

EAST BROADWAY, SOMERVILLE MA

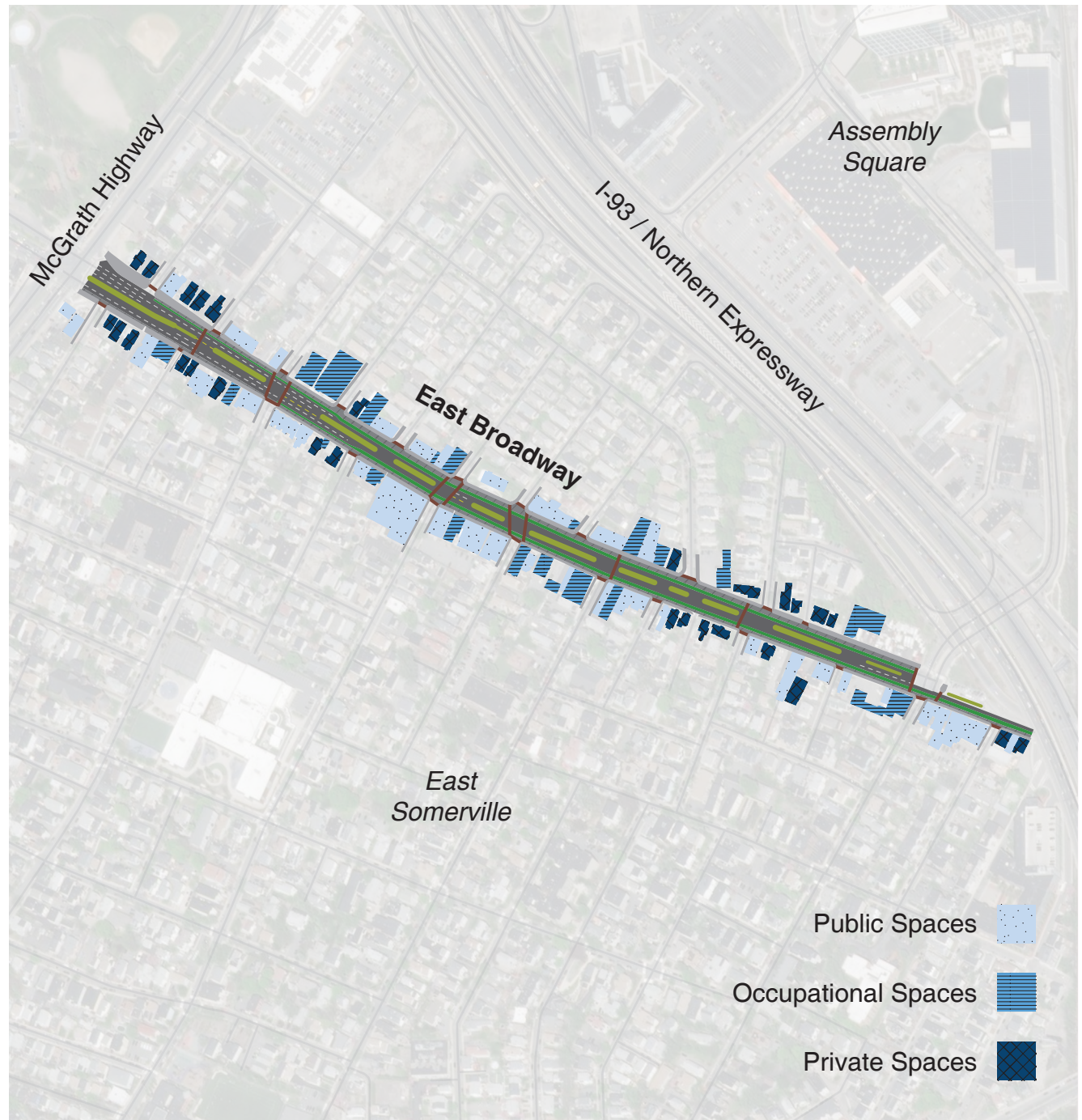
Lena Ferguson (MUP)

Laura Krull (MCP)

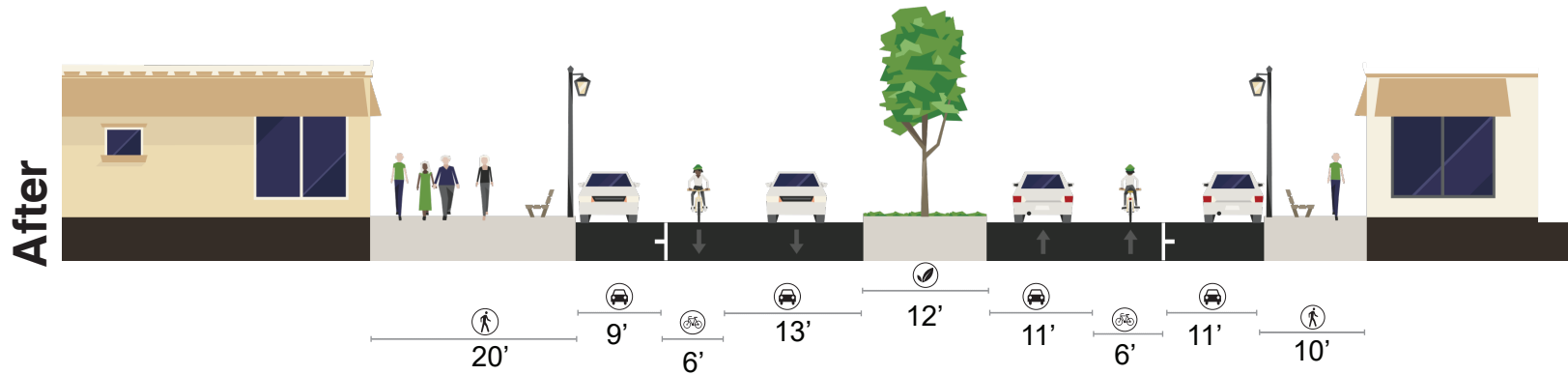
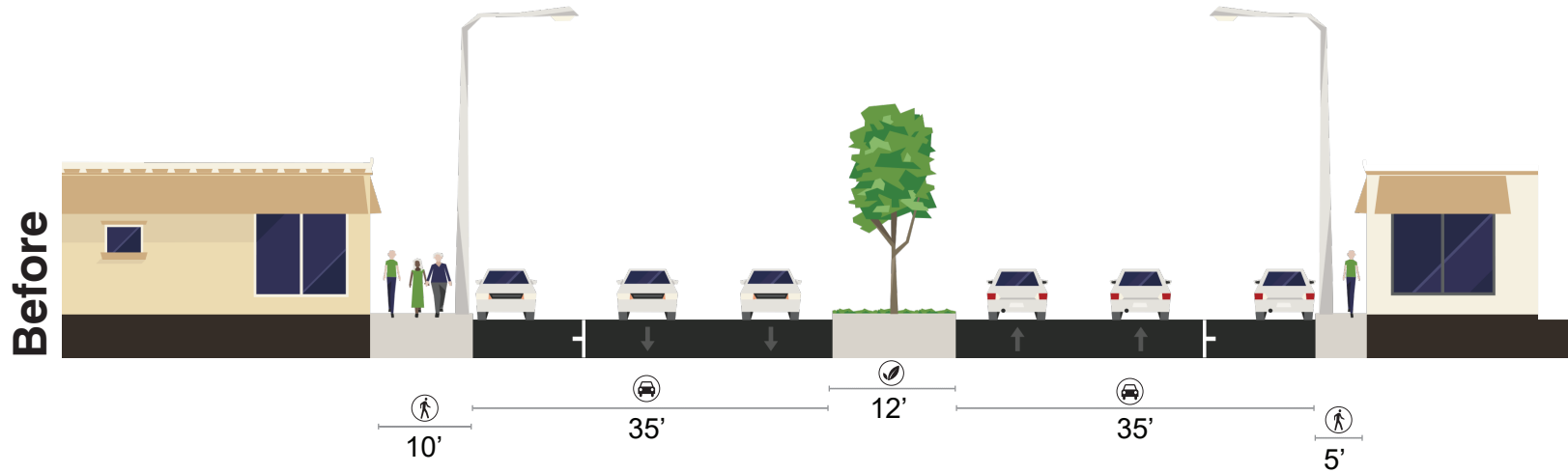
Angelica Quicksey (MUP/MPP)

CONTEXT

East Broadway connects Route 28 (McGrath Highway) and Sullivan Square. Originally conceived in the 1990's, the East Broadway Streetscape Improvement project was developed as part of a larger stormwater management effort to separate sewer and rainwater beneath East Broadway. In addition to infrastructure upgrades, the project introduced a "road diet" that reduced the number of travel lanes from four to two and redistributed the available right-of-way for cyclists and pedestrians. The city began aligning funding in 2007. They broke ground in late 2012 and completed the project in 2014.



SECTION: Broadway & Glenn St



Percent Change in Streetscape by Use

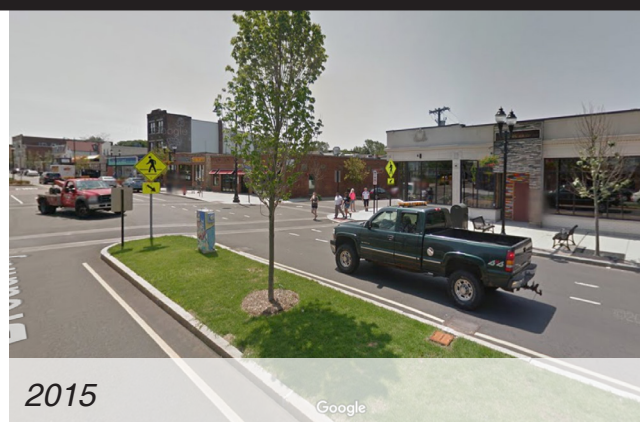
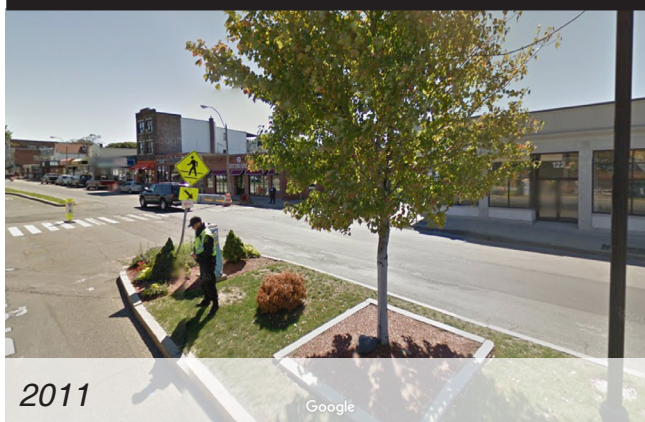


BEFORE & AFTER

Broadway & Garfield St



Broadway & Glenn St

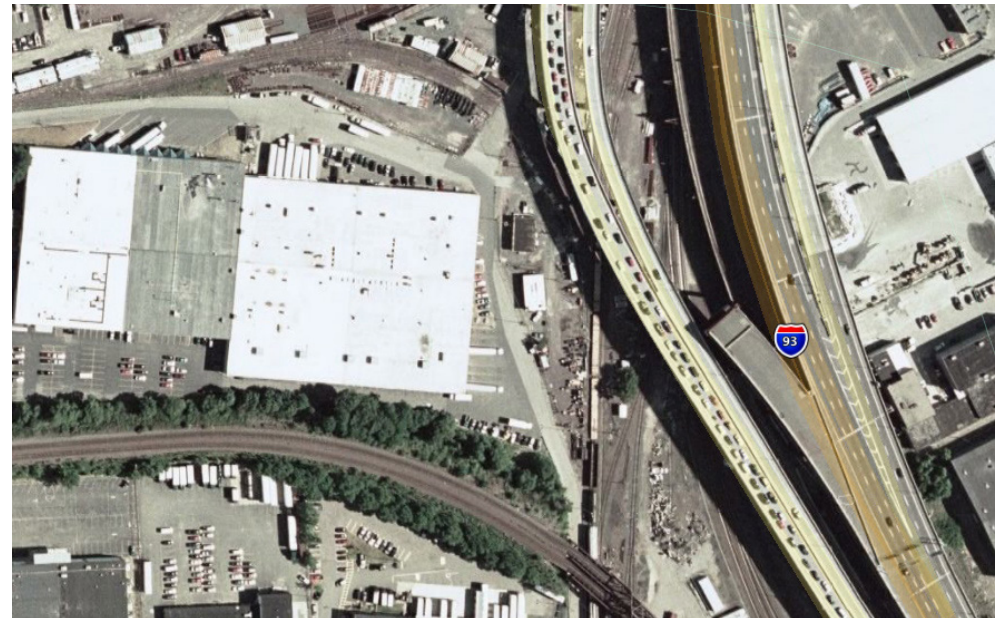


Broadway & Pennsylvania Ave



HISTORICAL CONTEXT

- 1863** Originally called Menotomie's Road, Broadway is the second highway built in the Greater Boston area
- 1928** McGrath Highway constructed to connect the Charles and Mystic Rivers
- 1950** Brockbottom neighborhood razed for construction of Inner Belt Expressway and I-93
- 1971** Community mobilization blocks the I-93 expansion
- 1990** Somerville begins considering sewer separation project along East Broadway
- 2007** City raises funds for infrastructure component of redesign and begins soliciting feedback on streetscape designs
- 2012** East Broadway Streetscape Improvement Project breaks ground
- 2014** Project completed



This project occurred in the context of a growing commitment to environmentalism and efforts to move mode share away from cars in Somerville. Living in the shadow of I-93, the neighborhood has long had concerns about pollution and noise emanating from the expressway. The East Broadway project was seen as a way to create more of a destination for East Somerville, rather than allowing the neighborhood to be a cut-through for I-93. It is part of the city's broader goal to be carbon neutral by 2050.

The community in this area has a long history of activism. They had banded together in the 1970's to prevent the highway from terminating in Somerville and Cambridge. The result was a half-built "ghost ramp" that still juts out from the I-93 in Somerville.

PROJECT

Costing a total of about \$10M, the East Broadway Streetscape Improvement project was the product of many stakeholders.

It relied heavily on federal funding, and also received support from three private developers with interested along the street. To choose the final design, the city solicited input from the community on four potential plans through public meetings. It drew on community partnerships with local groups like East Boston Mainstreets, Somerville Transportation Equity Partners (STEP), and Somerville Community Development Corporation.

Project components:

Safety & Traffic Operational Improvements

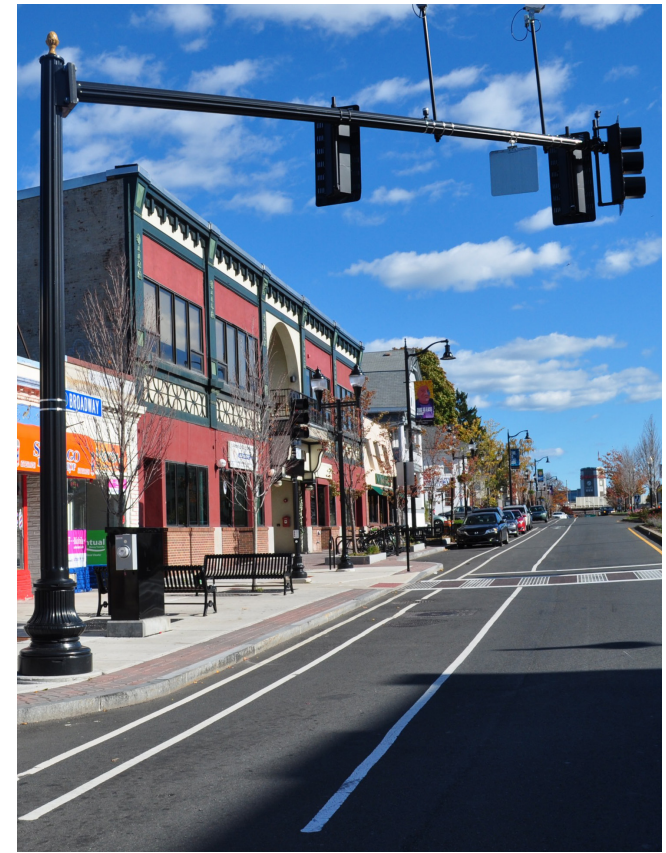
- New bicycle lanes
- Signals, signage, striping

Rehabilitation and Replacement of Utilities

- Storm & Sanitary Sewers
- Water Mains

Streetscape Improvements

- Wider, ADA compliant sidewalks
- Trees and grates
- Sidewalk and crosswalk treatments
- Ornamental LED lighting



Project Funding Source	Amount
Community Development Block Grants (CDBG)	\$1.1M
Massachusetts Water Resources Authority (MWRA)	\$3M
Local Water & Sewer Funds	\$1.5M
Metropolitan Planning Organization (MPO) Federal Transit Authority	\$2.5M
MASS DOT Discretionary Funds	\$600K
MASS Housing and Economic Development	\$1M
Private Developer Contributions	\$500K

TWO AREAS

To measure impact of the street redesign on demographic change, transit and mode share, property values, and businesses, we analyzed these factors for the census block groups within a 5-minute walk (.25 miles) of Broadway. We chose to look at the neighboring Central Broadway area for our comparison. This area is currently planning its own streetscape improvement project.

CENTRAL



1
at Medford Street



2
at Main Street



3
at School Street



4
at Walnut Street

EAST



5
at Cross Street



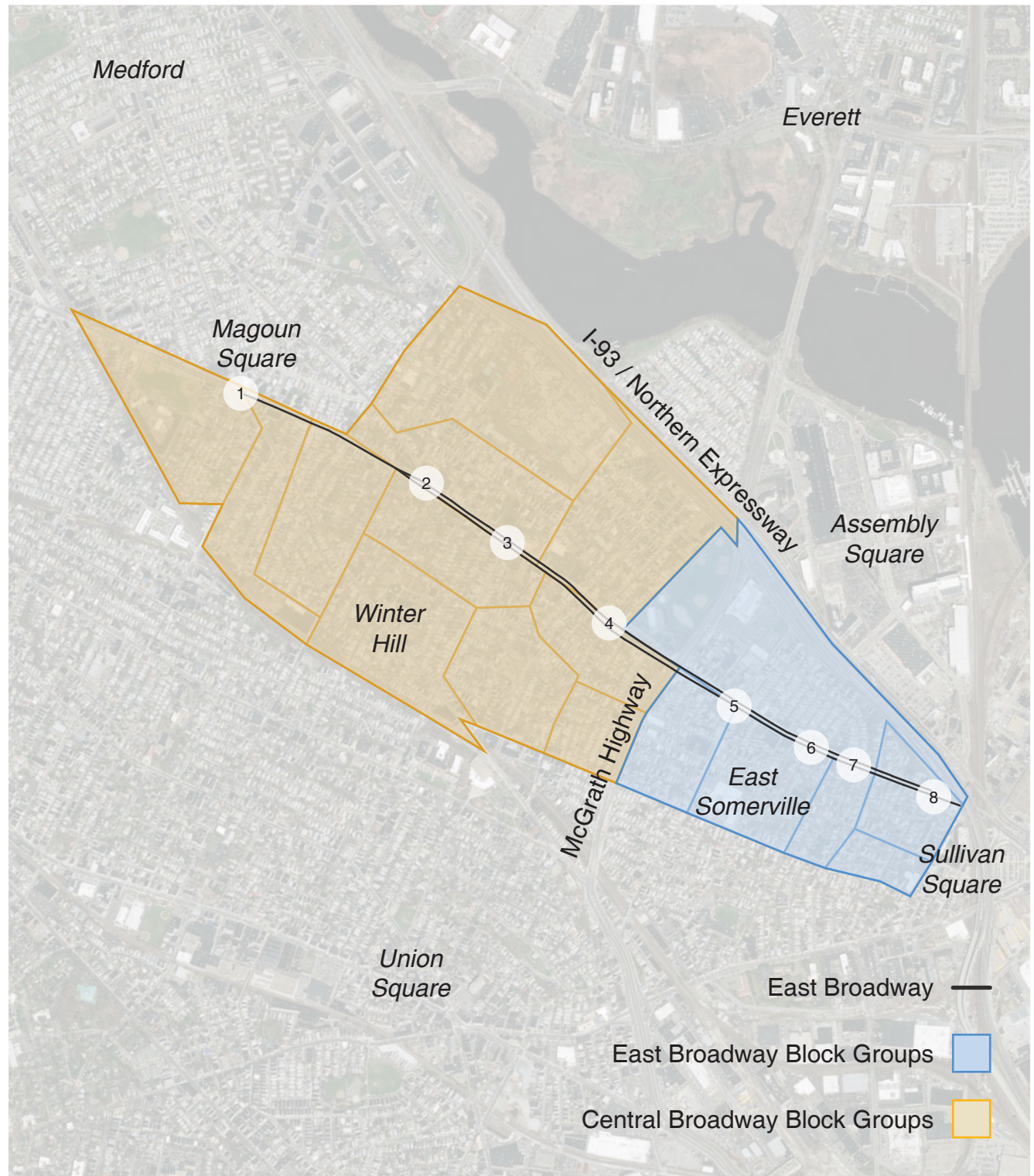
6
at Cutter Street



7
at Hathorn Street



8
at Mt. Vernon Street



DEMOGRAPHICS

population

% white

% black

% hispanic

% college educated

% unemployed

median income

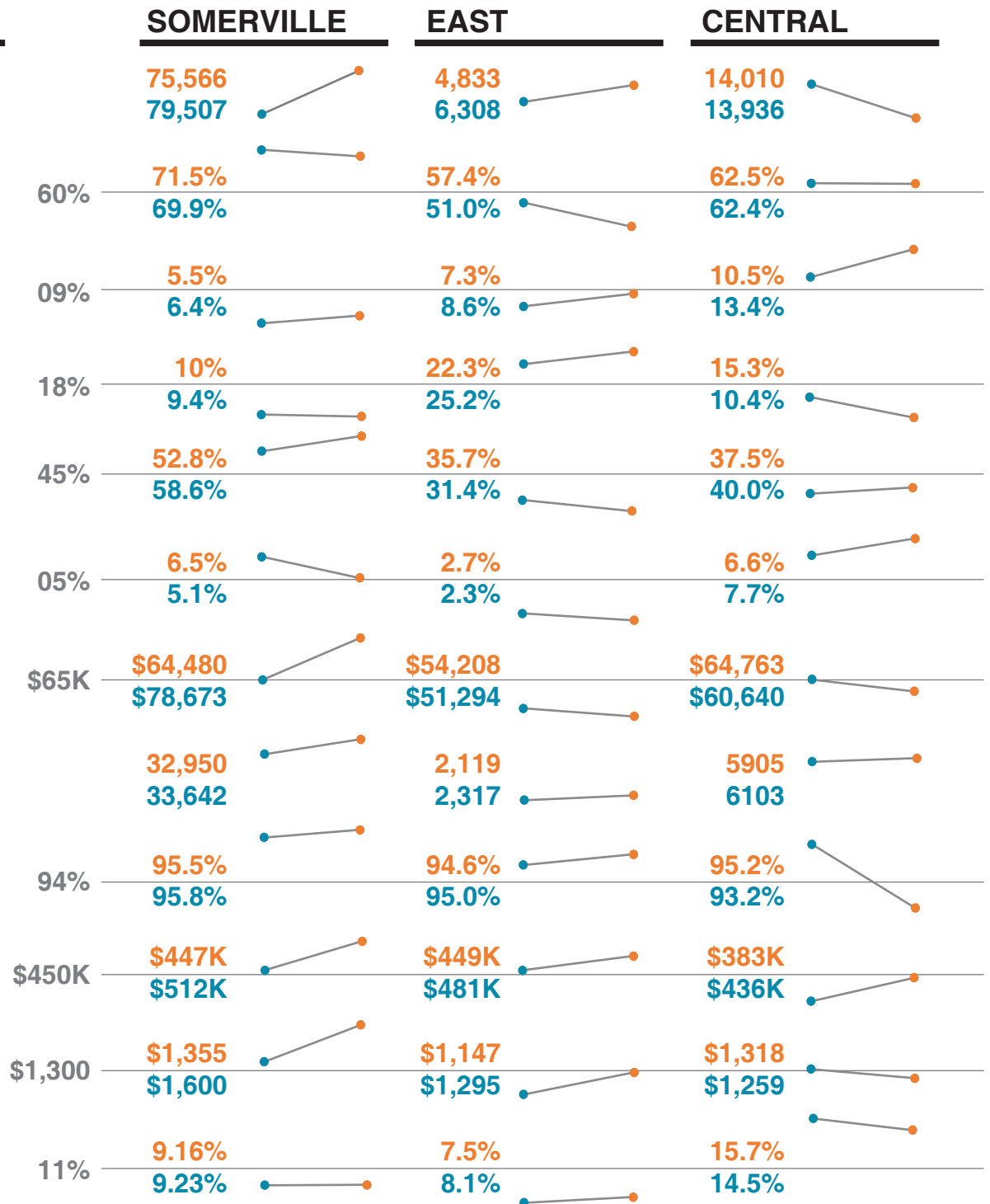
house units

% occupied units

median home value

median rent

% below poverty



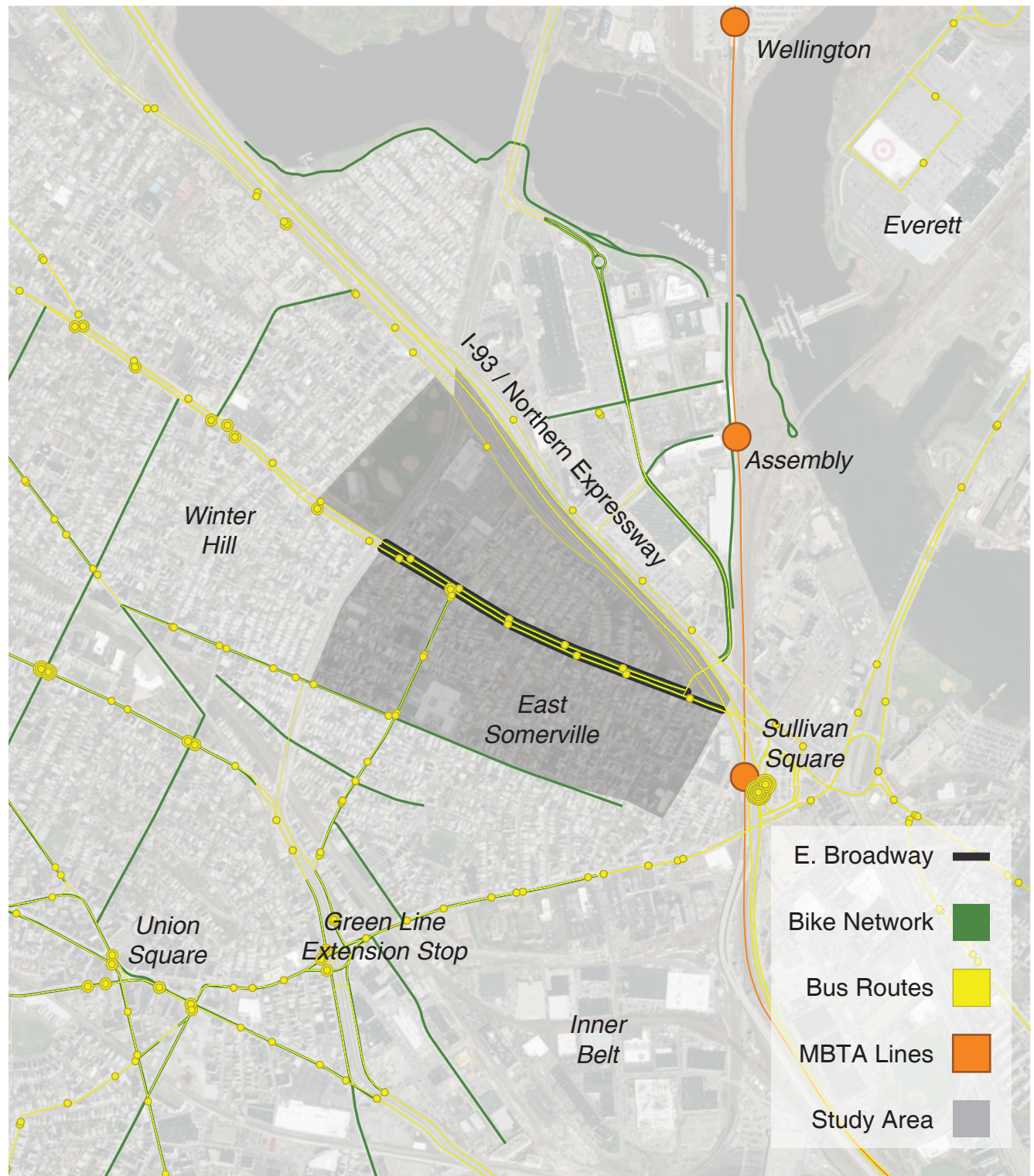
TRANSIT MAP

East Broadway has a diversity of transit options within its vicinity. A number of buses run on the street through our study area, including the 89, 90, and 101 buses. The Sullivan Square orange line stop and bus hub is also located just east of our study area. However, the bike lanes on East Broadway are relatively isolated from the rest of Somerville's bike network. While Cross Street offers a bike connection, it is the only one that directly connects to East Broadway. The following are a number of transit and development initiatives in the vicinity:

Assembly Square: Our study area abuts Assembly Square to the north, which opened Assembly Row, a 50-acre mixed use transit oriented development in 2014, had Partners Health move its headquarters (and 4,500 employees). An additional 500 units are in the works, with 12.5% affordable housing.

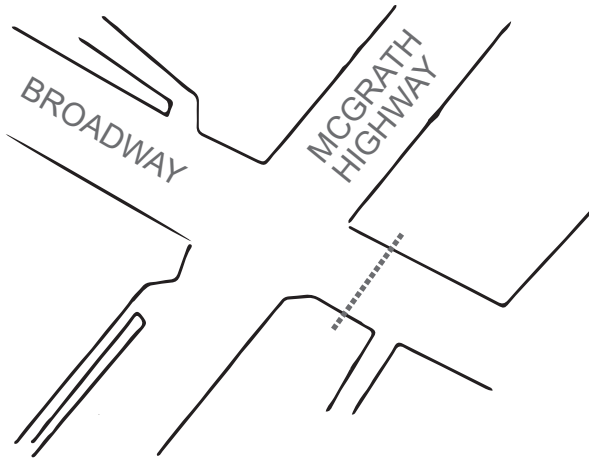
Sullivan Square: East Broadway also abuts Sullivan Square to the east. The City of Boston has been working with residents to redesign Rutherford Avenue/Sullivan Square, which is known as being dangerous for those who walk in the area. The redesign may be partially due to the Wynn Casino being developed in Everett, just over the bridge to the north of Sullivan Square.

Green Line Extension: Our study area is just north of the planned green line extension, which is planned to open by the end of 2021. The East Somerville stop is planned near the intersection of McGrath Highway and Washington Street.

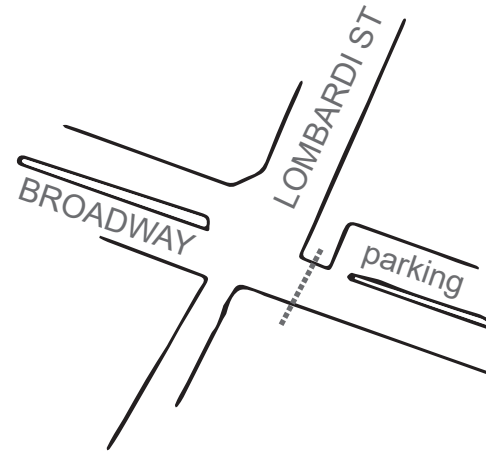
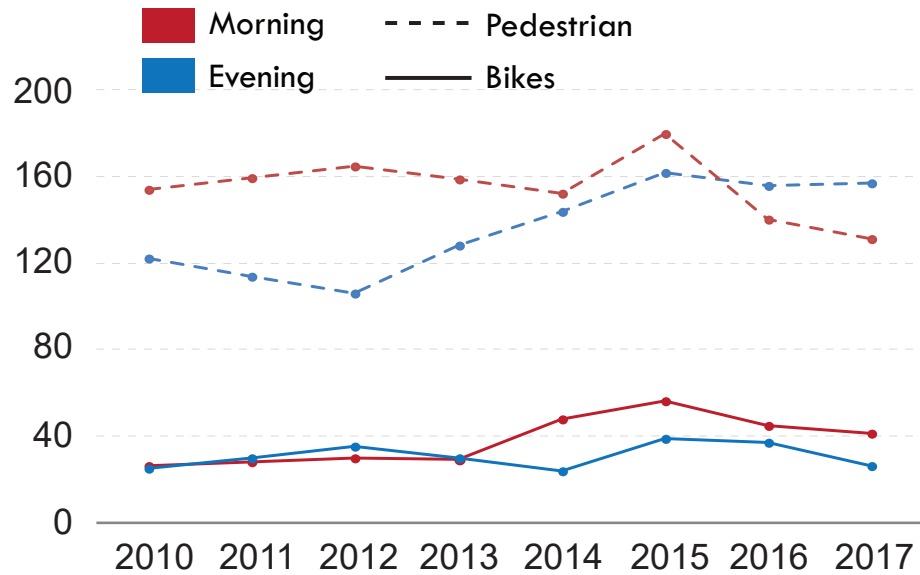


MODE COUNTS

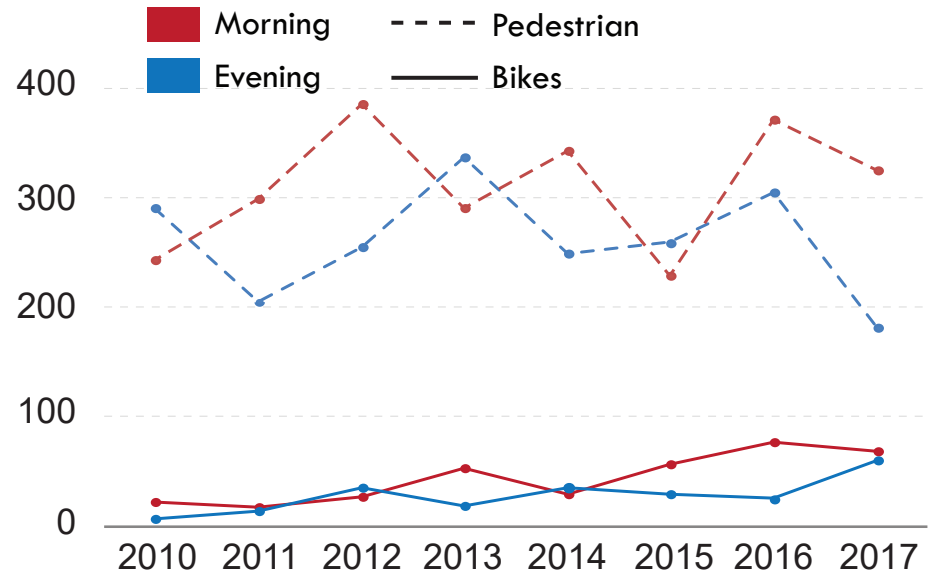
While pedestrian use vasculated over time with no clear trend, the number of cyclists traveling along East Broadway during peak hours increased by an average of 257 percent between 2010 and 2017.



McGrath & Broadway Mode Counts 2010-2017



Lombardi & Broadway Mode Counts 2010-2017

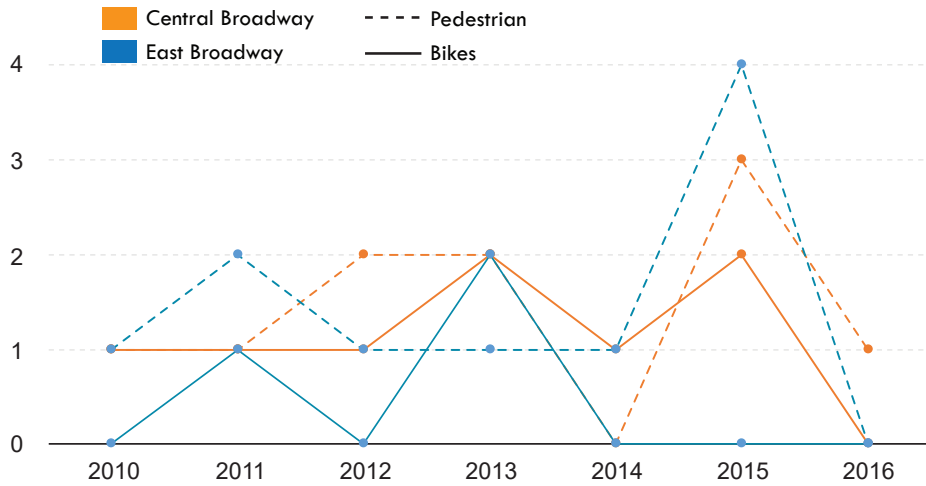


COLLISIONS

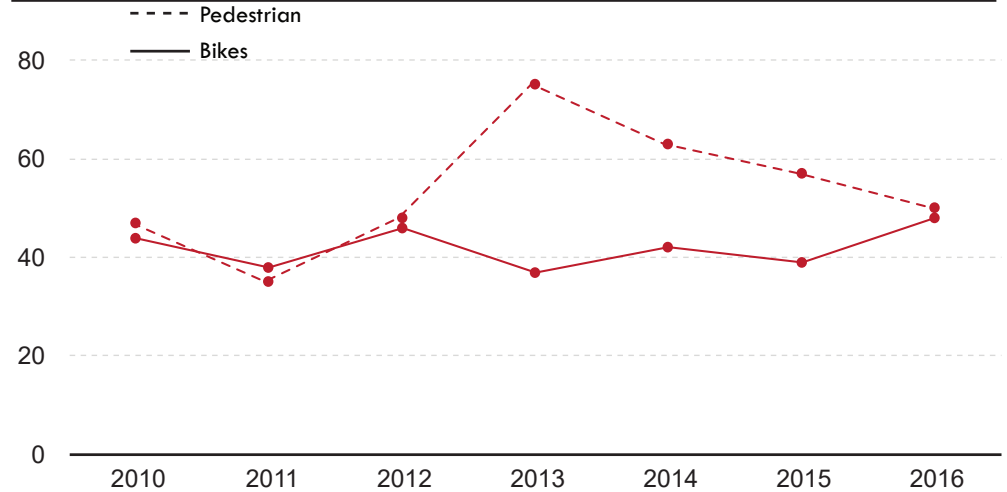
With the small number of bicycle and pedestrian collisions on Broadway, it's hard to identify a meaningful change, though East Broadway did see the number of bike collisions drop to zero.

Vehicle collisions remained relatively constant on Broadway and across the city.

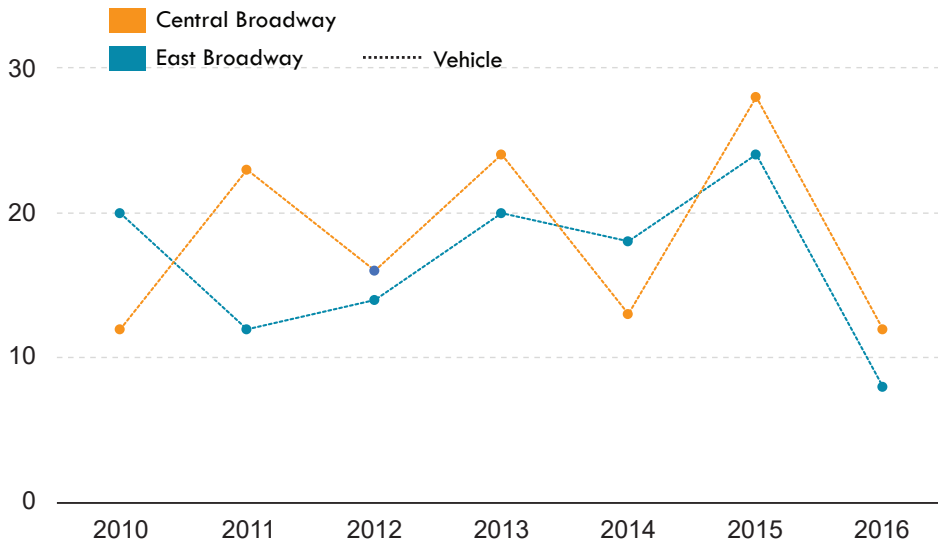
Broadway Bike & Pedestrian Crashes, 2010-2016



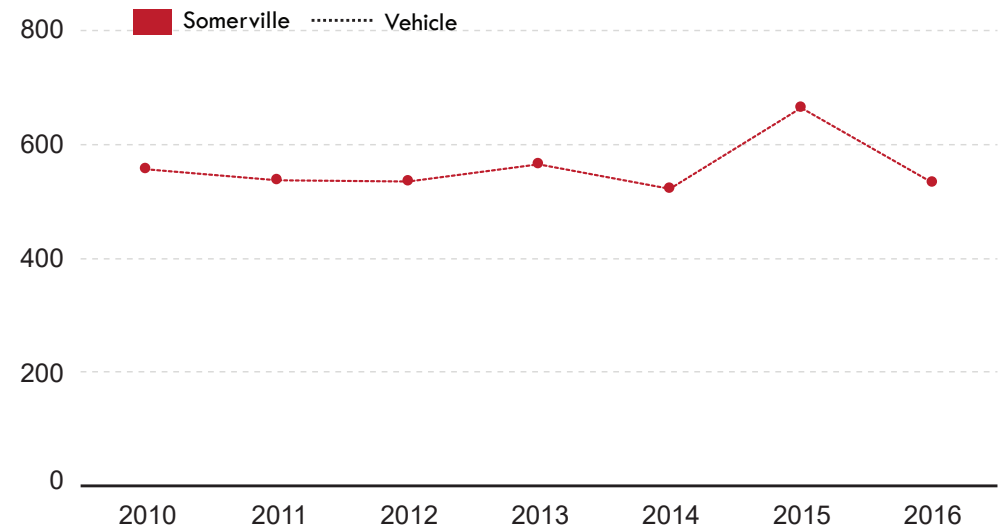
Citywide Bike & Pedestrian Crashes, 2010-2016



Broadway Vehicle Crashes, 2010-2016



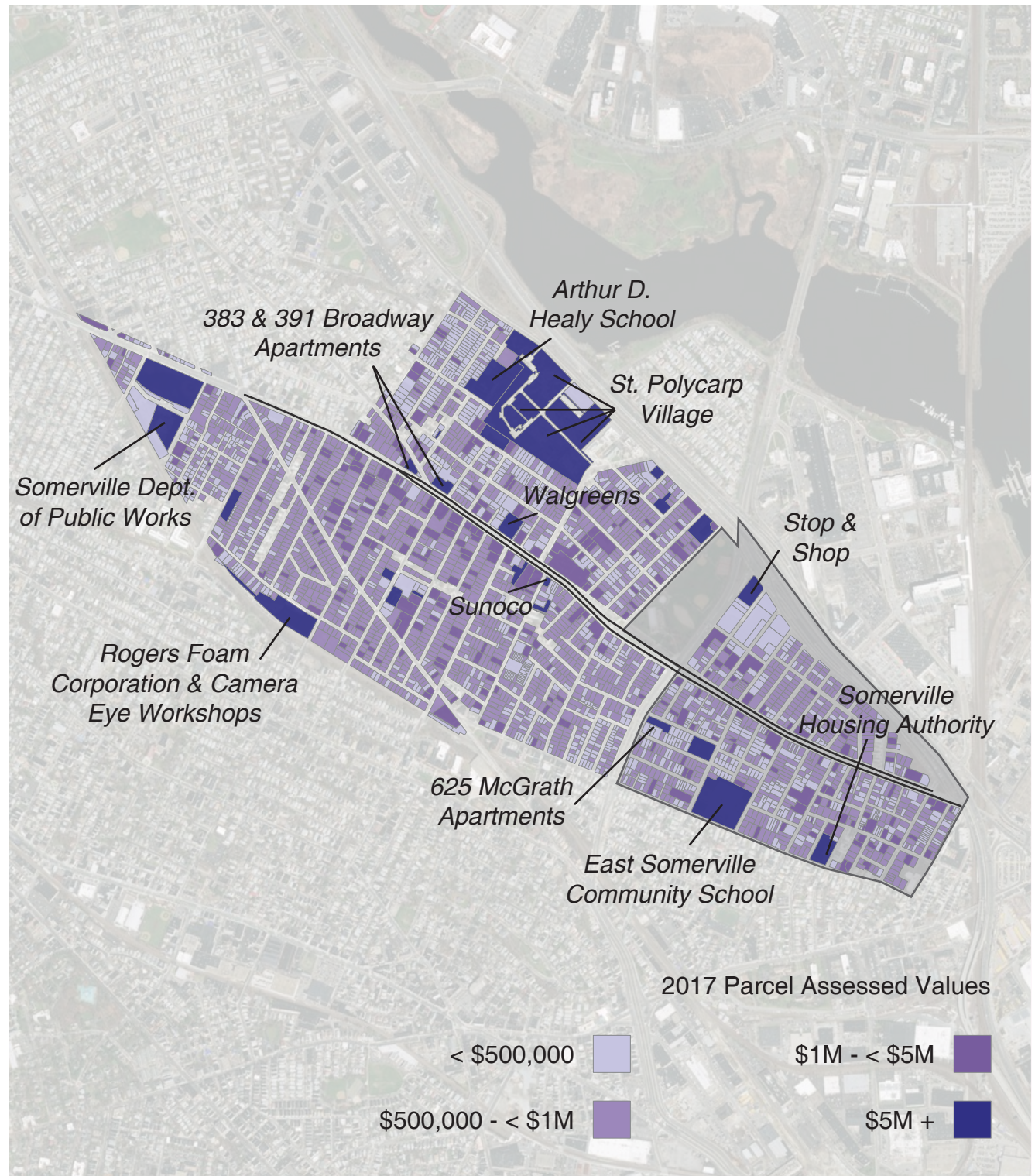
Citywide Vehicle Crashes, 2010-2016



PROPERTY

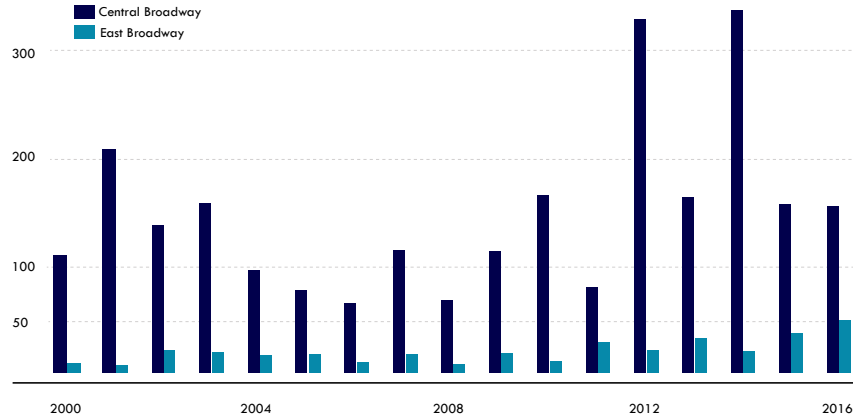
The majority of the properties in the study area are residential, with some commercial properties, mainly along Broadway Street. There are also a couple K-12 educational institutions and public housing buildings in both study areas. Generally, Central Broadway has higher property values in 2017 than East Broadway. Spatially, in Central Broadway, property values are higher closer to Broadway corridor, where in East Broadway they aren't consistently higher closer to Broadway. In Central Broadway, values tend to be higher below Broadway, where in East Broadway, values tend to be higher above Broadway.

Breaking property values and sales prices by building type can give a more granular understanding of property values as a whole for the two areas, and show changes before and after the streetscape improvements.



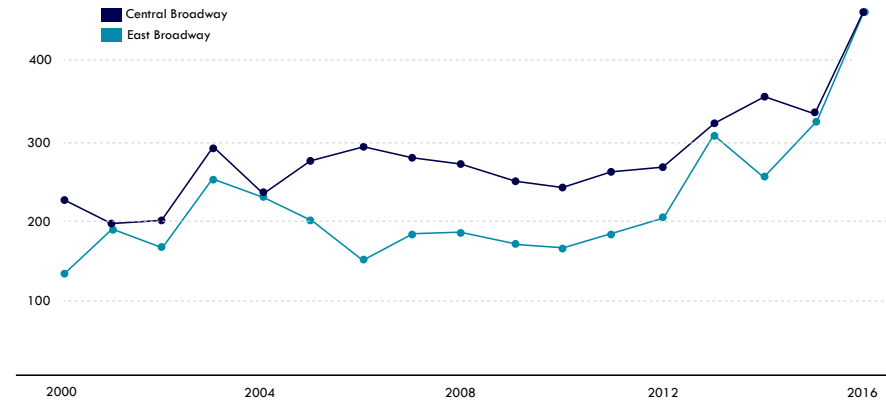
PROPERTY VALUES

Number of Sales, Since 2000



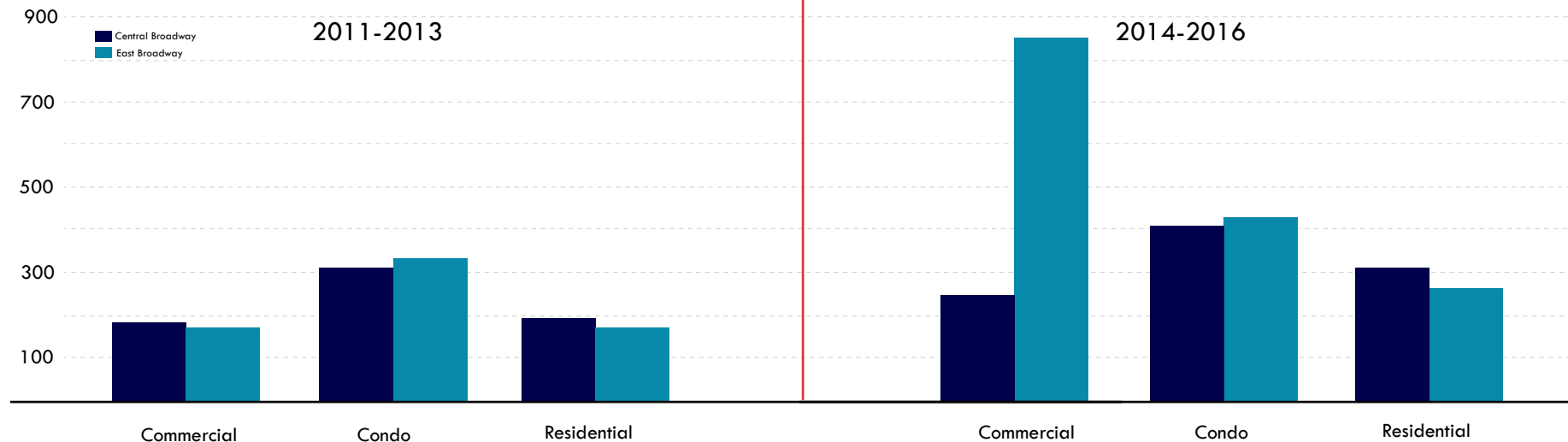
East Broadway has seen an increase in the number of sales since 2014 where Central Broadway has seen a decrease.

Sales Prices per Square Foot, Since 2000



Sales prices in East Broadway have stayed below Central Broadway, until 2016 where sales prices are almost identical.

Sales Price per Square Foot Before and After Street Improvements, by Building Type

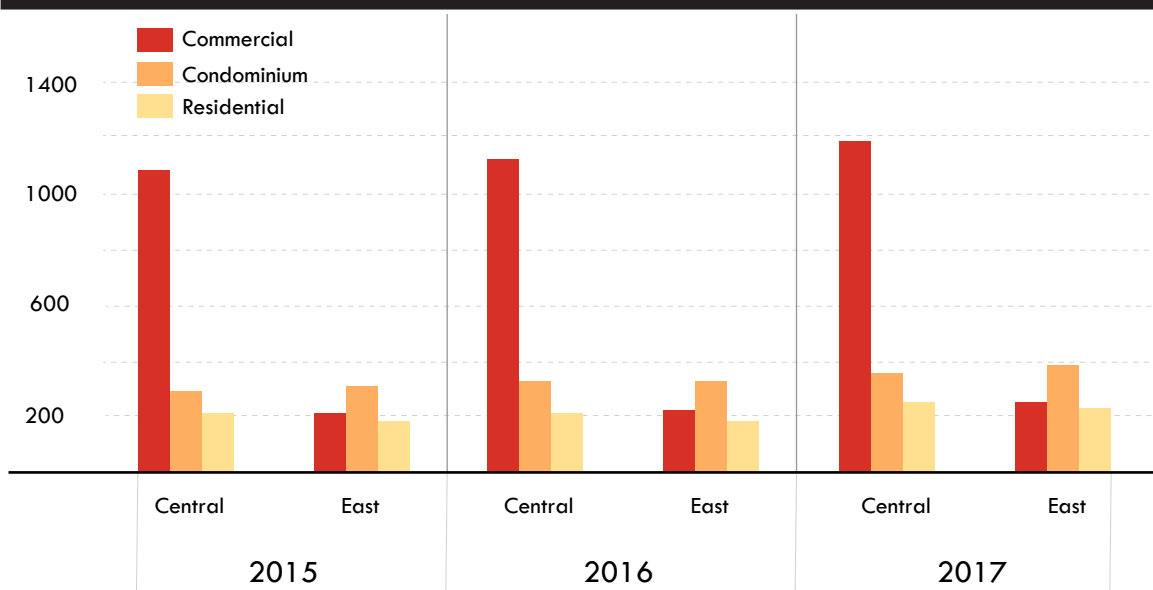


For residential buildings, **Central Broadway increased 62%**, and **East Broadway increased 55%**. For condos, Central Broadway increased 30% and East Broadway increased 29%.

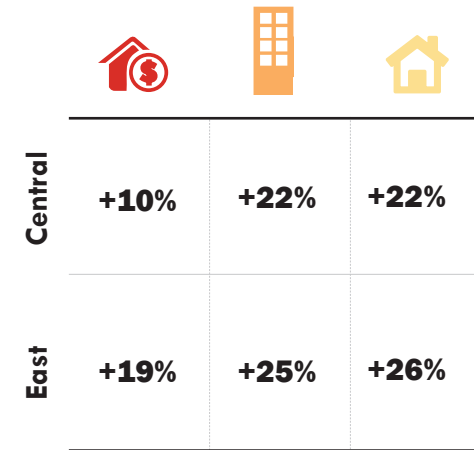
East Broadway has higher price per square foot for condos, which is likely due to new construction and could be partially due to street improvement.

PROPERTY VALUES

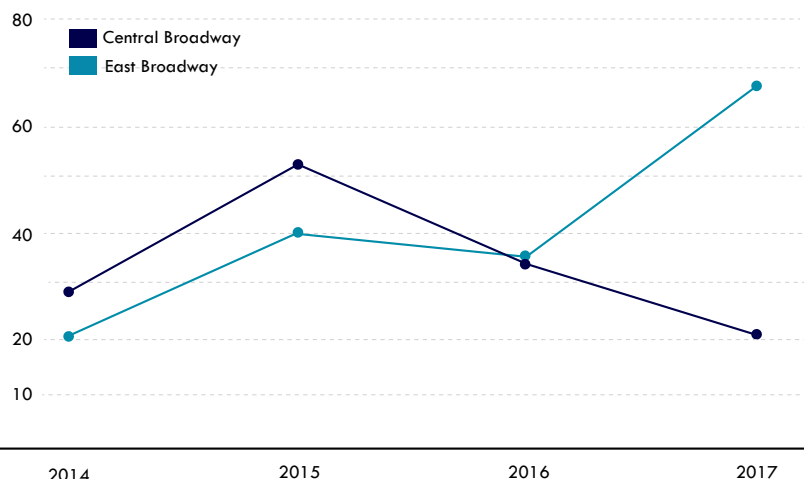
Property Valuation (Total Valuation/SF), 2015-2017



Percent Change in Valuation, 2015-2017



Building Permits 2015-2017



East Broadway had a higher valuation growth rate for all building types compared to Central Broadway. The higher growth rate in valuation of commercial properties could be linked to streetscape improvements.

East Broadway has seen a large increase in building permits in the last year. Over the last three years, parcels directly on East Broadway have seen slightly fewer building permits than parcels directly on Central Broadway. The Green Line Extension could have an impact on valuation, permits and property sales, as well as development in Assembly Square, Wynn Casino, and the Sullivan Square redesign.

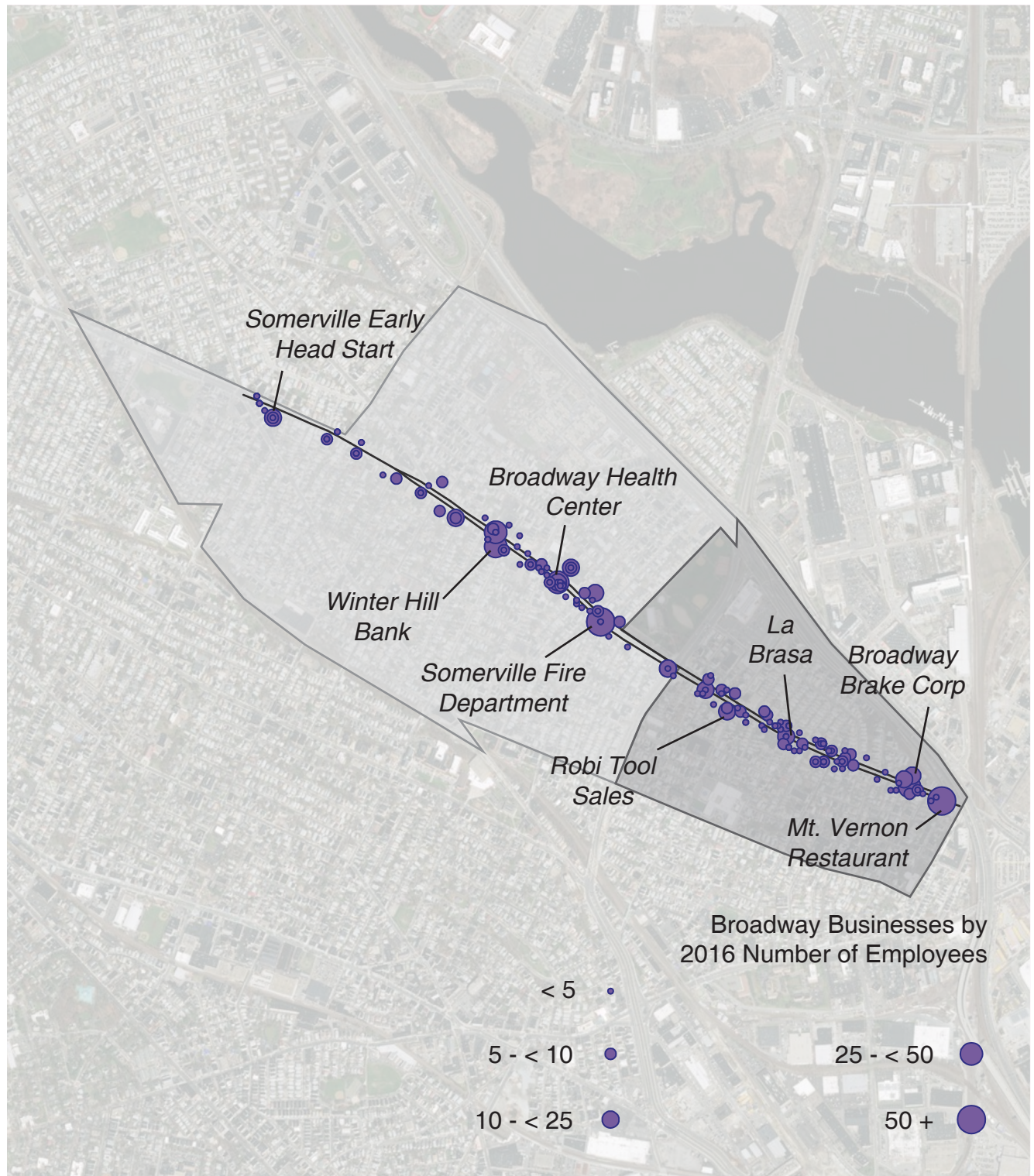
BROADWAY BUSINESSES

East Broadway (.60 miles)

2011	2016
<i>Number of Businesses</i>	<i>Number of Businesses</i>
86	95
<i>Sales Volume</i>	<i>Sales Volume</i>
\$65,140,000	\$125,517,000
<i>Number of Employees</i>	<i>Number of Employees</i>
470	510

Central Broadway (.99 miles)

2011	2016
<i>Number of Businesses</i>	<i>Number of Businesses</i>
92	91
<i>Sales Volume</i>	<i>Sales Volume</i>
\$106,288,000	\$96,158,000
<i>Number of Employees</i>	<i>Number of Employees</i>
688	823



FULL-SERVICE RESTAURANTS

East Broadway: (.60 miles)

2011

*Number of
Businesses*

14

Sales Volume

\$6,760,000

*Number of
Employees*

169

2016

*Number of
Businesses*

18

Sales Volume

\$9,342,000

*Number of
Employees*

161

Central Broadway: (.99 miles)

2011

*Number of
Businesses*

6

Sales Volume

\$2,448,000

*Number of
Employees*

52

2016

*Number of
Businesses*

7

Sales Volume

\$2,204,000

*Number of
Employees*

38



124 Broadway, August 2011



124 Broadway, May 2016

In 2011, 124 Broadway was a vacant commercial space. Today, the building is home to two restaurants - La Brasa, opened in 2014, and Fat Hen, opened in 2016 - as well as Perfect Dental, a dental office.

CONCLUSIONS

The future of streets will require some new designs to streets, whether that is repainting streets initially so that AVs can detect lanes, or repaving due to the poor pavement quality in the Northeast. Complete Streets projects like East Broadway can happen simultaneously if the political will power and process are in place. To be prepared, planners need to be aware of the impact that these streetscape and infrastructure improvements can have on the people and communities in the areas.



Lyft proposes street redesign for a driverless future

The concept cuts some traffic lanes while doubling the transportation capacity of the street

KEY TAKEAWAYS

There's a disconnect between the two areas assessed even though they're the same street. The improvements only exacerbated this.

Along East Broadway, while not all attributable to the streetscape improvements, the street saw increases in:
condo sales, condo prices, number of property sales, property valuation (compared to Central Broadway), and restaurants

General

Every street redesign doesn't have to have the most technical innovations or win AIA Best Streets. Assessing what we want our "new normal" or basic street to be in the future can help cities and planners make sure those recommendations are standardized.

Street design will still be contentious in the future, potentially only more contentious.

With projects in the future, planners need to think about the impact on the neighborhood.

KEY QUESTIONS

- Can we design streets today in a way that is flexible or that can adapt to future needs?
- Is assessing a project five years out a long enough time horizon?
- How many years does it take for the changes to manifest in the built environment (ped/bike activity) versus in properties or business activity?