

A photograph of a city street scene. In the foreground, two cyclists are riding towards the camera. The cyclist on the left is wearing a blue helmet, sunglasses, and a bright orange safety vest over a yellow shirt. The cyclist on the right is wearing a white helmet and sunglasses. Behind them, a white bus is stopped at a traffic light. The bus's destination sign reads "69 VIA CAMBRIDGE ST" in orange letters. To the right of the bus, a line of cars is waiting at the light. The background shows green trees and a clear sky. The overall scene is bright and clear.

Welcome!

Safety Improvement Project on Cambridge Street

Working Group Meeting 2:
December 16, 2024, 11 am to 1:30 pm

Remote Participation Instructions

Working Group members:

- You will be promoted to "panelist".
- Please turn on your video.
- Raise your hand to join the queue.

Members of the public:

- There will be an opportunity to share public comment at ~12:15 PM.
- At that time, you can raise your hand to join the queue.

If you have technical challenges, please contact Jackie McLaughlin (jmclaughlin@cambridgema.gov, 857-331-3630).



AGENDA

11 AM	Welcome & introductions
11:15	Relevant policies and plans
11:40	CSO Quick-build project design considerations and decision-making
12:15	Public comment
12:30	Wrap-up & adjourn meeting
12:35	Site walk for Working Group members
1:10	Meet at Valente library
1:30 PM	Adjourn



GUIDING PRINCIPLES FOR WORKING TOGETHER

- Respect all participants (members, staff, public)
- Bring as much eagerness to listen deeply for understanding as to speak
- Talk about the topics, not people
- Be curious about and open to different perspectives and sources of information
- Keep the focus on what we can create together



INTRODUCTIONS

- Please share your:
 - Name
 - Pronouns (optional)
 - A holiday plan you're looking forward to



Relevant Policies and Plans



Sustainable Transportation

Sustainable transportation options allow people to get around in ways that reduce emissions and congestion, such as walking, biking, and public transit.

The City supports this through many policies, plans, and ordinances, including:

- Vehicle Trip Reduction Ordinance (1992)
- Parking & Transportation Demand Ordinance (1998)
- Climate Protection Plan (2002)
- School Wellness Policy (2017)
- Envision Cambridge (2019)

▶ Complete Streets (2016)



▶ Vision Zero (2018)



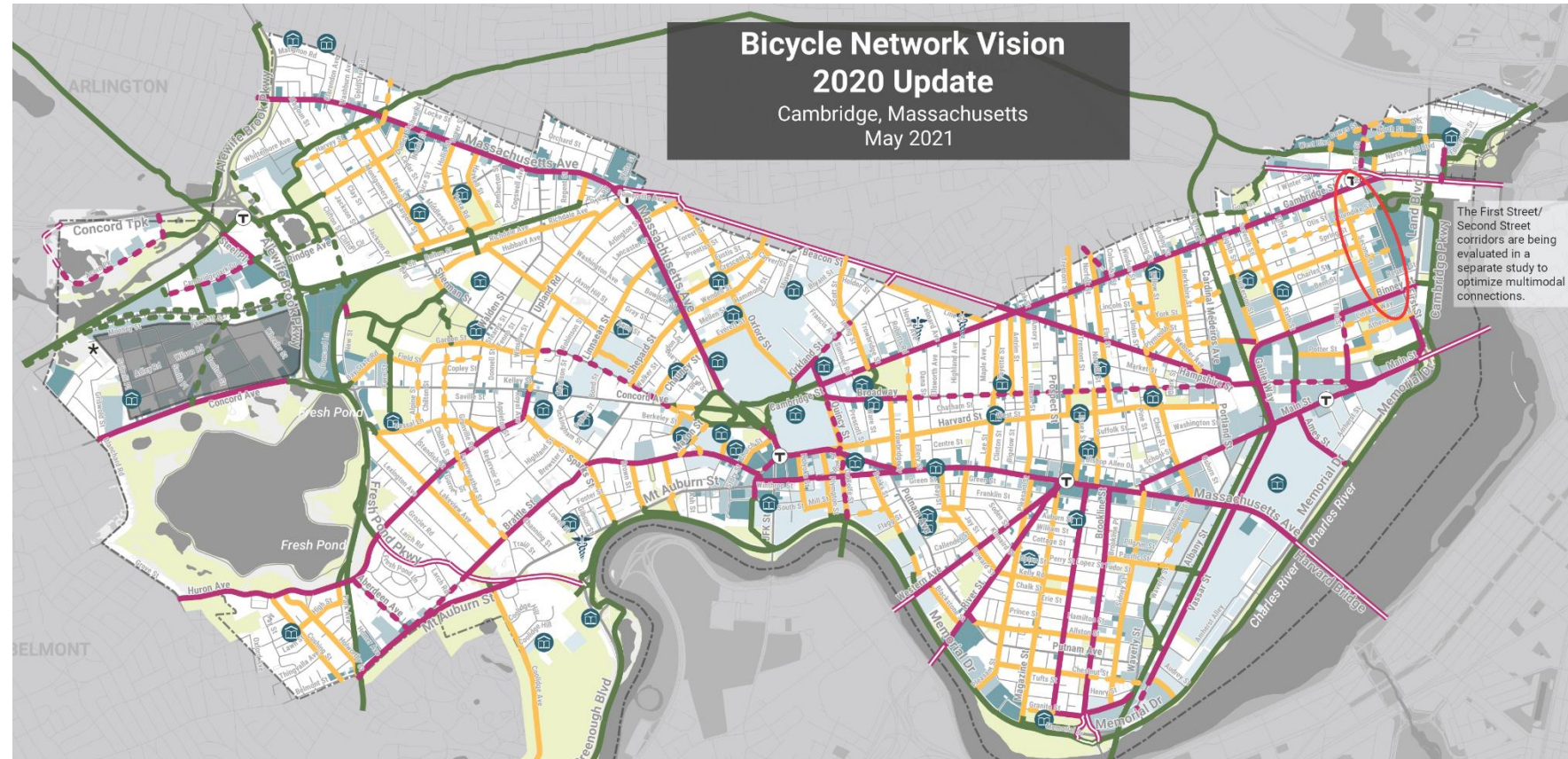
▶ Cycling Safety Ordinance (2019)



The Bicycle Network Vision

We are creating a network for biking that is safe, comfortable, connected, and people-centered.

A safe, comfortable network that connects important destinations throughout the City helps more people choose to bike if they would like to.



Key: Off-Street Path █ Greater Separation █ Lower Volume & Speed (Bicycle Priority Street) █

Learn more: cambridgema.gov/2020bikeplanupdate



Bicycle-Related Crashes

Implementing the Cambridge Bicycle Plan has made biking safer in Cambridge.

Crash Rate

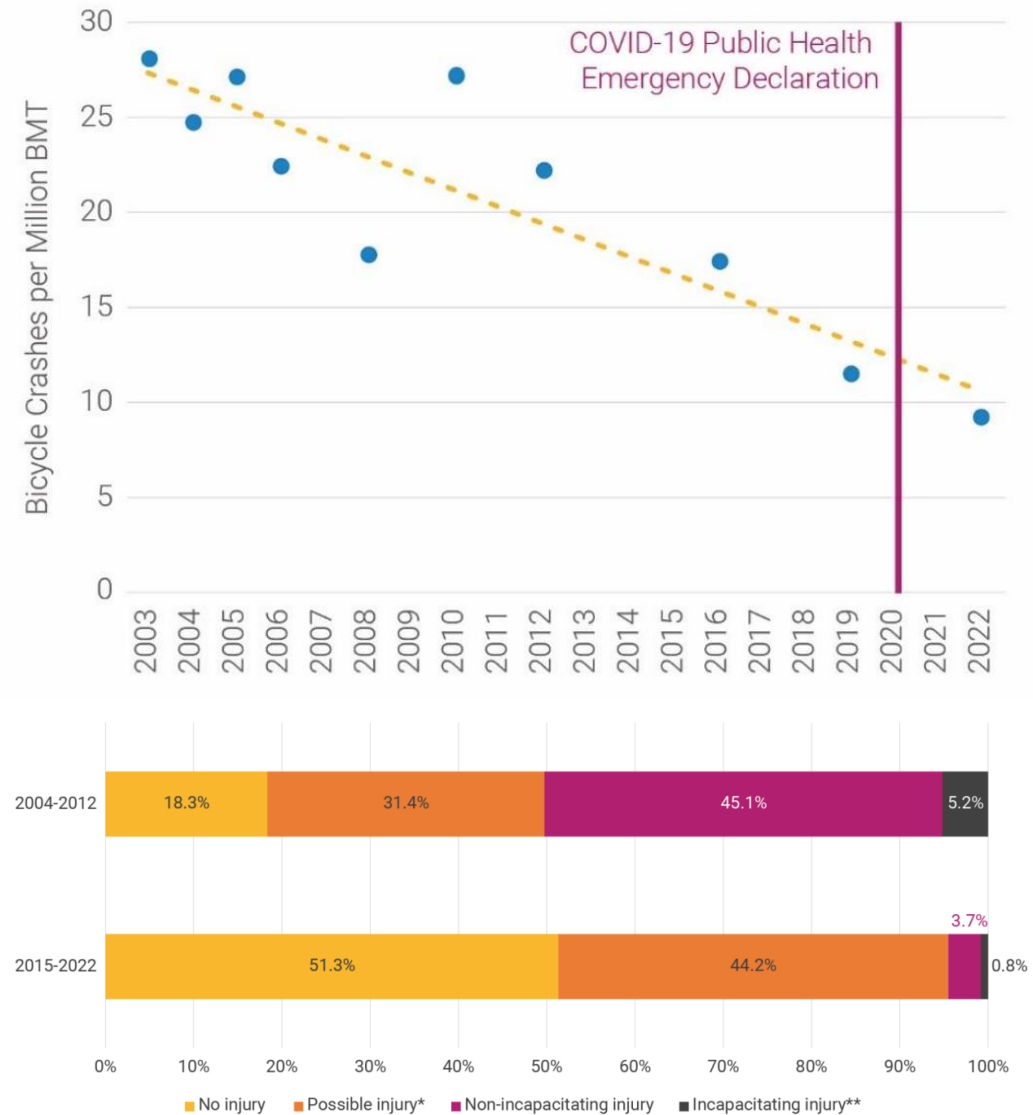
The crash rate—number of crashes per million bicycle miles traveled (BMT)—has steadily decreased since 2003, with 2022 the lowest rate to date.

The likelihood of a crash for someone biking continues to decline.

Crash Severity

Of the crashes that do occur, more than 50% of bicycle-related crashes have become non-injury (from 18.3%), city-wide.

Incapacitating injury crashes have declined from 5.2% to 0.8%, a decrease of 84%.



Source: Bicycling in Cambridge, Data Report 2023



Cycling Safety Ordinance

Types of separated bike lanes

Quick Build

We don't dig into the ground or make changes to the width and shape of the road. This allows us to make changes quickly.

- Methods: paint, stencils, flex-posts or concrete curbs, new signage, and adjustments to traffic signals and signs.
- Examples: Brattle Street, Garden Street, Mid Mass Ave

Construction

Involves more extensive changes, including moving curbs, removing medians, and changing the shape of the road. Work becomes more complex (and longer!) any time we dig into the ground.

- Examples: Inman Square, Western Avenue

On Cambridge St, we're doing a quick-build project with construction just at bus stops.



CYCLING SAFETY ORDINANCE (CSO)

2019

Cambridge City Council passes the Cycling Safety Ordinance

When streets are being reconstructed as a part of the City's Five-Year Plan for Streets and Sidewalks, the Ordinance requires the City to construct separated bike lanes if the street has been designated for "Greater Separation" in the Bicycle Network Vision.

2020

Cambridge City Council passes amendments to the Cycling Safety Ordinance

Requirement for the City to install about 25 miles of separated bike lanes by April 30, 2026, including quick-build projects not on the Five-Year Plan.

2024

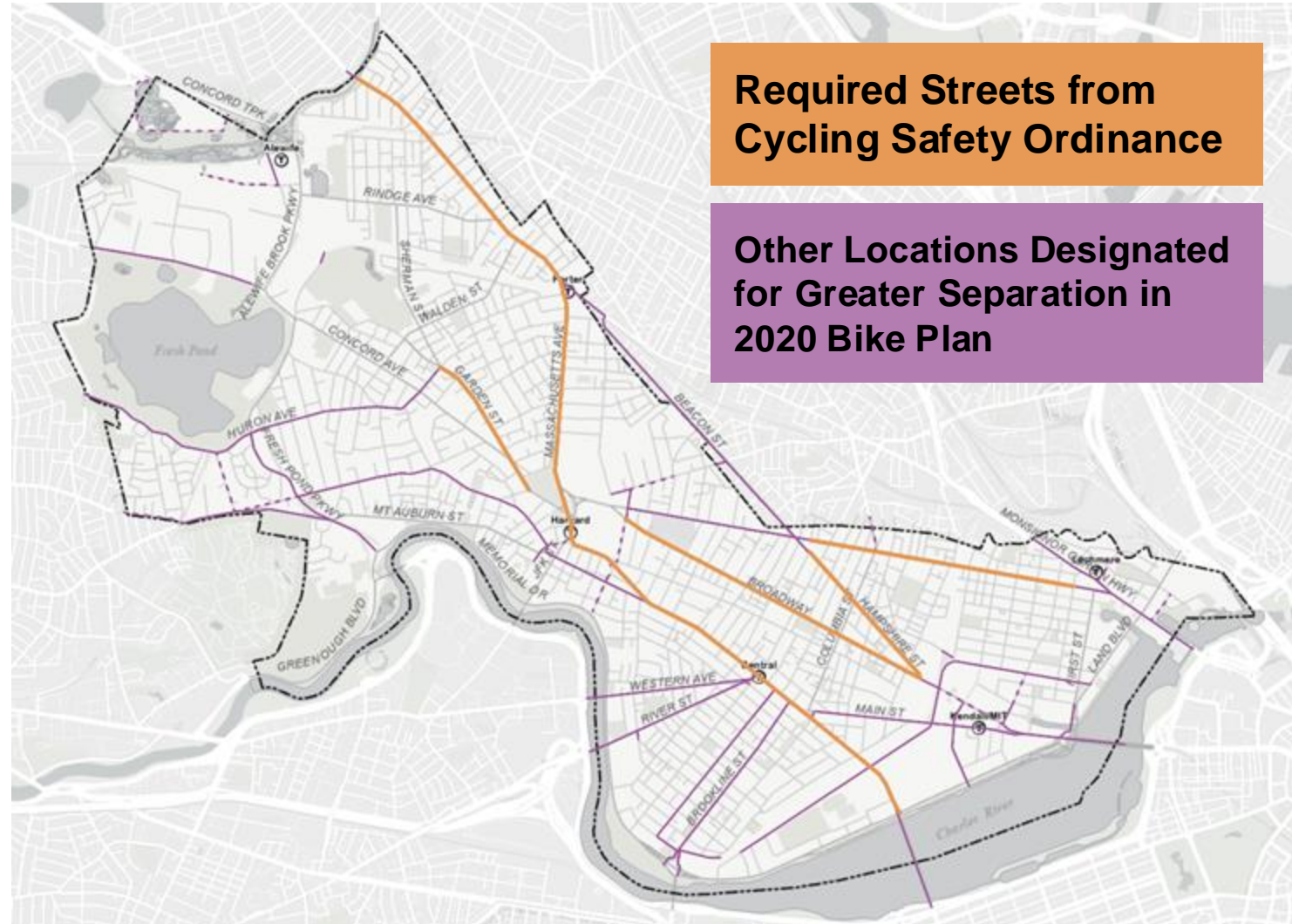
City Council sets tentative new deadline of November 1, 2026



CAMBRIDGE'S CYCLING SAFETY ORDINANCE

The 2020 amendments require that the City install 25 miles of separated bike lanes within five to seven years on:

- All of Massachusetts Avenue
- Broadway from Quincy Street to Hampshire Street
- Cambridge Street from Oak Street to Second Street
- Hampshire Street from Amory Street to Broadway
- Garden Street from Huron Avenue to Berkeley/Mason Street
- 11.6 miles of separated bike lanes in other locations from the 2020 Bicycle Plan's Network Vision



Parking Management

Cambridge St Parking Study

- Note: City staff will present this to the Working Group at a future meeting

Flexible Parking Corridors

Proposed changes to:

1. Zoning Ordinance
2. Parking and Transportation Demand Management (PTDM) Ordinance
3. Commercial Parking Space Permits Ordinance (small change for PTDM change consistency)

Status

- Under City Council Review. First review on November 21, 2024.
- Two to four month expected City Council review process

What to Expect

- The City is enabling underused parking to be used better, not guaranteeing access to off-street parking.
- The City is not operating the off-street parking covered by these changes, except when the City owns the parking facility.
- The City does not plan to acquire new parking facilities to mitigate on-street parking removal.
- The experience of using an off-street lot or garage will not be the same as using on-street parking (i.e., different costs, time limits, proximity to destination).



Cycling Safety Ordinance Quick-Build Project Design Process and Decision-Making

A woman wearing a black t-shirt, blue jeans, and a white helmet is riding a bicycle on a city street. She is positioned in the foreground, riding towards the camera. The street is paved and has white lane markings. In the background, several pedestrians are walking, including a man carrying a book, a woman in a red jacket, and a person in a wheelchair. There are also some red and blue bike racks and white bollards along the sidewalk. The scene is set in an urban environment with buildings and trees in the background.

Explanation of how we weigh decisions and design options for CSO projects in the context of limited street space

Street Design Process Summary

1

Look at width of street between curbs and determine what we can accommodate in addition to separated bike lanes

2

Keep parking and loading where possible with space constraints

3

Ask community feedback about what type of parking/loading spaces to keep, and where

4

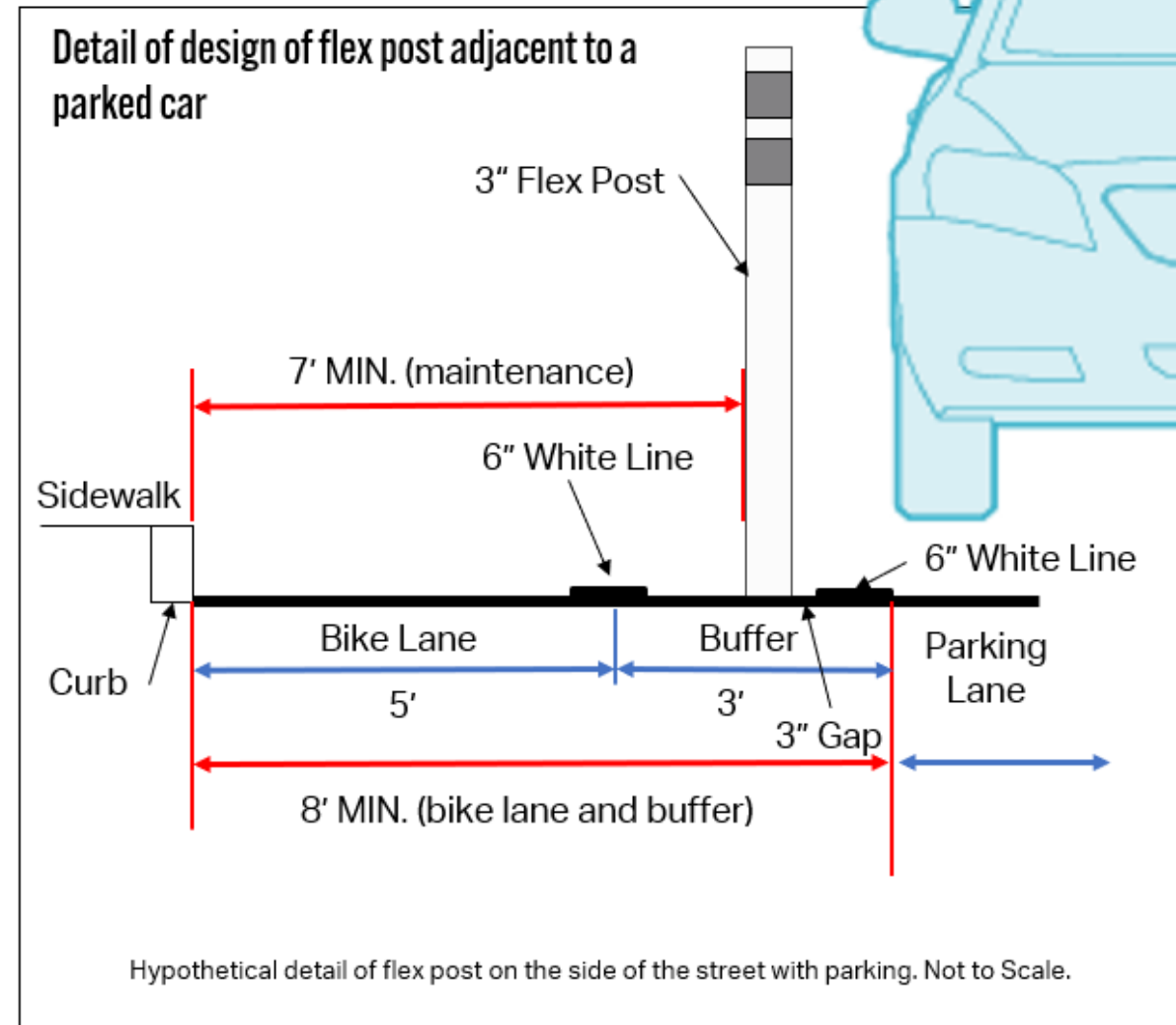
Monitor after installation and adjust to address issues

For each corridor, our final design reflect these constraints and conditions and is as responsive as possible to community feedback.



What width requirements do we have?

- Standards for minimum travel and parking lane widths:
 - 10.5-11 feet for streets with a lot of buses and trucks (10 feet on streets with fewer buses or trucks)
 - 7-foot parking lanes
- City minimum for separated bike lanes: 7-8 feet
 - 7-foot minimum between curb and flex posts
 - 1 additional foot of buffer needed on side of the street with parking
- Why can't we have narrower bike lanes?
 - 7 feet: Minimum to fit street sweeping and snow removal equipment between the flex post and the curb.
 - Door zone: We need to give enough hatched-off buffer space between parking lanes and bike lanes so that people in cars don't step out into the bike lane.
 - Bike lanes should fit all types of bikes, including cargo bikes and recumbent cycles.



Separated bike lane width best practices

- [Federal Highway Administration Separated Bike Lane Planning and Design Guide:](#)
 - “Total width between the curb and vertical element should be at least the fleet maintenance vehicle width. Widths narrower than 7 feet often require specialized equipment.”
- [MassDOT Separated Bike Lane Planning & Design Guide:](#)
 - Bike lane width: 6.5 feet recommended for less than 150 cyclists/hour, 5 feet minimum
 - Buffer area + flex post width: 6 feet recommended, 2 feet minimum
- [Denver Bikeway Design Guidelines:](#)
 - One-way protected lane dimensions: 5 feet minimum width
 - Buffer dimensions: 3 feet minimum width
- [New York City Street Design Manual:](#)
 - One-way protected bike lane dimensions: 4 feet minimum width
 - Buffer area dimensions: 3 feet minimum width
- [Capital Regional District Pedestrian and Cycling Master Plan Design Guidelines \(British Columbia, Canada\):](#)
 - Physically separated bike lane minimum width: 2.5 meters (8.2 feet)
 - Buff zone width: 0.6 to 1 meters (1.6 to 3.3 feet)



Driveways, Curb Cuts, and Parking

- The number of curb cuts, side streets, and driveways impacts the number of parking spaces we can fit on one side of the street.
 - More curb cuts, driveways, etc. = less on-street parking
 - Fewer curb cuts = more on-street parking
- Decisions when choosing the side of the street to put parking on:
 - Optimize # of spaces?
 - Where is it important to have meters or loading? Balance proximity and quantity of spots
 - Community feedback



Mass Ave near Hancock Street, 2020 (© Google Streetview)



Designing for Transit

Create stop spacing consistent with MBTA guidelines

- Suggested stop spacing is 1,000 to 1,300 feet apart.
- Current stop spacing on Cambridge St is less than 1,000 feet. Most stops are 500 to 700 feet apart.

Create fully accessible bus stop locations

- Identify locations with fewer barriers for people with disabilities (including, for example, deploying the accessibility ramp)
- Some stops are lengthened to better accommodate bus movements

Improve bus reliability

- Relocate bus stops to the far side of the intersection where feasible
 - This means a bus can clear the intersection on green before stopping to serve passengers
- Fewer stops overall improves bus travel times



All Ages and Abilities Design



Photo Credit: Fort Collins Bikes



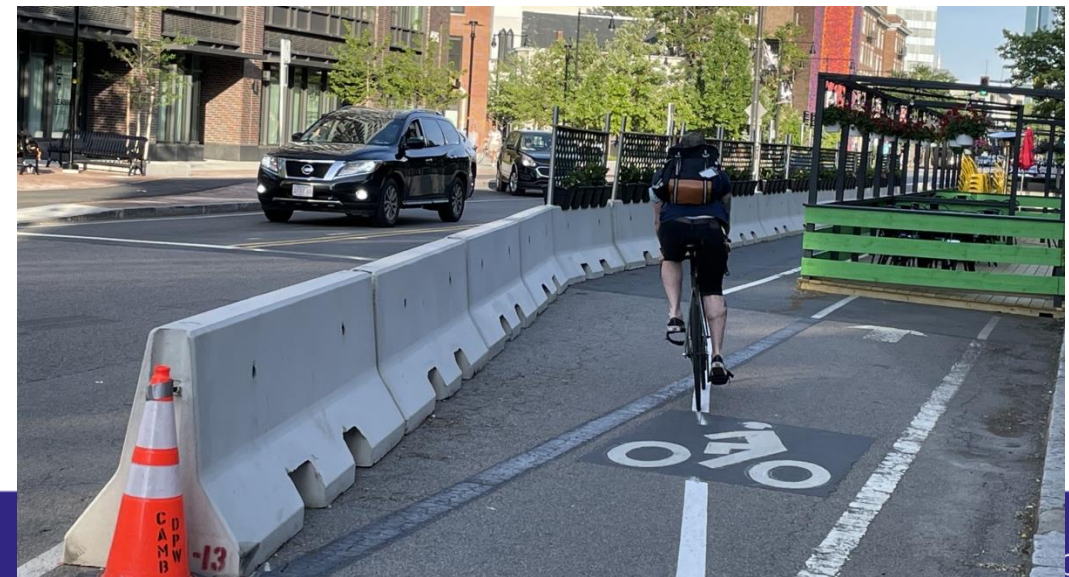
Other Considerations

- Safety and visibility
 - *Daylighting*. Keeping open space (i.e., no parking) near crosswalks, curb cuts, and corners so that drivers' views of the crosswalk, bike lane, and side streets aren't blocked by parked cars.
 - More daylighting space is needed when bike lanes are behind the parking lane.
- Should parking lane side be consistent for the whole corridor?
 - Switching the sides that parking is on gives opportunity for cars traveling in either direction to park without turning around.
 - Switching parking sides from one side to another creates a shift in the travel lane (*chicane*) that slows traffic.



Other Considerations

- What are the buildings on each side of the street?
 - Are there businesses? What did they tell us about their needs for the curb during engagement? (Customer parking, quick pick up/drop off, loading, etc.)
 - Are there residential buildings? Do most residences have driveways or off-street parking?
- Fire hydrant locations
- Outdoor dining
- Bus stops and accessible/disability parking (have more design flexibility than other curb uses in the CSO)
 - Reducing overall parking often requires additional accessible/disability parking





Cycling Safety Ordinance Quick-Build Projects Decision-Making

With design considerations and limitations in mind, how do we make decisions?

Example: Questions asked of Communities

- Which side of the block should we keep parking on? *(Can switch sides between blocks.)*
- What should parking regulations be?
 - As part of each project, we can change the mix of loading zones, meters, accessible spaces, permit-only spaces, etc. on the street.
 - We do our best to balance parking needs of businesses, residents, workers, shoppers, etc.
- Bus stop locations are moving to improve accessibility. Do the proposed locations work?
- How should we change parking on side streets?
 - Adding new metered spaces and loading zones



Signs were different based on what questions we were asking about each block.



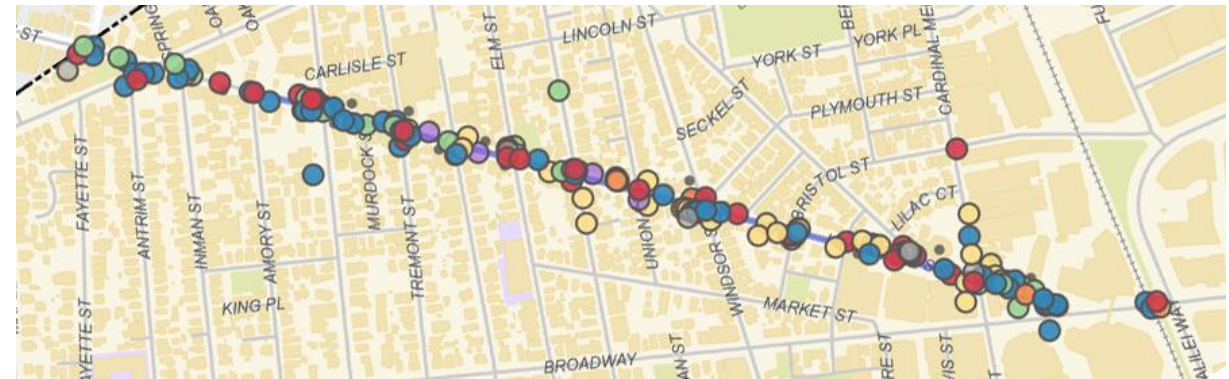
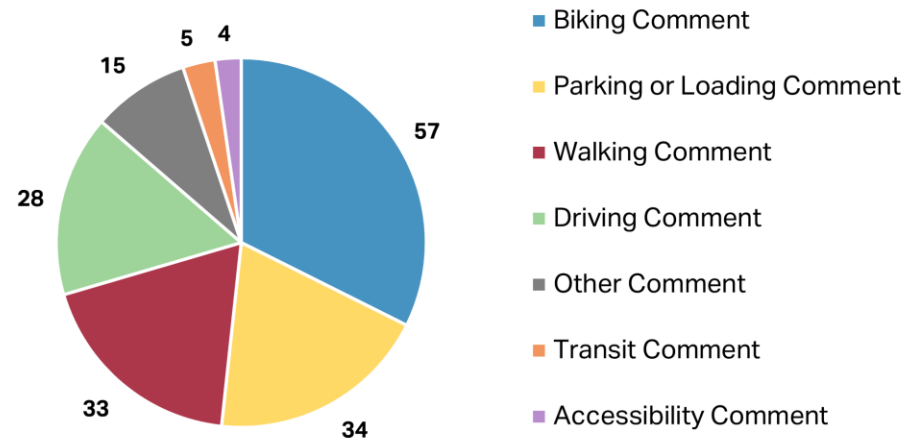
Example Feedback Method: Survey

Feedback from Hampshire St

November 2022 – February 2023: Online feedback map and comment form

- 176 Comments on feedback map
- 70 additional open-ended comments

Hampshire Street Safety Improvement Project Comment Map
Comment Types



Online feedback map



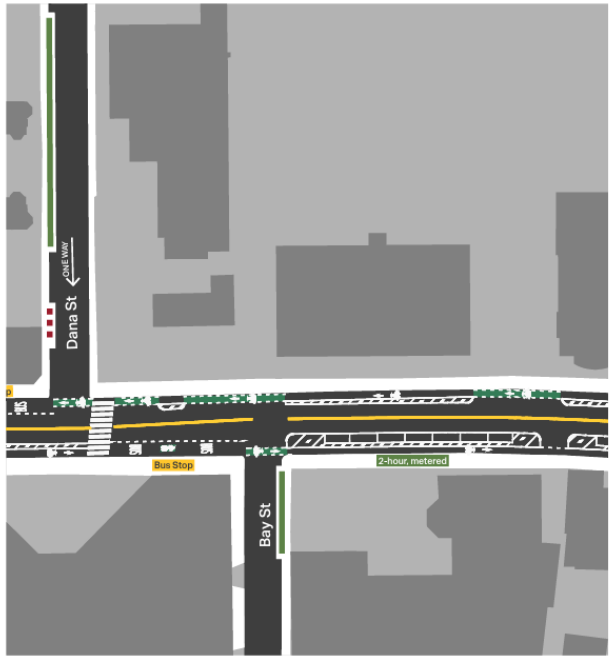
Example Feedback Method: Community Meeting Feedback from Mid-Mass Ave

May 2021: Community meeting presenting the design and proposed parking changes.

May-June 2021: Comment period on designs shared at community meeting. Community members could fill out a feedback form or email project staff.

- 30 comments

Dana St to west of Hancock St



The diagram illustrates the proposed safety improvements for Dana St from Dana St to west of Hancock St. It shows Dana St running north-south, crossing Mass Ave. Bay St is shown as a cross street to the east. The diagram highlights a bus stop and a 2-hour metered parking area on Mass Ave. A legend on the right details the changes to these areas.

General Improvements

- New crosswalk signs at Dana St
- New high-visibility signs at the bus stop
- Separated bike lanes in both directions
 - Shorter crossing distances for people walking
 - Increased safety and comfort for people biking

Parking Changes on Mass Ave

Before	After
2-hr meter: 10 spaces	2-hr meter: 7 spaces
Bus: 1 stop	Bus: 1 stop
Loading: 30 feet	

City of Cambridge | Mid-Mass Ave Safety Improvement Project

Slide from May 2021 Community Meeting



Example Outcomes and Decisions from Mid-Mass Ave Engagement



Based on community feedback, we **kept parking on the south side of the street.**

We could keep more parking and loading spaces on the south side, because there are more side streets and curb cuts on the north side of the street.

On every block, more community support for keeping parking on south side of the street.



On Mass Ave itself:

Prioritized metered parking.

We kept existing outdoor dining and one loading zone.



In front of City Hall:

We prioritized accessible parking for people with disability plates/placards, accessible loading, accessible taxi stand, and bus stops.

Kept the existing bus stop location.

We chose these uses instead of metered spaces.



On side streets:

Changed 8 unrestricted and non-metered spaces to two-hour meters.

Changed 13 permit-only spaces to two-hour meters.

Added 4 two-hour meters in former “no parking” areas.

Changed 3 unrestricted spaces to a large loading zone.

Added 1 loading zone in a former “no parking” area.

More changes after installation.

Example Changes After Installation from North Mass Ave

- Added metered parking in the bus lane after 9 a.m. when traffic conditions allowed.
- Adjusted signs and markings to improve clarity.
- Added North Mass Ave to Mass Ave Partial Construction Project to allow for median removal and other more significant changes.



Expanded project area for Mass Ave Partial Construction Project



Public Comment



Public Comment

Public Comments Welcome

- Share thoughts in Q&A or verbally
- To comment verbally, raise virtual “hand”
- Limit comments to 2 minutes; may need to adjust if many speakers

Please keep all comments...

- On-point
- Respectful
- Focused on issues (not individuals)

If you have technical challenges, please contact Jackie McLaughlin (jmclaughlin@cambridgema.gov, 857-331-3630).



NEXT STEPS

- **Next Meeting: Thursday, January 23 from 4 – 6 PM**
 - Cambridge Street Section A: Detailed design review
 - Outreach plan and March community meeting
 - Section B + C timeline update
 - Working Group: Charter, summary review
- **All:**
 - If you are unable to join for the site walk, consider questions and send responses by 1/10
 - If you have not yet, send feedback on the Charter by 12/20
 - Once shared, send feedback on meeting summaries



SITE WALK FOR WORKING GROUP

Reflect on how it feels to use different modes on Cambridge Street (Oak to Willow) and compare it to your experience on other streets.

Today, what is working well? What could be improved? How does it feel to:

- Bike? Compare that with Hampshire St, Inman Square or another street with separated bike lanes.
- Drive and/or park? Compare that with Hampshire St, Inman Square or another street with parking on one side of the street and/or parking that “floats” off the curb.
- Use the bus? Compare that to a location with bus boarding islands, such as Inman Square.
- Walk? Compare that to a location with narrower car lanes such as Inman Square, or a place with quick-build bike lanes such as Hampshire St, or any other street in Cambridge.



SITE WALK FOR WORKING GROUP

- We will walk north on Inman St and east on Cambridge St.
- We will discuss your observations at the Valente Library.

For those unable to join, please consider the questions and share your feedback via email by January 10.

