

SOMERVILLE

Redesigning a wide boulevard to serve multiple travel modes

All Day Dedicated Bus Lane

Direct to Permanent

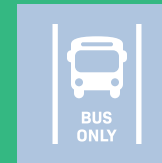
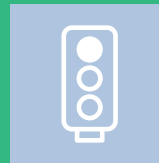
Permanent: August 2019



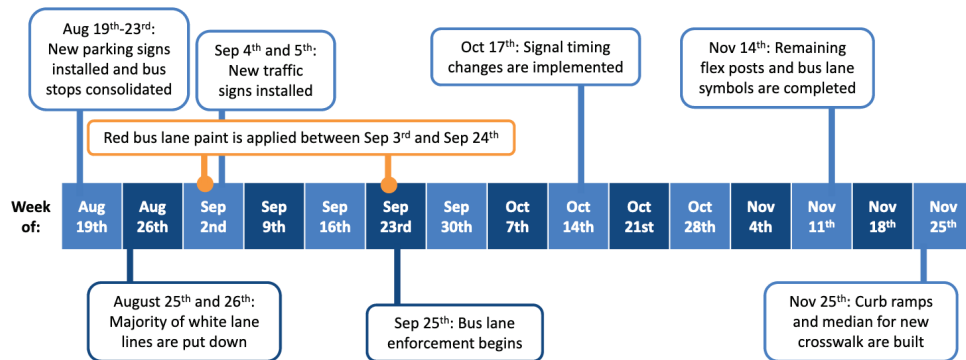
Broadway Bus Lane // Radu Nan

While many bus priority projects were starting to kick off in neighboring municipalities through the BostonBRT program, the City of Somerville built on the momentum of its first bus lane project in late 2017 on Prospect Street and began implementing its second in 2019 on Broadway in the Winter Hill neighborhood. The City coordinated closely with BostonBRT partners, and leveraged lessons learned from participating municipalities to deliver meaningful transit solutions.

The Broadway project followed an interesting trajectory. In 2014, the City initiated community engagement and design development for reconstruction of the project corridor. As the construction project was approaching final design in late 2016, the City was notified that they were required to contribute \$50 million to MassDOT to prevent the MBTA Green Line Extension light-rail project from being cancelled. The new financial pressure caused the City to defer the Broadway reconstruction. City staff began investigating “quick-build” strategies to deliver safety and mobility improvements on a severely constrained budget.



Central Broadway Project Timeline



Central Broadway Project Timeline // City of Somerville

Knowing that this corridor could benefit from a range of improvements, the City sent out a survey to residents asking what they wanted improved along Broadway. The survey generated more than 1,000 responses, which suggested that the road was serving motorists well, but that the experiences for people traveling in other ways were subpar. Somerville staff compared their survey data to MBTA data which supported the results from the survey that bus congestion was a problem during peak times.

From their survey results, the City developed a new project, branded “[Winter Hill in Motion](#).” The initial concept proposed bus queue jump lanes at high-delay intersections, along with segments of protected bike lanes. As public review of the design concept proceeded, stakeholders encouraged the City to pursue more aggressive bus and bike treatments. City staff began exploring an offset bus lane configuration, replacing a general purpose travel lane rather than parking lanes. Traffic signal upgrades and retiming were identified as a key strategy to maximize the benefit of the bus lanes and simultaneously mitigate potential queuing in the general-purpose lanes. Bus stop consolidation was used to reduce dwell times and create stop frequencies meeting MBTA standards.

The final design featured a half-mile long, bi-directional, all-day bus lane between McGrath Highway (State Route 28) and Main Street at the top of Winter Hill. Unlike many other communities in the region that piloted projects before implementing, Somerville was able to utilize lessons learned from previous projects in neighboring municipalities and go straight to a permanent installation. They did, however, replicate the non-traditional engagement approach modeled by many other local projects.

The City reached out to neighborhood associations, community-based organizations, bicycle advocates, business owners, city councilors, and the MBTA. LivableStreets Alliance was contracted to train volunteers to flyer the neighborhood, interview people biking and riding the bus, and perform merchant interviews in multiple languages. A traditional project webpage was created to host important project information. Despite this mixture of traditional and non-traditional approaches, some community stakeholders reported feelings of being caught by surprise when the project was implemented in late 2019.

Project implementation was exceptionally challenging. The City’s proposed implementation sequence assumed that traffic signal equipment would be upgraded and retimed prior to operation of the new bus lanes. Scheduling challenges with contractors forced the City to reverse this sequence, opening the bus lanes and eliminating the general purpose lanes without the benefit of signal retiming. Traffic queues were exacerbated by major regional detours associated with the Green Line construction. Public opposition was severe, and a major controversy erupted in the weeks leading up to Somerville’s municipal elections.

Somerville’s Mayor stood firm throughout the turbulent fall season, assuring stakeholders that traffic patterns would adjust and that the City’s commitments to transit equity and climate action required projects of this scale and ambition. The Mayor visited bus stops and rode on Broadway’s two bus routes to engage with constituents. He attended a town hall meeting hosted by City staff, facing aggressive and emotional advocacy to eliminate the bus lane and return to the status quo. In early November, the Mayor won reelection.

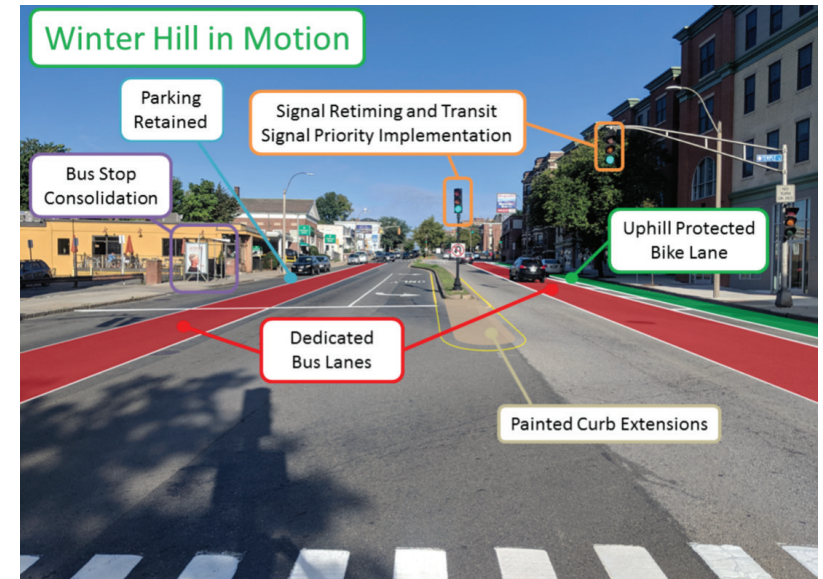
CASE STUDY / SOMERVILLE

During the month of November, the City prioritized a quantitative evaluation of the “Winter Hill in Motion” project to date. City staff and consultants analyzed safety data, travel time data, bus ridership, motor vehicle volumes and motor vehicle speeds. The results were presented in a formal City Council public hearing in December. Although project opponents remained organized and vocal, project supporters mobilized effectively and helped create a positive framing.

One of the most compelling data points for the project emerged in February 2020. MBTA ridership data compared the representative four-week period of January 2019 against January 2020. Post-bus lane weekday ridership on MBTA Route 89 was documented to be 36% higher than the equivalent period twelve months earlier. In absolute terms, the data showed that approximately 1,000 more weekday customers chose to use the bus after the new bus lanes were created. Saturday ridership was up 58% and Sunday ridership was 69% higher in 2020 compared with 2019.

What happened next?

The City of Somerville worked in 2020 to document lessons learned from the Broadway bus lane project and apply them citywide to quickly scale its bus priority program. The City implemented three dedicated bus lane projects as part of its COVID-19 public health response in 2020. In 2021 the City plans to implement three more bus lane projects, including a bus facility pilot on a major state highway facility (Route 38 / Mystic Avenue).



Winter in Motion // City of Somerville

BEFORE



AFTER



DATA

Type of Improvement:

All day bus lane

Length of Improvement:

0.6 Miles (in each direction)

Bus Routes Along Corridor:

89, 101

Exact Location:

Broadway between Magoun Square and McGrath Highway

Starting Intersection/Point:

Broadway at Magoun Square

Ending Intersection/Point:

Broadway at McGrath Highway

Weekday Ridership: 8,000 people

Vehicles Allowed to Use Bus Lane: MBTA buses, emergency vehicles, school buses

Multimodal Improvements:

Bus, bike, and pedestrian improvements

Land Uses Along Corridor:

Commercial and residential

Pilot or Direct to Permanent:

Direct to permanent

Dates of Pilot: None

Dates of Implementation: August 2019

Parking Study: No

Planning Study:

Winter in Motion

Average bus rider time saved:

One minute

Post-implementation Survey Satisfaction:

Bus Riders – 80% positive