

First/Second Street Corridor Study | Stakeholder Meeting #2

June 14, 2021 | City of Cambridge

Cameras + Microphones

- You may turn your camera on or off
- Mute yourself when you're not speaking

Raise Your Hand

- Use the raise hand feature if you have a question during the presentation

Meeting Chat is Off

- We won't use the chat in this meeting

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cambridgema.gov/first-second-street

Meeting Agenda

Welcome

Study Background and Purpose

Community Feedback to Date

Key Design Tools

Concept Designs

Group Activity and Report Back

Next Steps

Meeting Purpose, Outcomes, and Process

Purpose

To share what we have heard about First and Second Street priorities and how that has informed our work on street layout options

Outcomes

Obtain stakeholder feedback on street layout cross-section options to best meet study goals and if they capture the right set of options for deeper analysis

Process

Presentation, breakout groups for discussions and comments

Study Details

Primary Objective

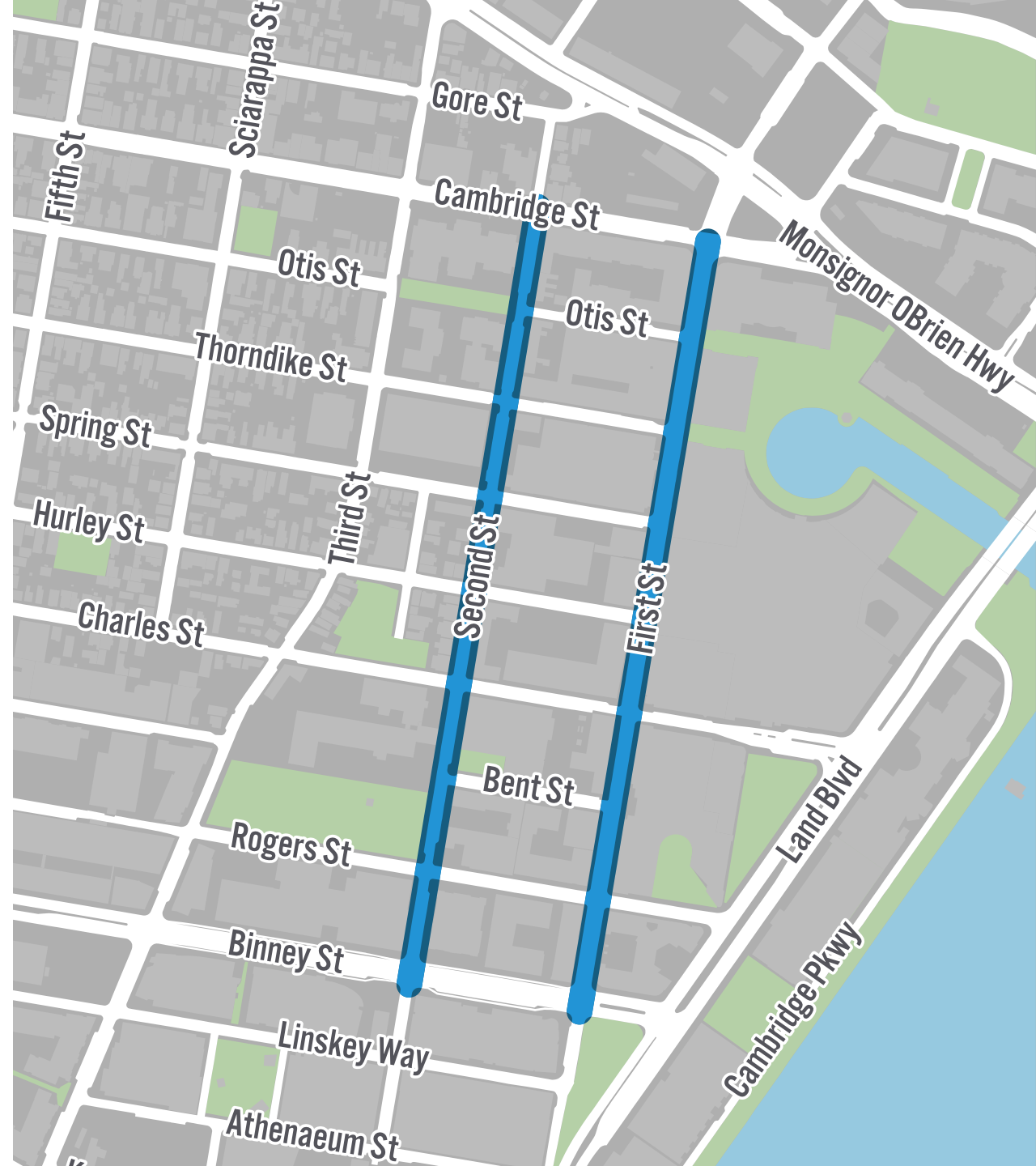
Identify how to provide safe and comfortable north/south travel connections between Binney St and Cambridge St

Study Area

First St and Second St between Cambridge Street and Binney St

Study Outcomes

10% concept plan that incorporates any new street space created by the CambridgeSide Redevelopment



Community Feedback to Date

Stakeholder Group Priorities for First St and Second St

Based on breakout group discussions during the first Stakeholder Group meeting on April 12, 2021

General Priorities

- **Safe bicycle travel** so all users can feel comfortable biking
- **Better transit access** to encourage more sustainable travel in the area
- **Use space for walking, biking, and transit** while ensuring there is room for **loading zones** and **short-term parking**
- Promote **pedestrian friendly travel** to protect commuters, residents, and shoppers
- **Trees and greenery in open spaces** to keep the area pleasant and attractive

First St Specific

- **Support businesses** by keeping the street active
- **Minimize single occupancy vehicle traffic** to keep the road safe and convenient for travel

Second St Specific

- **Maintain residential feel of street** due to the amount of housing in the area
- **Lower traffic volumes and speeds** to keep the street safe and quiet
- **Maintain street parking** for residents

User Experience Survey: First St

Works Well

- accessible for pedestrians
- area is well lit
- convenient connector to other roads
- ease of traffic movement
- sidewalks in good condition
- spacious roadway

Problems

- inconvenient connector
- insufficient bus service
- lack of available parking
- limited access for disabled people
- need for urban development
- speeding
- traffic congestion
- unsafe for walking, biking, and driving

Recurring Comments

- vehicles blocking bike lanes
- needs a separated bike lane
- peak hour congestion
- unattractive walking area

User Experience Survey: Second St

Works Well

- convenient connector to other roads
- rare traffic congestion
- safe for people driving

Problems

- limited access for disabled people
- limited visibility to connector roads
- no bicycle facilities
- speeding
- roadway/sidewalk is too narrow
- unsafe for people walking/biking
- too much space dedicated to parking

Recurring Comments

- difficult for all users to pass through
- frequent sidewalk obstruction
- too narrow for people walking or driving
- prefer less parking or on only one side

Key Design Tools

Key Design Tools - Bike Facilities

One-Way Separated Bike Lanes

- Provide physical separation between people biking and people driving on streets with higher volumes and speeds
- People bike in the same direction as motor vehicle traffic



Image: One-way separated bike lane on Mass Ave near Main St

Key Design Tools - Bike Facilities

Two-Way Separated Bike Lanes

- Provide physical separation between people biking and people driving on streets with higher volumes and speeds
- People biking are next to each other and on one side of the street, which saves space as only one buffer area is needed rather than two
- Additional complications at intersections, especially unsignalized intersections
 - May create unexpected conflicts when people are turning



Image: Two-way separated bike lane on Brattle St; Credit: Kyle Klein

Key Design Tools - Bike Facilities

Lower-Volume/Lower-Speed Streets

- Primarily in residential areas
- Provide access within and between neighborhoods, or to parks and schools
- If this facility were on Second St, people would still be able to choose to bike on First St
- People biking may feel that they are going out of their way to ride on Second St



Image: Priority bike markings and a raised intersection on Oxford St at Wendell St

Key Design Tools - Transit Facilities

Bus Lanes

- Provide dedicated space for buses
- Improve reliability, and will allow for increased frequency
- Can be dedicated lanes or shorter “queue jumps” to get the bus to the front of the line
- Without bus lanes, buses are in the general travel lane and can only move at the same speed as other vehicles



Image: Bus Lane on Mt Auburn St; Credit: MBTA

Key Design Tools

General Travel Lanes

- Provide space for people driving (e.g., cars or delivery vehicles) to travel on the street

Parking and Loading

- Provide space for people who need to stop to make deliveries or visit businesses
- A lack of parking or loading may lead to people stopping in other places (e.g., general travel lanes or bus stops)



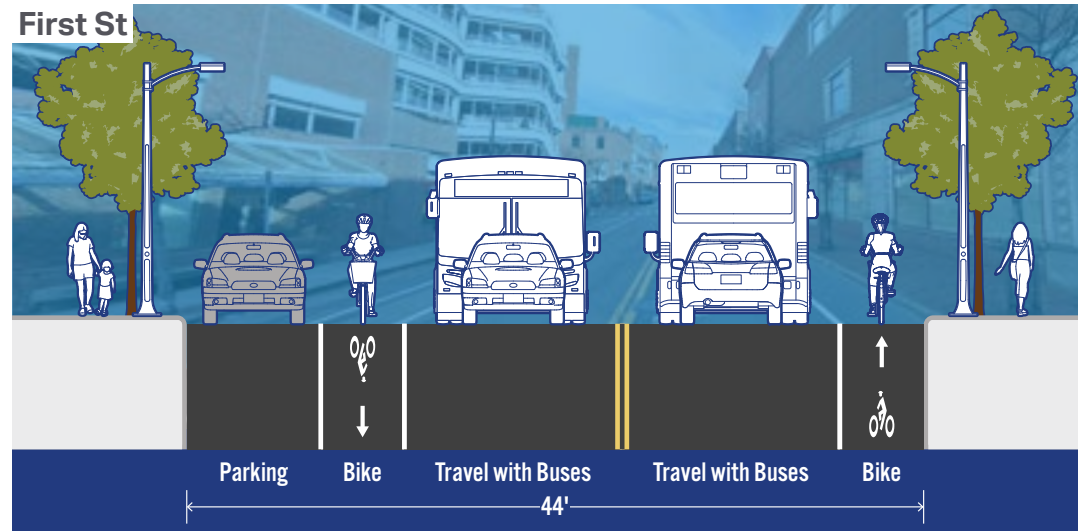
Image: USPS truck parked outside of a Post Office; trucks and other vehicles are using the general travel lanes

Concept Designs

Existing Conditions

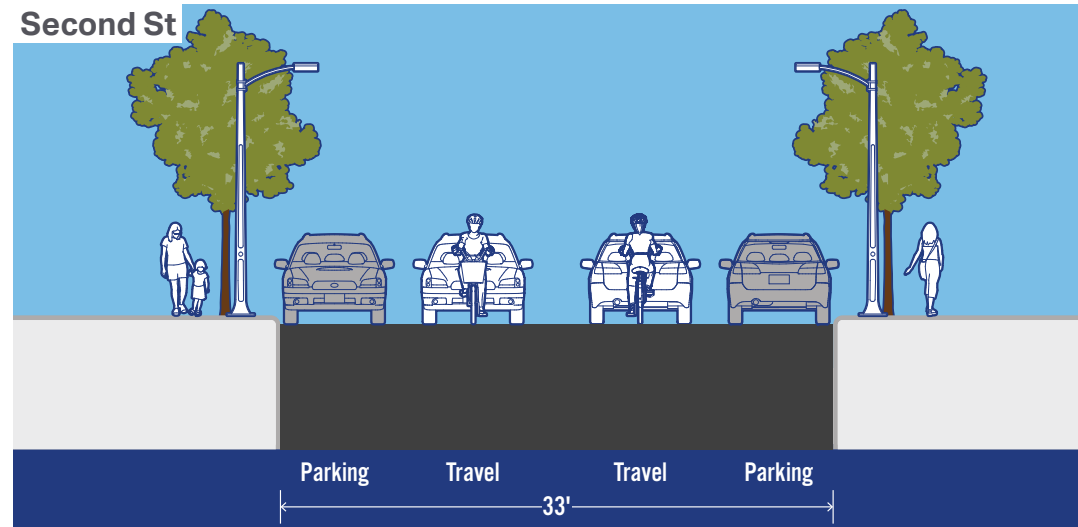
First Street

- Standard bike lanes in both directions on First St
- One parking lane, typically in the southbound direction
- Turning lanes approaching Binney St and Cambridge St



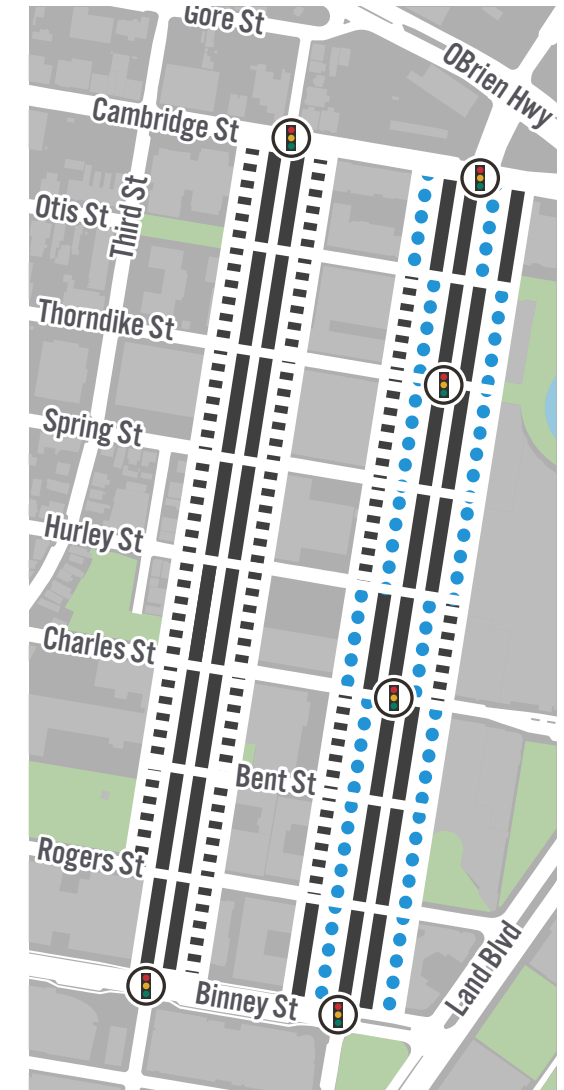
Second St

- One general travel lane and one parking lane in each direction
- Sidewalks with trees
- Raised intersections at some locations



- Bike Lane
- Parking Lane
- Travel Lane

Map illustrates existing lanes.

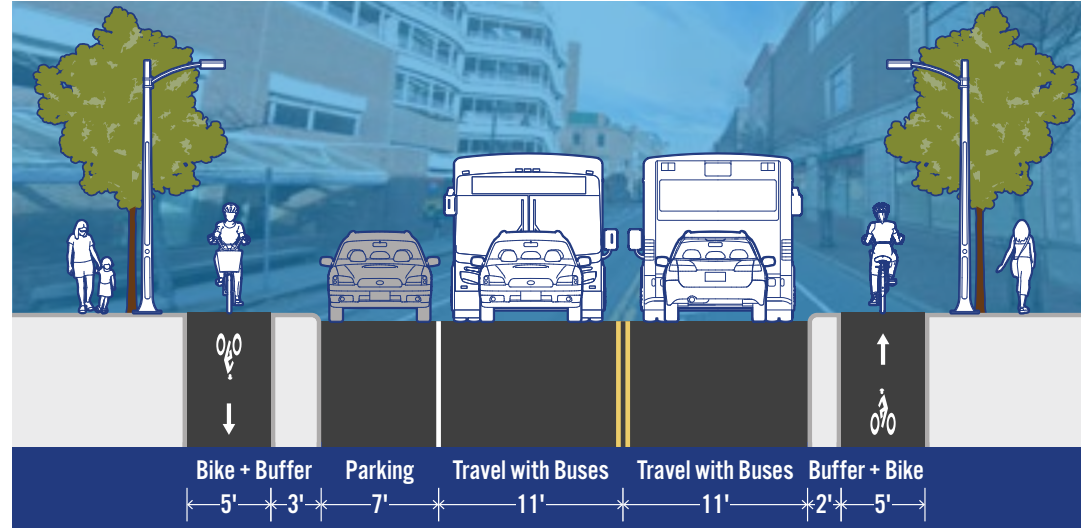


Project Goals

- Improve safety and experience for all users
- Provide a north/south connection for people of all ages and abilities who are biking between Kendall Square and Lechmere/North Point
- Ensure that plans account for a future bus connection between Lechmere and Kendall Square, and points beyond
- Maintain pedestrian and motor vehicle access for individuals and emergency response
- Manage curbside uses, including residential parking on Second Street
- Identify opportunities for additional tree plantings
- Ensure that plans are in line with the City's plans and policies including Vision Zero, Complete Streets, Envision Cambridge, Vehicle Trip Reduction Ordinance, and the Cambridge Growth Policy

Baseline Option

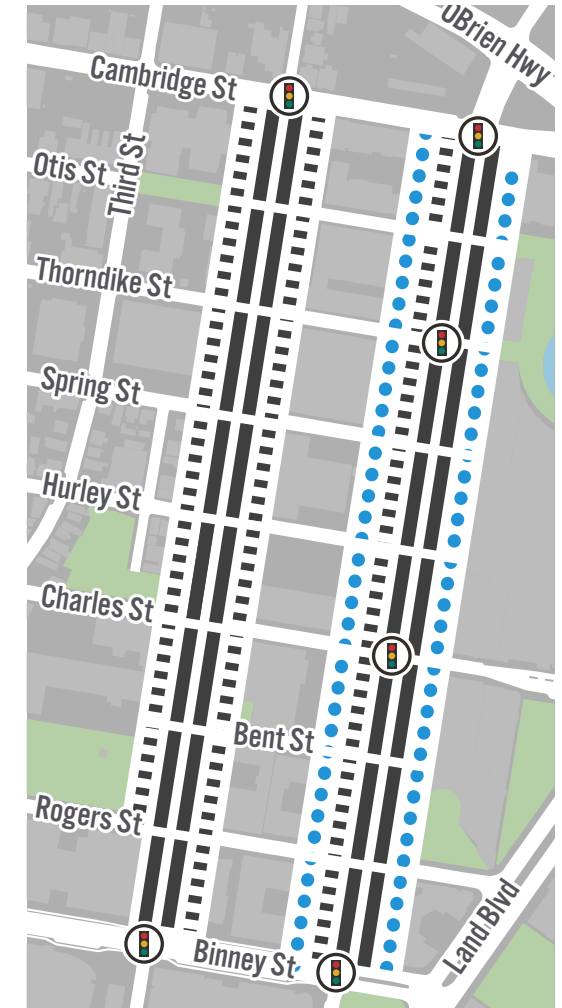
- Two one-way separated bike lanes improve safety for people biking
- No improvements for transit, as buses still share the travel lanes with other vehicles
- 7' of space remains that may be used for parking, additional sidewalk space or greenery
- Requires consideration of bus stop location and design, with a focus on safe interactions between people biking and people getting on or off the bus



By narrowing the existing parking and travel lanes, we create space for buffers. Through this study we are working to find a design that meets more of the project goals.

- Bike Lane
- Parking Lane
- Travel Lane

Map illustrates one possible configuration of this concept.



Design Parameters

We used these design parameters and the information that we've heard from community members to create draft cross sections. We have identified two primary options.

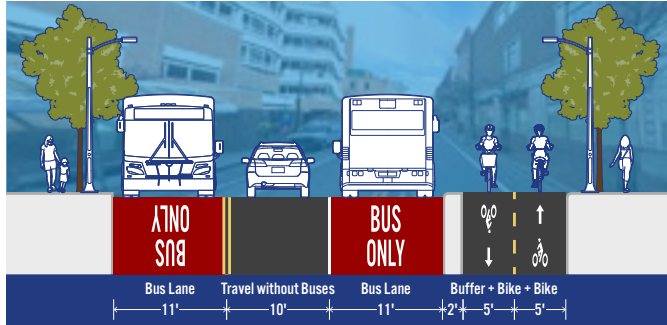
Designs must:

- Maintain accessible sidewalks
- Preserve and, if possible, increase opportunities for trees and greenery
- Provide a safe connection for people of all ages and abilities who are biking :
 - Provide separated bike lanes on First St, OR
 - Ensure that Second St is a Lower-Volume, Lower-Speed Street
- Benefit North/South transit service
- Maintain access to garages on First St

Designs must not:

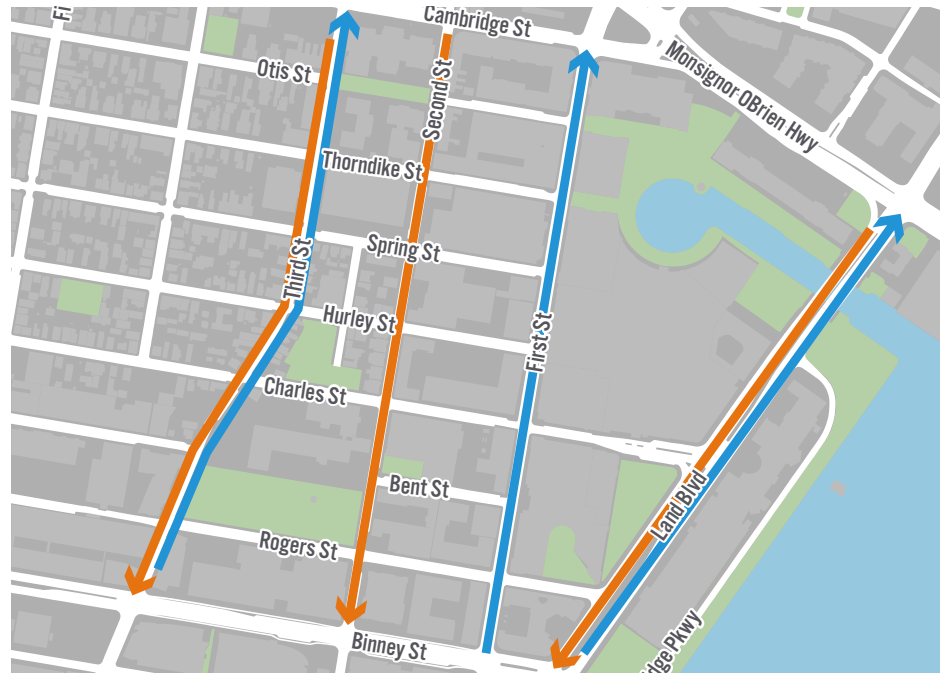
- Remove all parking on Second St
- Increase vehicle trips on Second St or Third St

Two Bus Lanes + One Two-Way Bike Facility Option We Considered



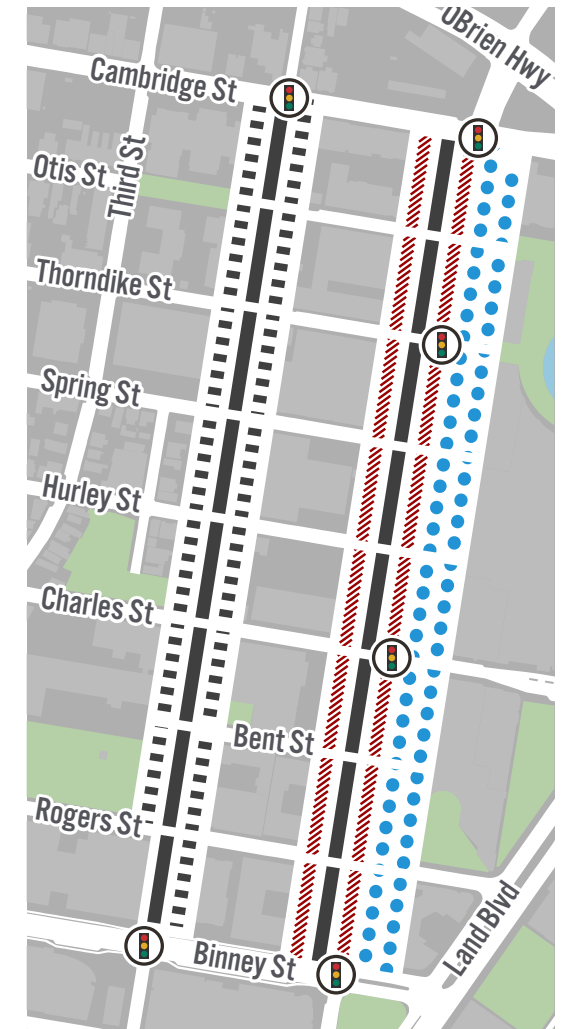
- Priority for bicycles and buses on First St
- Shifts southbound general traffic to other streets (Third St, Second St, Land Blvd)
- Requires regular enforcement to prevent people from driving south in Bus Lane
- Two-way lane complicates intersections

We don't anticipate advancing this design because of the potential for additional motor vehicle trips on smaller streets (Third St and Second St)



- Bike Lane
- Bus Lane
- Parking Lane
- Travel Lane

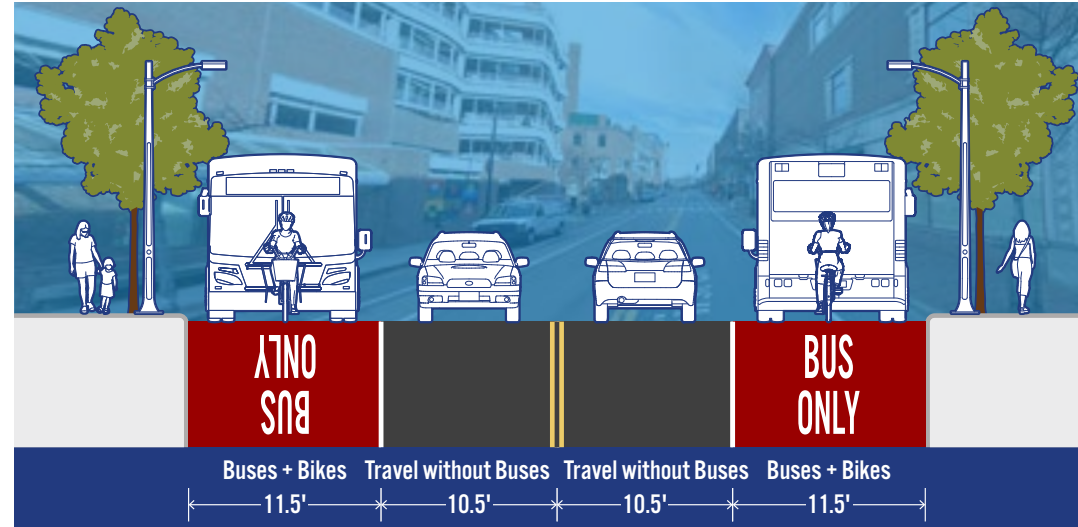
Map illustrates one possible configuration of this option.



Two Bus Lanes on First St + Lower Volumes/Lower Speeds on Second St

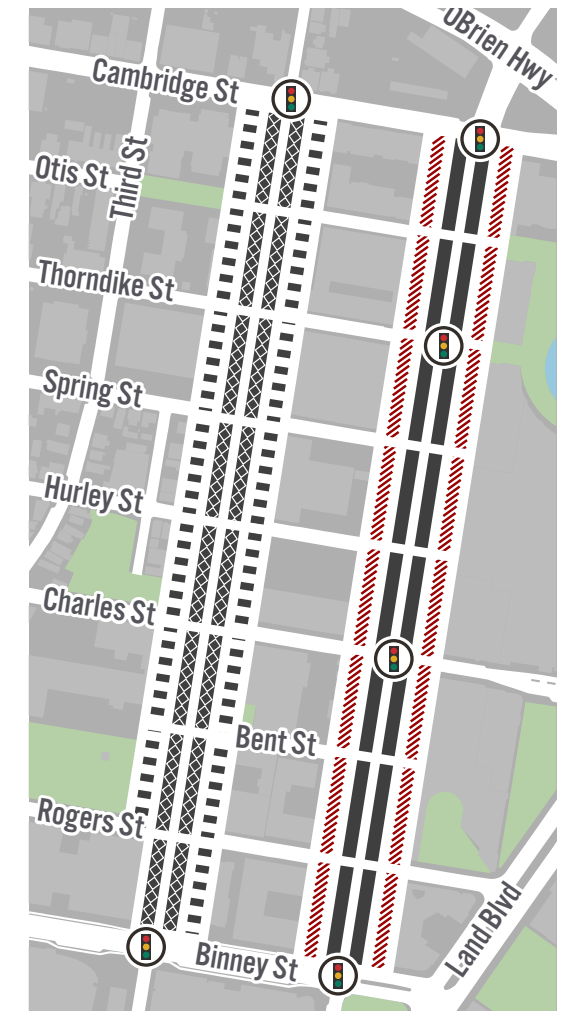
Concept A

- Maintains travel lanes in both directions
- Creates dedicated space for buses
 - Bus lanes could be used for off-peak loading and pick-up/drop-off
- Would include some changes to Second St to help ensure lower volumes and lower speeds
 - People may bike in the travel lanes on First St
 - Potential changes to Second St have not yet been determined



- Bus Lane
- Bike Priority
- Parking Lane
- Travel Lane

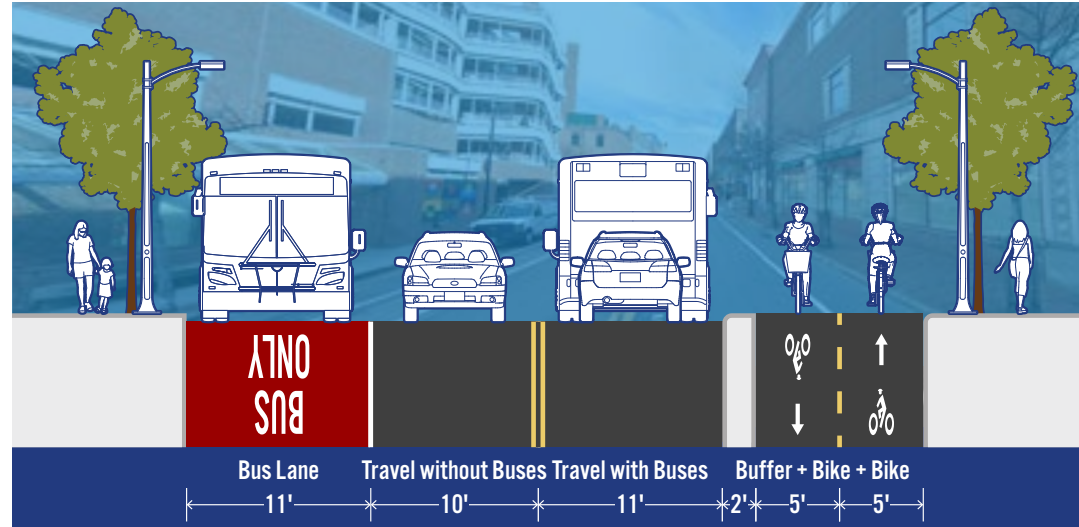
Map illustrates one possible configuration of this concept.



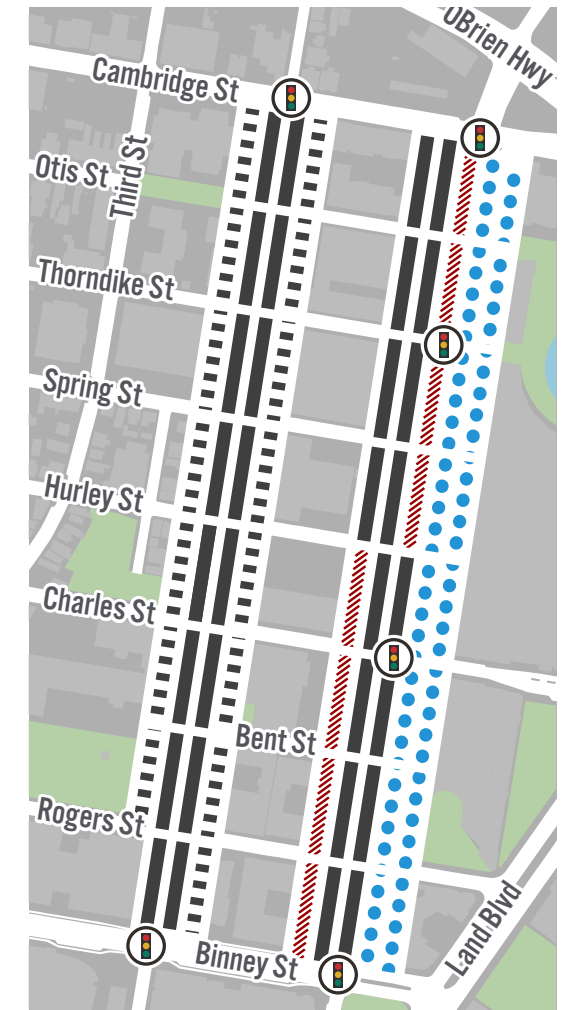
One Bus Lane + Separated Bike Lane(s) on First St

Concept B

- Separated bike lane improves safety and comfort
 - Two-way lane requires less space, but adds challenges at intersections
 - Traffic volumes will inform lane location
- Requires consideration of bus stop locations and design, with a focus on safe interactions between different modes
- Concept creates dedicated space for buses in one direction
 - Bus lanes could be used for off-peak loading and pick-up/drop-off
 - Design could include a change in the bus lane location in the middle of the corridor

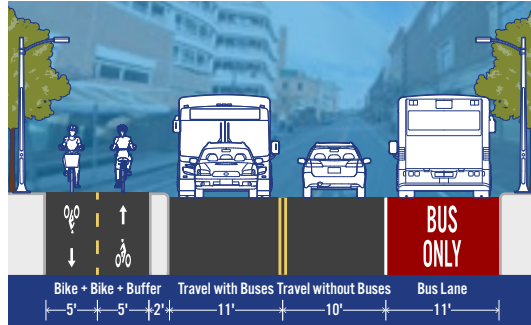


Map illustrates one possible configuration of this concept.



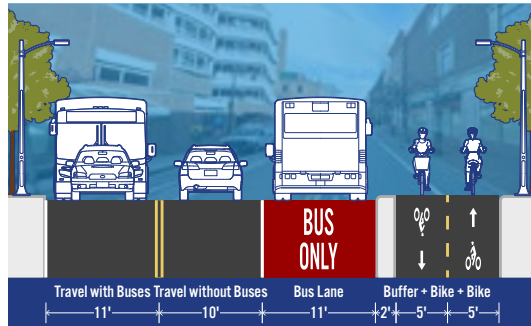
One Bus Lane + Separated Bike Lane(s) on First St

Concept B - Considerations



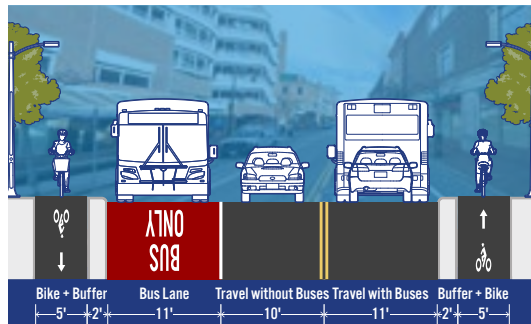
Bus Lane Direction and Bike Lane Location

- As mentioned traffic volumes from side streets and garages will be used to inform the location of the bike lane
- We will look to reduce potential conflicts between different modes
- We can swap the direction of the bus lane once along the corridor



Bike Lanes and Bus Lanes on the Same Side of the Street

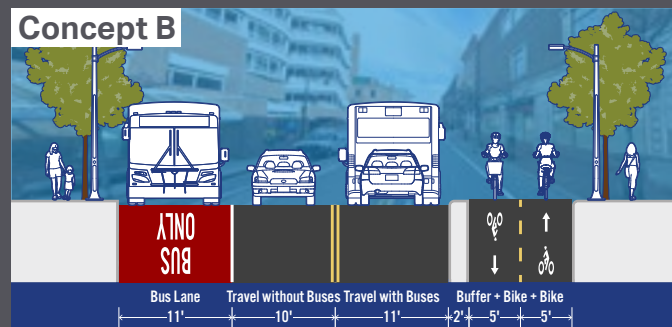
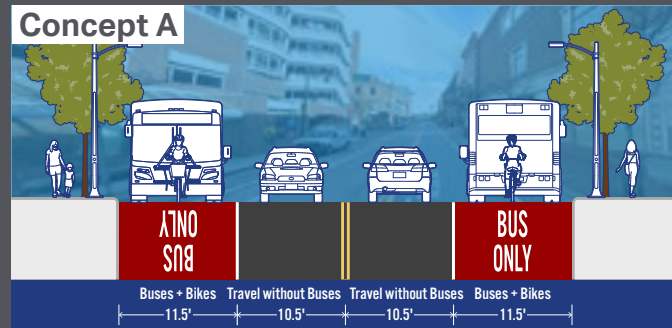
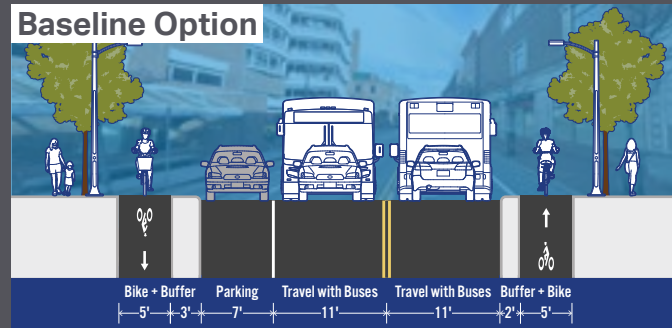
- Further analysis may show that this is the best balance of transit improvements and safety
- Buses are on both sides of the street, so this does not necessarily result in an increased number of conflicts between bikers and transit riders



Two One-Way Bike Lanes

- Some space from existing sidewalks and tree pits would have to be used create space for the second buffer
- This may negatively impact trees
- This does not limit options for the direction of the bus lane

Summary of Concepts



Walking	Biking	Riding Transit	Driving	Curb Use
<p>No changes required</p> <p>Sidewalks could be widened by reallocating some parking spaces</p>	<p>Separated lanes increase safety and comfort</p>	<p>No change, buses stay in the general travel lanes</p>	<p>No change</p>	<p>Could maintain most parking spaces or reallocate space to sidewalks</p>
<p>No changes required</p> <p>Does not leave space for widening sidewalks</p>	<p>Changes to Second St to ensure lower volumes and lower speeds</p>	<p>Adds bus lanes in both directions</p>	<p>No change</p>	<p>Bus lanes could be used for off-peak loading and pick-up/drop-off</p>
<p>No changes required for 2-way bike lane</p> <p>1-way bike lanes (one lane on each side) would take some space from tree pits</p>	<p>Separated lanes increase safety and comfort; two-way adds challenges at intersections</p>	<p>Adds a bus lane in one direction</p>	<p>No change</p>	<p>Bus lane could be used for off-peak loading and pick-up/drop-off</p>

Group Activity

How Do/Don't the Concepts Meet the Goals?

Instructions

- Introduce yourself to your group members: your name and affiliation(s)
- Work with your group members to identify the ways each goal is or is not met by the Baseline Option, Option A, and Option B
- Your responses will be written down and be used to inform the final design
 - We do not intend to select the final design tonight

Next Steps + Study Schedule

Winter 2021: Background Review

April 2021: Stakeholder Meeting

June 2021: Stakeholder Meeting  **We are here**

Spring 2021: Transportation Analysis

Late June 2021: Community Meeting

August 2021: Stakeholder Meeting

Summer 2021: Design Process

September 2021: Community Meeting

Fall 2021: 10% Design

Thank you!

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