



City Update June 2026 PTAC Meeting



Agenda

- Somerville Ave Quick Build Safety Improvements Project - Concept Design Review
- Union Square Transit Signal Priority (TSP) Project



Above: Somerville Ave Quick Build Safety Improvements Project Open House on Tues June 9th.

Somerville Avenue Quick Build Improvements

Included

- Improved sight lines for crosswalks
- Protected bike lanes (~1.96 miles)
- Some parking removal
- Narrowing of travel lanes

Could be Included

- Bus stop changes
- Traffic signal timing changes
- Changes to parking regulations

Not Included

- New crosswalks
- Planters
- Repaving street or repouring sidewalks
- Speed humps or raised crosswalks
- Utility, lighting, or stormwater work



Limit of Work (~ Length .98 street miles)

Somerville Avenue Quick Build Improvements

Timeline



Somerville Avenue Quick Build Improvements

Somerville Ave
On-Street Parking Total
Existing : 117 spaces
Concept: 84 spaces
Change: -33 spaces

The majority of these spaces are regulated as two-hour parking except by permit. There are also a small number of metered parking spaces, loading zones, and 15-minute parking spaces. There are currently no accessible parking spaces located within the project area.

Elm St – Belmont St
Existing: 16 spaces
Concept: 8 spaces
Change: -8 spaces

Belmont St – Beech St
Existing: 36 spaces
Concept: 35 spaces
Change: -1 space

Central St – Loring St
Existing: 19 spaces
Concept: 12 spaces
Change: -7 spaces

Loring St – School St
Existing: 18 spaces
Concept: 14 spaces
Change: -4 spaces

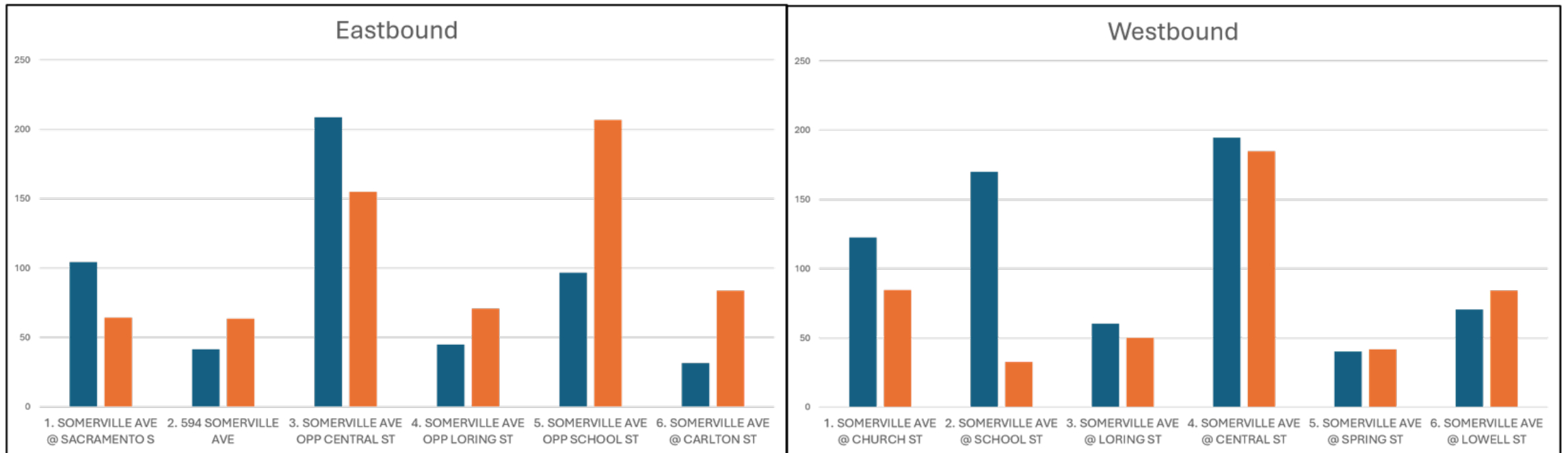
School St – Bow St
Existing: 28 spaces
Concept: 15 spaces
Change: -13 spaces

Approximate on-street parking space counts on Somerville Ave in the existing condition and Concept Design

Existing Bus Stops

- Somerville Avenue currently serves two bus routes, with approximately 2,300 people per day using bus stops within the project area in Fall 2024.
- The bus stops with the most people using them are near Lowell Street, Central Street/Conway Park, and Market Basket.

Average Daily Bus Stop Utilization (Weekday & Weekend), Fall 2024



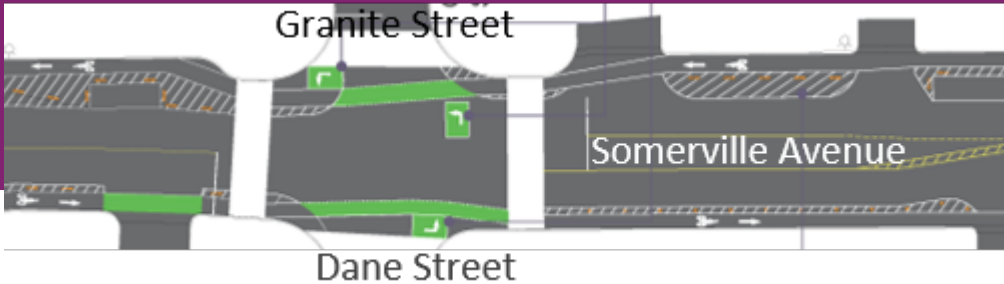
Proposed Bus Stop Changes

- There are two key challenges that exist with bus service on Somerville Avenue:
 1. Bus stops are spaced close together, which results in the bus stopping frequently and contributes to delays in bus service.
 2. Several bus stops are too short, which prevents the bus from being able to pull against the curb and creates accessibility hazards.
- We propose to reduce the total number of bus stops on Somerville Avenue to decrease delay and create spacing between stops that aligns with the MBTA's recommended guidelines.
 - Stops are maintained in the locations where people use them the most today.
- In the concept design all bus stops have been designed to allow the bus to pull against the curb.

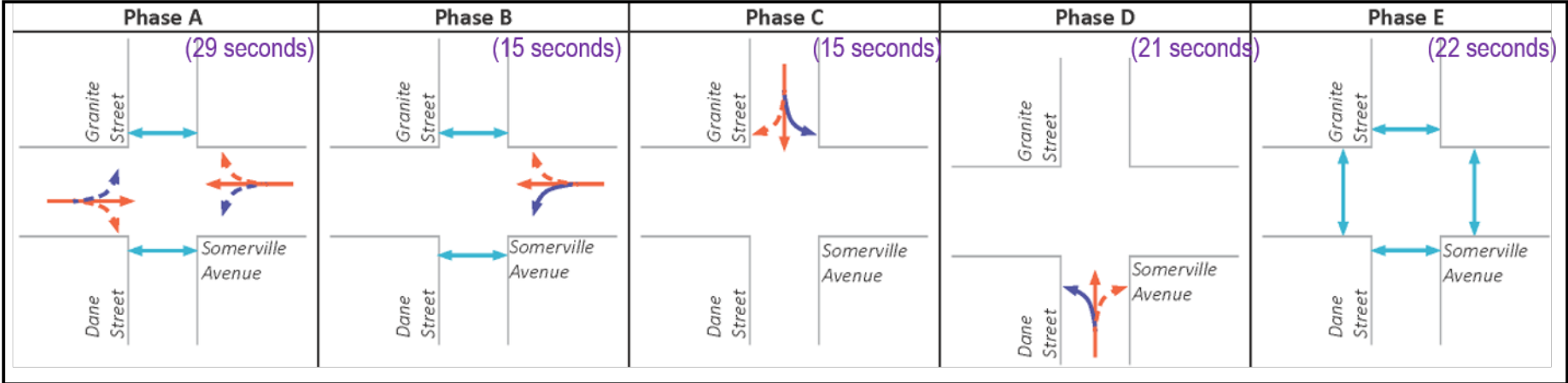


Somerville Avenue Quick Build Improvements

Signal Changes

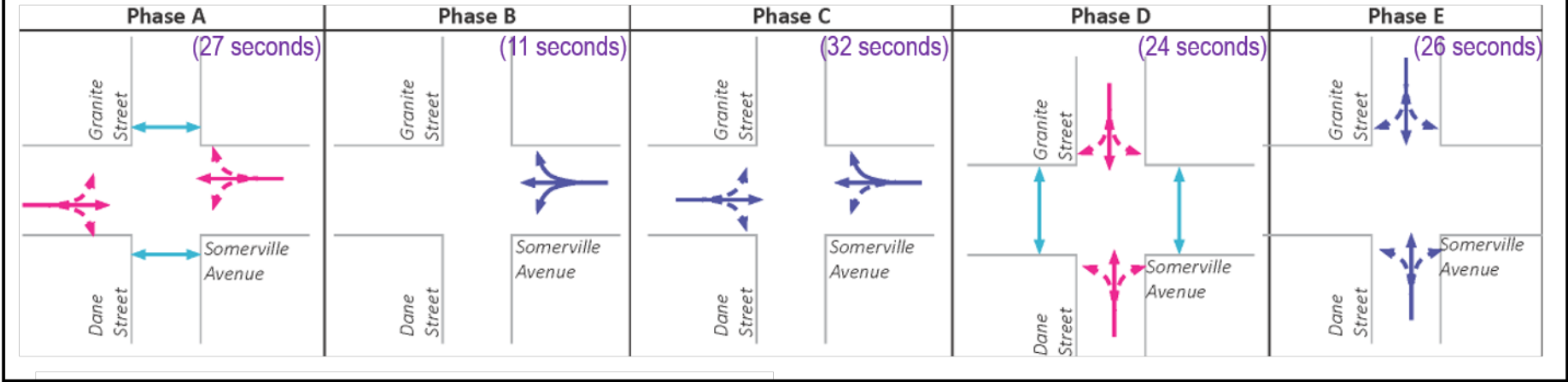


Option A – Two Stage (Cycle Length: 100 seconds)



For safer left turns for cyclists from Somerville Avenue onto Granite Street or Dane Street, we propose to add bike boxes to allow cyclists to wait and use two phases. We also propose two separate phases for northbound and southbound moves. Green for traffic out of Granite Street will only come up if a car or bicycle is detected. Pedestrians are allowed to cross Dane Street and Granite Street at the same time as traffic goes eastbound and westbound on Somerville Avenue.

Option B – Vehicle Separation (Cycle Length: 120 seconds)



We propose complete separation between vehicle traffic and pedestrians and cyclists. Cyclists and pedestrians share two phases (A and D).

Legend

- Vehicle and bicyclist movement
- Bicyclist movement
- Vehicle movement
- Pedestrian movement
- Dashed line indicates move has to yield to oncoming traffic

Somerville Avenue Quick Build Improvements

Signal Changes

Pedestrian Green Lights

- Automatic (Recall)
 - Does not require action
 - Pedestrians always have to wait for pedestrian phase within one cycle
 - Red for Somerville Avenue even when not pedestrians slowing down bus operations.
- Push Button
 - Requires action
 - Potentially decreases waiting time.
 - Only red for Somerville Avenue when pedestrians cross therefore more often bus operations is not slowed down.



Somerville Avenue Quick Build Improvements

Feedback/Comments

Specific Feedback

- Parking regulation preference
- Bus stop locations and eliminations
- 2-Stage versus Vehicle Separation phases
- Pedestrian crossing when vehicles can turn
- Automatic (Recall) versus Push Button?

How to share feedback

Take the concept design feedback survey!

- Available until July 10 and in English, Spanish, Portuguese, Haitian Creole, Nepali, Traditional Chinese, and Simplified Chinese

Visit our Street Outreach Pop-Up

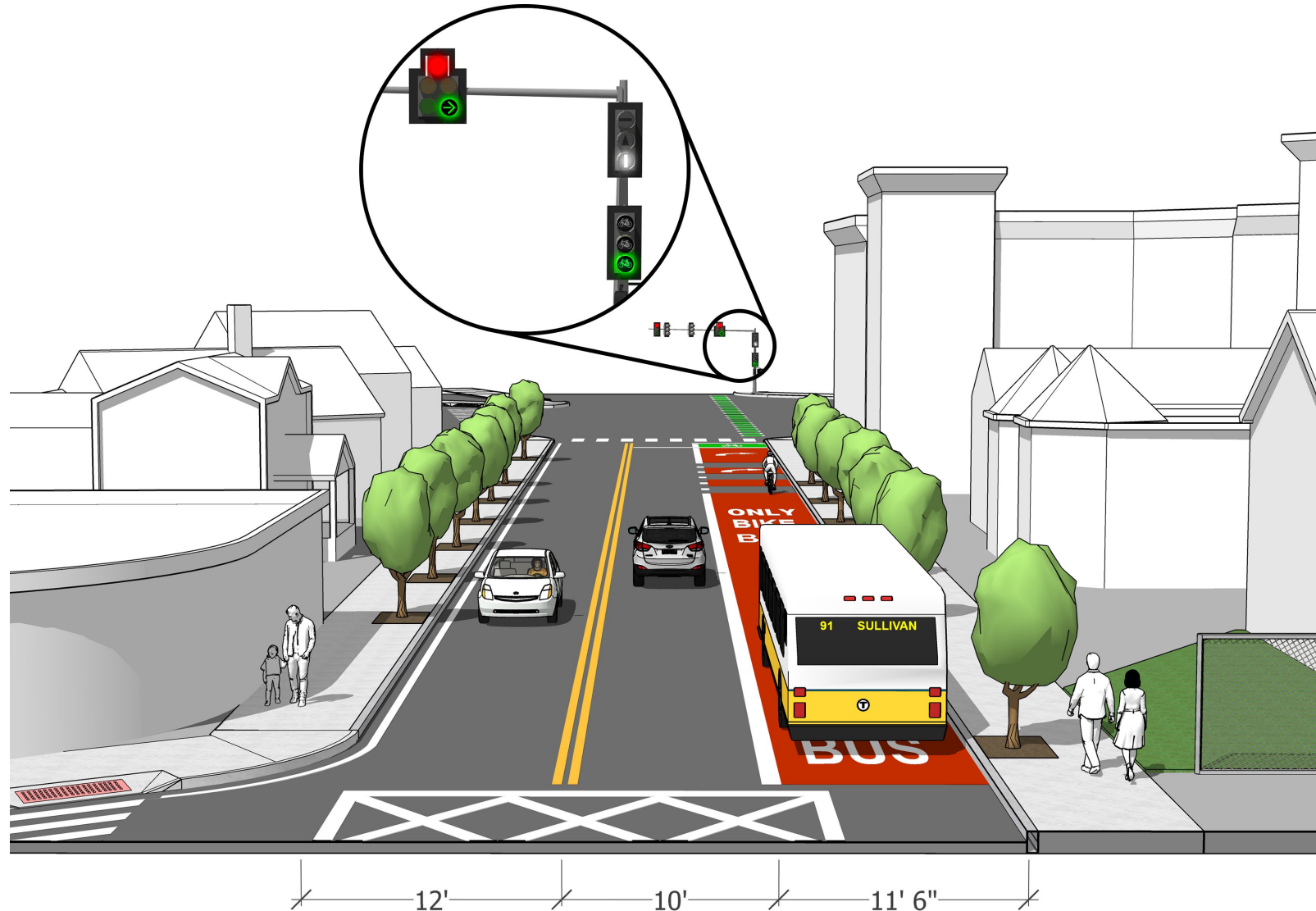
- Planned for Friday, June 26, 12:30 - 1:30pm (Church Street) and Tuesday, June 30, 5:00 - 6:00pm (Park Street). If inclement weather is forecasted, check the website approximately 48 hours ahead for event updates.

Write or call us

- Send your written comments to transportation@somervillema.gov or submit a call back request to 311 (617-666-3311)

Union Square Transit Signal Priority Project Overview

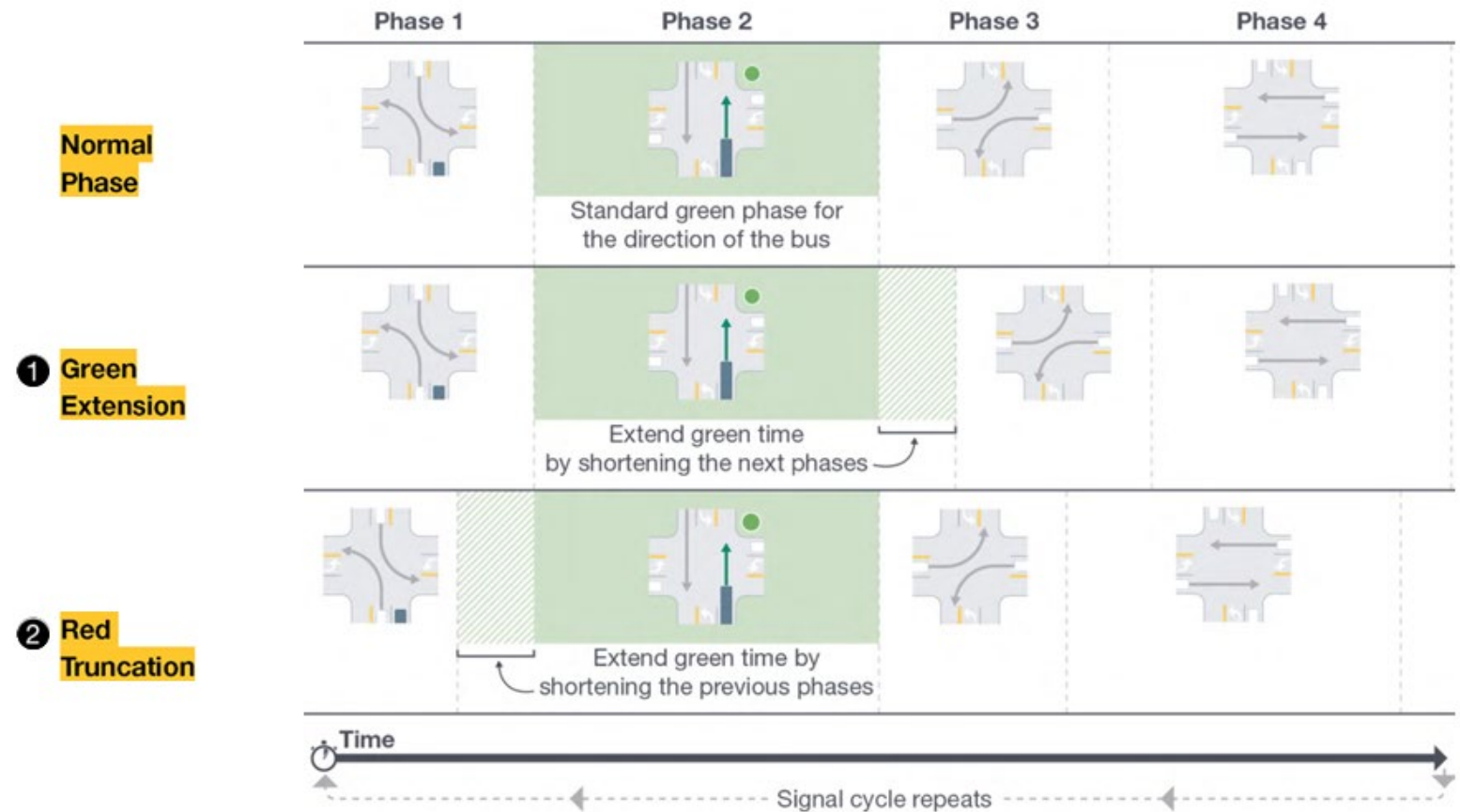
- Union Square is an area of Somerville that is growing quickly. To mitigate some of the recent development, the City has received funding to be spent on transit priority improvements that can keep the 4 existing bus routes (85, 87, 91, 109) and 2 future bus routes (47, 96) moving
- In partnership with the MBTA, we will be making major upgrades to the signal equipment at Washington St and Webster Ave, Somerville Ave and Prospect St, and Webster Ave and Prospect St. These upgrades should help everyone, but especially buses, get through the square more quickly without compromising on safety
- This effort also includes installing a bus/bike lane on Prospect St from Oak St to Webster Ave



Transit Signal Priority Strategies

The two most typical TSP strategies, as outlined in the MBTA's Bus Priority Toolkit, are green extension and red truncation:

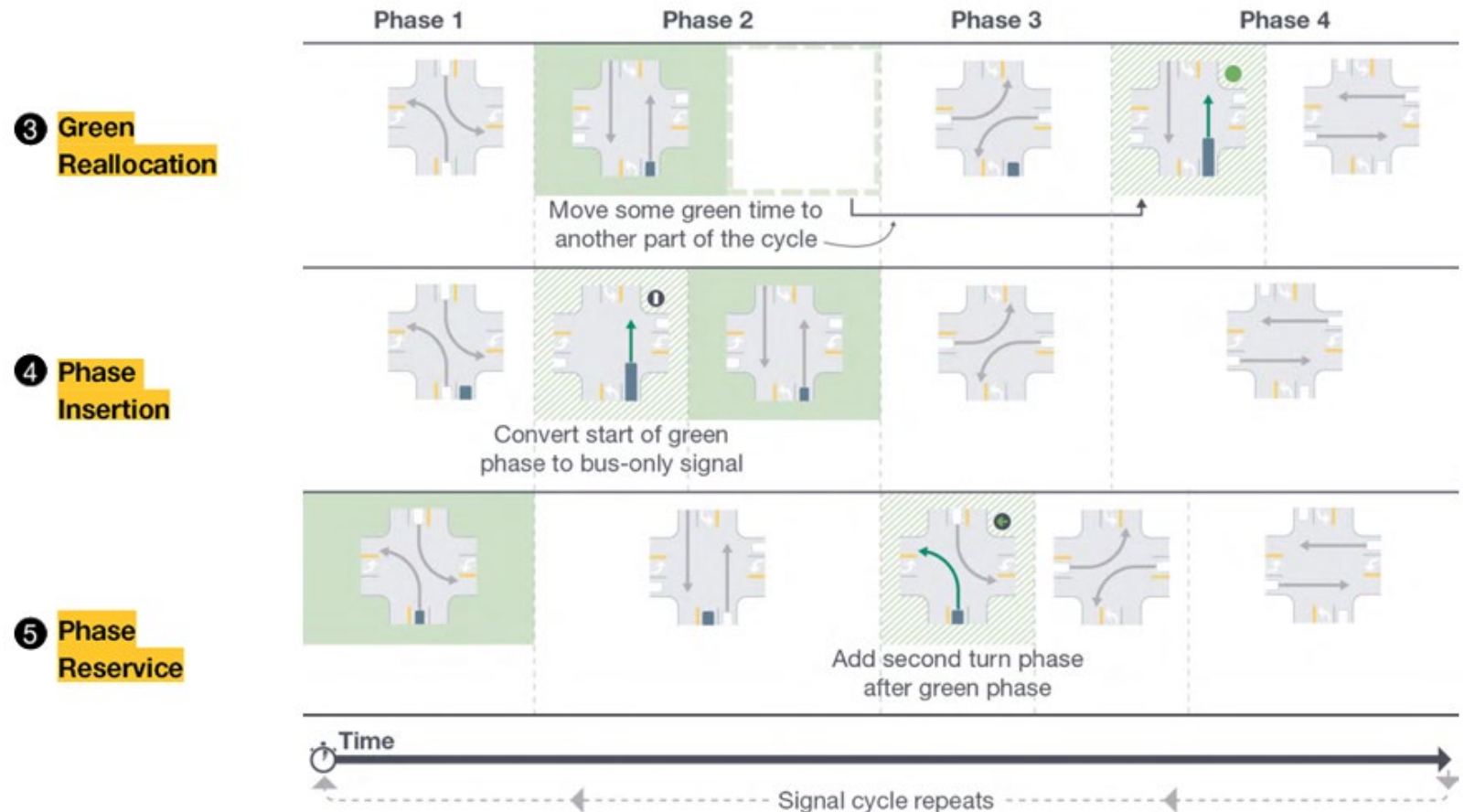
- **Green extension**
lengthens the bus's phase beyond its typical maximum to allow the bus to get through on a green
- **Red truncation**
shortens a non-bus phase to allow the bus's phase to start sooner



Transit Signal Priority Strategies

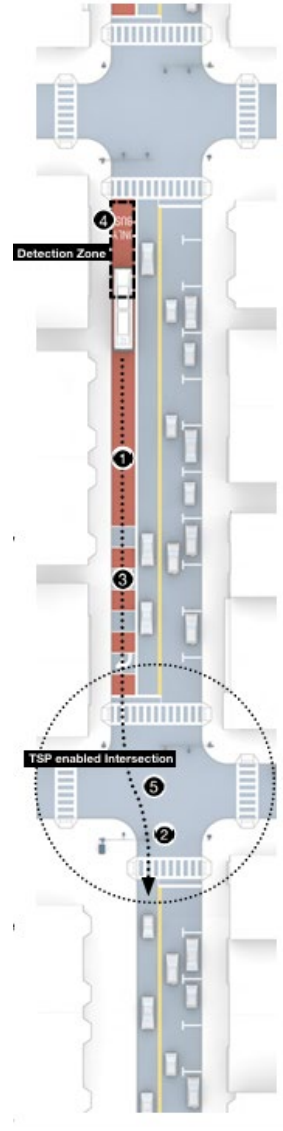
There are also more advanced strategies that may be applicable under certain circumstances:

- **Green reallocation** shortens the bus's phase if it's not expected to arrive on green, and then moves the remaining green time to a different part of the cycle when the bus is expected to arrive
- **Phase Insertion** activates a special bus-only phase that allows the bus to advance through the intersection while all other traffic is stopped
- **Phase Reservice** allows a phase that accommodates a bus turn to happen at two different points during the cycle, although it will only be activated one of those times



What's the plan for Union Square?

- The proposed bus lane on Prospect St will function as a queue jump, similar to the existing bus lane on Washington St at Webster Ave. While there isn't enough space to have either lane run fully through the intersection, the goal is to allow the bus to get up to the stop line sooner and take advantage of the **phase insertion** strategy to give the bus it's own dedicated time to proceed through the intersection
- **Green extension** and **red truncation** of up to 20 seconds will also be permitted during a given signal cycle to better align with the bus's expected arrival time
- Green reallocation and phase reservice were not pursued here because they didn't provide additional value, either because the existing phasing is simple and green extension and red truncation are sufficient (in the case of Prospect/Webster) or because we're limited by crosswalks that run during the non-bus phases (in the case of Wash/Webster and Prospect/Somerville)
- New camera detection, although not explicitly a TSP solution, is expected to better accommodate traffic volumes throughout the day and reduce delay for all modes



TSP Scenarios

By using multiple tools that prioritize buses over general purpose traffic, it allows the bus to more reliably move through Union Square. Here are some examples of how a northbound Prospect St bus could use different tools in different situations:

- Scenario 1: Bus arrives on a red with a few cars ahead of it. Bus pulls into the queue jump lane, gets up to the stop line, and then receives a green from the transit signal. The bus has saved some time at this intersection, and then is also more likely to make it through the next intersection on a green because it skipped several vehicles.
- Scenario 2: The bus is approaching on a green and therefore didn't need to use the bus lane, but the signal is going to turn yellow before the bus can get through. The green extension function is activated and allows the bus to make it through on green instead of having to wait for a full signal cycle.
- Scenario 3: Bus arrives on red during a period when traffic is heavy on Prospect St and it can't get into the bus lane. Webster Ave traffic is light, however, and the new camera detection equipment is able to see this and end the Webster Ave phase more quickly so that Prospect St can get a green sooner. TSP may not be needed/activated in this scenario.

