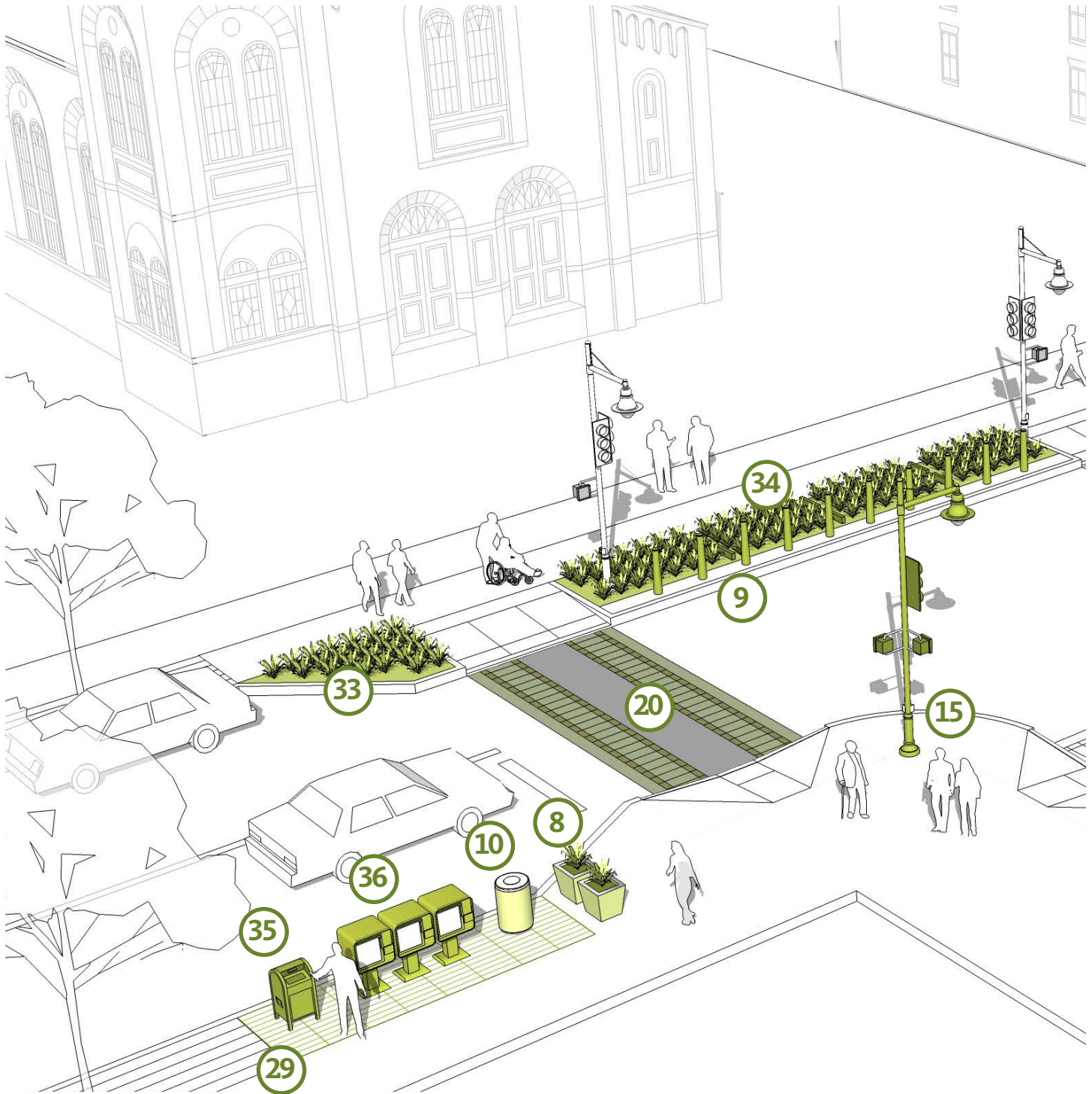


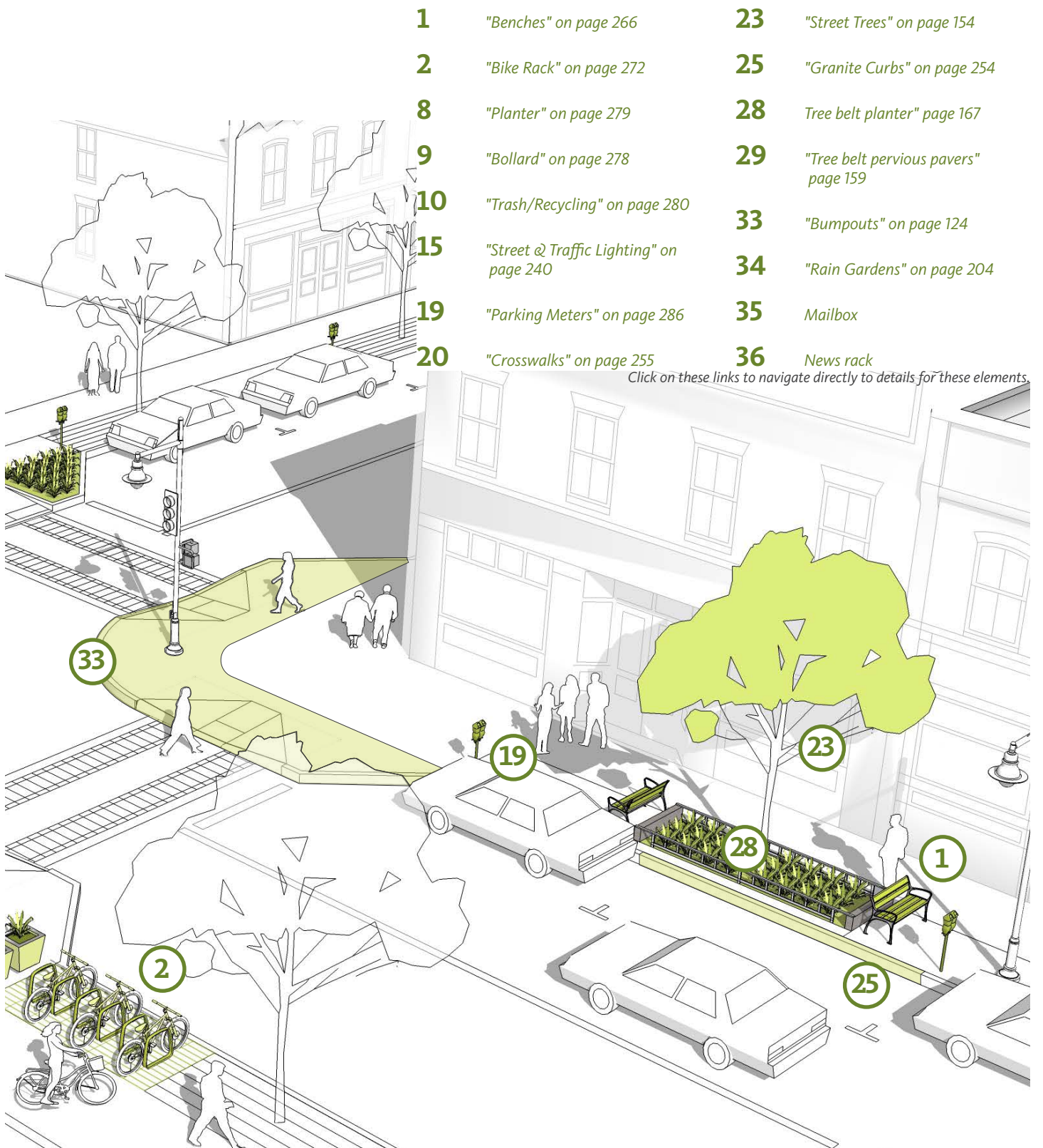
- | | | | |
|-----------|---|-----------|---|
| 1 | "Benches" on page 266 | 19 | "Parking Meters" on page 286 |
| 2 | "Bike Rack" on page 272 | 22 | "Outdoor Dining" page 118 |
| 3 | "Bike Corral" on page 274 | 23 | "Street Trees" on page 154 |
| 8 | "Planter" on page 279 | 25 | "Granite Curbs" on page 254 |
| 10 | "Trash/Recycling" on page 280 | 26 | "Tree well grates & guards" on page 283 |
| 11 | "Safe Hit Posts" page 277 | 28 | "Tree belt planter" page 167 |
| 12 | "Wheel Stops" on page 277 | 29 | "Tree belt pervious pavers" page 159 |
| 14 | "Street Lights" on page 241 | | |

Click on these links to navigate directly to details for these elements.

Commercial Street with 66' ROW**CROSS INTERSECTION**



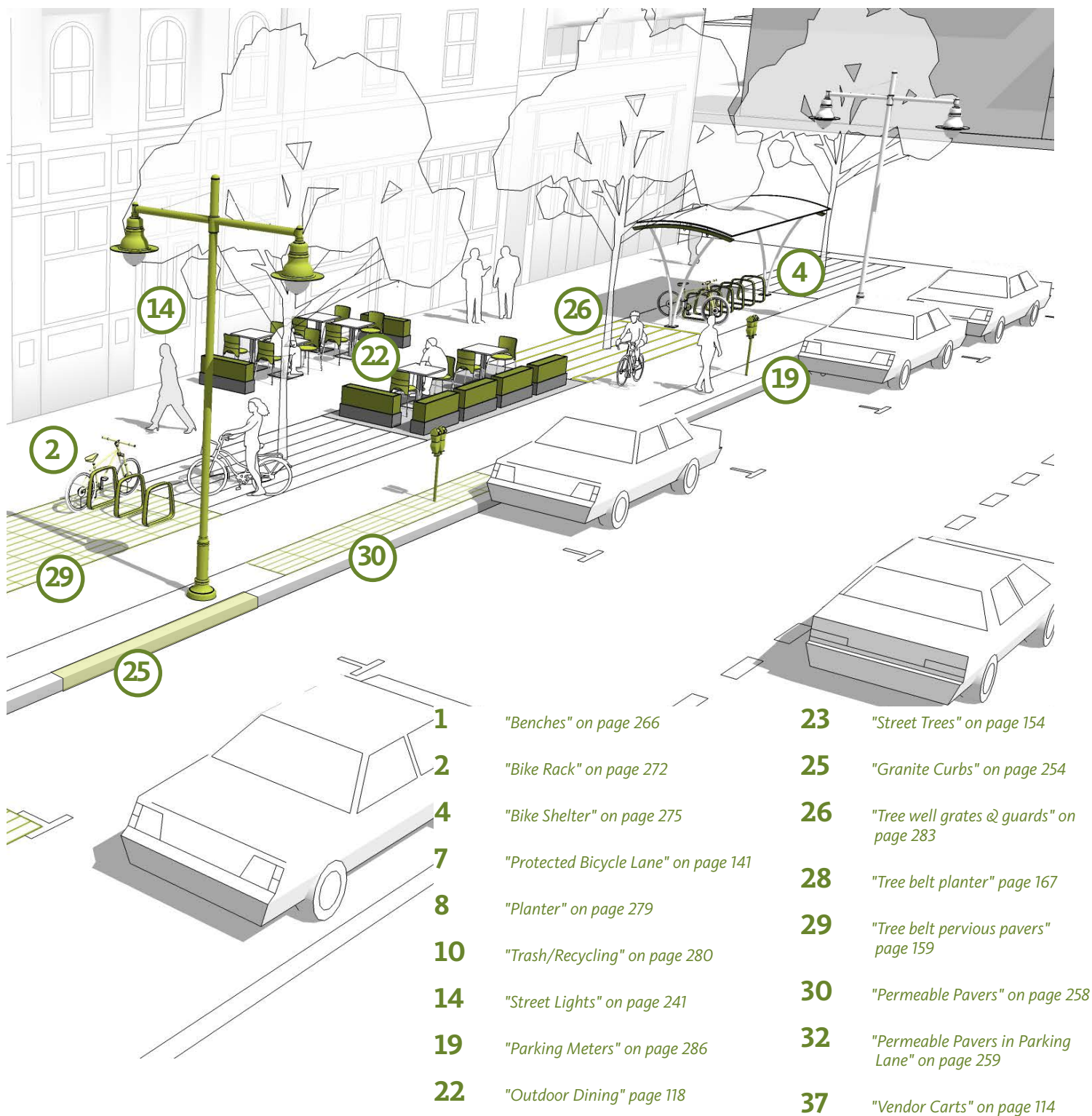
Commercial Streets with 66' ROW**"T" INTERSECTION**



Commercial Street with 99' ROW

MIDBLOCK

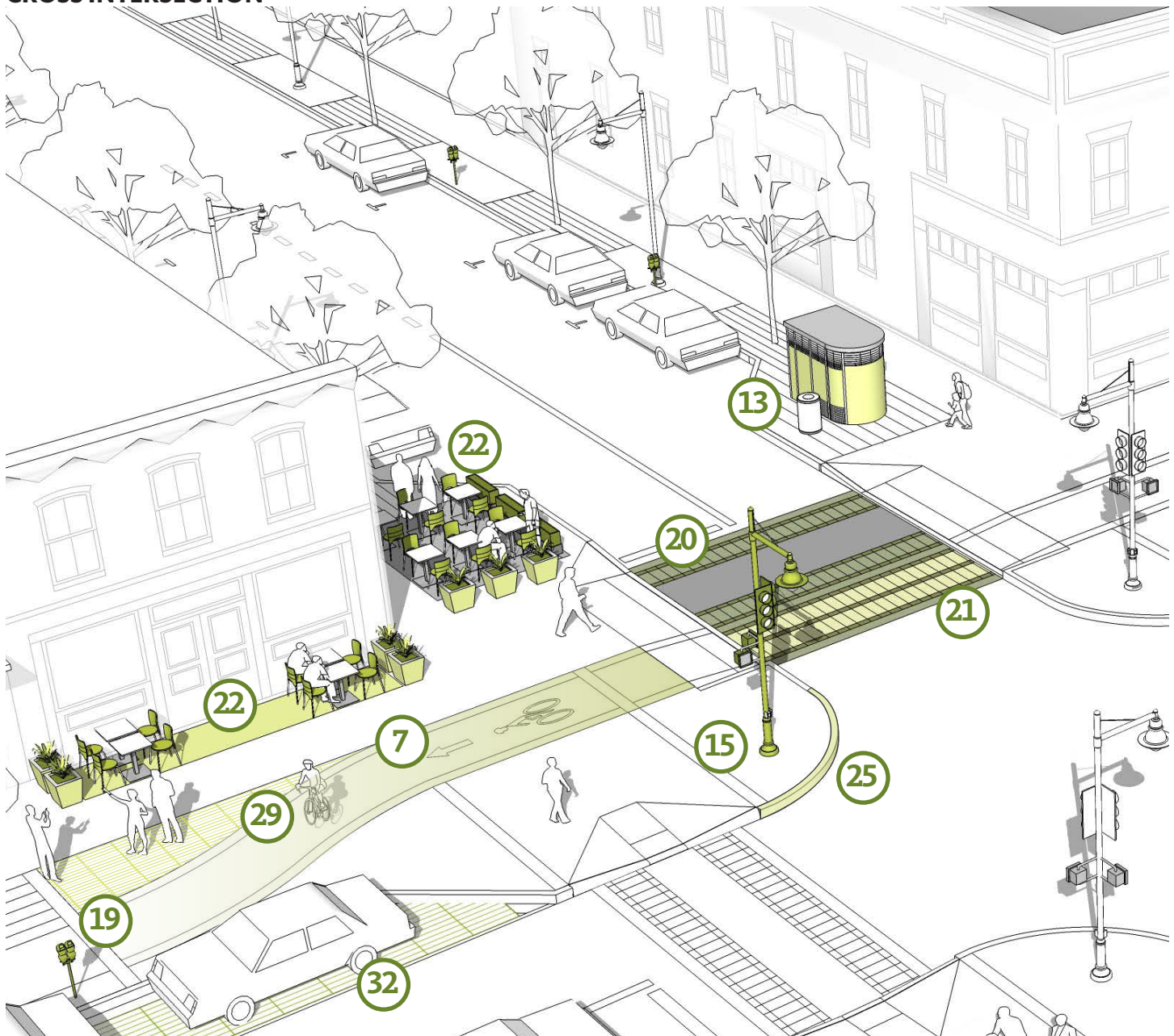




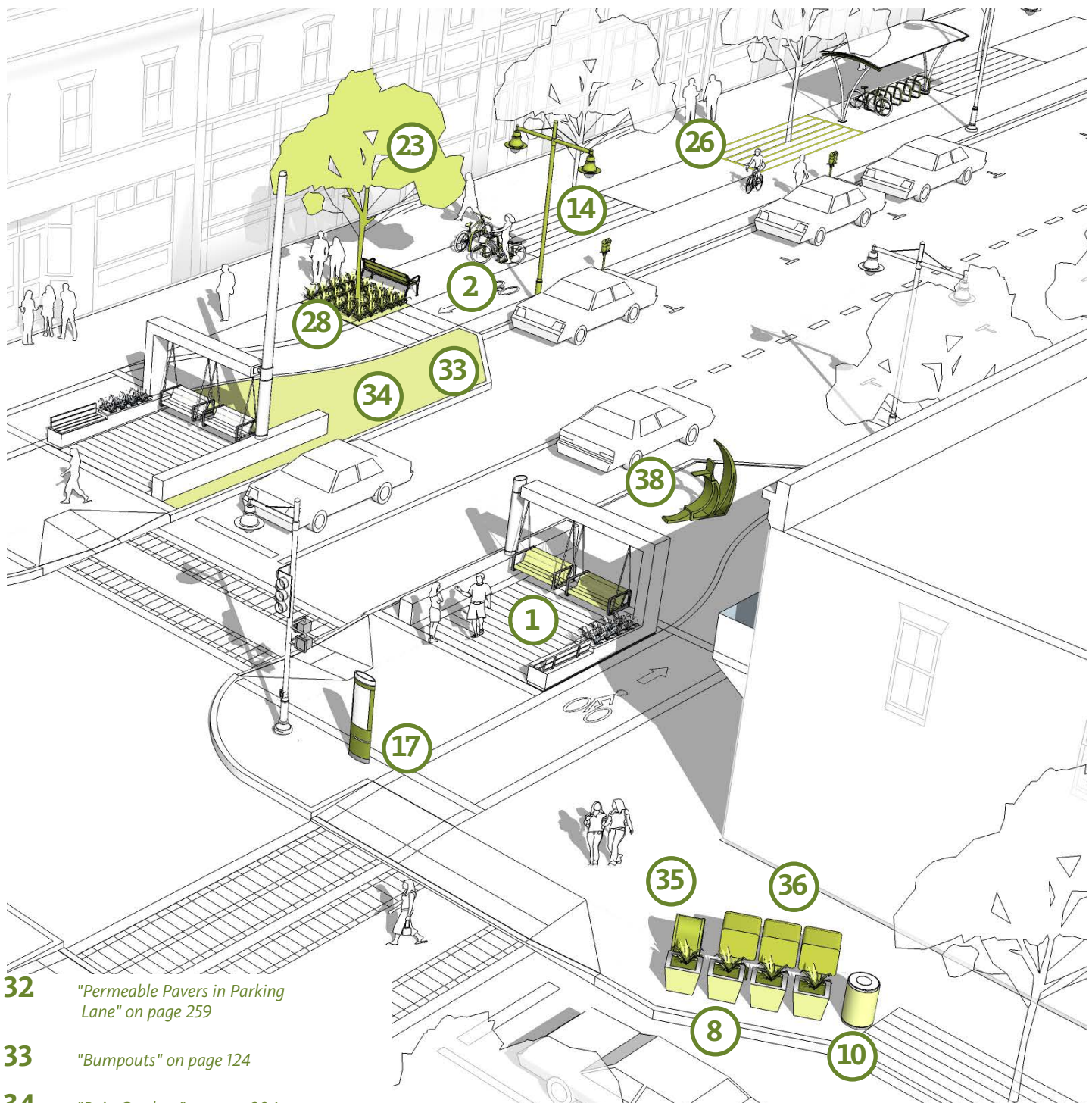
Click on these links to navigate directly to details for these elements.

Commercial Street with 99' ROW

CROSS INTERSECTION



- | | | | | | |
|-----------|--------------------------------------|-----------|---|-----------|---|
| 1 | "Benches" on page 266 | 14 | "Street Lights" on page 241 | 22 | "Outdoor Dining" page 118 |
| 2 | "Bike Rack" on page 272 | 15 | "Street & Traffic Lighting" on page 240 | 23 | "Street Trees" on page 154 |
| 7 | "Protected Bicycle Lane" on page 141 | 17 | "Map Kiosk" on page 291 | 25 | "Granite Curbs" on page 254 |
| 8 | "Planter" on page 279 | 19 | "Parking Meters" on page 286 | 26 | "Tree well grates & guards" on page 283 |
| 10 | "Trash/Recycling" on page 280 | 20 | "Crosswalks" on page 255 | 28 | "Tree belt planter" page 167 |
| 13 | "Public Toilets" on page 281 | 21 | Bike crossing | 29 | "Tree belt pervious pavers" page 159 |



32 "Permeable Pavers in Parking Lane" on page 259

33 "Bumpouts" on page 124

34 "Rain Gardens" on page 204

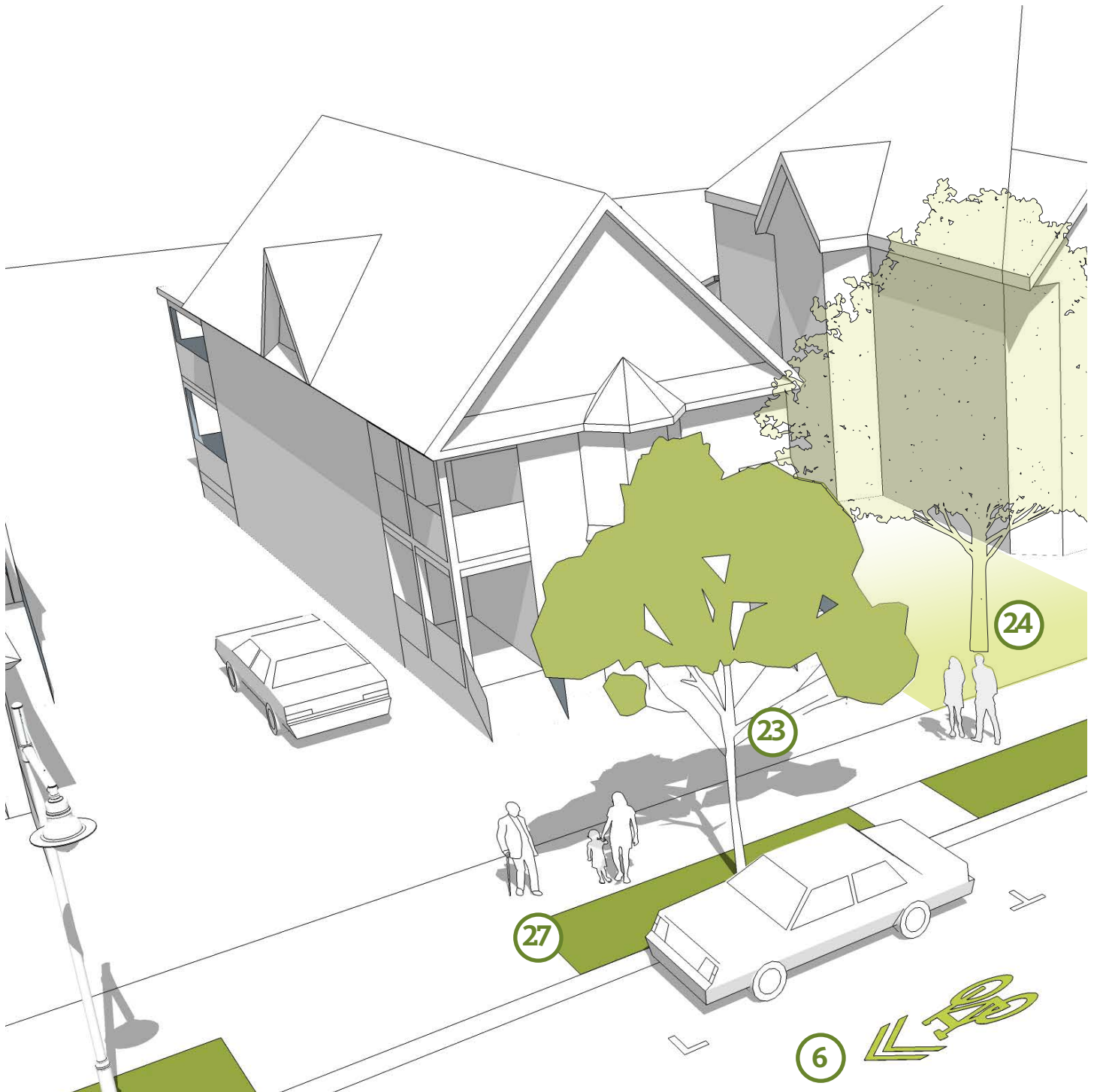
35 Mailbox

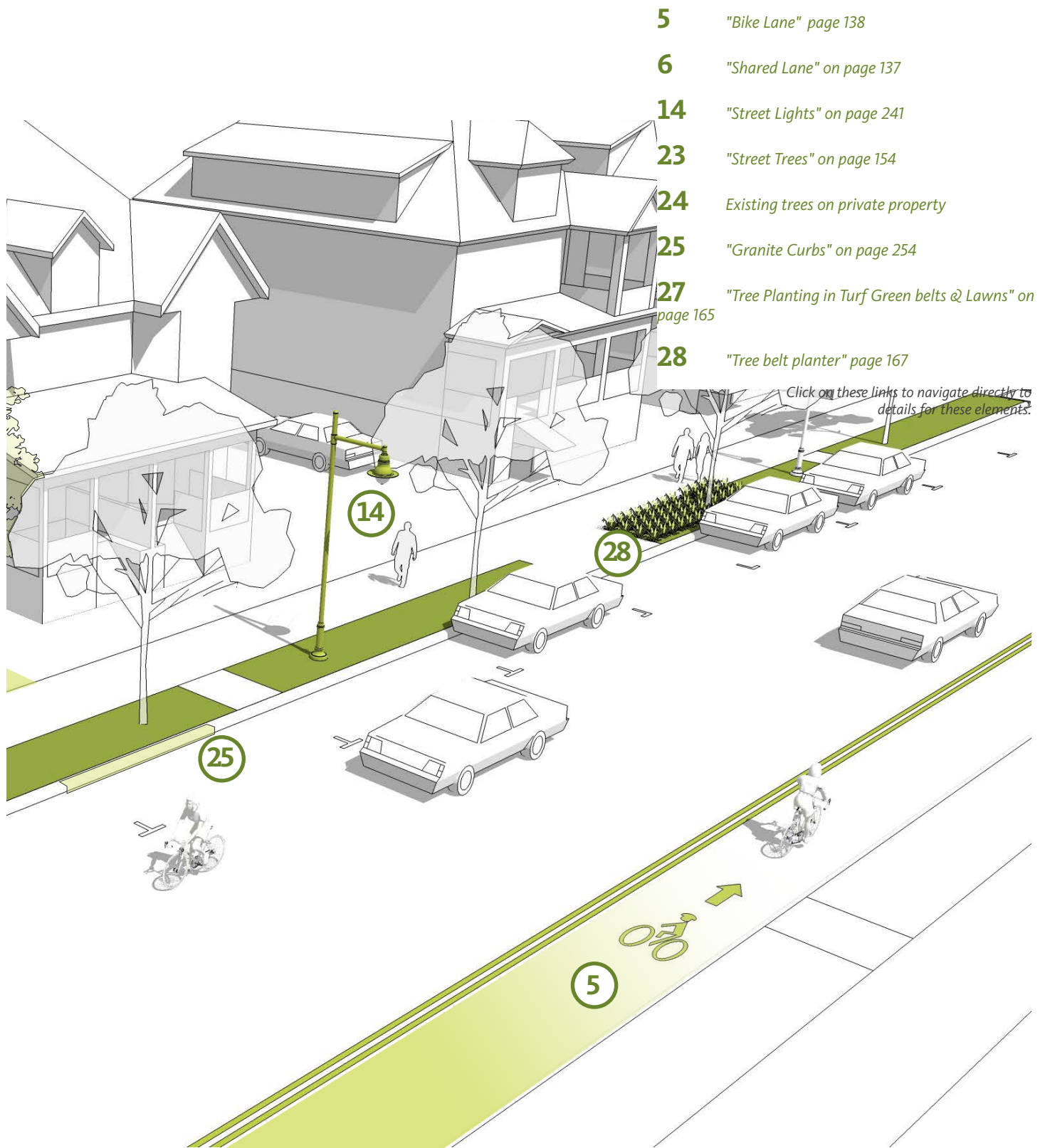
36 News rack

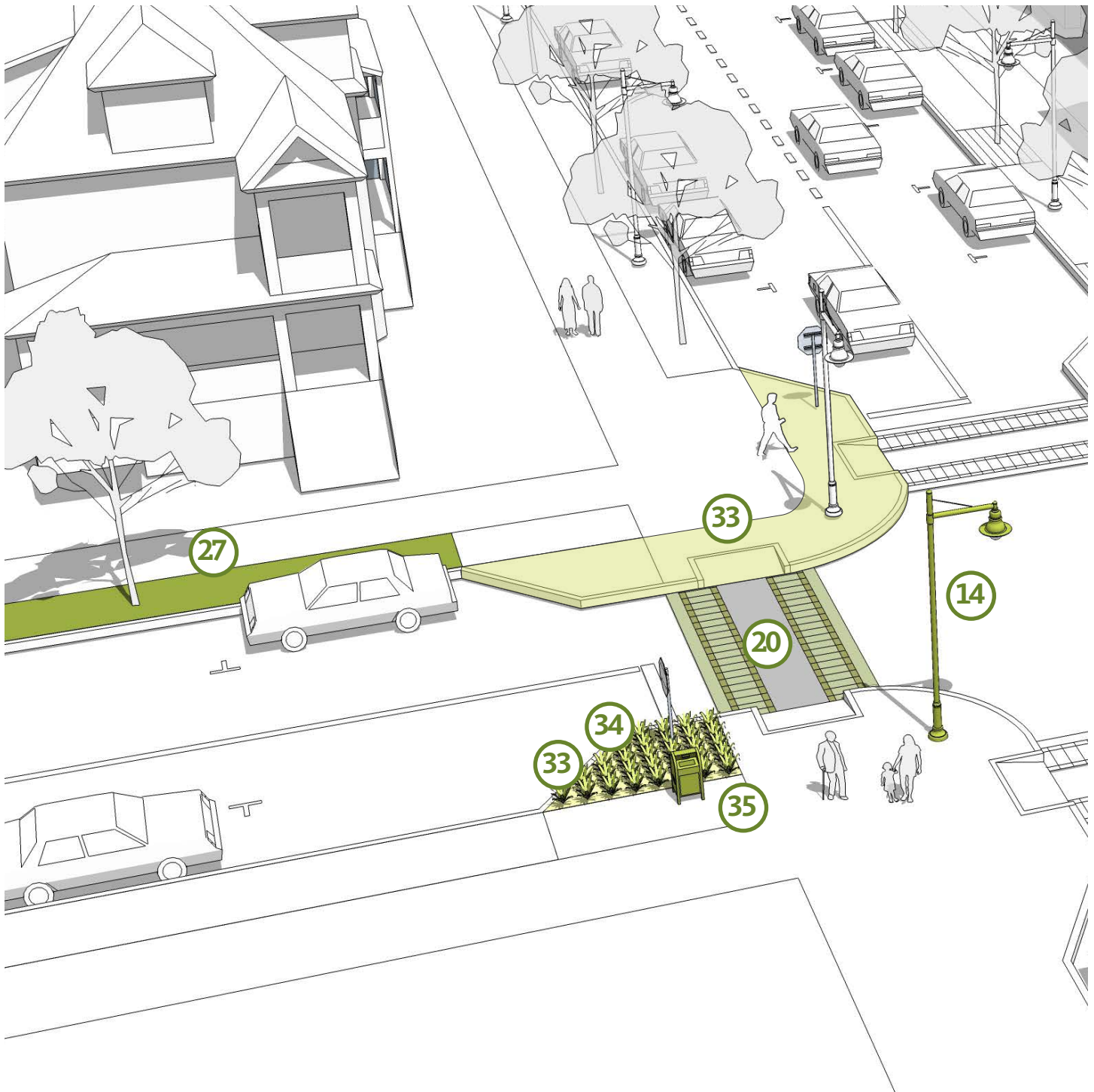
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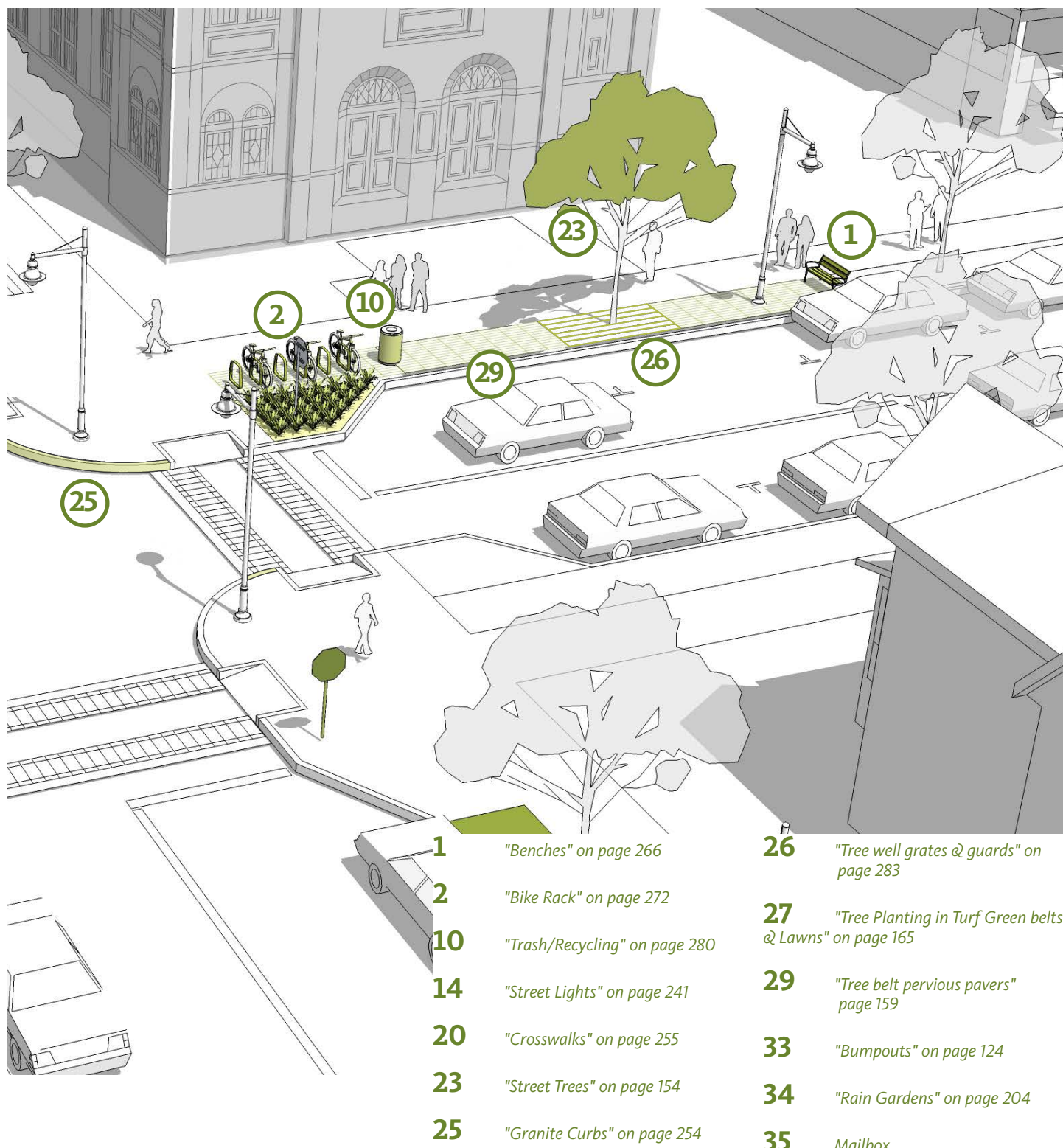
Residential Streets with 66' ROW

MIDBLOCK





Residential Streets with 66' ROW**CROSS INTERSECTION**

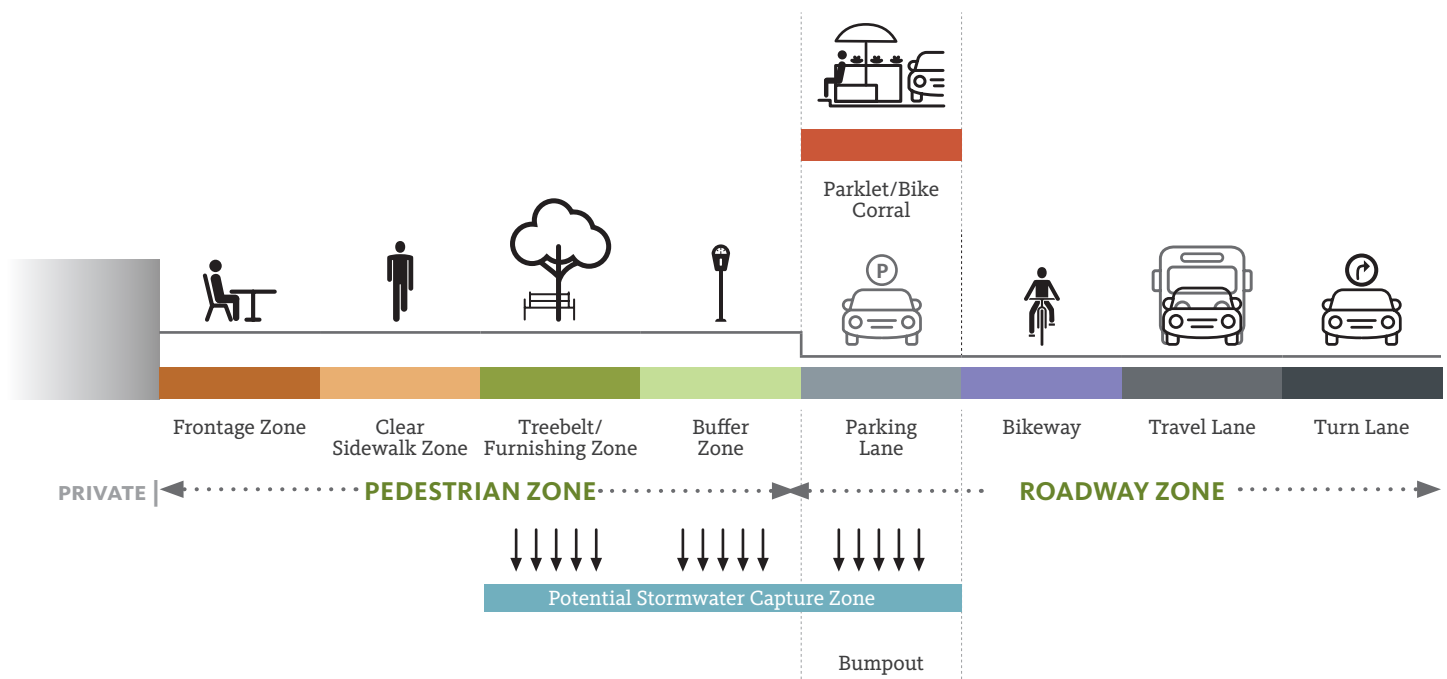


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Standard Dimensions & Siting Considerations

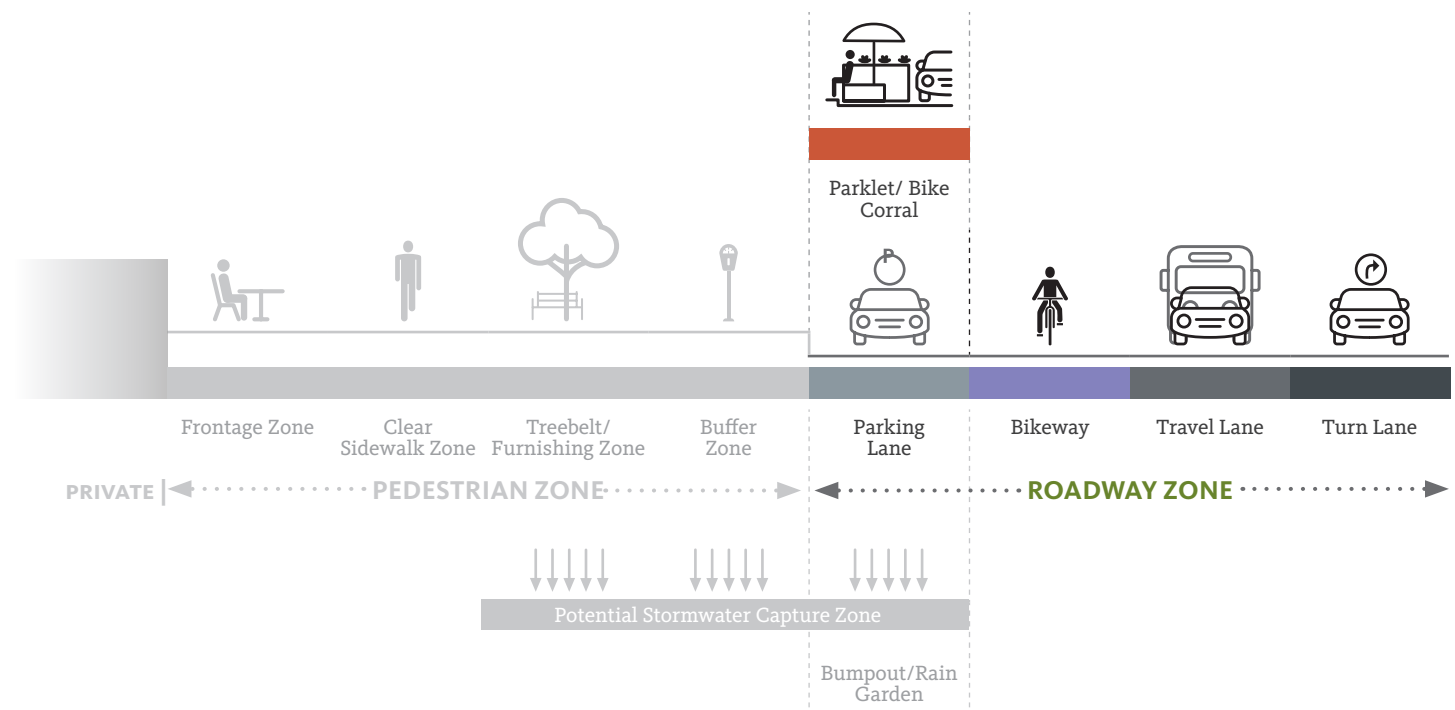
Standards for Laneways and Elements

This section provides the requirements for dimensions and siting of elements within the downtown rights-of-way. This includes minimum, maximum, and/or preferred dimensions for zones located within the Roadway and Pedestrian Zones, requirements for carrying these zones through intersections, and separation and placement requirements for individual elements within the right-of-way. This section should be consulted after the Street Type and Roadway and Pedestrian Zone options have been selected for a project to ensure that all applicable local, state and federal standards are met. Additionally, this section should inform the "fit up" of the streetscape as individual elements are selected and located in the design process.



Roadway Zones

This zone is dedicated primarily to the movement of personal, delivery, and transit vehicles and bicycles in a way that is physically separated from pedestrians. The following Roadway Zone standard dimensions are critical to ensuring that the City is meeting all state and federal requirements for vehicular transportation routes, and appropriately designing streets to meet current and anticipated traffic volumes, types, speed, and design speed. While the street design hierarchy prioritizes pedestrians, the dimensions begin with roadway zones because these lanes have the least flexibility in order to meet minimum spacing requirements.



Zone	Dimensions	Considerations	Add'l Info
Parking Lane 	Parallel Parking: 7.5' x 20' Angled Parking: 9' x 18' (length measured perpendicular to curb when stall is at 60 deg. angle)	- A 20' minimum no parking zone should be established from a crosswalk to the first parking stall at intersections. - A 30' minimum no parking zone should be established from a crosswalk to the first parking stall at approaches to a signalized intersection. - Bumpouts may be utilized within this required setback distance. VTrans ref. dwg. Standard E-193 Pavement Marking Details Parking Stall Markings Section 3B.19	<i>App. A-1</i>
Parking Zone Placemaking Options 	6' x 12' (1 parking stall) 6' x 32' (2 parking stalls)	- Parklets and bike corrals shall be immovable once placed, but capable of being removed and stored during winter months or when required by request of City. - Parklets are permitted on streets with design speeds of 20 MPH or less per the guidance on page 125. Greater separation and/or more intensive buffer elements may be required by the City Engineer for streets with high traffic volumes or high volumes of heavy vehicles. - In general, parklets should be located at least one parking space away from an intersection or street corner, 4' from an adjacent parking stall, and 1'-2' from an adjacent travel lane. - Parklets and bike corrals are sited along the curb line on streets where on-street parking spaces exist. They can be considered in any location where there are or would be space(s) for on-street parallel or angled parking, except for where accessible spaces are provided. - Parklets are not permitted along the curb in areas where bus stops or bus pull-offs are located. - Parklets may not be constructed over utility access panels, manhole covers, storm drains, or fire hydrant shut-off valves. - Bike Corrals can be considered when Pedestrian Zone space is limited and should be dedicated to other pedestrian uses, or where bike parking demand is very high.	<i>page 125</i>
Bikeway 		Shared Lane Conventional Lane Adjacent to Curb Buffered Lane Adjacent to Curb Buffered Lane Adjacent to Parking Protected Bicycle Lane Contra-Flow Lane Left-Side Lane Advisory Lane Bicycle Boxes Two-Stage Left Turn Boxes Markings & Signage VTrans ref. dwg. Standard E-131B Bicycle Guide Sign Details VTrans ref. dwg. Standard E-194 Bicycle Pavement Markings and Sign Layout	<i>page 137</i> <i>page 138</i> <i>page 139</i> <i>page 140</i> <i>page 141</i> <i>page 142</i> <i>page 143</i> <i>page 144</i> <i>page 145</i> <i>page 146</i> <i>page 148</i> <i>App. A-5</i> <i>App. A-5</i>
Travel Lane 	10' minimum; 10.5' minimum on transit/truck routes	- Wider travel lanes (11' to 12') are appropriate in locations with high volumes of heavy vehicles. - Travel lane widths of 10' generally provide adequate safety in urban settings while discouraging speeding. City may choose to use 11' lanes (10.5' min.) on designated truck and bus routes. VTrans ref. dwg. Standard E-193 Pavement Marking Details	<i>App. A-1</i>

Zone	Dimensions	Considerations	Add'l Info
Turn Lane 	9.5' min. 10' min. on Transit/Truck Routes	Assess left-turn volumes and evaluate the overall traffic network to determine whether or not left turns can be restricted or removed at a particular intersection. VTrans ref. dwg. Standard E-191 Pavement Marking Details VTrans ref. dwg. Standard E-192 Pavement Marking Details	App. A-1

Add: Bus Berth

Pedestrian Zones

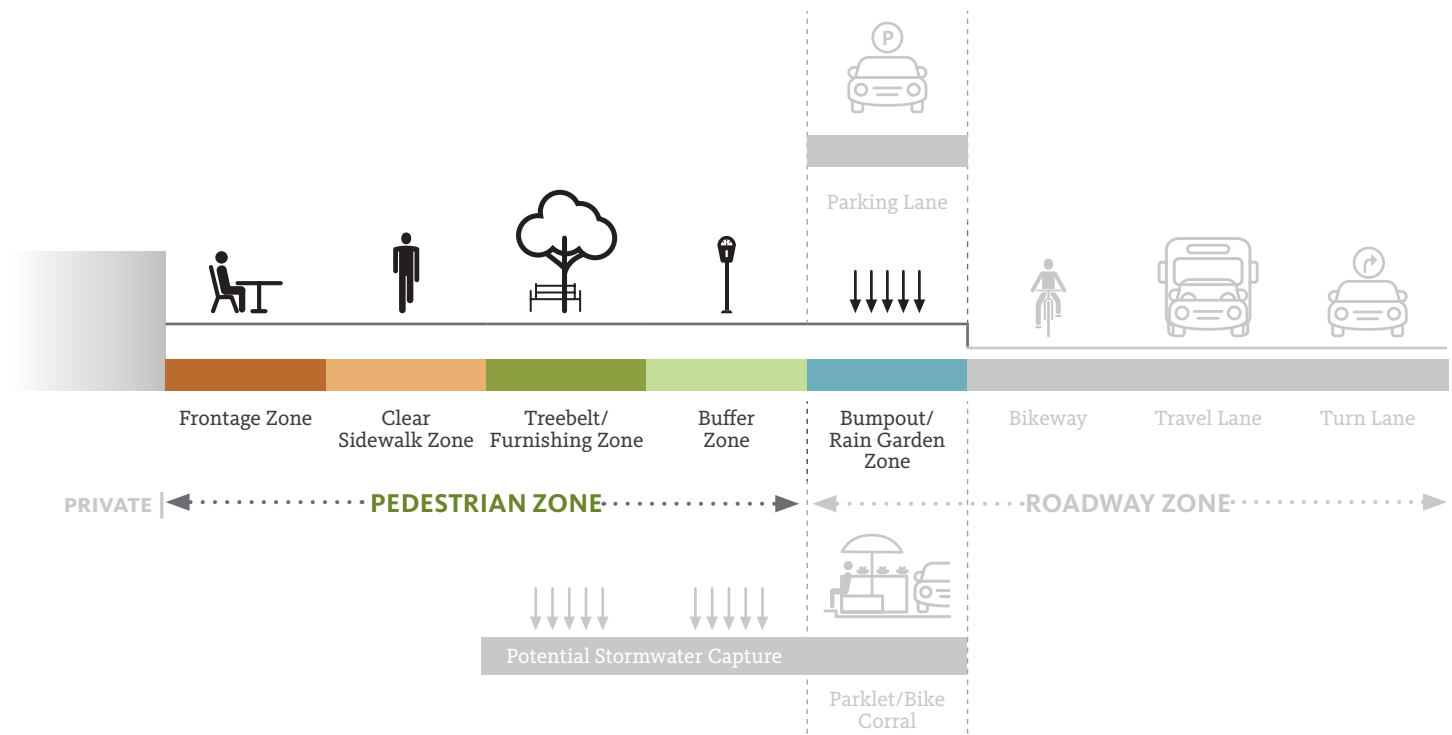
This zone is where all activities aside from driving and parking occur; in addition to unobstructed space for pedestrians to walk, this includes space for street trees and stormwater infrastructure, benches, lighting, mailboxes, and other furnishings, and in some cases, outdoor seating or dining for private uses along a street. The width of the Pedestrian Zone is essential to the degree of comfort, enjoyment, and accessibility of walking along a street. Narrow sidewalks do not support lively pedestrian activity, and may create dangerous conditions that cause people walk in the street. Therefore, the Clear Sidewalk Zone is the most critical element within the Pedestrian Zone; the minimum dimension should always be maintained and may require flexible sizing or elimination of other zones.

Typically, a five foot wide Sidewalk Zone supports two people walking side by side or two wheel chairs passing each other. An eight foot wide Sidewalk Zone allows two pairs of people to comfortably pass each other, and a ten foot or wider Sidewalk Zone can support high volumes of pedestrians. There may be corridors with high volumes of pedestrian activity for which a pedestrian level of service study would be helpful to determine sidewalk widths that adequately support pedestrians.

Vibrant sidewalks bustling with pedestrian activity are not only used for transportation, but for social walking, lingering, window-shopping, and people watching. Sidewalks, especially along Downtown Commercial, Downtown Mixed-Use, and Neighborhood Main Streets, should encourage social uses of the sidewalk realm by providing adequate widths.

When determining Sidewalk Zone widths, factors to consider include the available right-of-way, accessibility, anticipated pedestrian volumes, ridership projections for locations near transit, and the locations of bus shelters and transfer points. While these guidelines prescribe more generous preferred Clear Sidewalk Zone widths, they also establish a total minimum sidewalk width of 5' for all Street Types.

Widening sidewalks by a few feet is often cost prohibitive and may require significant changes to drainage infrastructure as well as the relocation of utilities. If feasible to adjust curb locations, the widening of sidewalks may be achieved by narrowing and/or removing travel or parking lanes, or establishing setbacks as a part of adjacent private redevelopments. Where setbacks cannot be established or roadway space cannot be reallocated, consider converting the roadway to a Shared Street to increase pedestrian space and reduce vehicle speeds.



Zone	Dimensions	Considerations	Add'l Info
Curb 	Granite 6" wide 17" min./19" max. total slab height 6" vertical reveal Concrete 6" wide top 9" wide base 18" total slab height 6" vertical reveal	The Curb Zone should be free from all objects, furniture, sign posts, etc. See ref. dwg. VTrans Standard C-10 Curbing	<i>App. A-2</i>
Stormwater/ Rain Garden Zone 		See chapter on " <i>Street Ecology</i> "	<i>page 153</i>
Buffer Zone 	18" minimum next to parked cars 2' minimum next to bicycle facility	- An 18" minimum setback is required for vertical elements adjacent to parking. With a 6" curb, this means a minimum 12" buffer is required next to parking. - Bicycle parking must be 24" from a curb. - On roadways without on-street parking and/or higher speeds, setbacks for vertical elements should be greater than 18" where feasible.	
Tree Belt/ Furnishing Zone 	6' minimum 8' preferred	Maximize the Tree Belt/Furnishing Zone to provide as much of a buffer as possible between the Sidewalk Zone and adjacent street traffic; however do not reduce the Clear Sidewalk Zone beyond the minimum recommended widths. When space is limited at the surface, resulting in a Tree Belt/Furnishing Zone of less than 8', the soil volume for trees can be achieved by encroaching under the Buffer Zone, Clear Sidewalk Zone, and, if applicable, Raised Cycle Track. For new developments and where opportunities are available to create a consistent setback, designs should accommodate wider sidewalks with generous Tree Belt/Furnishing Zones. Consider traffic calming elements, such as curb extensions or chicanes where on-street parking is present, to provide more space for street furniture, trees, and other amenities.	<i>page 154</i>

Zone	Dimensions	Considerations	Add'l Info
Clear Sidewalk Zone 	5' width minimum Preferred with varies by street type; see street types Slab thickness: 5" residential 8" commercial Compressive Strength:	The Sidewalk Zone should be clear of any obstructions including utilities, traffic control devices, trees, and furniture. While these guidelines prescribe more generous preferred Sidewalk Zone widths, they also establish a total minimum sidewalk width of 5' for all Street Types. The ADA minimum walkway width is 4', with a 5' width every 200'; this may be applied when severe dimensional constraints exist upon approval of the City Engineer. When reconstructing sidewalks and relocating utilities, all utility access points and obstructions should be relocated outside of the Clear Sidewalk Zone. VTrans ref. dwg. Standard C-2A Portland Cement Concrete Sidewalk Drive Entrances With Sidewalk Adjacent Curb VTrans ref. dwg. Standard C-2B Portland Cement Concrete Sidewalk Drive Entrances With Sidewalk And Green Strip	App. A-2
Frontage Zone 	Not required; preferred widths based on adjacent use: • 0'-1' width where building or fence setbacks are required by building code. • 1.5' min. where retail and hospitality uses are encouraged. • 3.5' min. where outdoor seating and display are anticipated/encouraged. See Preferred width for each street type.	The Frontage Zone is the area between the Clear Sidewalk Zone and either the front wall of an adjacent building, or the edge of a right-of-way. It is where people window shop, enter and exit buildings, or sit and gather at outdoor cafés/restaurants. It also provides a buffer from a building facade that is built to a Frontage Line, so that pedestrians do not have to walk with their shoulders pressed against a building. The ideal dimension for a successful frontage zone is 3.5'. This Zone should be maximized to provide space for cafés, plazas, and greenscape elements along building facades wherever possible, but not at the expense of reducing the Clear Sidewalk Zone below the minimum widths.	page 122

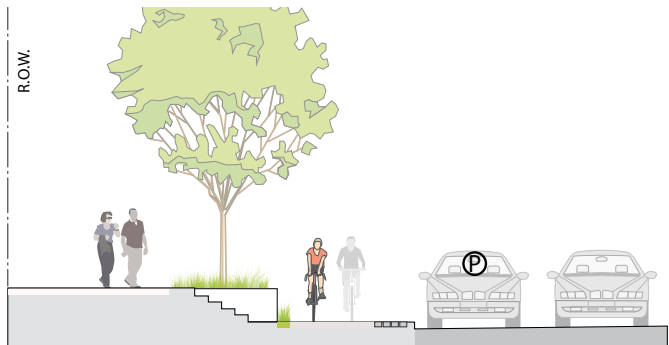
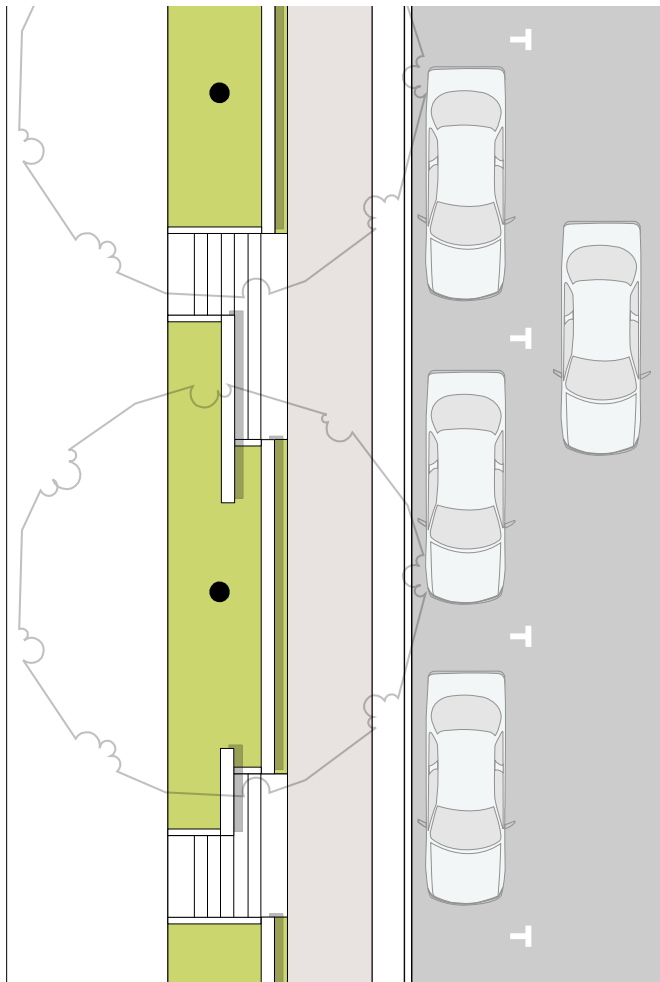
Grade Changes

Because of Burlington's sloping terrain, there currently exist a few street conditions where there are challenging differences in elevation between street level, pedestrian walkway, and private property. These differences, for example, make it difficult for someone who parks on the street to make their way up to the sidewalk and into their destination. These discrepancies should be addressed on a case-by-case basis as conditions change from site to site, but the following diagrams address some common factors that need to be considered. In most cases, the height difference (beyond the standard 6" curb height) that needs to be mitigated between street and sidewalk ranges between 2–3 feet and the condition occurs at the mid block, not at intersections. These examples anticipate addressing the grade change within the Tree Belt/Furnishing zone.

In the first scenario (**Level Change—Wide Pedestrian Zone**, next page, left), the condition shown accounts for a raised cycle track (proposed Main Street condition) but the site conditions are generous enough to accommodate the level change while maintaining all minimum zone widths and setbacks.

In the second scenario (**Level Change—Narrow Pedestrian Zone**, next page, right), a constrained sidewalk condition allows the level mitigation to occur within a reduced tree belt while maintaining an adequate buffer next to parking and maintaining a minimum Clear Sidewalk Zone. This condition wouldn't accommodate a Frontage Zone but paving or grates within the Tree Belt/Furnishing Zone, and should not be used for long traverses, but would allow a clear and usable sidewalk dimension with flexibility for accommodating door swings and other encroachments.

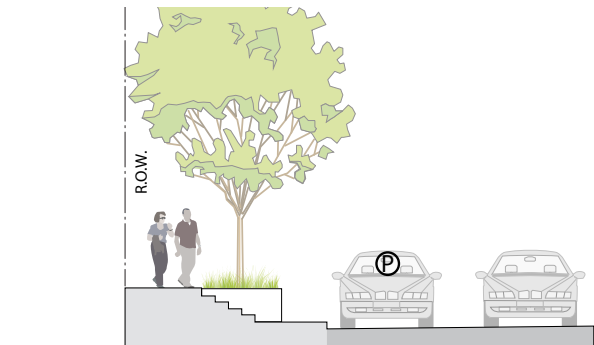
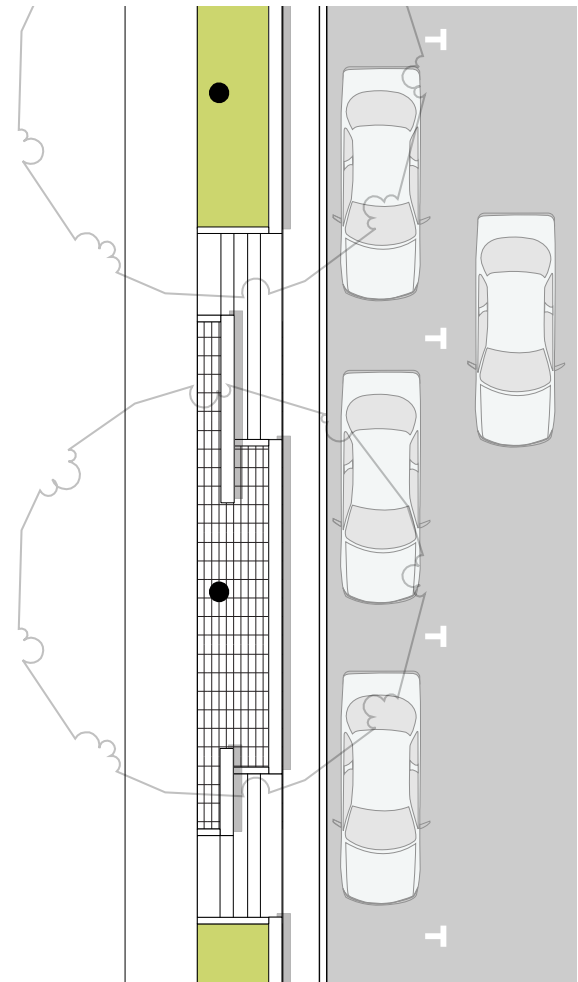
Grade Change—Wide Pedestrian Zone



	Clear Sidewalk Zone	Treebelt / Furnishing Zone	Bikeway	Buffer Zone	Parking Lane	Travel Lane
	3.5'	8'	8'	6.5'	2.5'	
	Pedestrian Zone					
	29'+					

Option for accommodating grade changes within a wide Pedestrian Zone, utilizing a tree belt zone that is planted or paved.

Grade Change—Narrow Pedestrian Zone



	Clear Sidewalk Zone	Treebelt / Furnishing Zone	Buffer Zone	Parking Lane	Travel Lane
	5'	5.5'	2.5'		
	Pedestrian Zone				
	13.5'				

Option for accommodating grade changes within a narrow Pedestrian Zone, with the tree belt zone utilizing either pavers or tree grates.

Intersection Zones

Intersections are critical yet challenging parts of the city streetscape and transportation network, as they are the place in which all of the various uses within the public right-of-way (ROW) come together, and intersect. Conflicts between pedestrians, bicyclists, and drivers are typically greater here, but when designed carefully, intersections can not only be safe, but they can also tap civic and economic potential by infusing these challenging spaces with street life and activity.

Intersection design should be self-evident to all users, and should promote awareness and visibility between all users so that they can more effectively share the space. Delays should be minimized for all modes of travel, while prioritizing signals for pedestrians, cyclists and transit, utilizing predictable/natural signal phasing.

Pedestrian

- Intersections should be designed to be as compact as possible to reduce pedestrian exposure to traffic while crossing.
- Ensure that signal timing works for both commuters and slower walkers.
- Locate crossings and waiting areas within sight triangles.
- Reclaim area within the right-of-way that is not used for driving or cycling to sidewalk or usable pedestrian space.
- Continuity of pedestrian paths of travel and connectivity should be improved and encouraged by introducing crosswalks at signalized and unsignalized intersections where possible.
- Landscape or use sustainable materials for all spaces not used for walking, cycling or driving.

Cyclist

- Bicyclist left turns may be facilitated using intersection crossing markings, protected intersection treatments, protected lanes in advance of an intersection, bike boxes, and 2-stage turn queue boxes.
- Merge cyclists with slow speeds and low volumes, separate cyclists from fast speeds and high volumes.
- Prioritize cyclists over turning drivers.
- Ensure sufficient queue space for cyclists.
- At intersections, accommodate bicyclists through mixing zones. Avoid the use of mixing zones or restrict turns where turn volumes are likely to make bicyclists feel unsafe, or where a protected lane enters the intersection to ensure a protected facility through the intersection.
- While a dedicated bicycle signal is generally desirable from a safety point of view, an added signal phase lengthens the overall cycle length and exacerbates delay for all users.

Transit

- Minimize delay to transit vehicles using transit signal priority. Determine the transit stop placement based upon the

location of major destinations, transfer activity, and route alignment. At signalized and unsignalized intersections, far-side transit stops are preferable. Bus bulbs improve transit travel times and provide a dedicated space for waiting passengers.

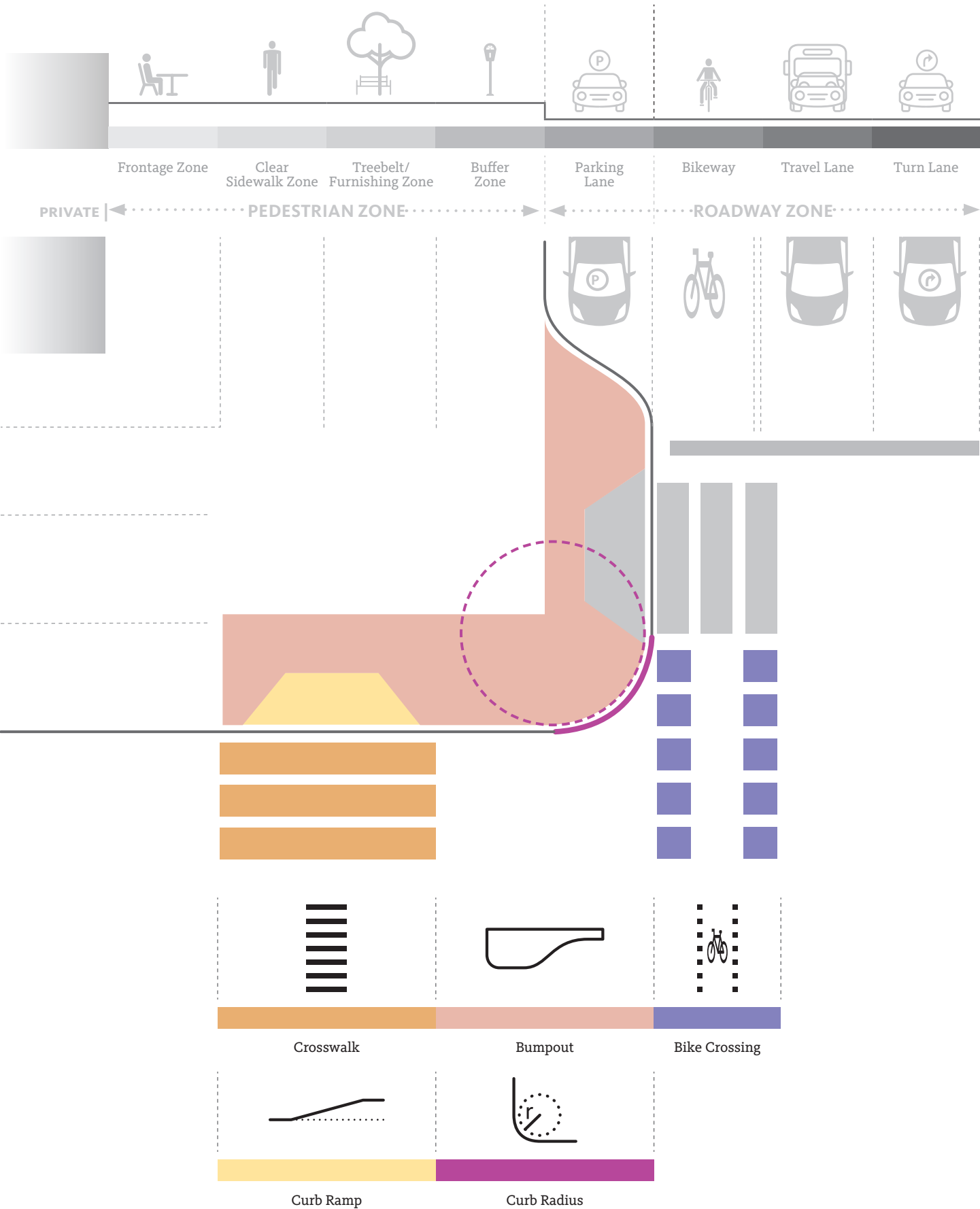
Vehicles

- Intersection design should limit the addition of dedicated turn lanes and pockets, and remove slip lanes where possible.
- Control speeds by tightly managing the design and spatial layout of intersections. Tighten lane widths and eliminate unnecessary travel lanes, reallocating space for other uses which will create a balanced use of the ROW.
- Limit opportunities for drivers to make sudden movements.
- Square off skewed intersections.
- Minimize speed, especially at turns. Curb extensions, tight corner radii, cycle tracks, and pedestrian safety islands force drivers to navigate intersections cautiously.
- Set signal timing between intersections to keep travel speeds slow.
- Align lanes so that number of approach and departure lanes are equal.
- Align lanes through an intersection and enforce turning lanes with curb extensions to reduce merging and weaving. Delineate guide markings through intersections to reduce conflicts and guide turning vehicles.

Reducing Crosswalk Length: Roadway Narrowing & Bumpouts

In addition to gaining adequate width for walkways and tree belts, reducing the Roadway Zone width allows for shorter crossings for pedestrians at intersections, which should be a priority when designing Great Streets. For the past century, the trend has been towards ever longer crosswalks, as streets were widened to accommodate more vehicular traffic with more and wider travel lanes. These standards are intended to reverse that trend by shortening the crosswalks as much as possible, thereby reuniting the two sides of the street.

Narrowing the roadway is one strategy for reducing crossing distance. Narrowing can be combined with a second strategy of introducing "curb extensions" or "bumpouts." These are constructed at intersections, and are typically 8' in depth, matching the depth of a parallel parking lane. The reductions in crossing distance and crossing time are significant, and increases the safety for pedestrians when within the Roadway Zone. On a 40' roadway, bumpouts can reduce the crossing length from 40' to 24', and the average exposure time from 10 seconds to 6 seconds. On a 35' roadway, bumpouts can cut crossing time and exposure in half, from 8 seconds to 4 seconds.



Zone	Dimensions	Considerations	Add'l Info
Crosswalk 	Commercial: 14'–16' width Residential: 10'–12' width Verify this works with alignment with curb ramps.	Safe and frequent crosswalks support a walkable urban environment and reinforce pedestrian right-of-way at intersections. Crosswalks should be applied at: • All open legs of a signalized intersection. • Across a roadway approach controlled by a STOP or a YIELD sign if there is a sidewalk on both sides of the approach. • At intersections on roadway approaches not regulated by signals, STOP signs or YIELD signs if the speed limit is 25 MPH or less, and there are sidewalks on both sides of the approach. Because non-intersection pedestrian crossings are generally unexpected by the road user, warning signs should be installed and adequate visibility should be provided by parking prohibitions. • Mid-block as needed. Because children constitute a high percentage of the walking public, crosswalks that provide accessible routes to schools are among the first locations that should be considered. Elderly pedestrians and pedestrians with disabilities are highly dependent on transit, so providing crosswalks at or near transit stops as well as near housing for the elderly should also receive high priority. Marked crosswalks should be placed as close to perpendicular as possible, unless a traffic engineering study determines otherwise.	page 255
Bike Crossing 	Crossing lane width should match width and positioning of the leading bike lane (5' min. width, 4' width in constrained areas)	Intersection Markings Typical Applications: • Across signalized intersections, particularly through wide or complex intersections where the bicycle path may be unclear. • Along roadways with bike lanes or cycle tracks. • Across driveways and Stop or Yield-controlled cross-streets. • Where typical vehicle movements frequently encroach into bicycle space, such as across ramp-style exits and entries where the prevailing speed of ramp traffic at the conflict point is low enough that motorist yielding behavior can be expected. • May not be applicable for crossings in which bicycles are expected to yield priority, such as when the street with the bicycle route has Stop or Yield control at an intersection. Because the effectiveness of marked crossings depends entirely on their visibility, maintaining marked crossings should be a high priority.	page 147
Bumpout 	Width: 7.5' (ensure consistent with the adjacent parking lane dimension) 5' min. length beyond extension of corner property line	With on-street parking required to be 50' from the corner of the intersection, bumpouts are an ideal treatment to occupy this space for Pedestrian Zone amenities. Bumpouts can also be used for curb extension at mid-block crossings. See the "Street @ Intersection Assemblies" and "Street Ecology: Stormwater" sections for information on how to design and utilize the space created within bumpouts.	page 78 page 193

Zone	Dimensions	Considerations	Add'l Info
Curb Ramp 	Nominal Dimensions & Grades - Ramp width: 48" min. - Running slope: 1:12 (8.3%) max. in new construction - Cross-slope: 1:48 (2%) max. - Counter-slope: 1:20 (5%) max. at gutter 5' min. flat (or 2% max. slope) landing at top of ramp Flared Ramp - Sidewalk Ramp Type 5 - Flare slope: 1:10 (10%) max. - Min. width: 48" (not incl. flares) Curbed Ramp - Sidewalk Ramp Type 3 Detectable Warning 24" min. from back of curb - Full width of ramp	A curb ramp provides pedestrians a smooth transition from the sidewalk to the street. Appropriately designed curb ramps are critical for providing access across intersections and at midblock for people with mobility and visibility disabilities. ADA guidelines require all pedestrian crossings to be accessible to people with disabilities by providing curb ramps. Curb ramps also benefit people pushing strollers, grocery carts, suitcases, or bicycles. - Paired curb ramps preferred. - One at each crossing perpendicular to curb line. - Within crosswalk at foot of ramp. - No exposure to moving traffic lane. - Avoid diagonal curb ramps where possible. - Avoid fully flared ramps that wrap the entire intersection curb radius. - Small lip at connection with street for stormwater flow management. See ref. dwg. VTrans Standard C-3A/B Sidewalk Ramps <i>"Detectable Warnings/Truncated Domes"</i>	<i>App. A-3</i> <i>page 257</i>
Curb Radius 	10'-15' radius	Curb radii determine the speed at which vehicles are able to turn corners. Within the downtown core, there is a desire to encourage slower driving speeds that improve the safety for all users. Therefore, curb radii in the range of 10'-15' will work well and support most transportation needs. Radii of as little as 5' may be acceptable if other factors increase the effective radius. In general, curb radii should be kept to the minimum consistent with overall safety and operations. Larger radii should be considered carefully and only implemented as requirements dictate. Other treatments can be considered for high truck volume areas, such as appropriately designed slip lanes.	

Utilities

In order to ensure an equitable balance of uses within the City's public rights of way, it is recommended that when whole blocks or multiple blocks of a street are rebuilt, the required and preferred dimensions and location of surface elements drive the relocation/replacement/upgrade of subsurface utilities whenever possible. This will provide greater continuity of and less uncertainty regarding the location of underground infrastructure, which is a problem that plagues many construction projects in the City. Additionally, this will provide more reliable access to subsurface utilities in the event that they need to be reached in an emergency, and will involve cutting and replacing less expensive and complicated portions of the street cross section. Therefore, this section indicates the City's preferred location for underground utility systems—both public and private.

STORMWATER

Stormwater drainage facilities and structures are usually located along the edge of roadway where they often present conflicts with bicyclists. Careful consideration should be given to the location and design of drainage facilities on bicycle compatible roadways. A "bicycle safe" drainage grate with acceptable hydraulic characteristics should be used in all normal applications and must be installed flush with the final pavement or should be curb inset.

Manholes and covers should be located outside of the lane sharing area wherever possible. Utility fixtures located within the lane sharing area or any travel lane used by bicycle traffic should be eliminated or relocated. Where these fixtures cannot be avoided the pavement surface should be made flush with the particular facility.

These standards have been developed to maximize the potential use of green stormwater infrastructure, and to reduce the quantity of stormwater runoff that is utilizing the City's combined sewer system for treatment. Extensive recommendations for green stormwater infrastructure that can be incorporated throughout the Roadway and Pedestrian Zones downtown are provided in *"Stormwater" on page 193*.

AERIAL UTILITIES

These standards follow the *Municipal Development Plan* guidance that electric, telecom services that are currently aerial within the downtown core are buried when roads are reconstructed. Wherever overhead utilities exist, they should be buried when a block face or more of a street is being reconstructed.

UTILITY BOXES

Ground Mounted Controller Cabinet

Cabinet Dimensions

Vary with manufacturer, but a typical cabinet has dimensions of 26" depth and 46" width.

Concrete pad dimensions

Cabinet width + 4", depth + 4" + 2' clear zone in front of doors; 9" and 6" slab thickness.

Sub-base

2' minimum; crushed gravel—fine graded.

Setbacks

The minimum clear zone in low speed urban areas is 2' beyond the face of the curb. In other cases, the minimum is equal to the clear zone as defined by AASHTO's Roadside Design Guide. 1' min. from walkway.

Pole Mounted Controller Box

Typical Cabinet Installation

2' pole setback from curb face (applies only in urban low speed areas). 3'-4' from concrete pad to bottom of cabinet. 1' minimum from sidewalk to pole or cabinet (when they are less than 7' above sidewalk). 5' height from concrete pad to meter socket.

Concrete pad dimensions

6" thick, 3' width, 4' depth (3.5' from face of cabinet; may be adjusted as necessary where sidewalk or roadway is adjacent to controller). Pad may be deleted when pole is placed in a paved area.

Sub-base

6" crushed gravel—fine graded.

Pullboxes and Junction Boxes

Wherever feasible, these should not be located within the Clear Sidewalk Zone. If located generally within the Pedestrian Zone, covers need to be flush with the sidewalk, and feature non-slip elements.

See ref. dwg. **VTrans Standard E-173 Pullboxes and Junction Boxes** in *Appendix section A-4*.

Box Appearance/Masking

Burlington's Department of Public Works spends a great deal of time cleaning graffiti off of its property, and the gray traffic control boxes with their large, blank surfaces have been an ideal target for vandals. DPW has experimented with creative ways of addressing the issue by sponsoring the commission of a few ground mounted traffic control box murals throughout downtown. Efforts like this enhance the cultural environment, visual landscape and the quality of life for residents and visitors.

New technologies, and technologies used in other fields have made it possible to broaden box enhancement possibilities. Wraps, much like those used on city buses, have made it possible to go beyond traditional one-of-a-kind painted art and opened the graphic pool to photographers and graphic designers as well. Wraps have also made it possible to have more temporary approaches that can be replaced or changed more readily. This opens up the possibility of themed treatments that can change over time or that can be reproduced when infrastructure is replaced. Photos at right illustrate examples of treatments, including traditional painted art, and wraps with photos of historic and landscape themes.

References

See ref. dwg. **VTrans Standard E-171A Traffic Control Signals General Notes & Details** in *Appendix section A-4*.

See ref. dwg. **VTrans Standard E-171B Traffic Control Signals Misc. Details** in *Appendix section A-4*.

ADDITIONAL UTILITIES REFERENCES

The following reference drawings can be found in *Appendix section A-4 "Utility Details"*:

BED Standard 1601 Underground General

BED Standard 1602 Excavation and Conduit

BED Standard 1603 Conduit in Trench

BED Standard 1604 Typical Trench

BED Standard 1605 Fiberglass Box Single Ø Transformer Specs & Installation

BED Standard 1606 Single Ø Padmounted Transformer, Dead Front

BED Standard 1609 Utility Hole Grounding

BED Standard 1622 Three Ø Transformer Concrete Pad

BED Standard 1625 Underground Enclosures



Element Siting & Considerations

All Furnishings

Regardless of the sidewalk width, a minimum of five feet (5') must be left clear from vertical streetscape elements at all times for pedestrian through passage, and should be exceeded wherever possible. Additionally, placement of elements should follow ADA and/or PROWAG clear space requirements for Streetscape Furnishings.

- Fixed street furnishings shall not impede pedestrian traffic in the sidewalk buffer or walkway zones.
- Provide a clear, walkable, path of 5' min. width between each building entrance and the street curb. The path must be free of fixed furnishings and reasonably direct.
- Provide adequate clear space for exiting buildings per Burlington Fire Code.
- 5' min. clear space between Fire Hydrants and any Streetscape Furnishings.
- Maintain min. 1' clear space between all Streetscape Fixtures (mounted furnishings, amenities, signs, utilities, etc.)
- Maintain clear sight triangles for vehicles at intersections and driveway crossings as required by the Burlington's Comprehensive Development Ordinance.

No person may place, operate, or maintain any street furniture on a public street, sidewalk, or public right-of-way without a permit from the City of Burlington. In all cases, replacement of curbs, gutters, and sidewalks will require a permit from the City of Burlington.

A-Frame Signs (Sandwich Boards)

Temporary A-Frame signs are permitted in order to add variety and color to the streetscape, to promote downtown business, and as a supplement to business signs on facades or signs mounted within the property. Per City Ordinance:

- A-frame signs are permitted within specified zoning districts. Within downtown, these are permitted on properties located between Battery and Winooski and Pearl and Main, as well as along Lake Street and the waterfront.
- One temporary A-frame sign is permitted per business.
- Signs may be permitted in the Frontage Zone as long as applicable clearances are met, and where the sign is located more than 12' from other previously permitted signs.
- Upon approval of DPW, signs may be placed in the Tree Belt/Furnishing Zone in an area between eighteen inches (18") and five feet (5') from the face of curb.
- Signs should not obstruct the normal flow of pedestrian traffic.

- When located in the frontage zone, signs shall be no more than 4' high x 3' wide, and the total area of the sign may not exceed 8 sq.ft.
- When located in the Tree Belt/Furnishing Zone, within 40' of an intersection, or 15' of a driveway curb cut, signs may be no more than 2.5' high x 3' wide, and the total sign area may not exceed 6 sq.ft.
- Signs may not be illuminated, animated, or electrified in any way.
- Adjacent to a street parking space (except for an accessible parking space), the sign may be located only in the area on the sidewalk that is within five feet (5') of the beginning or end of the parking space, as indicated by the parking space markings on the street.
- Signs should be constructed of durable materials that are weather and rust resistant. Signs should be well-maintained and free of graffiti at all times. Signs should display the City permit number sticker on the upper right corner of the sign.
- Signs may not be attached to any other structure on the sidewalk, and should be sufficiently weighted to avoid blow-down.
- Signs shall not be placed out prior to 6am, and must be removed prior to 5pm (Sept 22-Mar20) or 7pm (Mar21-Sept 21).

Banners

Banners shall be located over the Pedestrian Zone, and not obstruct in any way the public's view of traffic signals, street signs, or any other City approved sign. Banners are to be hung on City light poles with standard banner arms, or on poles outfitted with after-market banner arms installed properly by the City. The lowest banner arm should be located at least 8' AFG.

Banners on street light poles must not exceed 24" in width and 48" in height, total length including pockets. Banners must have a hemmed top and bottom and must be made of durable cloth, canvas, nylon, or vinyl. It is recommended that banners include a slit or other design feature to reduce wind loading and enhance the durability of the banner.

Benches

Benches are an important public resource and are essential in making streets friendly for pedestrians. Benches are permitted in the public right-of-way, space permitting, on all streets. Benches and other sitting elements are also strongly encouraged in building setbacks adjacent to the public right-of-way. Permits are required for private benches placed in the public right-of-way.

- Benches in a Tree Belt/Furnishing Zone that is six feet (6') or eight feet (8') wide should be oriented perpendicular to the

street. In narrower Tree Belt/Furnishing Zones, benches may be oriented parallel to the street, facing the sidewalk. In all cases, benches should be a minimum of two feet (2') from the face of the curb.

- Benches in the Frontage Zone are encouraged, space permitting, adjacent to blank walls or if approved by tenant. Minimum Clear Sidewalk Zone of five feet (5') should be maintained.
- Backless Benches: Provide 36" clear space in front of and behind benches for pedestrian accessibility.
- Benches with backs: Provide 36" clear space in front of benches for pedestrian accessibility.
- Multiple street furniture elements such as planters and benches may be combined in one installation but must meet minimum placement requirements.
- Benches should not be placed on tree grates, utility covers, or manholes. Bench placement should not interfere with disabled access ramps, blue zone parking or loading areas, fire hydrants, or emergency vehicle access.
- No advertisement is allowed on benches, except placards recognizing BPRW Adopt-a-Bench donor.

Bike Corrals

Locate in street to fill one or two standard parallel parking spaces, or two to three diagonal parking spaces, in coordination with Burlington Department of Public Works. See additional detail on [page 132](#).

Bike Racks

Bike racks are an important element that provide an incentive for bicycle ridership. Bike racks are strongly encouraged throughout downtown, particularly near activity areas and destinations.

- Bicycle racks are encouraged in the Tree Belt/Furnishing Zone and in bumpouts.
- Bicycle racks are allowed in the Frontage Zone and within a building setback as long as they do not impede pedestrian traffic in the Clear Sidewalk Zone and minimum clearances are met.
- A minimum of five feet (5') Clear Sidewalk Zone for pedestrians must be maintained including when bicycles are parked in the rack.
- Maintain 3' min. clear space between bicycle racks.
- Maintain at least three feet (3') of clearance between bicycles parked at racks and any other street furniture.
- Maintain two foot (2') minimum clear space between bicycle racks and Clear Sidewalk Zones.
- Single racks may be installed parallel to the street. Continuous (multiple or ribbon) racks may be placed perpendicular to the curb as long as minimum setbacks are met including clear pedestrian zones, 18" minimum distance

from the curb face, and three feet (3') clear from other furnishings.

Bike Share Hubs

It is anticipated that many of the bike share hubs will be located on adjacent private property. When located within the public right-of-way, pods should:

- Include bicycle parking facilities that are clearly distinguished from other public bicycle parking.
- Be located within a bike corral within the parking lane or in a bumpout.
- Adhere to other placement guidelines for bike racks and bike corrals.

Bollards

Bollards are used in areas where vehicles might encroach into pedestrian areas. They may also be used to protect street lights, street trees, public art, and other sidewalk elements from potential vehicular conflict.

- Bollards should be placed eighteen inches (18") from the curb. If there is no parking in the bollard placement area, the bollard may be installed immediately adjacent to the curb.
- All bollard installations must leave a minimum of six feet (6') of clear pedestrian passage between the bollards and any adjacent property lines.
- Bollards must be removable at locations that require emergency vehicle access.

Kiosks (Map, Information & Bulletin Board)

Two types of kiosks may be located within the downtown rights-of-way: pedestrian wayfinding information/map kiosk, event/information kiosk/bulletin boards.

- It is preferred that the pedestrian wayfinding kiosk be internally illuminated. Its design should be of the highest quality and in coordination with an overall city-wide wayfinding program.
- Kiosks may not exceed seven feet (7') in height, three feet (3') in width/diameter, and one foot (1') deep.
- Kiosks should be located in the Tree Belt/Furnishing Zone, a minimum of eighteen inches (18") from the curb face, and perpendicular to the curb.
- Local event information kiosks shall be separated by a distance of not less than 150' per block face with a maximum of two kiosks per block.
- No more than two kiosks are recommended at any corner intersection.
- Local event/information kiosks may be curated or non-curated (i.e. a bulletin board). Where more than one local

event information kiosk is located on a block, at least one must be non-curated.

Movable Tables & Chairs

- Within the ROW, locate movable tables & chairs within paved Treebelt/Furnishings or Frontage Zones.
- Movable tables & chairs may be located on tree grates. Remove these at the request of the City Arborist.
- Maintain 4' min. clear space between movable tables & chairs and tree trunks and tree guards.
- No clear space is required between movable tables & chairs.

Newsracks

While newsracks serve an important function in the city, improperly placed newsracks can be an eyesore and a safety hazard for pedestrians. In an effort to minimize these conditions, consolidated, pedestal-mount newsracks are recommended for all installations.

- Newsracks must conform to the general placement guidelines outlined for streetscape elements.
- Newsracks should be located in the Tree Belt/Furnishing Zone a minimum of eighteen inches (18") and no more than thirty inches (30") from the curb face.
- Newsracks are prohibited in the Frontage Zone.
- No newsrack may be placed within three feet (3') of a utility cabinet or on top of an underground utility vault.
- No newsrack may be placed within five feet (5') of a fire hydrant, emergency facility, any driveway, or bicycle rack.
- Newsracks are not permitted within any accessible parking spaces, vehicle or passenger loading zones, or bus stop shelters.
- Consolidated newsrack groups may be placed in a continuous row with a maximum length of ten feet (10'). In this case, a space of no less than three feet (3') separating each group is required.
- It is the responsibility of the newsrack operator to ensure that the newsracks are well-maintained at all times, free of graffiti and vandalism.

Pedestrian Wayfinding Signs

Pedestrian-oriented signs have been developed for downtown to assist visitors and residents. Examples of key destinations to include in signage and/or to locate signage are libraries, post offices, government offices, transit centers, schools, museums, entertainment centers, shopping districts, parks, public rest rooms, and tourist attractions.

Place only enough signs to lead a pedestrian confidently to the destination by the best route. Avoid adding clutter to the streetscape by clustering signs in strategic locations on a single post where possible.

Planters

Well-maintained planters can be a colorful addition to the streetscape in areas where constraints exist that do not allow trees to be planted in the ground, or if additional planting is desired to compliment existing trees and tree pit plantings.

- Placement of planters in the public right-of-way must be approved by the city.
- Planters may be placed in the Frontage Zone, Tree Planting/Furnishing Zone, Parklets, and bumpouts.
- Planters must be maintained at all times, free of debris, with provisions for watering, and pruned. It is the responsibility of the permittee to maintain the planters.
- Movable planters may be placed on tree grates. Remove these at the request of the City Arborist.
- Planters should be placed no closer than two feet (2') from the face of curb.
- Maintain minimum one foot (1') clear space between planters and other streetscape furnishings; no clear space is required between planters.
- All plant materials with spines, thorns, or any other sharp protrusions are not permitted in the public right-of-way.
- Advertising is not permitted on planters.

Public Art

All art that is placed on the sidewalk or on a building face adjacent to the sidewalk, whether permanent or temporary, should not be a hazard to pedestrians and must meet all current codes, guidelines, and requirements, especially as it relates to the Americans with Disabilities Act (ADA). Art placement in the public right-of-way must conform to the general placement guidelines for streetscape elements. The location of artwork in the public right-of-way is to be coordinated with the City of Burlington and Burlington City Arts.

Public Toilets

Sidewalk toilets serve an essential function in the city for residents and visitors. Toilets should be located in areas with high pedestrian activity near shopping, public parks, and highly frequented civic locations.

- Public toilets should be located near intersections in the Tree Belt/Furnishing Zone and sidewalk bumpout zone, a minimum of three feet (3') from the face of curb.
- Public toilets must be placed a minimum of four feet (4') from existing sidewalk elements such as trees, benches, or street light poles.
- A minimum of five feet (5') of clear pedestrian through space must be maintained at all times.

- Wherever possible, public toilets should be placed in areas which prohibit stopping or standing, but not bus stops or fire lanes.
- Sidewalk toilets are not recommended on sidewalks fronting an eating establishment.

Ramp Placement

Good intersection design practice suggests that all pedestrians enter a crosswalk at the same point. The placement of a curb ramp can help direct pedestrians to the preferred crossing location. Curb ramp placement is affected by curb height, crosswalk location, curb radius, and the location of other elements such as utility poles.

Paired curb ramps are preferred rather than a single diagonal ramp because they lead directly into crosswalks and have the added benefit of providing more useful information to blind pedestrians about the location of the corner and the crossings.

Pedestrians using wheelchairs must “square off” so they approach a change of slope with both front wheels on the ground at the same time. A skewed approach would leave one caster on the ground, compromising balance and control.

Street Lights

- **Minimum 10'** from street trees.
- Maintain 36" min. clear space between street light pole base and other streetscape fixtures.

Street Trees

It is preferred to have consistent street tree spacing when possible, but the location of driveways, intersections, and the need to maintain uniform light levels within the ROW may require some variation based on the following guidelines:

- Typical street tree spacing for large and medium trees is 40' on center. (30' min.)
- Typical street tree spacing for small trees is 30' on center. (25' min.)
- Intersections: minimum 30' from intersections
- Street Lights: minimum 10'
- Curb Cuts/Driveways: minimum 6'
- Parking Meters: outside of tree grate area OR minimum of 4' in greenbelts
- Public Signage: distance will vary based on type of sign

Transit Shelters & Stops

Good transit access combined with ease of use and safe and comfortable transit waiting areas makes transit more attractive for all users, thereby increasing pedestrian traffic in the downtown. Well-designed transit stops can serve multiple functions providing services for transit users as well as for other pedestrians. Transit stops should be well-designed public spaces that allow riders to wait comfortably out of the elements.

- Bus stops and shelters are typically located on the down stream side of an intersection, and should be placed to maintain intersection sight lines, and should not limit access to undeveloped parcels.
- GMT's adopted bus shelters should be used throughout downtown where possible. All efforts should be made to integrate transit facilities to create a unique identity for downtown.
- Shelters and other transit furniture (including trash cans, bollards, and signs) currently adopted and used by Green Mountain Transit around the Downtown Transit Center should be adopted throughout downtown wherever feasible per their transit stop classification requirements.
- Major transit stops should incorporate: shelter (with integral seating), wayfinding and information kiosk, trash cans, special safety lighting, bus stop pad per GMT standards, bicycle racks, and sign.
- Standard transit stops should include: bench, trash can, bus stop pad per GMT standards, and sign. These stops may incorporate bicycle racks as needed.
- Bus stop shelter locations must maintain clearance zones that meet ADA requirements for wheelchair accessibility to and from the shelter, and to board and exit the bus.
- Bumpouts (bulb-outs) should be considered as part of the transit stop wherever possible.
- Bus shelters must also comply with the general guidelines outlined for all street furniture.

Trash & Recycling Receptacles

It is important that litter containers be provided at frequent intervals. Their use should be convenient and they should be well-maintained at all times.

- Trash and recycle containers should be placed in the Tree Belt/Furnishing Zone. They are not permitted in the Frontage Zone.
- **Trash and recycle containers should be placed on every corner at an intersection, with additional locations at high traffic areas. A minimum of two trash and recycle containers should be placed on each block except on residential streets.**

- Containers should have a covered top to keep snow, water and animals out, and should not be locked. Containers must be maintained in a clean and sanitary condition at all times.
- Trash/Recycling Receptacles shall be mounted in pairs.
- No clear space is required between trash and recycling containers.

Tree Grates & Guards

To increase the walkable area of sidewalks as well as to protect street trees, grates are recommended for all streets with heavy pedestrian activity or constrained sidewalks.

- Standard tree grate widths are six feet (6') and eight feet (8') with special conditions requiring a five foot (5') option.
- Streets with planting strips do not require tree grates.
- Tree grates need to be inspected regularly and enlarged as necessary to accommodate tree growth.
- When tree grates are used, tree guards are required. At times, tree with guards must be inspected to ensure tree and guard are not rubbing.
- Grates should meet accessibility standards.
- Maintain 1' min. clear space between streetscape fixtures and tree well curbs/fences, or tree grates.
- Only Tree Guards may be mounted to tree grates. No other fixtures may be mounted to tree grates.

Vehicular Wayfinding Signs

The vehicular wayfinding system directs motorists into the downtown core through current gateway streets. Directional signs are placed at key decisions points within the network to direct motorists to their destinations, where parking signs would direct them to the most appropriate parking facility. Vehicular wayfinding signs must comply with the general guidelines outlined for all street furniture.

Vendor Carts

Street vendors ranging from food carts to craftspeople add life to the sidewalk and should be encouraged on commercial streets, space permitting. Church Street Marketplace maintains guidance for carts on the marketplace; for other carts within the public right-of-way, the following guidelines apply:

- Vendor carts must comply with the general guidelines outlined for all street furniture.
- Vendors may be located in the Tree Belt/Furnishing Zone and must leave at least six feet (6') of clear pedestrian passage between their cart and the nearest property line. **Upon approval of DPW, vendors may be located within bumpouts or the Parking Lane as part of a Parklet.**
- Vendor carts cannot exceed **32 square feet (inclusive of all appendages), and 8 feet high at the highest point on the cart.**
- No element of the vendor installation may interfere with access to any building including paths of travel and exiting.
- Vendor carts are not permitted on any sidewalks adjacent to an accessible parking space, a designated commercial loading zone, pedestrian loading zone, transit stop, or along a curb where parking or standing is prohibited.
- All food vendors must provide a durable trash and separate recycling can adjacent to the vending area.
- The installation must be well-maintained and kept free of litter and other debris.



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Public Placemaking

Public Placemaking & Gathering

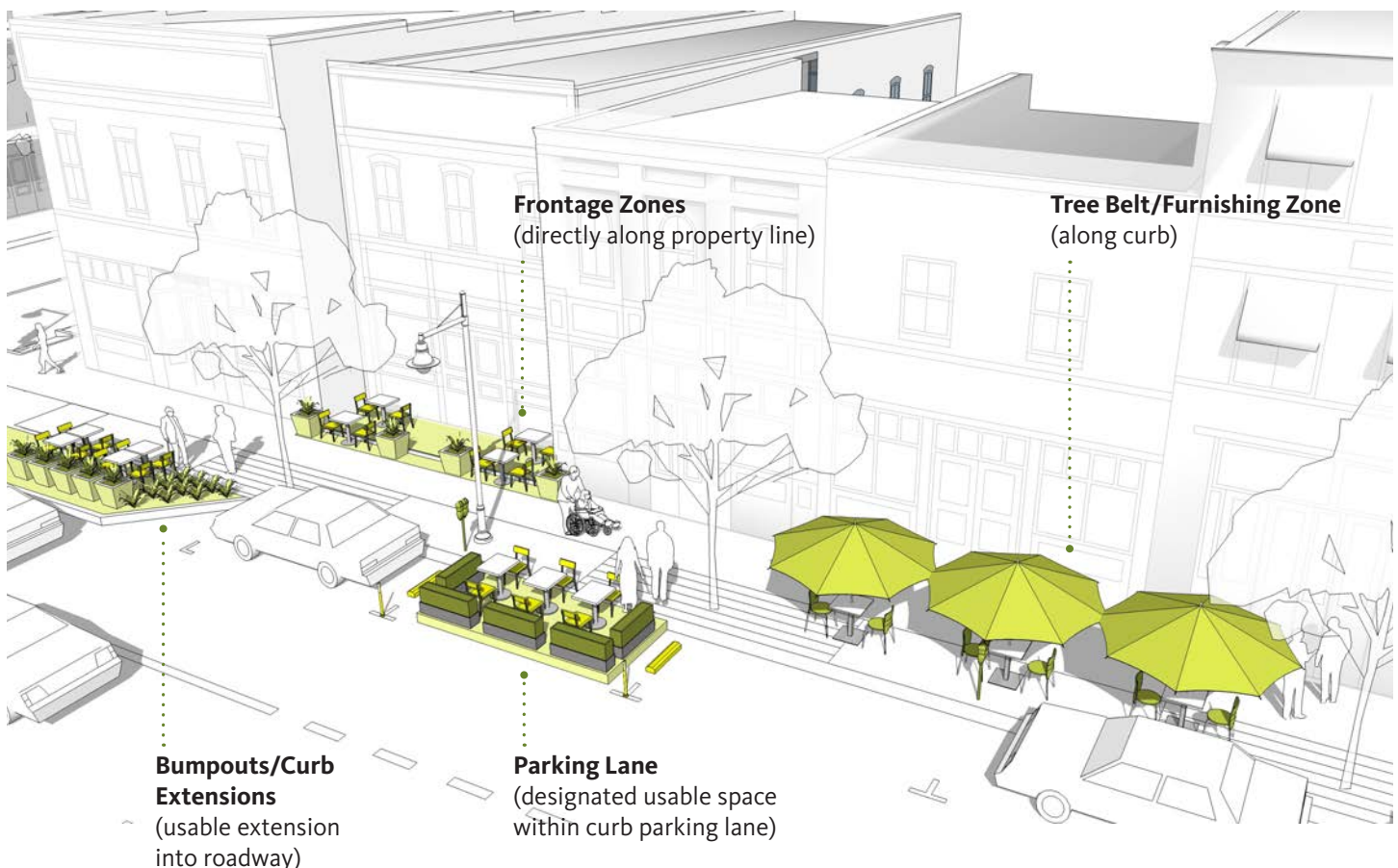
The creation of active, successful public places—public placemaking—usually occurs in or along publicly-owned spaces or rights-of-way: parks, plazas, streets, walkways. These are places which allow not only free public movement, but stopping and gathering for a variety of purposes. This may be as simple as a single person finding a place to sit and enjoy the view or observe passersby, or larger groups gathering to talk, socialize, eat, drink, and share the outdoor setting.

On a typical street, this gathering can generally occur in one of four locations:

- In the "Frontage Zone" adjacent to abutting private property and buildings.
- In the "Tree Belt/Furnishing Zone" along the sidewalk next to the roadway curb or edge.
- At an intersection on a "Bumpout" (also sometimes referred to as a "Bulb-Out" or "Curb Extension").
- In a temporary or permanent installation within the Parking Lane (also known as a "Parklet" or a "Bike Corral").

All of these public spaces can function to some extent on their own, independent of private property and private places. But along most great streets, these public places interact harmoniously with the facades and features of private buildings and spaces. In fact, *planBTV Downtown Code*, in its section on "Frontage Types," encourages active physical frontage and uses along the sidewalk; a well-designed public sidewalk helps facilitate that symbiotic relationship. Though they are driven by different rules and considerations, when public space and adjacent private activity work together, the result is usually a more vibrant public environment. These standards establish guidelines for the design of and installation within these areas, while providing enough flexibility for these placemaking opportunities to respond to the adjacent private uses which may change overtime.

planBTV Downtown Code includes two form districts in downtown: the "core," and the "center" (see [page 31](#)). While there may be properties, or even entire blocks, that are residential in nature, public gathering within the ROW is still anticipated and should be enabled, but not to the degree that is expected within commercial areas. Therefore, the public placemaking described in these Standards is intended for areas within the "core" and "center" districts which have commercial or cultural activity predominating the street level.



Example Placemaking Solutions



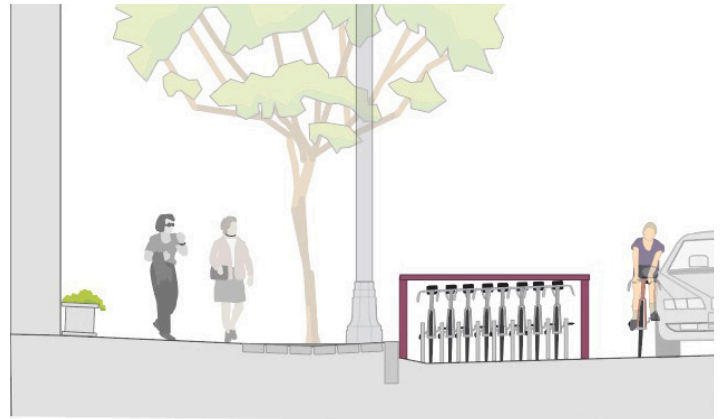
Chairs and tables in the Frontage Zone, demarcated with posts and rope



Planters in the Frontage Zone



Chairs and tables in the Tree Belt/Furnishing Zone, demarcated with posts and rope



Bike corral in the Parking Lane



Café/restaurant seating spanning both the Tree Belt/Furnishing Zone and a parklet within the Parking Lane



Parklet with sidewalk-level platform and seating in the Parking Lane

Frontage Zones (Private & Public)

Setback Areas (Private, may allow public access)

These are spaces which blend with the sidewalk space and expand the possibilities of placemaking (see *planBTV Downtown Code* for Forecourt—14.5.15, Gallery—14.5.16, or Arcade—14.5.17). They can be paved terraces or plazas (covered or uncovered), or storefronts which open broadly onto the sidewalk and become part of its activities. Trees and other landscaping on the private property effectively become landscaped edges of public space. When used sparingly and in harmony with the public ROW,

these can help make public sidewalks a “place” where the public may gather or enjoy a brief reprieve from the continuous street wall that typically defines the edges of the ROW. However, if overused, they can erode the sense of enclosure along a street, and dilute the physical and visual connections that buildings have with the active uses along them. Public officials, private stakeholders, and designers should work cooperatively to maximize mutual private and public benefit through the integration of such setbacks into the overall street design. In cases where the approved setback is adequate, the active frontage zone may sit entirely on the property rather than in the public right-of-way.



At Burlington's privately owned Courthouse Plaza on Main Street, the paved plaza created by the building setback effectively widens the public space of the sidewalk. However, streetscape elements have been placed in a way that makes the bike racks unusable.



At the Chittenden County Courthouse on Main Street, the building setback creates a public landscape that effectively widens the public space of the sidewalk.



The ground-floor facade of this café is set back onto the private property in order to create a covered outdoor space next to the sidewalk, effectively widening the public space (but not the walkable area) while enlivening the public environment and sense of place.



The facade of this florist shop is set back onto private property to create an outdoor display space that is protected by an awning; floral displays are extended across the walkway into the utility zone, effectively creating each day a temporary public landscape that pedestrians pass through, enlivening their experience on the street.

Storefronts (Private, with public interface)

The architectural facade of a building at the property line along the sidewalk forms the vertical edge of the public space, and can contribute powerfully to placemaking (see *planBTV Downtown Code* Frontage Types, especially "Shopfront"—14.5.13). The building can create a sense of enclosure and protection, particularly when a "street wall" is established by buildings that have a consistent setback along an entire block. These buildings offer the visual and tactile pleasure of architectural materials and ornament; provide illumination at night; install signage with color, form and typography that adds interest and information to the street; present broad windows that provide views of activities within; offer sun and rain protection with overhanging awnings or other structures; and of course offer goods, food, beverages, or services to activate options for passing pedestrians. All of these help make the public right-of-way, and specifically its sidewalks, a "place" where the public may gather and enjoy. Public officials, private stakeholders, and designers should work cooperatively to maximize the mutual private and public benefit of private building facades and storefront activity within the overall street design.



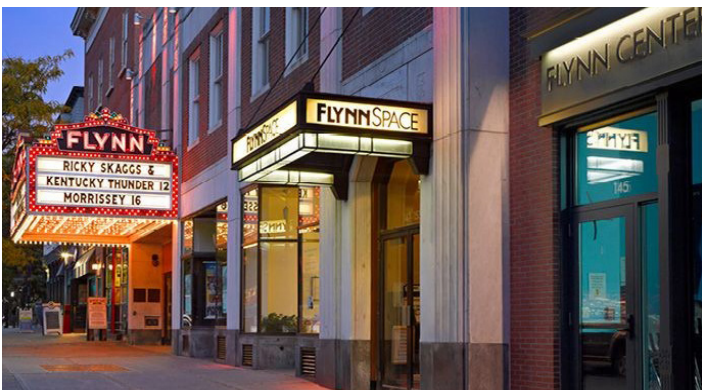
A shop owner cleans windows and waters plants along Main Street—the architectural materials, wooden door, plate glass, and planter are all private contributions to the quality of place in the public right-of-way.



Brightly colored signage and umbrellas against a white two-story facade, all on private property, create a strong sense of place along the sidewalk, framed and enhanced by the foliage and shade of mature trees in the public right-of-way.



Intimately scaled and colorful bay windows with storefront displays, attractive store signs, planter boxes, and tables and chairs are all private contributions which add visual interest and vitality to the narrow public sidewalk.



On Main Street, the signs on each of the Flynn Center's three facades contribute illumination, information, color, protective cover, and spatial definition to the public sidewalk.



The deep recesses of a historic facade provide space for covered outdoor seating along the public sidewalk.

Public Frontage Zone

The approximately 3'–6' of sidewalk in front of a downtown business, shop, restaurant or cafe can be of great importance both in the success of the business and in the "place" qualities of the public sidewalk and the overall public space of the street. The *planBTV Downtown Code* establishes a range of "Frontage Types," and this section is primarily related to private, commercial frontage which meets the Code's definitions of Shopfront (14.5.13), Forecourt (14.5.15), Gallery (14.5.16), or Arcade (14.5.17)

Because the Frontage Zone falls within the public ROW, it belongs to the public and should be regulated to assure public benefit. These guidelines are intended to encourage rather than inhibit the lively and imaginative use of this zone (whose width will vary depending on street conditions). Business operators have an inherent interest in creating an attractive environment along their frontage, and in some cases this includes providing the furnishings to encourage gathering: sitting, leaning, looking. The goal is to integrate the public Frontage Zone and the private Frontage for maximum public benefit and economic vitality.

Tables and chairs can be arranged in as little as 3.5' in depth. Other elements can include planters and flower boxes, displays of goods, and signs. All of these can help make the public right-of-way, and specifically its sidewalks, a "place" where the public may gather and enjoy. Adequate space must be assured to allow for the safe and unobstructed pedestrian pathway; but some crowding should be viewed as acceptable, as occasional jostling and "rubbing shoulders" is one of the characteristics of vibrant city life. The determination of locations suitable for private utilization of the Frontage Zone should be made in consultation with the City through the Department of Public Works encumbrance process.



Even on a narrow sidewalk with no trees, placemaking is possible: at this café on College Street, a single row of chairs with small round tables is shaded by an overhead trellis structure that supports planters.



At this London pub, the Frontage Zone is used exclusively for standing, which maximizes the users and resulting liveliness. Alcohol is permitted only within the Frontage area.



The Frontage Zone of this café is well related to the interior by large plate glass windows.



This dining area, which straddles the property line, combines the Frontage Zone with the building setback to widen its usable area.

Tree Belt/Furnishing Zone (Public)

This zone, which may range in width from 6'–11' and extend nearly the full length of the city block, provides many opportunities for public placemaking. Its location and size allow for a range of uses, including:

- seat walls, benches, and built-in seating platforms
- bike parking and amenities
- chairs and tables (for public or commercial use)
- kiosks with maps and local event information, bulletin boards
- historic or cultural displays and art exhibitions
- specialty lighting
- rain gardens, tree pit planters

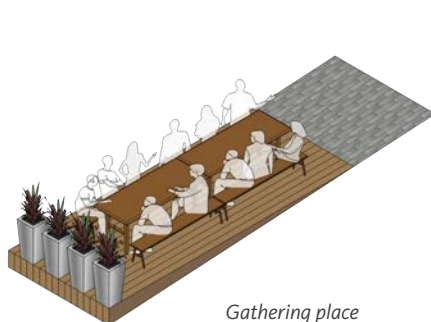
This zone, along with bumpout areas, is also critical to the maintenance and provision of a functional public realm. These spaces may be used for snow storage in the winter, and are a key portion of right-of-way that allows for the capture and treatment of stormwater before it can carry pollutants to the public waterways. The Street Ecology section will describe how these areas can be treated to achieve these goals. Ultimately, these spaces can assist with the activation of the streets, provide areas for socialization, and meet the goals for environmental performance. The determination of which uses and in what quantities should be determined on a block by block basis, in consultation with the City through the Department of Public Works encumbrance process, and with the input of adjacent stakeholders.



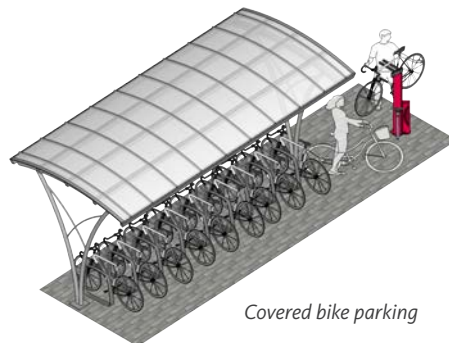
This paved tree belt accommodates tree wells and guards; planters with flowers; benches; bike racks, and waste receptacles.



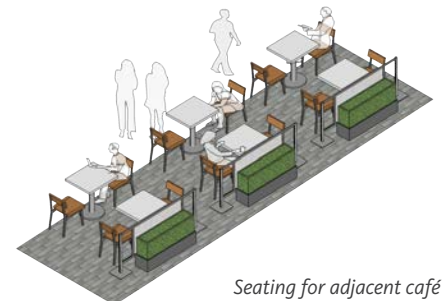
The extensive rain gardens both in the tree belt and in the adjacent bumpout frame the public walkway with greenery; a sign explains the purpose and design of the stormwater system.



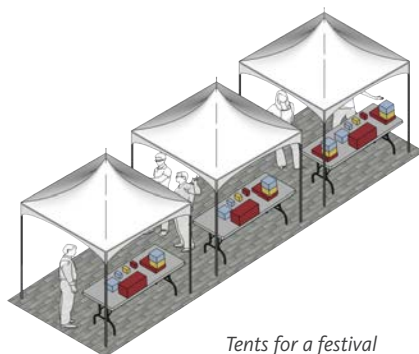
Gathering place



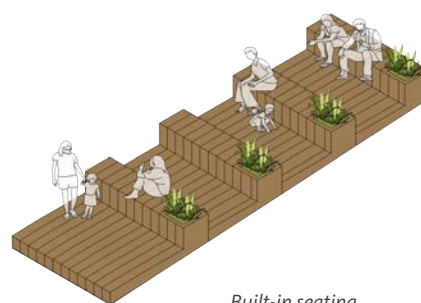
Covered bike parking



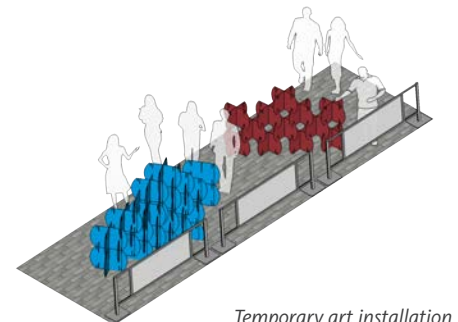
Seating for adjacent café



Tents for a festival



Built-in seating



Temporary art installation

Bumpouts

Bumpouts encourage placemaking in the same lateral zone as parklets and corrals, but at intersections instead of mid-block. Bumpouts make crossing pedestrians more visible and shorten crossing times. They also provide critical space to plant trees and capture stormwater runoff in low-lying rain gardens. They can also support public placemaking by providing space for seating and information kiosks. Because of their location, they may also provide long views down the street corridor; and their higher visibility may add to the street's overall impression of liveliness. They can be created with both permanent or temporary materials and installation techniques.



Concrete bumpout with adjacent planter barrier, wood deck, and seating



Interim bumpout created with paint and delineators, furnished with bikeshare station



Construction of a curb extension, or "bumpout"



Bumpout with pavers, tree well, bench, and trash receptacle

Parking Lane



Photo credit Samuel Heller—San Francisco Parklet Manual Version 2.2

Streets and sidewalks in downtown Burlington make up thirty-three percent (33%) of the City's land area and are an integral part of daily experience for Burlingtonians. But often sidewalks are too narrow to accommodate outdoor amenities for adjacent businesses and uses. In some cases, sidewalks can effectively be widened by extending public placemaking beyond the curb into the roadway, taking advantage of the 7.5' Parking Lane adjacent to the curb. These spaces, commonly repurposed into parklets or bike corrals, are usually captured by removing one or more on-street parking spaces and introducing other uses. Some uses can sit directly on the roadway, while others, are built on raised platforms level with the sidewalk, effectively widening the Pedestrian Zone. These areas are usually protected at each end by a parked car, and along the travel lane by a barrier.

Placemaking elements in the Parking Lane balance local needs by:

- creating a better balance the uses of city streets for all users
- encouraging walkability and cycling
- supporting lively, vibrant streets
- fostering neighborhood interaction
- supporting local businesses

The following pages provide guidelines for placemaking within the Parking Lane for:

- Parklets, which are public spaces created from a platform at sidewalk level that extends the Pedestrian Zone into the Parking Lane. They generally cover one or two parking spaces, and include an open accessible space for people to sit, rest, gather, eat and many other activities.
- Bike Corrals, which are designated areas within the Parking Lane that accommodate high capacity bicycle parking and other bicycle amenities. These could accommodate general public parking or bike share hubs.



Early "parklet" in Paris: dining in the street between two parked cars



Contemporary parklet with shade covering, located in the Parking Lane with appropriate buffers

PARKLET GUIDELINES & SETBACKS

planBTV Walk/Bike encourages the creation of a parklet plan for the construction of these elements throughout the City. Until such a time a resource might be available, the following pages outline the details regarding the placement and performance of parklets within the public right-of-way.

Context

Parklets should be located primarily along active streets with retail, restaurants, civic and other mixed land uses. Generally, parklets are not located on residential streets.

Design Speed & ADT

Parklets are recommended on streets with design speeds of 20 MPH or less, and with lower traffic volumes and lower class vehicle utilization. Parklets on streets accommodating higher speeds, higher traffic volumes, and larger vehicle classes may be considered on a case-by-case basis.

Parking Spaces

Parklets are sited along the curb line on streets where on-street parking spaces exist. They can be considered in any location where there are or would be space(s) for on-street parallel or angled parking, including spaces with metered or unmetered parking.

Corner Locations

In general, parklets should be located at least one parking space away from an intersection or street corner. In some instances, an on-street bicycle corral at least 15' in length, a curb-extension (bulb-out), or some other physical barrier may allow the city to consider a parklet closer to the corner.

Other Locations

Other locations adjacent to the curb including those fronting driveways should be considered on a case-by-case basis.

Special Curb Zones

Parklets are not allowed to replace accessible parking spaces, unless the accessible parking space is relocated in close proximity. In most instances parklets are not permitted along curbs where parking or standing is prohibited.

Transit

Parklets are not permitted in a bus stop, but may be located adjacent to a bus stop.

Utilities

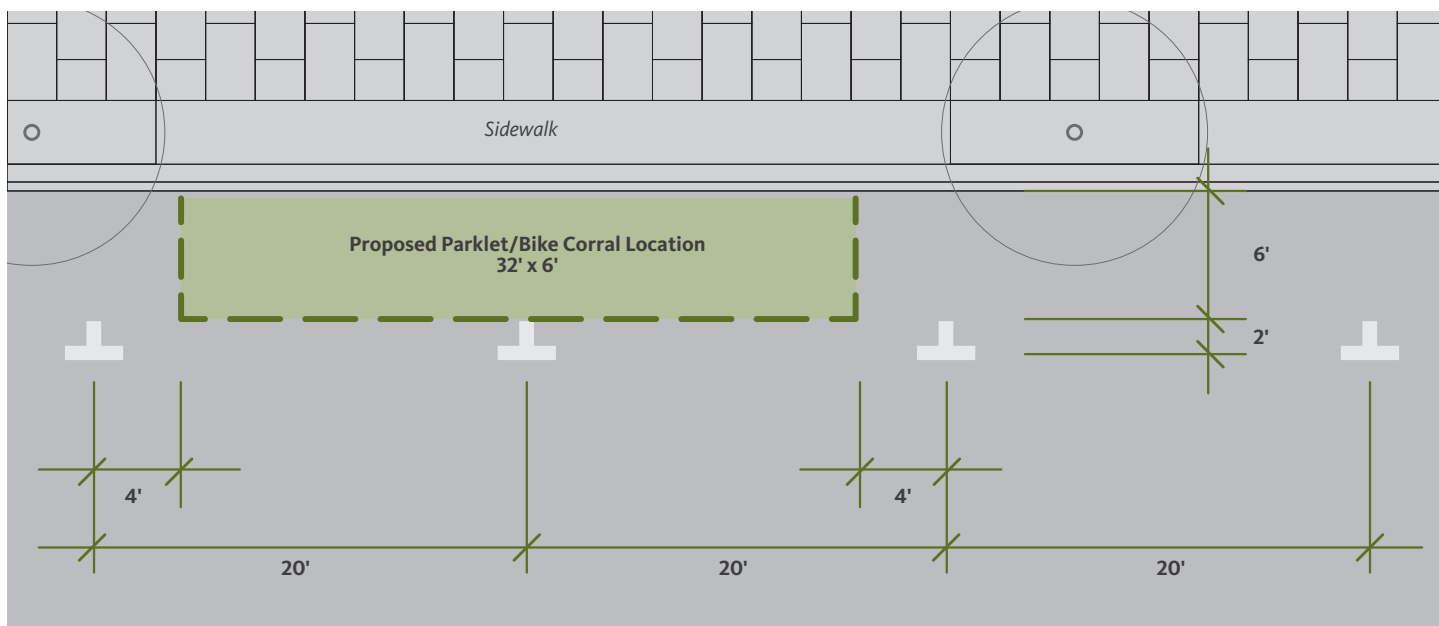
Parklets may not be constructed over utility access panels, manhole covers, storm drains, or fire hydrant shut-off valves.

Designed for Easy Removal and Restoration

Parklets should be designed for easy removal in case of emergency, for access to underground public utilities, and during the winter for snow removal and storage. For long-term installations, parklet locations and duration of installation should be reviewed for potential conflicts with future programmed streetscape improvements.

Parklets Are Public

Parklets are public spaces and should feel open and welcoming to passersby. Parklets are encouraged to display signs which state that all seating is publicly accessible at all times. When developing the parklet plan, the City will consider whether a policy on the private use of parklets by sponsors is appropriate.



Parklet dimensions and setbacks

No Advertising

Logos, advertising, or other branding should be prohibited. A small unobtrusive plaque recognizing project sponsors and material donors may be acceptable.

Siting Requirements

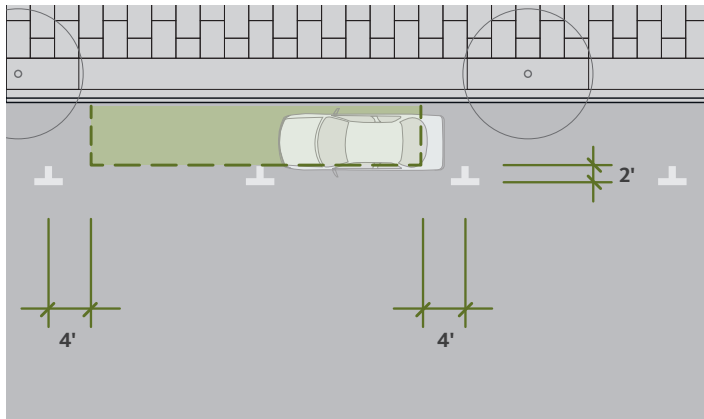
All parklet structures must be setback on either side, creating clear areas as a buffer from adjacent on-street parking spaces and driveways.

Parallel Parking

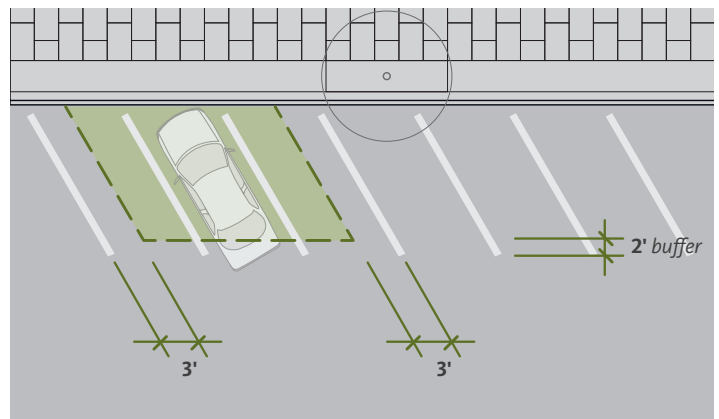
When replacing parallel on-street parking, most parklets should be the size and length of one or two parking spaces. Larger parklets could be considered depending on circumstance and existing site conditions. Smaller parklets have also been successful. For parallel parking, the parklet structure must be set back 48" from adjacent parking spaces.

Diagonal Parking

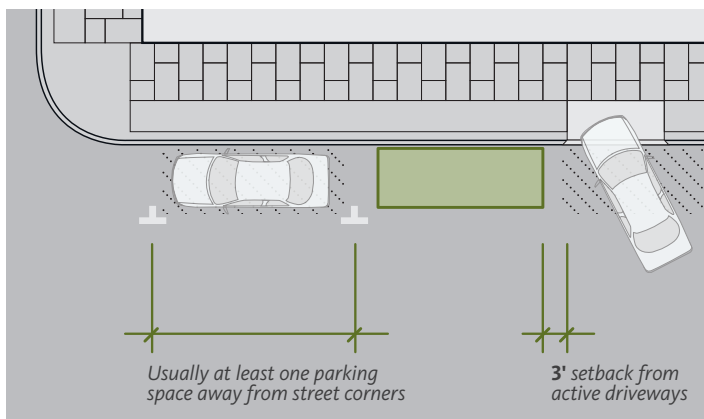
Where parklets are installed in diagonal parking spaces, it is recommended that they be designed to be the size of three



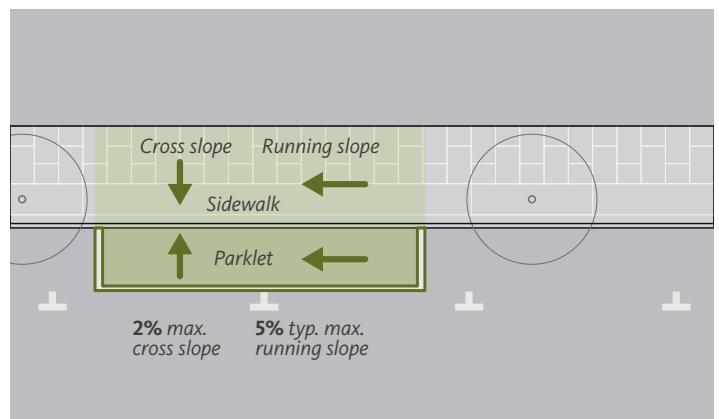
Parallel parking



Diagonal parking



Corner locations and driveways



Street Slope

combined parking spaces to maximize habitable space within the parklet. For diagonal spaces, the edge of the parklet must be set back 36" from the adjacent parking space on either side.

Nearby Driveways

Parklets located next to driveways must be set back 3' from the outside edge of the driveway.

Areas Without Marked Parking Spaces

In areas where parking spaces are not marked on the pavement, the proposed parklet should not leave an "orphaned" space that is too small to use as a full parking space.

Street Slope

Parklets are generally recommended on streets with a running slope (grade) of five percent or less. Parklets may be permitted on streets with a running slope (grade) over five percent if the parklet is designed to provide safe access for wheelchair users.

Platform

Threshold

Any openings between the sidewalk and the Deck Surface shall be flush without a horizontal or vertical separation greater than ½". Changes in level ¼" to ½" high maximum shall be beveled with a slope not steeper than 1:4 (25%).

Bolting

Bolting into the street or penetrating the surface of the road in any way is strongly discouraged. Parklets may be bolted to the existing curb, but only with a restoration plan.

Platform Surface

The top of the parklet platform must be flush with the sidewalk with a maximum gap of ½". In the case of a sloping street, see accessible guidelines in the following section.

Surface Materials

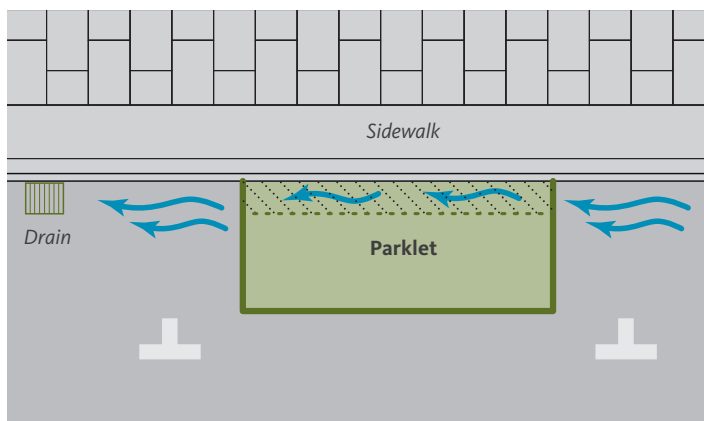
Parklet materials are highly recommended to be slip-resistant. Loose particles, such as sand or loose stone, are not permitted on the parklet.

Access

If the platform base is not a solid mass, the clear space underneath the platform surface must be accessible for maintenance through access panels, removable pavers, etc.

Drainage

The parklet cannot impede the flow of curbside drainage. Designers are strongly encouraged to cover openings at either end of the parklet with screens to prevent debris buildup beneath the deck and in the gutter.



Drainage

Enclosure

Buffer/Edges

The parklet should have an edge as a buffer from the street. This can take the form of planters, railing, cabling, or some other appropriate enclosure that is at least 6" in depth. The height and scale of the buffer required will vary depending on context. If cable railing is used, Building Code requirements must be followed, which indicates spacing between cables cannot exceed the diameter of a tennis ball.

Visual Connection to the Street

Designs should allow pedestrians on either side of the street to see into the parklet. Continuous opaque walls above forty-two inches that block views into the parklet from the surrounding streetscape are highly discouraged.

Overhead Elements

Overhead elements that span the sidewalk and connect the parklet to the adjacent building facade are not permitted.

Extend the Sidewalk

Parklets should be designed as an extension of the sidewalk, with multiple points of entry along the curbside edge.

Parklet Walls

While not visible from the sidewalk, the outside of the parklet enclosure is highly visible from across the street. Large blank walls can be an invitation for tagging. This can be mitigated by adding visual interest like pattern, color, modulation or planting.



Installation of parklet platform in the Parking Lane



Finished parklet in Parking Lane, with planter enclosure

Elements

Integrated Elements

Parklets should include some permanent seating integrated into the parklet structure. This ensures that the parklet still feels welcome after movable furniture like tables and seating are taken inside at night.

Movable Elements

The Material and Furnishings Palette identifies options for movable tables and chairs on [page 271](#) that can be utilized in public parklets. Other options can be utilized to contribute to the theme or arrangement of the parklet.

Planting

Integrated planting is strongly encouraged. Native plants, plants that provide habitat, and drought tolerant plants are encouraged.

Lighting

Lighting elements are strongly encouraged, but electrical connections to buildings will require separate electrical approvals. Designs should strongly consider solar-powered lighting over the option of running electricity from an adjacent building.

Bicycle Parking

Integrated bicycle parking is strongly encouraged. The Materials and Furnishings Palette identifies options for temporary and high capacity bicycle parking on [page 272](#) which are preferred for bike corrals, although custom racks may be installed as well. Bicycle parking can be incorporated into the parklet proposal in the following ways:

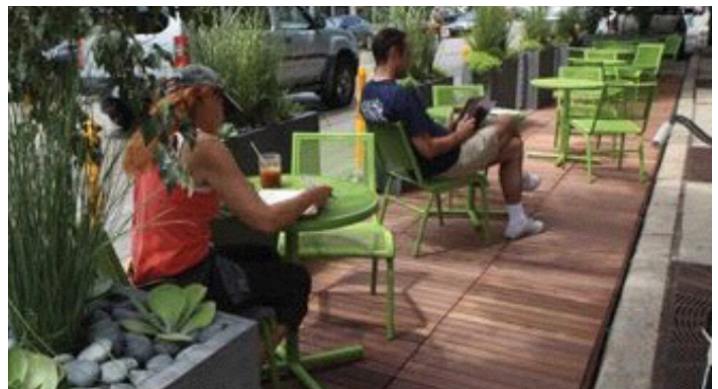
- Custom bicycle racks integral to the parklet structure.
- On the parklet platform. Applicants may wish to install bicycle racks on top of the parklet platform.
- On-street bicycle corral (adjacent to the parklet).

Art

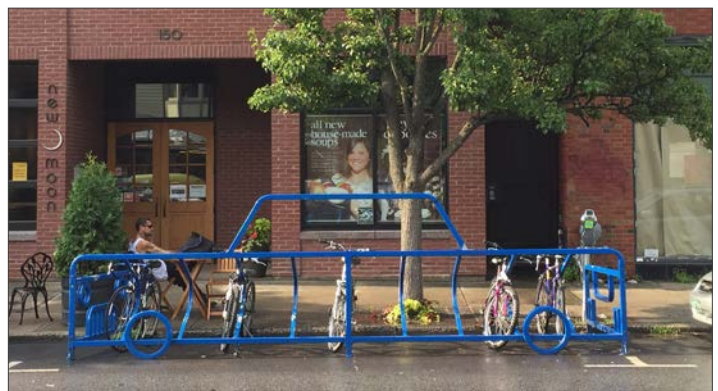
Parklets are encouraged to include a diversity of art including conventional elements, interactive pieces, performance and others.



Parklet with built-in benches



Parklet with movable chairs and tables



Bike corral in Parking Lane, sized to a single parking space



Mobile parklet

Accessibility

Accessible Path of Travel

An accessible route must connect the sidewalk to the:

- Parklet Entry
- Deck Surface
- Wheelchair Turning Space
- Wheelchair Resting Space

The Accessible Path must be a minimum of 48 inches wide on the sidewalk and not pass over tree wells. Once on the parklet's Deck Surface, the Parklet Path must be a minimum of 36 inches wide.

Accessible Entry

The Accessible Entry is where the Accessible Path crosses the threshold from the sidewalk to the Deck Surface. An ideal Parklet Entry should be located in an unobstructed area where there is the least amount of running slope along the sidewalk and curb.

Accessible Deck Surface

The portion of the parklet deck connected by the Accessible Path of Travel to the Wheelchair Turning Space and Wheelchair Resting Space must be level. The Accessible Deck Surface maximum cross slope (perpendicular to the sidewalk or curb) cannot exceed 1:48 (2%). The Accessible Deck Surface maximum running slope (parallel to the curb) cannot exceed 1:48 (2%).

For other Deck Surfaces, the running slope may not exceed 1:20 (5%). The Deck Surface shall all be on one level unless the change in level is served by a ramp, additional Parklet Entries, or otherwise permitted on a case by case basis.

When stairs or ramps are permitted, they must meet all building code requirements for rise, run, width, handrails, and contrasting stair striping for the visually impaired.

Wheelchair Turning Space

Wheelchair Turning Space allows for wheelchair users to make a 360-degree turn. This clear area shall be located entirely within the Parklet, with a 12" maximum acceptable overlap on the curb and sidewalk.

Wheelchair Resting Space

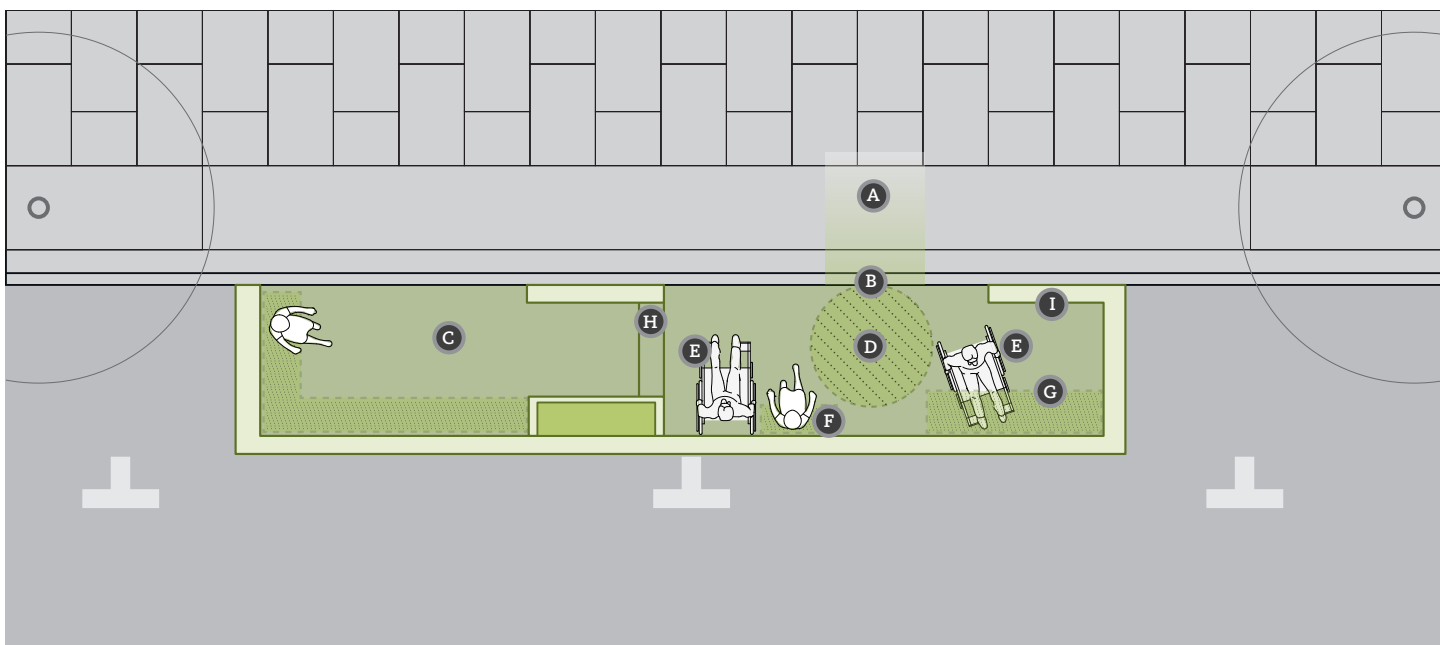
Wheelchair Resting Space has a 30" x 48" clear floor area. The Wheelchair Resting Space is permitted to overlap the Wheelchair Turning Space by 24" maximum in any orientation.

Wheelchair User Companion Seating

If fixed seating is part of parklet design, it should be configured to accommodate companion seating for a wheelchair user. The Wheelchair Resting Space should permit shoulder-to-shoulder alignment adjacent to one side of the fixed seat.

Equivalent Facilities

Where tables, counters, or drink rails are provided, at least one of each feature should be wheelchair accessible.



A Accessible path of travel

B Accessible entry

C Accessible deck surface

D Wheelchair turning space

E Wheelchair resting space

F Wheelchair companion seating

G Equivalent facilities

H Step between terraces

I Buffered edge where curb drops away

The top surface height of wheelchair accessible tables, counters and or drink rails should be 28" to 34" above the Deck Surface. Wheelchair accessible tables, counters, and drink rails shall be approachable from the front and provide an unobstructed knee clearance that is at least 27" high, 30" wide and 19" deep. When movable tables are provided in lieu of fixed, at least one of the movable tables must also be accessible.

Where drink rails are provided, a 60" long portion of a drink rail shall have 36" wide and level space adjacent to it for a side-approach by a wheelchair user.

Terraced or Multi-Level Parklets

For parklets proposed on streets with grades that exceed 5%, a terraced parklet with two or more habitable decks is acceptable. At least one of these terraces must be wheelchair accessible and provide equivalent seating, tables, and countertop facilities to those found in other habitable terraces.

Wheelchair Accessible Entry

The accessible terrace will require a wheelchair accessible entry from the sidewalk. The wheelchair accessible entry may be achieved with a structure on the sidewalk within the sidewalk furnishing zone that provides transition between the sidewalk and parklet deck.

Ramps, Steps & Stairs

Communication between terrace levels may be achieved with a ramp with a running slope not to exceed (1:20) 5%; steps or stairs. Any step or stair will require a warning strip at the nose of the step and handrails per building code.

PARKLET MATERIALS

Parklets are intended to be aesthetic improvements to the streetscape. They should be designed with this in mind, ensuring that the materials that are used are high quality, durable, and beautiful.

Locally Sourced Materials

Sourcing locally produced materials for parklets supports the local economy and reduces the embedded carbon footprint of the final structure by reducing transportation costs.

Recycled and Reclaimed Materials

Choosing recycled and reclaimed materials for parklets is highly recommended and has the additional benefit of reducing construction costs and keeping materials out of landfills.

Low Emission Materials

Choosing paints, stains, glues, and other materials that emit zero or low levels of volatile organic compounds (vocs) helps improve air quality as well as the health of the people who are constructing and using parklets.

Avoid Plastic

Plastic of any kind, including Plexiglas, is strongly discouraged.

Materials that Are Easy to Maintain

Having a strategy for removing graffiti, and replacing or repairing damaged parklet features such as plants, railings, or other elements is highly encouraged. Whereas some materials may cost more initially, they may ultimately save money in maintenance costs. For example, aluminum costs roughly three times as much as steel but when tagged, it can simply be cleaned with acetone. Project sponsors are ultimately responsible for making sure that their parklet is kept clean and in good repair.

Sustainable Timber Products

Parklet designs may not use tropical hardwood or virgin redwood. This includes FSC certified wood products.

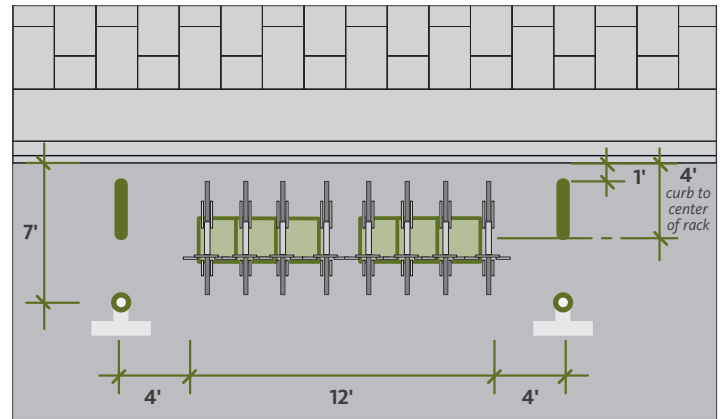
No Pressure Treated Wood or Plywood

Pressure treated lumber or plywood wood are not allowed in places where they will be visible.

BIKE CORRALS

A bike corral is a designated area for short-term bicycle parking. Bike corrals provide parking for a number of bicycles in a compact area. Bike corrals may be located on sidewalks, in parking lots, or other areas behind the curb, but are often placed in the curb lane of the street. By converting a parking space into space for a bike corral, cities can accommodate parking for 12 to 20 patrons on bicycles in the space typically used to park one automobile. Bike corrals can replace bicycle hoops, bike racks, freeing up sidewalk space for other uses such as additional pedestrian space or café dining. Bike corrals are an excellent solution for accommodating a large number of bicycles near specific activity areas and in areas with narrow sidewalks. Bike corrals are often highly valued by ground floor businesses. Despite removing a valuable curbside parking space, many businesses have found that bike corrals improve accessibility and visibility to their establishment(s) in addition to relieving pressure on limited sidewalk space.

- Bicycle parking is potentially needed in any frontage type, but is particularly necessary in Commercial, Civic/University, or Mixed use areas.
- In Destination Commercial areas, there may be competing needs for use of the Tree Belt/Furnishing Zone (e.g. for café dining & outdoor retail) and bicycle parking should be located to keep those areas open. Consider placing bicycle parking closer to intersections and not immediately in front of potential occupancy areas.
- Bicycle parking should be plentiful, dispersed, visible and conveniently located.
- Bicycle parking should facilitate transfers between modes. It should be accessible to major transit stops, transfer points and the Downtown Transit Center.
- Locating bicycle parking near to corners improves visibility, access to curb ramps, and accessibility to more block frontages. Parking should be located far enough away from the corner to avoid conflicts with curb ramps or sight lines.



Placement of corral elements in standard 20' Burlington parallel parking space.

REQUIRED BUFFER ELEMENTS

The following elements are required for parklets and bike corrals within the downtown on "slow streets." Additional protection/buffers may be required on a case-by-case basis for streets with higher volumes of traffic, higher speeds, or streets which accommodate larger vehicle classes as required by the City Engineer.

Safe-Hit Posts

Two (2) standardized safe-hit posts will be required, one for each end of the parklet. Posts must meet these specifications:

- Safe Hit Type 2 Guide Post
- 36" tall, white
- Surface Mount Pin Lock Base.
- Butyl Adhesive Pad or anchored
- Parallel parking: installed 7' from curb edge in line with wheel stop and parking bay markings
- Angled parking: install 15' from curb edge in line with parking bay markings

Wheel Stops

Two (2) wheel stops will be required, one for each end of the parklet. Wheel stops must meet these specifications:

- 3' long
- 6" reveal, black rubber with yellow stripes or concrete
- Mounted with bolts
- Parallel parking: installed 4' from outside ends of Parklet and installed 12" from the curb (long end perpendicular to curb)
- Angled parking: installed 15' from the curb (long end parallel to the curb) and 12" towards the center of the parklet from the Soft-Hit Posts

Public Parklet Signs

Parklets must display two (2) "Public Parklet" signs, one at each end. Final placement of the signs will be reviewed to ensure optimum visibility. Not required on bike corrals. City to provide graphic file. Signs must meet the following specifications:

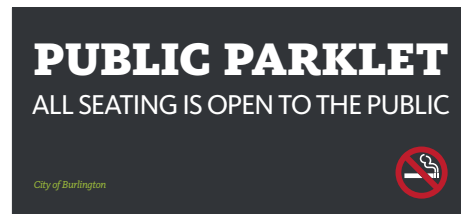
- 5" tall by 11" wide
- Copy must include "Public Parklet" and "All Seating is Open to the Public"
- 0.125" ($\frac{1}{8}$ ") anodized aluminum wrapped with laminated digital print. Applied white copy—reflective.

UPKEEP & MAINTENANCE

Parklets and bike corrals should be well-maintained and in good repair at all times. The City is encouraged to work with adjacent property owners, or to obtain parklet sponsors, which keeping the parklet free of debris, grime, and graffiti, litter, and to keep all plants in good health.



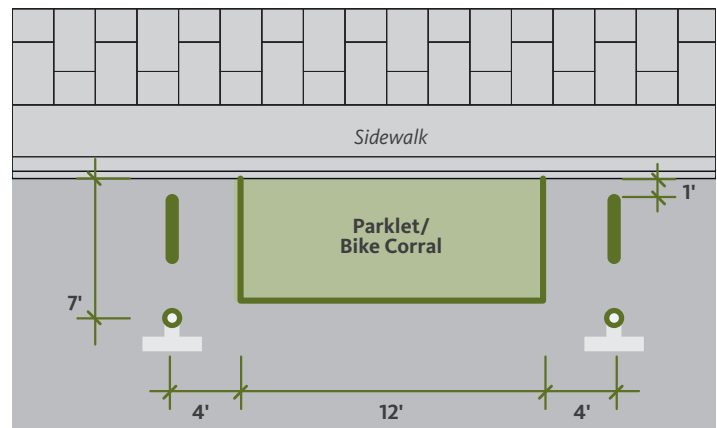
Wheel stop



Public Parklet sign



Safe-hit posts



Placement of elements in standard 20' Burlington parallel parking space.

Encumbrance Permit Process

Need to add details regarding City Encumbrance Permit process and check boxes for items requests need to meet.

I.e. at least a 5' min clear pedestrian zone maintained in all locations, etc.

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Burlington Department of Public Works Commission Meeting
Draft Minutes, 20 December 2017
645 Pine Street

Commissioners Present: Robert Alberry (*via phone*); Tiki Archambeau (Chair); Jim Barr; Chris Gillman (Clerk); Solveig Overby; Jeff Padgett; Justine Sears (Vice Chair). **Commissioners Absent:** None.

Item 1 – Call to Order – Welcome – Chair Comments

Chair Archambeau calls meeting to order at 6:29pm and makes opening comments.

Item 2 – Agenda

Commissioner Barr makes motion to accept agenda and is seconded by Commissioner Padgett.

Action taken: motion approved;

“Ayes” are unanimous.

Item 3 – Public Forum (3 minute per person time limit)

Matthew Vaughan, Ward 2, speaks on Agenda Item 5.

Chris Bullard, Ward 1, speaks on Agenda Item 5.

Daniel Scheidt, Ward 6, speaks on Agenda Item 5.

Patrick Hanley speaks on parking fine rates.

Kevin Bouchard speaks on Agenda Item 5.

Robert Tanneberger speaks on crosswalk at 246 North Winooski Ave.

Item 4 – Consent Agenda

A. Traffic Status Report

B. Burlington Free Press Parking Agreement

Clerk Gillman makes motion to accept Consent Agenda and is seconded by Commissioner Barr.

Action taken: motion approved.

“Ayes” are unanimous.

Item 5 – FY’18 Bike Projects & Willard Parking Flip

A) Communication by DPW Senior Transportation Planner Nicole Losch and DPW Associate Planner Elizabeth Gohringer who speak on FY’18 bike projects, including the parking “flip” on Willard St., introducing “Willard St Parking Lane/Bike Lane Switch Feedback received post 12.13.17” document for the record.

B) Commission Questions

Chair Archambeau, Vice Chair Sears, and Commissioners Alberry, Barr, Overby, and Padgett ask questions on Item 5 with DPW Director Chapin Spencer, City Engineer and DPW Assistant Director for Technical Services Norm Baldwin, and Planner Losch answering.

C) Public Comment

Daniel Scheidt, Ward 6, speaks on Item 5.

John Ware, Ward 3, speaks on Item 5.

Chris Bullard, Ward 1, speaks on Item 5.

Kevin Bouchard speaks on Item 5.

D) Commissioner Discussion

Vice Chair Sears, Clerk Gillman, and Commissioners Alberry and Padgett engaged in a discussion over Item 5.

E) Motion made by Commissioner Padgett to accept staff’s recommendation: repeal “No Parking” on east side of Willard Street between Maple Street and North Street; no parking on the west side of Willard Street between Maple Street and North Street; motorcycle parking in the first parking

space north of Maple Street, in the first parking space north of Main Street, and in the first parking space north of Brookes Avenue.

Seconded by Commissioner Barr.

Discussion

Clerk Gillman and Commissioner Padgett talked of Item 5.

Action taken: motion approved;

Commissioner Alberry: nay

Chair Archambeau: aye

Commissioner Barr: aye

Clerk Gillman: aye

Commissioner Overby: aye

Commissioner Padgett: aye

Vice Chair Sears: aye

Item 6 – Great Streets Standards Approval

A) Presentation by DPW Engineer Laura Wheelock and Planning & Zoning Principle Planner for Comprehensive Planning Meagan Tuttle who speak on Great Streets Standards.

B) Commission Questions

Chair Archambeau and Commissioner Overby ask questions on Item 6 with Director Spencer, City Engineer Baldwin, Engineer Wheelock, and Planner Tuttle answering.

C) Public Comment

Daniel Scheidt, Ward 6, speaks on Item 6.

D) Commissioner Discussion

E) Motion made by Commissioner Barr to accept staff's recommendation: approve and recommend the City Council adopt Great Streets Standards.

Seconded by Commissioner Padgett.

Discussion

Commissioners Overby and Padgett and City Engineer Baldwin, Engineer Wheelock, and Planner Tuttle talked of Item 6.

Action taken: motion approved;

"Ayes" are unanimous.

Item 7 – Plumbing Code Revisions

A) Communication by City Engineer Baldwin who speaks on the revised Plumbing Code.

B) Commission Questions

Chair Archambeau asks questions on Item 7 with City Engineer Baldwin answering.

C) Public Comment

D) Commissioner Discussion

E) Action Requested – None.

Item 8 – Traffic Calming/Traffic Requests Presentation

A) Communication by Director Spencer and City Engineer Baldwin who speak on the process improvement effort for Traffic Calming and Traffic Requests and wanting to get Commission input on an initial concept of delegating authority to DPW staff for adjusting certain traffic and parking regulations listed in Appendix C of City Ordinance.

B) Commission Questions

Chair Archambeau, Vice Chair Sears, Clerk Gillman, and Commissioners Barr, Overby, and Padgett ask questions on Item 8 with Director Spencer and City Engineer answering.

C) Public Comment

D) Commissioner Discussion

E) Action Requested – None.

Item 9 – Approval of Draft Minutes of 11-15-17

Commissioner Barr makes motion to approve draft minutes of 11-15-17 and is seconded by Commissioner Padgett.

Action take: motion approved;
Commissioner Alberry: aye
Chair Archambeau: aye
Commissioner Barr: aye
Clerk Gillman: *abstains*
Commissioner Overby: aye
Commissioner Padgett: aye
Vice Chair Sears: aye

Item 10 – Director’s Report

Director Spencer reports on UVM water billing anomaly and updates the Commission on addressing the issue.

Item 11 – Commissioner Communications

Commissioner Overby comments on narrow streets widths and snow removal and the ICV Encumbrance Permit at College St & Pine St with Director Spencer and City Engineer Baldwin answering; Chair Archambeau comments on Germain St parking, the Snow Ban car-drop on Pomeroy St, the Willard Parking Flip, Permit Reform, the addition of a guardrail at Manhattan Dr & Oak St, and Commission meeting minutes with Director Spencer and City Engineer Baldwin answering.

Item 12 – Adjournment & Next Meeting Date – January 17, 2018

Motion to adjourn made by Commissioner Barr and seconded by Clerk Gillman.

Action taken: motion approved;
“Ayes” are unanimous.

Meeting adjourned at 9:54pm.

COMMISSION MEETING SIGN IN SHEET

Date: 20 December 2017

NAME - (PRINTED)	ITEM #	EMAIL ADDRESS	PHONE #	WARD
Chris Bullard		Lunadog166@msn.com	862-2069	1
Kevin Barchard		1102372001@yahoo.com	363-1009	1
Matthew A Vaughan		Vaughan.matt@gmail.com	566-0087	2
Daniel Scheidt		danielscheidt@hotmail.com	233-8213	6
PATRICK HANLEY		phank1802@gmail.com	802 825 1095	
ROBERT TANNERBERGER		RGTVT@aol.com	802 373 2469	

Willard St Parking Lane/Bike Lane Switch

Feedback received post 12.13.17

Monday, December 18, 2017

Phone Call

Staff received a phone call from Ann Picard who lives out of town and rents with off street parking. She generally feels that bike infrastructure isn't worth the loss of parking, here and as a growing trend in other cities.

Friday, December 15, 2017 4:30pm

Meeting Notes

Staff met with Paul Cotton and Dave Wark at corner of Jackson Ct and S Willard St.

- Staff helped to clarify the project scope, goals, and the changes that would have to occur
 - Paul and Dave expressed concerns about:
 - cars parking in front of historic homes
 - passengers being able to open car doors given the slope of the greenbelt
 - general concern about resources being put toward bike facilities versus other issues/areas of the right-of-way
-

From: Caryn Long <carynlong@burlingtontelecom.net>

Sent: Tuesday, December 19, 2017 6:47 AM

To: dpwplanning

Subject: Bike lane on Willard

Dear DPW commissioners,

I am sorry that I am unable to speak at the meeting on Dec. 20th. I support switching the bike lane and parking lane on Willard in-between Maple and North Street.

Thank you.

Caryn Long

55 Henry Street

From: Valerie Koropatnick [mailto:ValerieK@howardcenter.org]

Sent: Tuesday, December 19, 2017 11:30 AM

To: Nicole Losch <NLosch@burlingtonvt.gov>

Subject: FW: Traffic pattern change on South Willard St.

Hello,

Just to express a few items about the proposed changes and a positive. I think it will make the turns from Buell St. onto South Willard much more visible and safer.

I have been the Coordinator of Westview House, a Howard Center day and evening program for

disabled adults at 50 South Willard Street for the past 35 years. Would it be possible for one handicapped parking space closest to our driveway to be designated in front of Westview House at 50 South Willard? It would be useful for social workers who are visiting with disabled clients and for some participants with handicapped tags on their cars.

I am concerned about Westview participants, 20 to 30 people a day, crossing Willard St between parked cars. A designated crosswalk would probably be too much to ask for but I put this out.

Thank you for your consideration,

Valerie

Valerie Anne Koropatnick LICSW
Westview House Coordinator
50 South Willard St. Burlington, VT 05401
Community Support Programs
Howard Center
802-488-6025

Burlington Department of Public Works Commission Meeting
Final Minutes, 20 December 2017
645 Pine Street

Commissioners Present: Robert Alberry (*via phone*); Tiki Archambeau (Chair); Jim Barr; Chris Gillman (Clerk); Solveig Overby; Jeff Padgett; Justine Sears (Vice Chair). **Commissioners Absent:** None.

Item 1 – Call to Order – Welcome – Chair Comments

Chair Archambeau calls meeting to order at 6:29pm and makes opening comments.

Item 2 – Agenda

Commissioner Barr makes motion to accept agenda and is seconded by Commissioner Padgett.

Action taken: motion approved;

“Ayes” are unanimous.

Item 3 – Public Forum (3 minute per person time limit)

Matthew Vaughan, Ward 2, speaks on Agenda Item 5.

Chris Bullard, Ward 1, speaks on Agenda Item 5.

Daniel Scheidt, Ward 6, speaks on Agenda Item 5.

Patrick Hanley speaks on parking fine rates.

Kevin Bouchard speaks on Agenda Item 5.

Robert Tanneberger speaks on crosswalk at 246 North Winooski Ave.

Item 4 – Consent Agenda

A. Traffic Status Report

B. Burlington Free Press Parking Agreement

Clerk Gillman makes motion to accept Consent Agenda and is seconded by Commissioner Barr.

Action taken: motion approved.

“Ayes” are unanimous.

Item 5 – FY’18 Bike Projects & Willard Parking Flip

A) Communication by DPW Senior Transportation Planner Nicole Losch and DPW Associate Planner Elizabeth Gohringer who speak on FY’18 bike projects, including the parking “flip” on Willard St., introducing “Willard St Parking Lane/Bike Lane Switch Feedback received post 12.13.17” document for the record.

B) Commission Questions

Chair Archambeau, Vice Chair Sears, and Commissioners Alberry, Barr, Overby, and Padgett ask questions on Item 5 with DPW Director Chapin Spencer, City Engineer and DPW Assistant Director for Technical Services Norm Baldwin, and Planner Losch answering.

C) Public Comment

Daniel Scheidt, Ward 6, speaks on Item 5.

John Ware, Ward 3, speaks on Item 5.

Chris Bullard, Ward 1, speaks on Item 5.

Kevin Bouchard speaks on Item 5.

D) Commissioner Discussion

Vice Chair Sears, Clerk Gillman, and Commissioners Alberry and Padgett engaged in a discussion over Item 5.

E) Motion made by Commissioner Padgett to accept staff’s recommendation: repeal “No Parking” on east side of Willard Street between Maple Street and North Street; no parking on the west side of Willard Street between Maple Street and North Street; motorcycle parking in the first parking

space north of Maple Street, in the first parking space north of Main Street, and in the first parking space north of Brookes Avenue.

Seconded by Commissioner Barr.

Discussion

Clerk Gillman and Commissioner Padgett talked of Item 5.

Action taken: motion approved;

Commissioner Alberry: nay

Chair Archambeau: aye

Commissioner Barr: aye

Clerk Gillman: aye

Commissioner Overby: aye

Commissioner Padgett: aye

Vice Chair Sears: aye

Item 6 – Great Streets Standards Approval

A) Presentation by DPW Engineer Laura Wheelock and Planning & Zoning Principle Planner for Comprehensive Planning Meagan Tuttle who speak on Great Streets Standards.

B) Commission Questions

Chair Archambeau and Commissioner Overby ask questions on Item 6 with Director Spencer, City Engineer Baldwin, Engineer Wheelock, and Planner Tuttle answering.

C) Public Comment

Daniel Scheidt, Ward 6, speaks on Item 6.

D) Commissioner Discussion

E) Motion made by Commissioner Barr to accept staff's recommendation: approve and recommend the City Council adopt Great Streets Standards.

Seconded by Commissioner Padgett.

Discussion

Commissioners Overby and Padgett and City Engineer Baldwin, Engineer Wheelock, and Planner Tuttle talked of Item 6.

Action taken: motion approved;

"Ayes" are unanimous.

Item 7 – Plumbing Code Revisions

A) Communication by City Engineer Baldwin who speaks on the revised Plumbing Code.

B) Commission Questions

Chair Archambeau asks questions on Item 7 with City Engineer Baldwin answering.

C) Public Comment

D) Commissioner Discussion

E) Action Requested – None.

Item 8 – Traffic Calming/Traffic Requests Presentation

A) Communication by Director Spencer and City Engineer Baldwin who speak on the process improvement effort for Traffic Calming and Traffic Requests and wanting to get Commission input on an initial concept of delegating authority to DPW staff for adjusting certain traffic and parking regulations listed in Appendix C of City Ordinance.

B) Commission Questions

Chair Archambeau, Vice Chair Sears, Clerk Gillman, and Commissioners Barr, Overby, and Padgett ask questions on Item 8 with Director Spencer and City Engineer answering.

C) Public Comment

D) Commissioner Discussion

E) Action Requested – None.

Item 9 – Approval of Draft Minutes of 11-15-17

Commissioner Barr makes motion to approve draft minutes of 11-15-17 and is seconded by Commissioner Padgett.

Action take: motion approved;
Commissioner Alberry: aye
Chair Archambeau: aye
Commissioner Barr: aye
Clerk Gillman: *abstains*
Commissioner Overby: aye
Commissioner Padgett: aye
Vice Chair Sears: aye

Item 10 – Director’s Report

Director Spencer reports on UVM water billing anomaly and updates the Commission on addressing the issue.

Item 11 – Commissioner Communications

Commissioner Overby comments on narrow streets widths and snow removal and the ICV Encumbrance Permit at College St & Pine St with Director Spencer and City Engineer Baldwin answering; Chair Archambeau comments on Germain St parking, the Snow Ban car-drop on Pomeroy St, the Willard Parking Flip, Permit Reform, the addition of a guardrail at Manhattan Dr & Oak St, and Commission meeting minutes with Director Spencer and City Engineer Baldwin answering.

Item 12 – Adjournment & Next Meeting Date – January 17, 2018

Motion to adjourn made by Commissioner Barr and seconded by Clerk Gillman.

Action taken: motion approved;
“Ayes” are unanimous.

Meeting adjourned at 9:54pm.