Crosstown

Smart Signal Corridors

Traffic signals that talk to each other

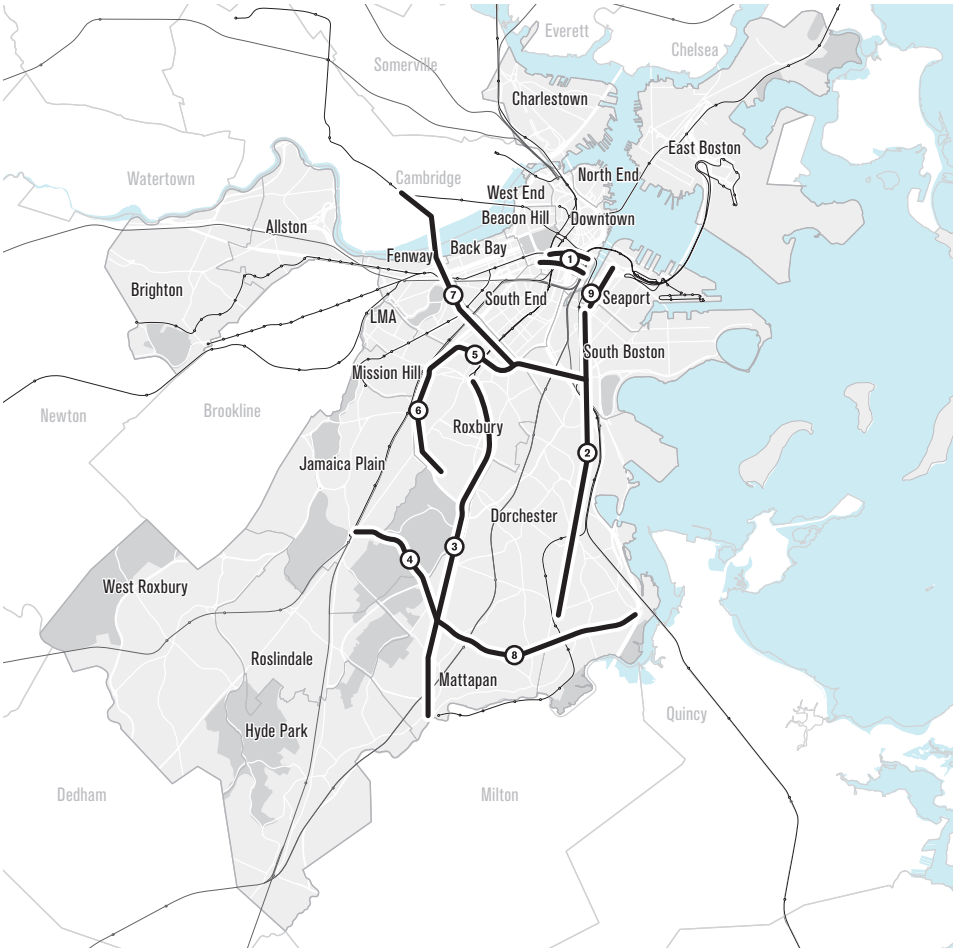
Project Score

- ○ Access 1
- ◕ Access 2
- ● Safety 1
- ○ Safety 2
- ● Reliability
- ● Affordability
- ○ Sustainability/Resiliency 1
- ○ Sustainability/Resiliency 2
- ● Governance

#2 in public voting

Project Description

Building off of and sometimes connecting to more localized *Smart Signals Districts*, these Smart Signal Corridors would allow BTD to better manage traffic flow for those walking, biking, riding transit, and driving on some of the City's most congested corridors. Today, staff at the City's Traffic Management Center monitor traffic cameras and manually adjust signal timing to improve driving conditions. Smart signal corridors would go one step farther by automatically adjusting signals in ways that respond better to the primary direction and desired speed of traffic flows. State-of-the art signals would improve the capacity of the City to give green lights to arriving transit and emergency vehicles, calculate green wave patterns that allow people biking and driving to stop less frequently, communicate with autonomous cars, and give more walk time at crossings when sidewalk crowding is an issue.



Benefits and Issues Addressed

New technology that is currently being developed for individual vehicles, including apps like Waze, only allows travelers to react to and avoid delays and congestion, rather than providing systemic solutions to delays. By integrating this data with live traffic cameras, smart signals can coordinate and make travel safer and smoother for all travelers. Smart signal corridors can keep traffic flowing without the pulses of signal delays, enabling bicycle and car speeds to be more compatible, emergency services to increase response times, and transit reliability to improve. These technologies are especially helpful where flows of people cross, reducing conflicts and crashes while making it safer to walk across the city.

Implementation

Approximate Cost: $25 million over five years for smart corridors and districts, as well as other signal upgrades
Potential Funding Sources: City capital plan and local developers
Who's Responsible: BTD
Time Frame: Ongoing

Best Practices

Bellevue, WA, has implemented an adaptive signal system along Factoria Blvd, a key corridor in the City, heavily used by commuter traffic. *time.com/3845445/commuting-times-adaptive-traffic-lights/*

Smart Signal Corridors along:

1 Essex and Kneeland Streets
2 Dorchester Avenue
3 Blue Hill Avenue and Warren Street
4 Morton Street
5 Melnea Cass Boulevard
6 Columbus Avenue
7 Massachusetts Avenue
8 Gallivan Boulevard
9 A Street

Public Input

"Reduce pedestrian waiting time on Columbus Ave/Tremont St. Pedestrians have to wait almost 2 minutes to get a green light."
–02119

"Magnetic sensor under roads: It would determine the number of cars waiting at a light and adjust the signal accordingly based on traffic flow."
–01867