



**PUBLIC
REALM**



April 14, 2021

COVID-19 Impacts on Parking, Biking, Sidewalks & Streets

**Stantec with
BETA Group &
Nelson\Nygaard**





**PUBLIC
REALM**



April 14, 2021

COVID-19 Impacts on Parking, Biking, Sidewalks & Streets

Stantec:

Jason Schrieber



BETA Group:

Jeff Maxtutis



Nelson\Nygaard:

Alyson Fletcher

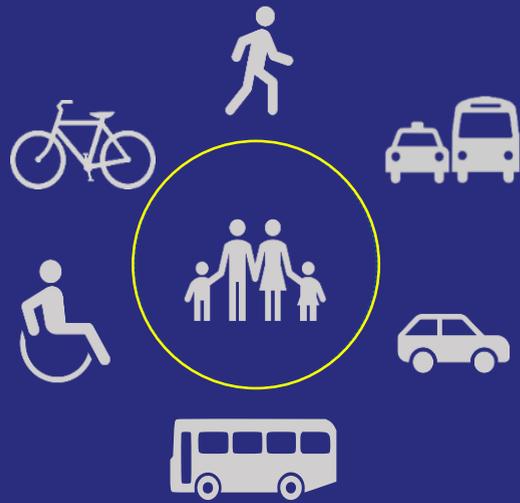


Agenda

Parking Biking Walking Transit Streets Mobility

- Welcome & Introductions (2m)
- Overview of Mobility Post-COVID (8m)
- Case Studies: (25m)
 - Plymouth MA
 - Amherst MA
 - East Providence RI
 - Wayland MA
 - Natick MA
 - Silver Line
- Summary and Panel Q&A (5m)
- Attendee Q&A (20m)

Re-Prioritizing Downtown Streets



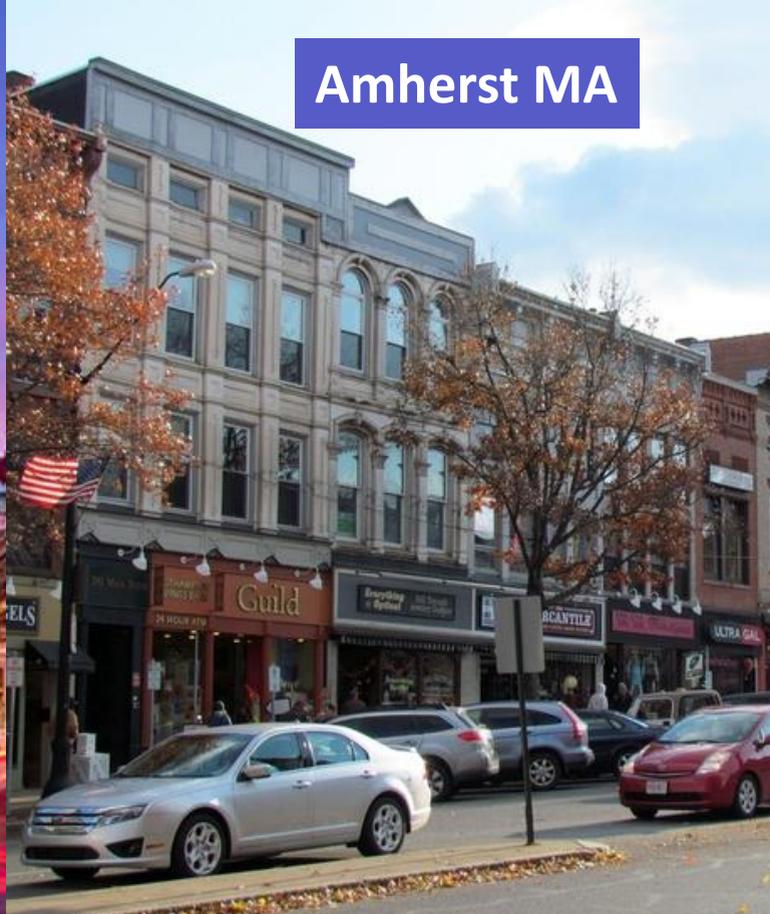
Fayetteville AR



Gainesville FL



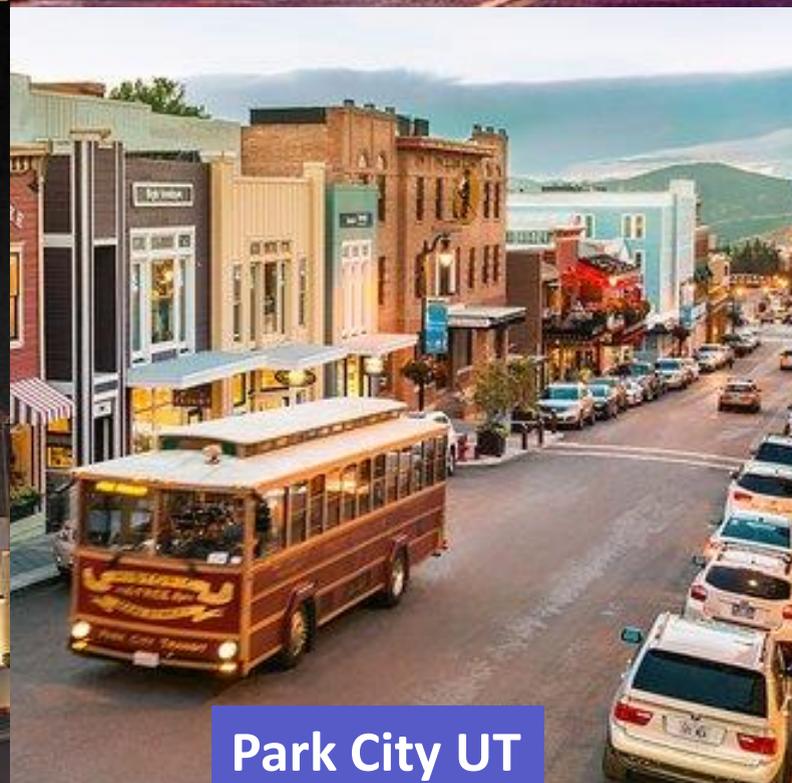
Amherst MA



Highland Park TX



Park City UT



Allentown PA



Re-Prioritizing Downtown Streets



35% decrease in injuries to all street users (8th Ave)

58% decrease in injuries to all street users (9th Ave)

Up to **49%** increase in retail sales (Locally-based businesses on 9th Ave from 23rd to 31st Sts., compared to 3% borough-wide)

Left turn bays and signal phases

Mixing zones for bicycles and left-turning vehicles

Parking-protected bike lane

Pedestrian safety islands

Re-Prioritizing Downtown Streets



20% increase in
bus speeds

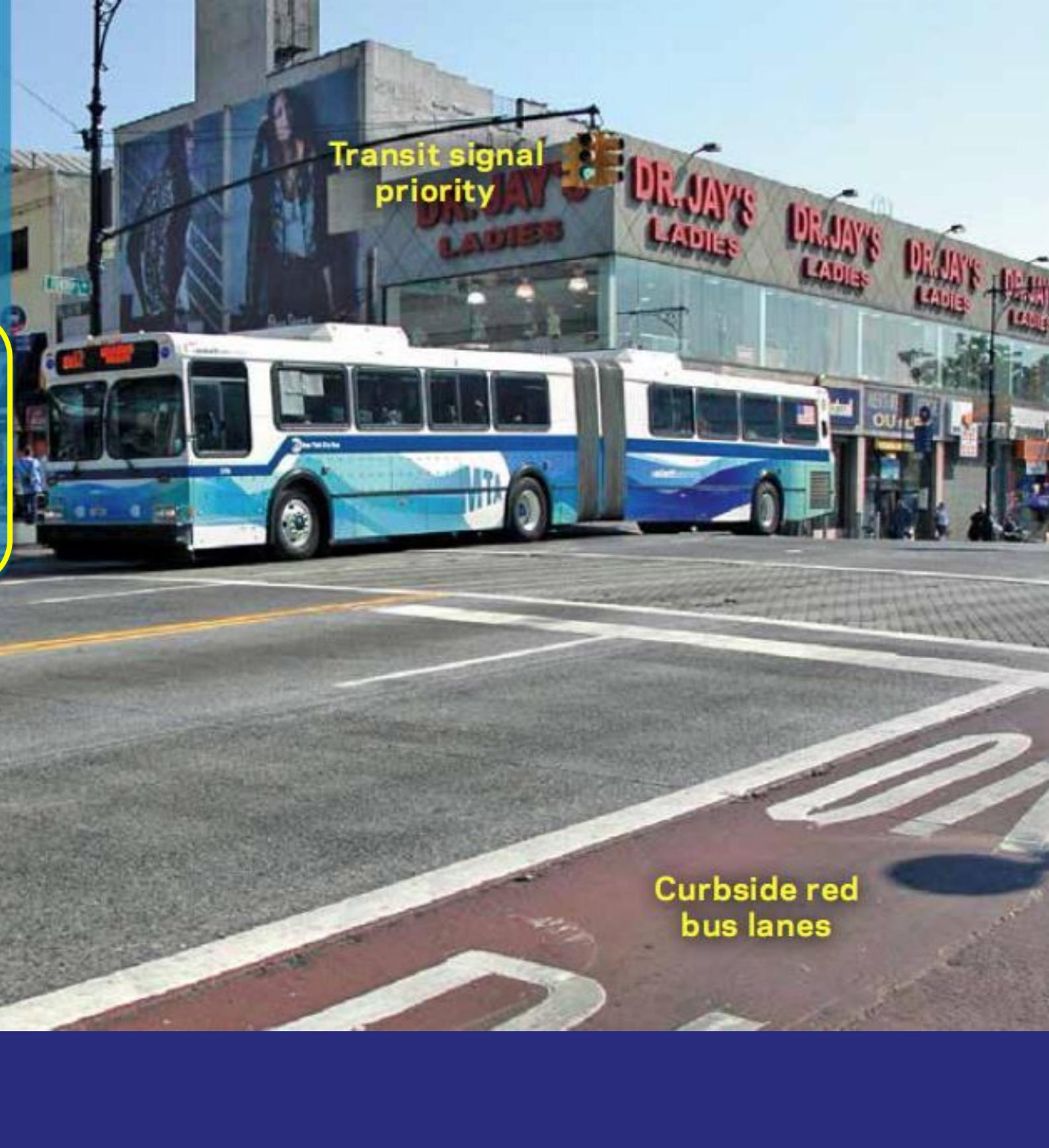
10% increase in
bus ridership

71% increase in
retail sales
(at locally-based
businesses, compared to
23% borough-wide)

Delivery windows
(curb dedicated to
trucks at key times)

**Curbside red
bus lanes**

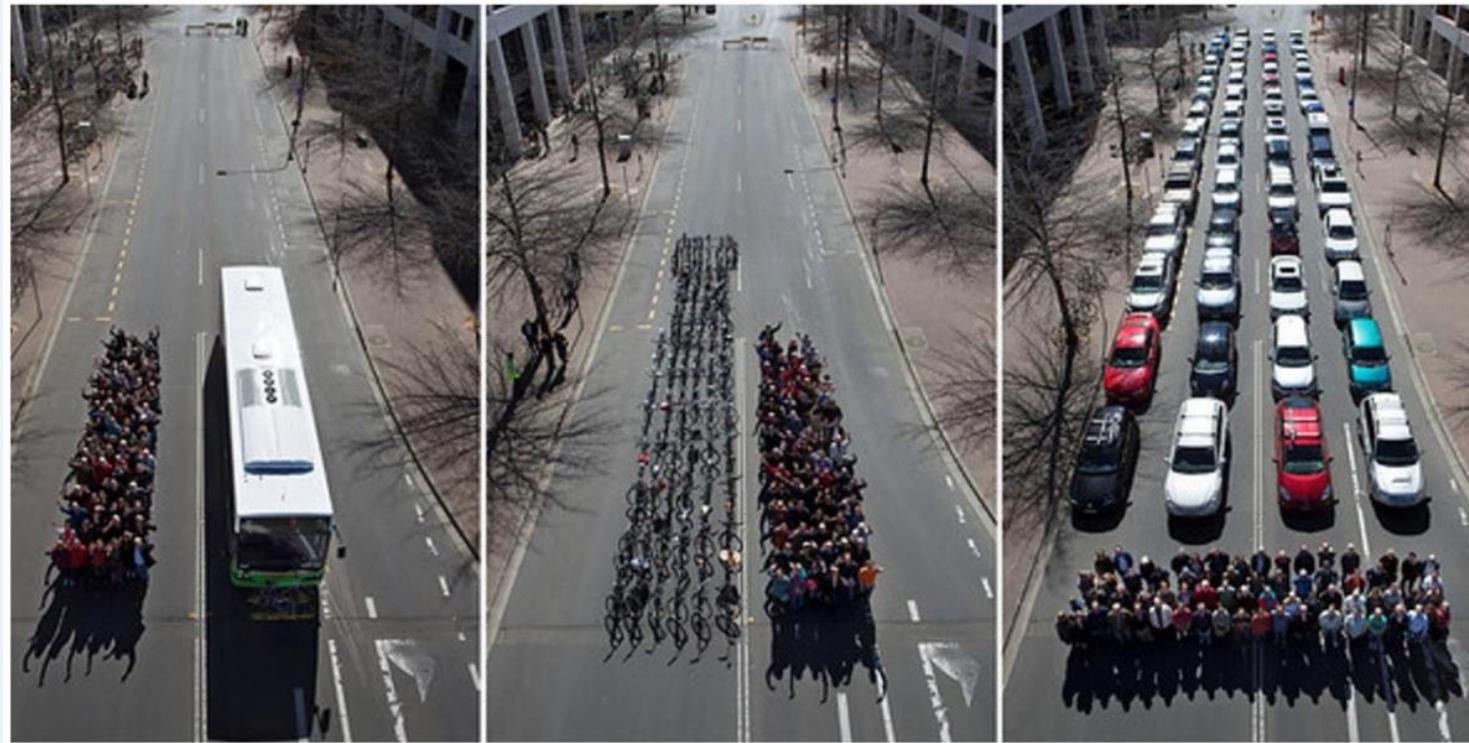
**Transit signal
priority**



Re-Prioritizing Downtown Streets



Re-Prioritizing Downtown Streets

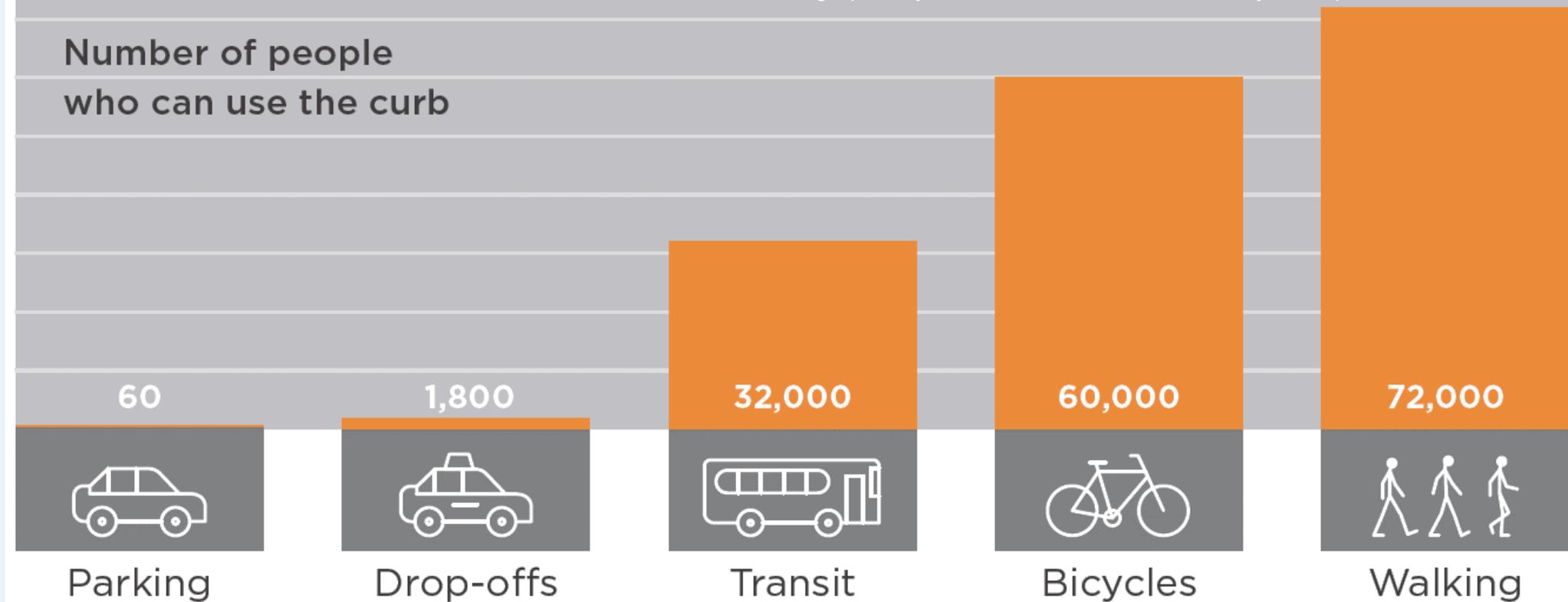


Reconsider the Curb



Based on a graphic by the National Association of City Transportation Officials

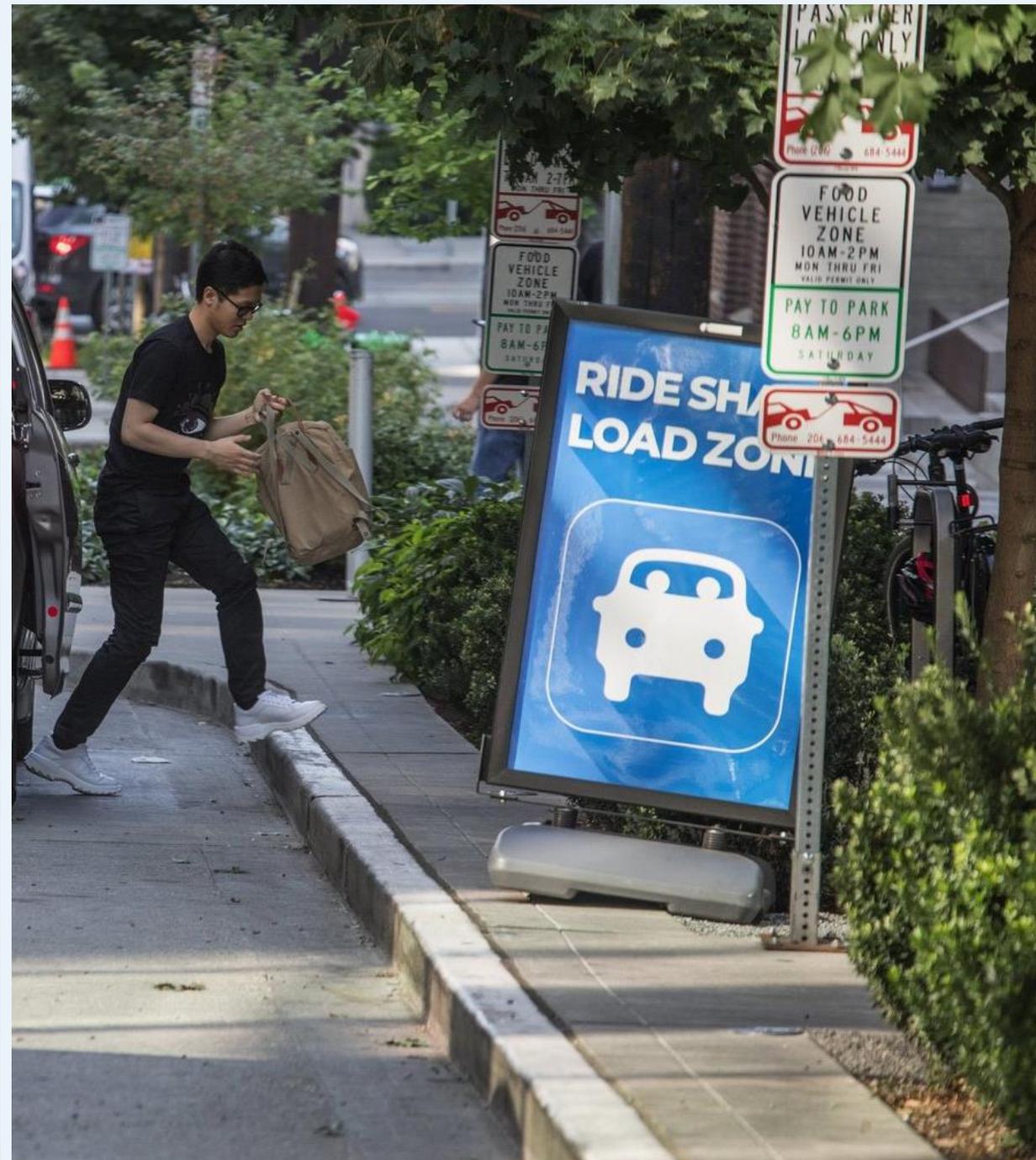
Number of people
who can use the curb



Re-Prioritizing Downtown Streets



Cincinnati, OH



Seattle, WA

Re-Prioritizing Downtown Streets



Santa Monica, CA

Re-Prioritizing Downtown Streets



Seattle, WA



Paris, France



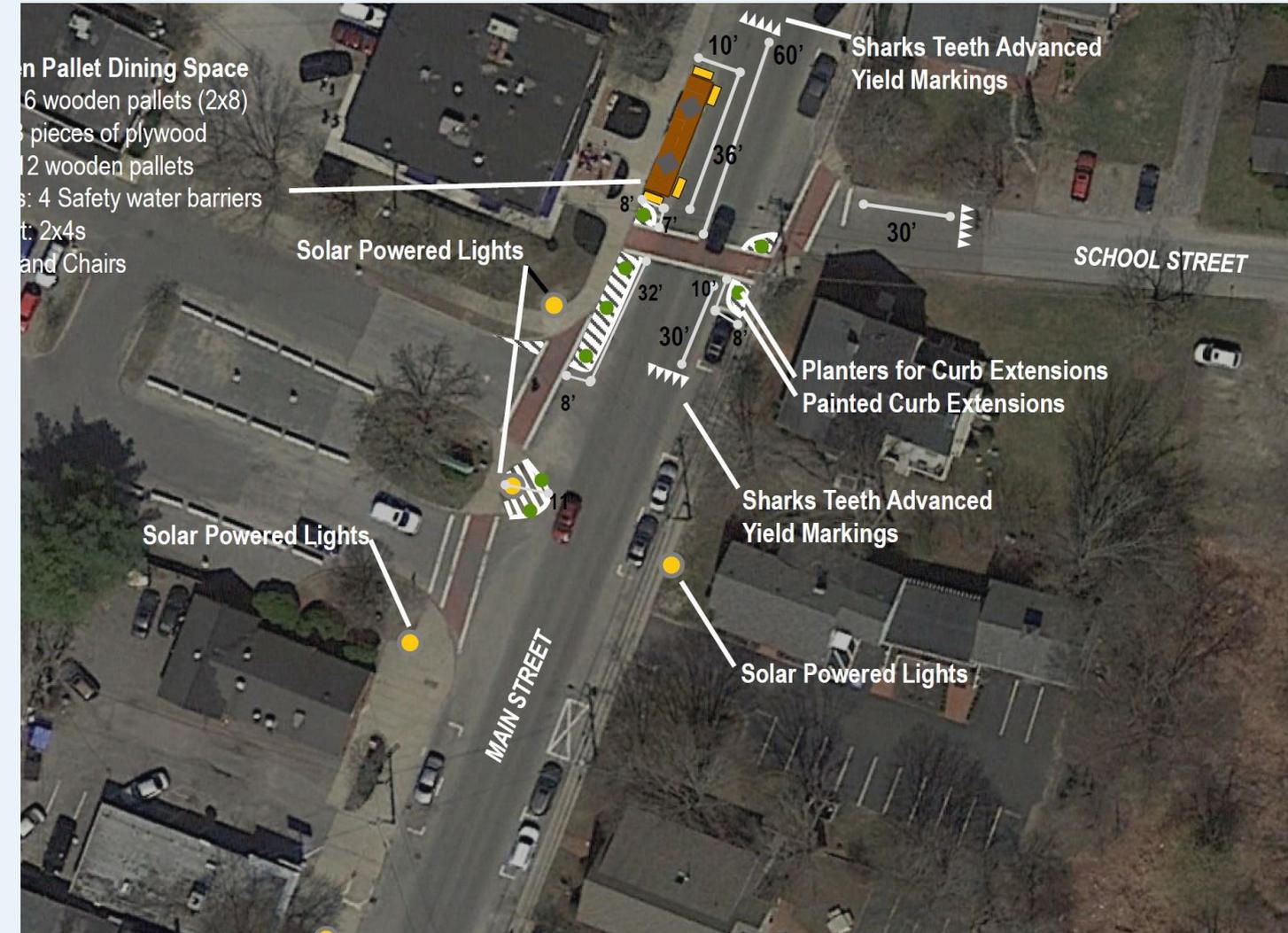
Milan, Italy

Example

Town of Topsfield Downtown Village and Outdoor Dining and Lighting Plan- MassDOT Shared Streets Grant (Fall 2020)



Topsfield Main Street Before



Topsfield Main Street After- Repurposed parking spaces for outdoor dining, new curb extensions, and new lighting fixtures

Example

Town of Topsfield Downtown Village and Outdoor Dining and Lighting Plan- MassDOT Shared Streets Grant (Fall 2020)



Main Street today- The enhanced crosswalks at several locations along Main Street encourage traffic calming in combination with other elements to make downtown more inviting and safe, particularly in the evening

Example

Town of Topsfield Downtown Village and Outdoor Dining and Lighting Plan- MassDOT Shared Streets Grant (Fall 2020)



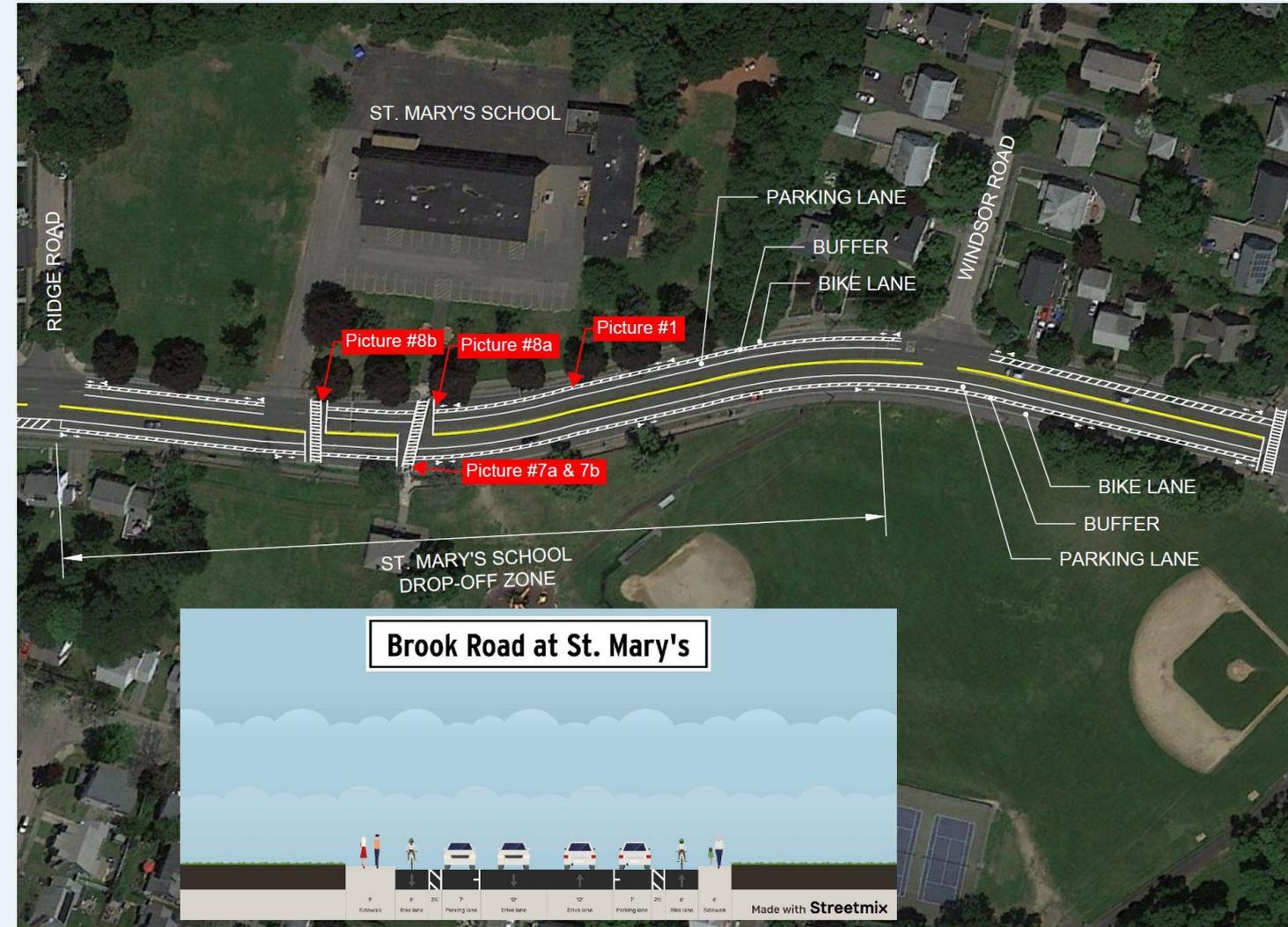
Main Street today- The enhanced crosswalks at several locations along Main Street encourage traffic calming in combination with other elements to make downtown more inviting and safe, particularly in the evening

Example

Town of Milton, Brook Rd Road Diet- MassDOT Shared Streets Grant (Summer 2020)



Brook Road Before- No bike lanes or signage along key corridor featuring two schools, a transit route, and recreational facilities



Brook Road After- New protected bike lanes and signage on both sides of the street, and road diet for traffic calming

Example

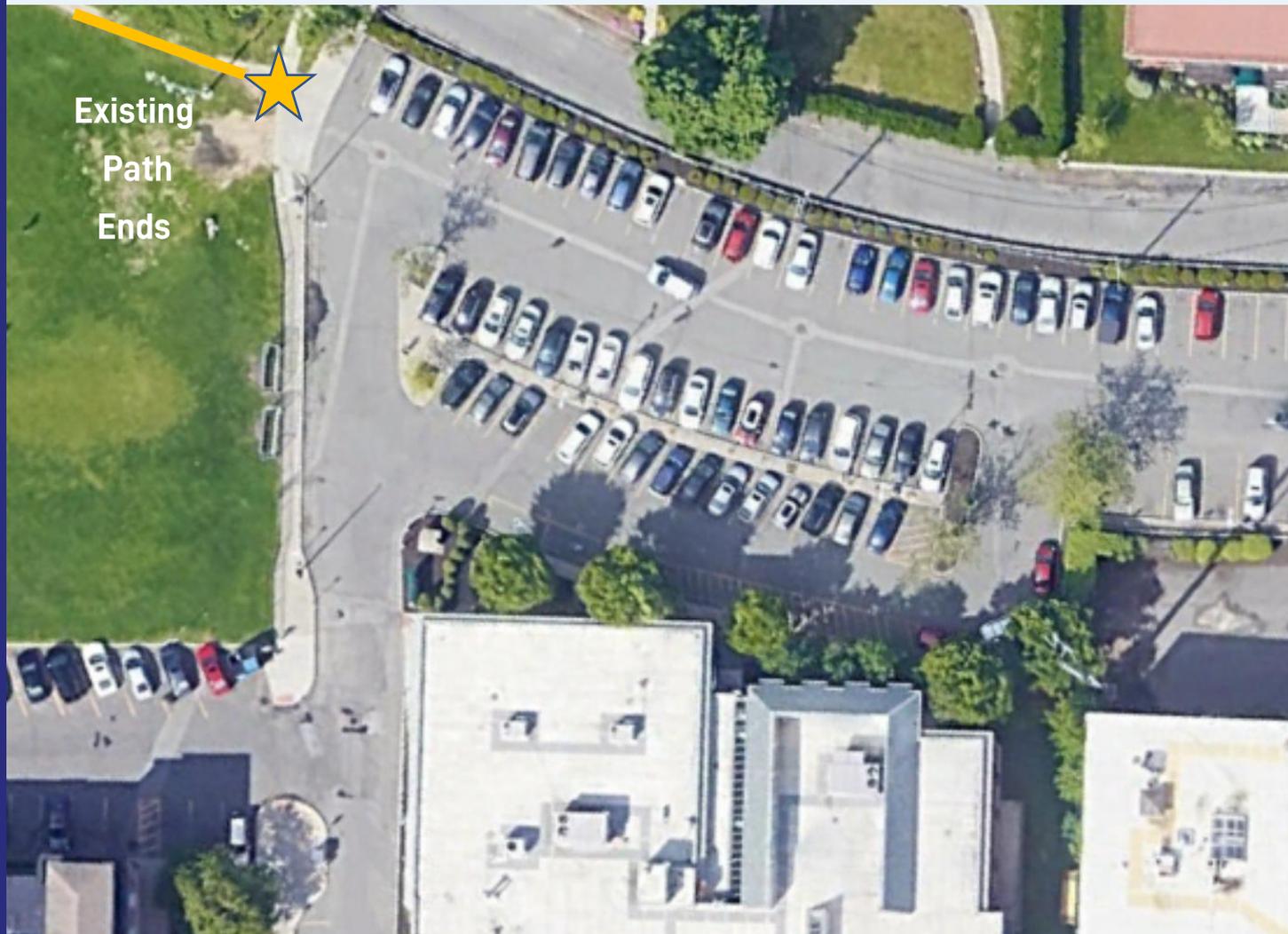
Town of Milton, Brook Rd Road Diet- MassDOT Shared Streets Grant (Summer 2020)



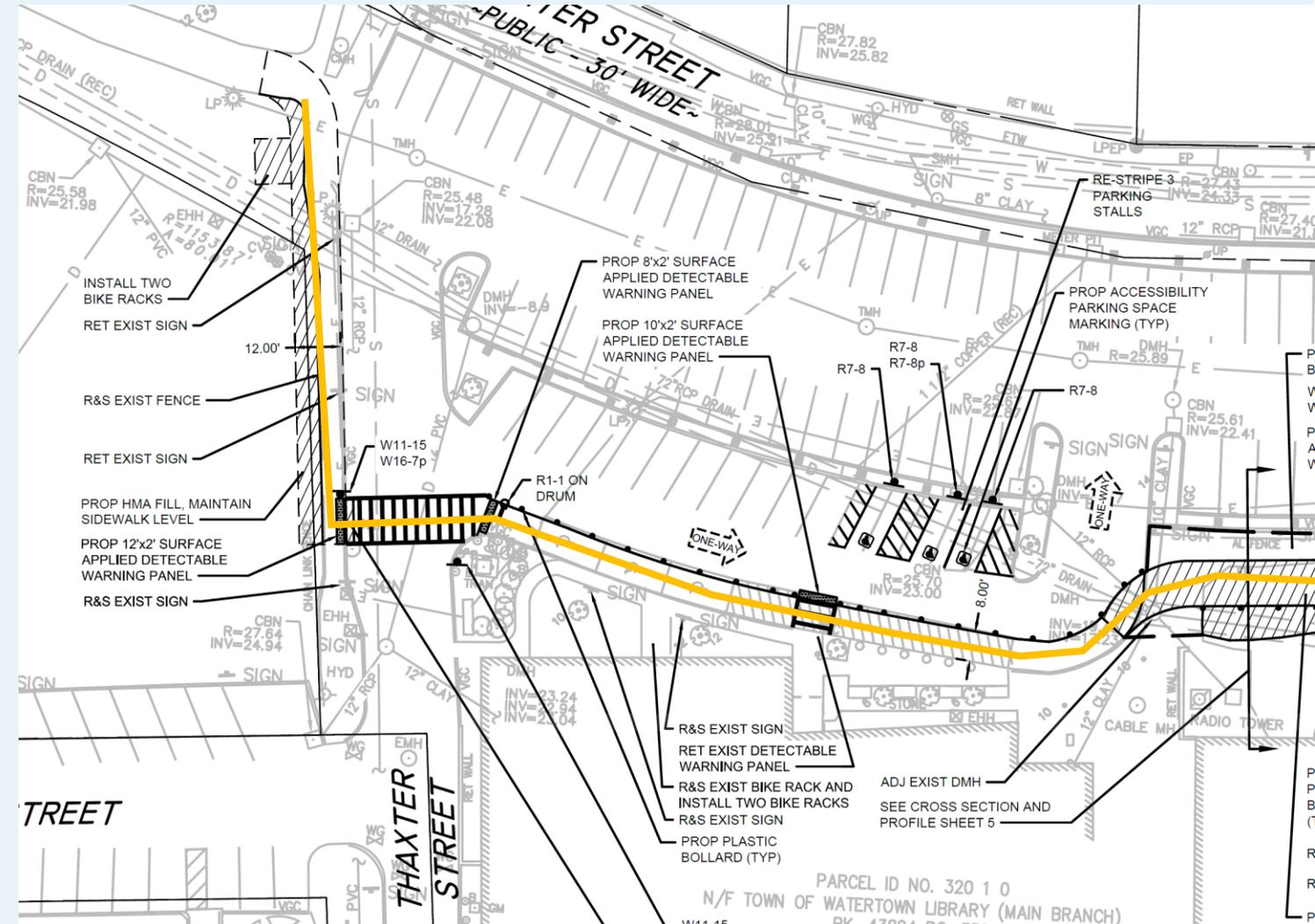
Brook Road today- Significantly improved on-street bicycle facilities and road diet for traffic calming near crosswalks supports Safe Routes to School

Example

City of Watertown Community Path Extension Project - MassDOT Shared Streets Grant (Fall 2020)



Existing
Path
Ends



Rear of Library before- No connection from existing community path heading east behind the library and fire station. Pedestrians must navigate through parking lots without sidewalks.

Rear of library after- New crosswalk and delineated pedestrian path defined, along with detectable warning surfaces and new bike racks

Example

City of Watertown Community Path Extension Project - MassDOT Shared Streets Grant (Fall 2020)



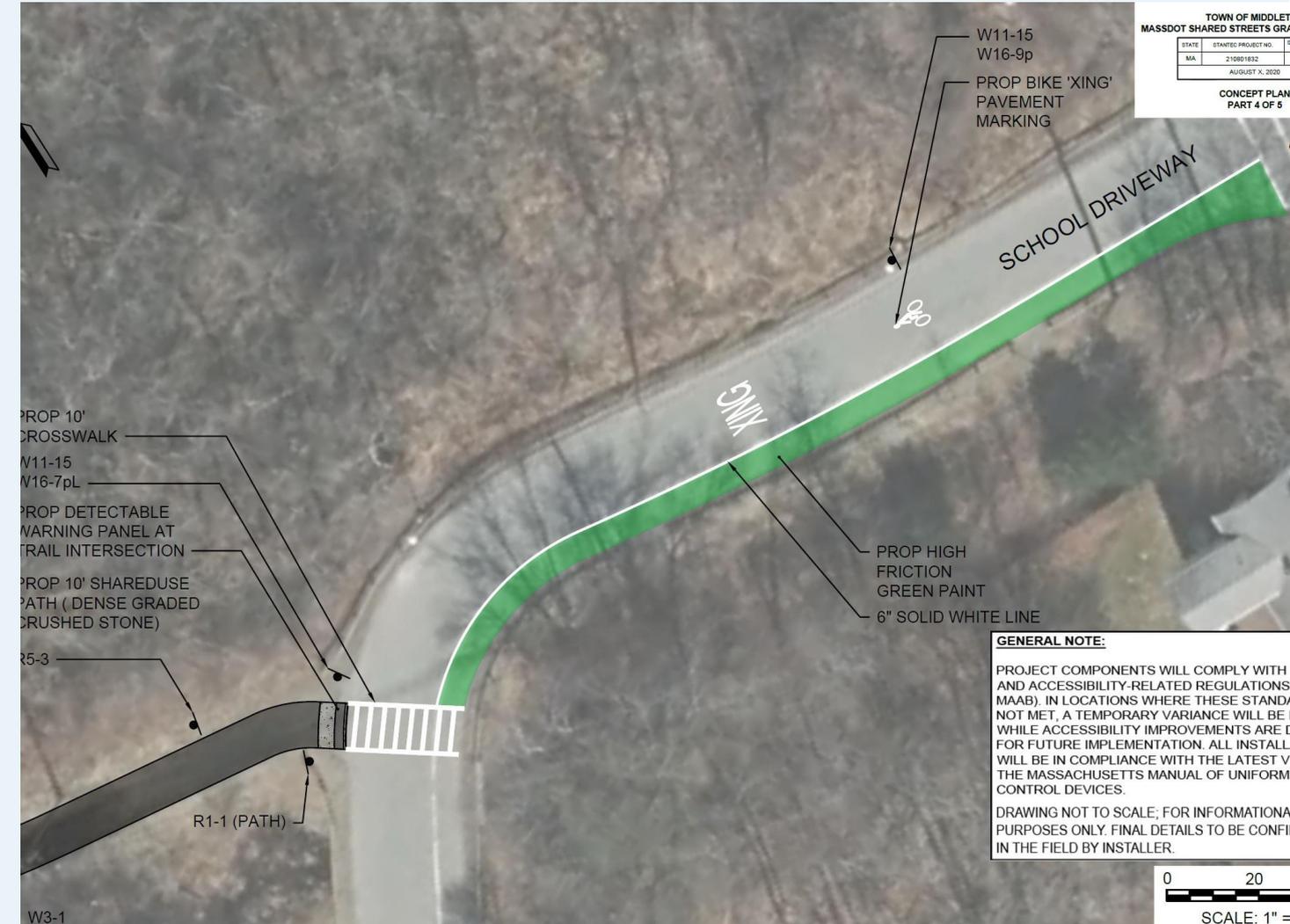
Community Path today- The new defined sidewalk area encourages safer transitions in this busy area behind the public library for pedestrians, and also better accommodates bicyclists with the addition of new bike racks.

Example

Town of Middleton Rail Trail- MassDOT Shared Streets Grant (Summer 2020)



School Driveway Before- Undeveloped rail bed, no pedestrian crossing, and minimal bicycle infrastructure near the school



School Driveway After- Improved bicycle infrastructure and pedestrian crossing for connections to the new rail trail

Example

Town of Middleton Rail Trail- MassDOT Shared Streets Grant (Summer 2020)



Rail Trail Partnership- Middleton Department of Public Works with volunteer labor from the Middleton Electric Light Department and the Middleton Rail Trail Alliance

Rail Trail Today- Residents and students utilize the trail to enjoy the outdoors and for Safe Routes to School while practicing social distancing

“Twenty-seven per cent of the American workforce will be remote in 2021.
(Upwork)

“About twenty million workers have moved—many of them out of major cities—or are planning to.” (The New Yorker)

“San Francisco vacancy rate of more than sixteen per cent, the highest on record.” (CBRE)

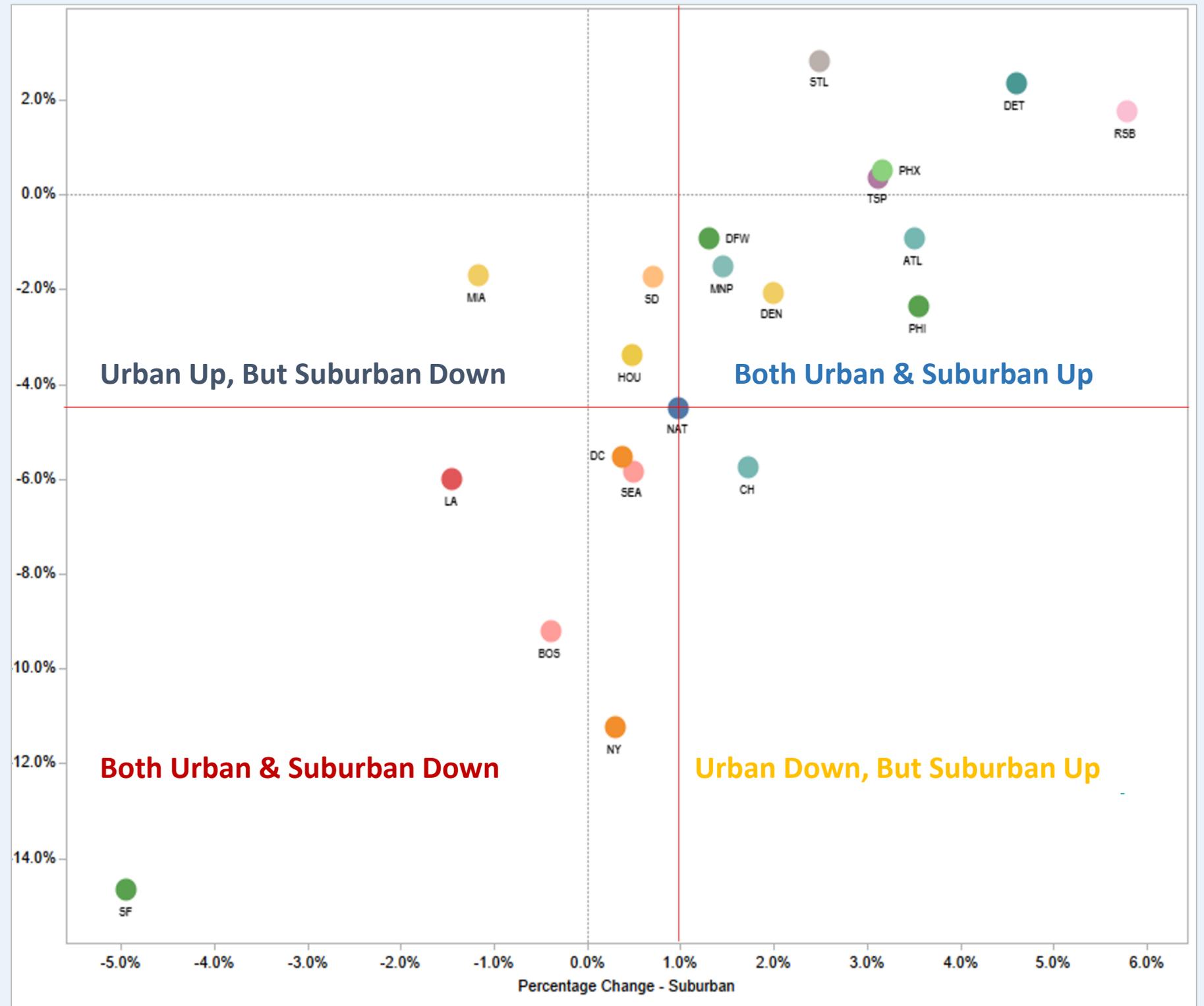
“Thirty per cent of supervisors said that their workers were more productive at home; only seven per cent said people were getting less done.” (R/GA)

“Face-to-face interactions dropped by roughly 70% after the firms transitioned to open offices, while electronic interactions increased to compensate.”
(Harvard Business Review in December, 2019)

Reality #1:
COVID-19 has
not caused a
flight from
density

Downtowns
remain our most
valuable places

Top 20 Rental Apartment
Markets % Change in Rents,
Urban vs. Suburban 2020-21
(RCLCO)



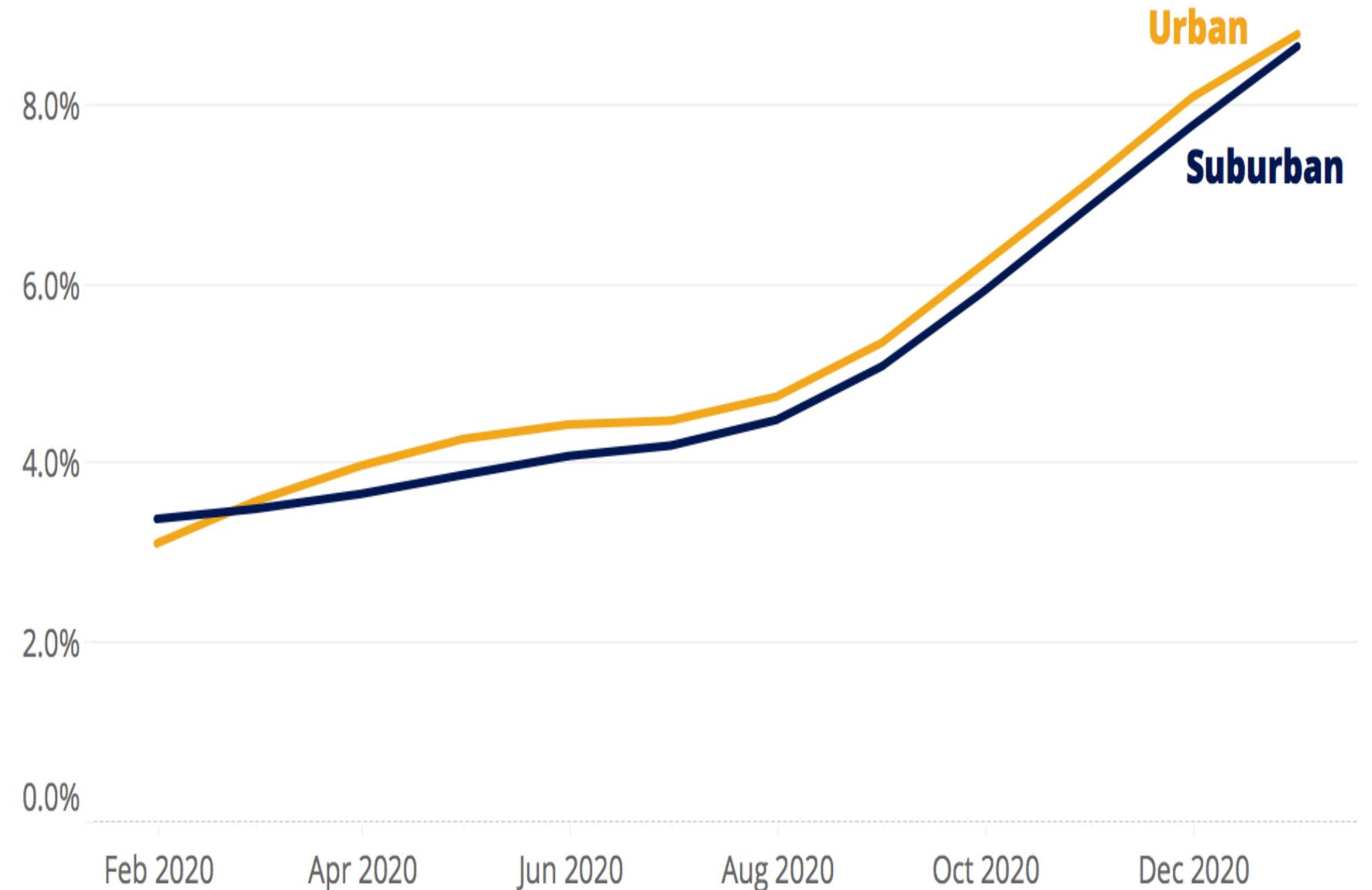
Reality #1:
COVID-19 has
not caused a
flight from
density

Downtowns
remain our most
valuable places

Across the US urban
housing values slightly
outpaced suburban values
over 2020 (Zillow)

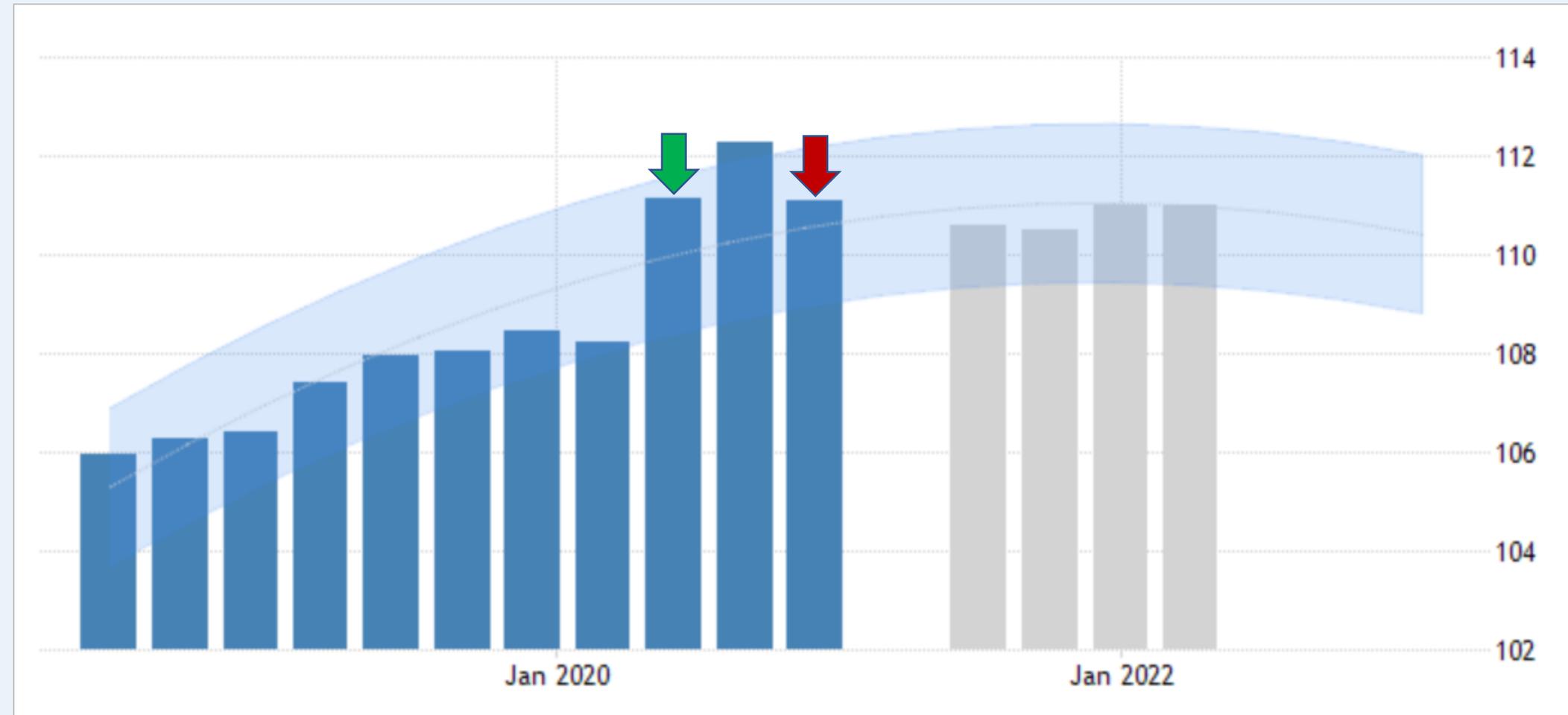
National urban and suburban home values have largely tracked

United States home value growth in **urban** and **suburban** markets



Reality #2:
Working from home has not made us more productive

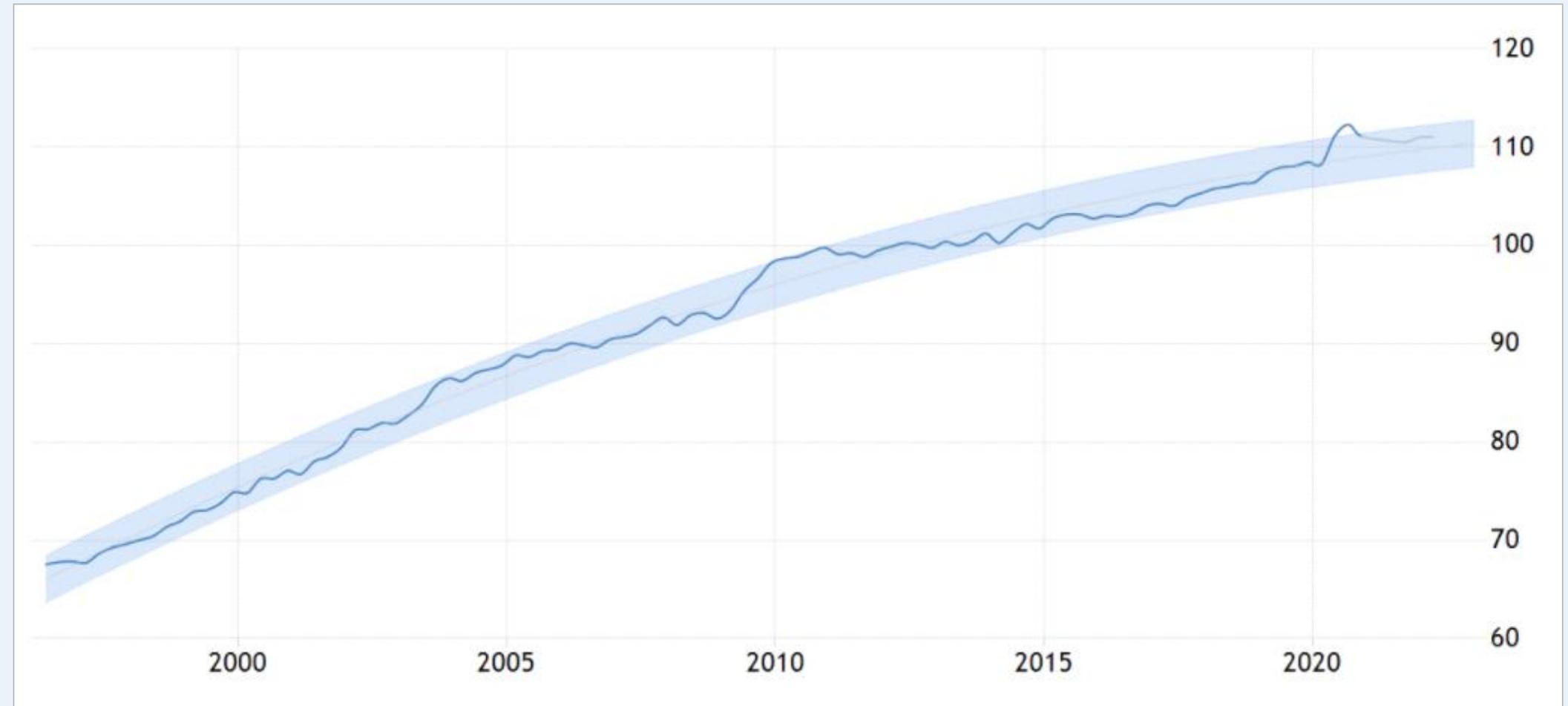
Commuters will need to get back to the office



Source: TradingEconomics.com | U.S. Bureau of Labor Statistics

Reality #2:
Working from home has not made us more productive

Commuters will need to get back to the office



Source: TradingEconomics.com | U.S. Bureau of Labor Statistics

Working from home will increase, but only 6 hrs. more per week from 2019

Commuters will need to commute

Scenario	Telecommuting		
	Percent	Days/Wk	Typical Day
Pre-COVID-19	20%	1.75	7.0%
Peak COVID-19	80%	5.00	80.0%
End 2020	50%	5.00	50.0%
End 2021	35%	2.50	17.5%



Source: Sam Schwartz, Transport Chicago 2020
(Derived from multiple sources, including U.S. Census Bureau, National Bureau of Economic Research, C2Smart, Port Authority of New York & New Jersey, Stantec, RPA Presidents Report, Federal Reserve Bank of Atlanta)

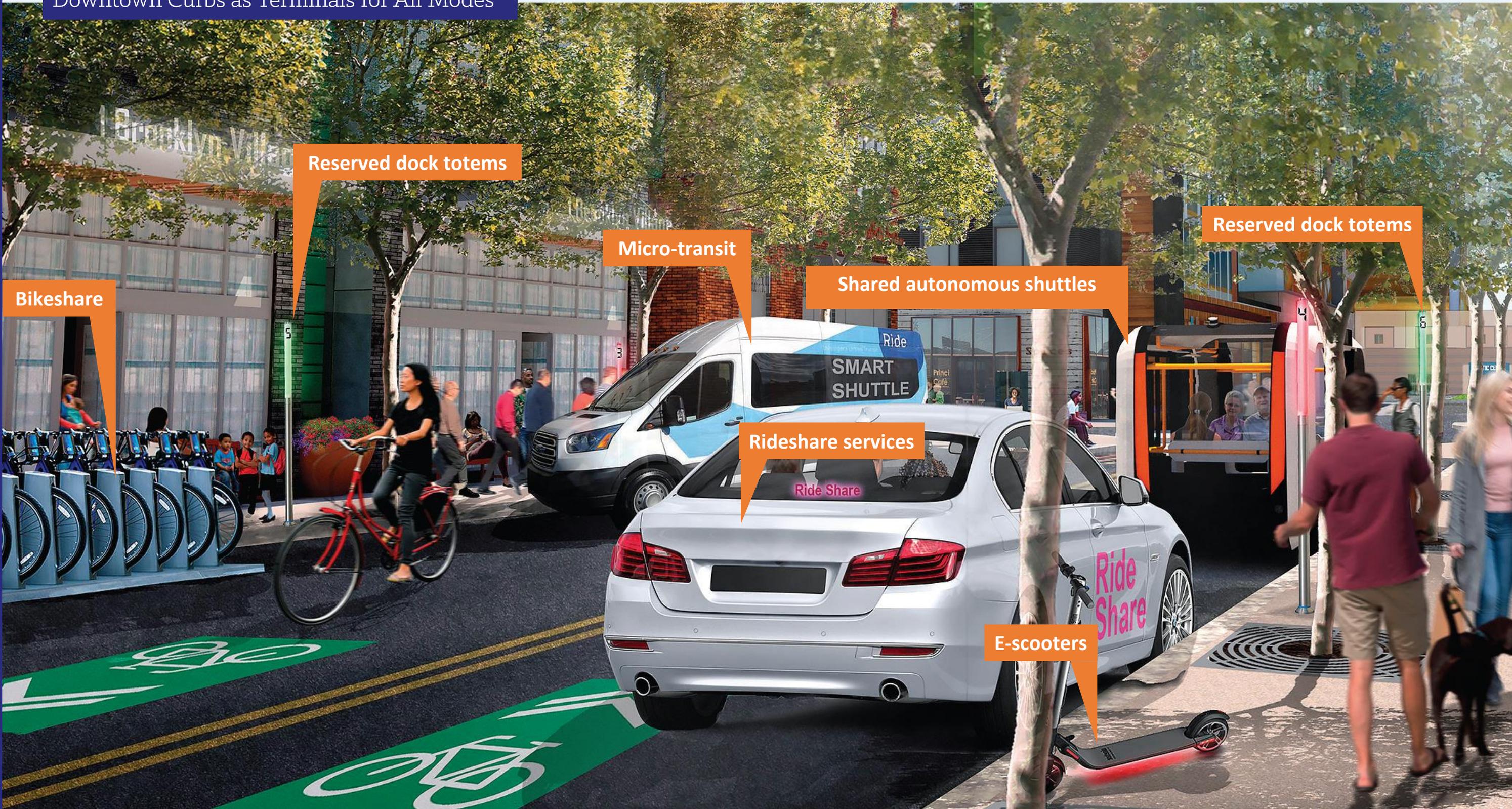
Reality #3:
Commuters
will need to
commute

Everyone will
not be able to
just start driving



Source: TradingEconomics.com | U.S. Bureau of Labor Statistics

Downtown Curbs as Terminals for All Modes



Bikeshare

Reserved dock totems

Micro-transit

Shared autonomous shuttles

Rideshare services

E-scooters

Reserved dock totems

Town of Plymouth Shared Streets



Case Study

Town of Plymouth Court Street/Main Street Parking & Travel Lane Conversion – MassDOT Shared Streets Grant (Spring 2020)



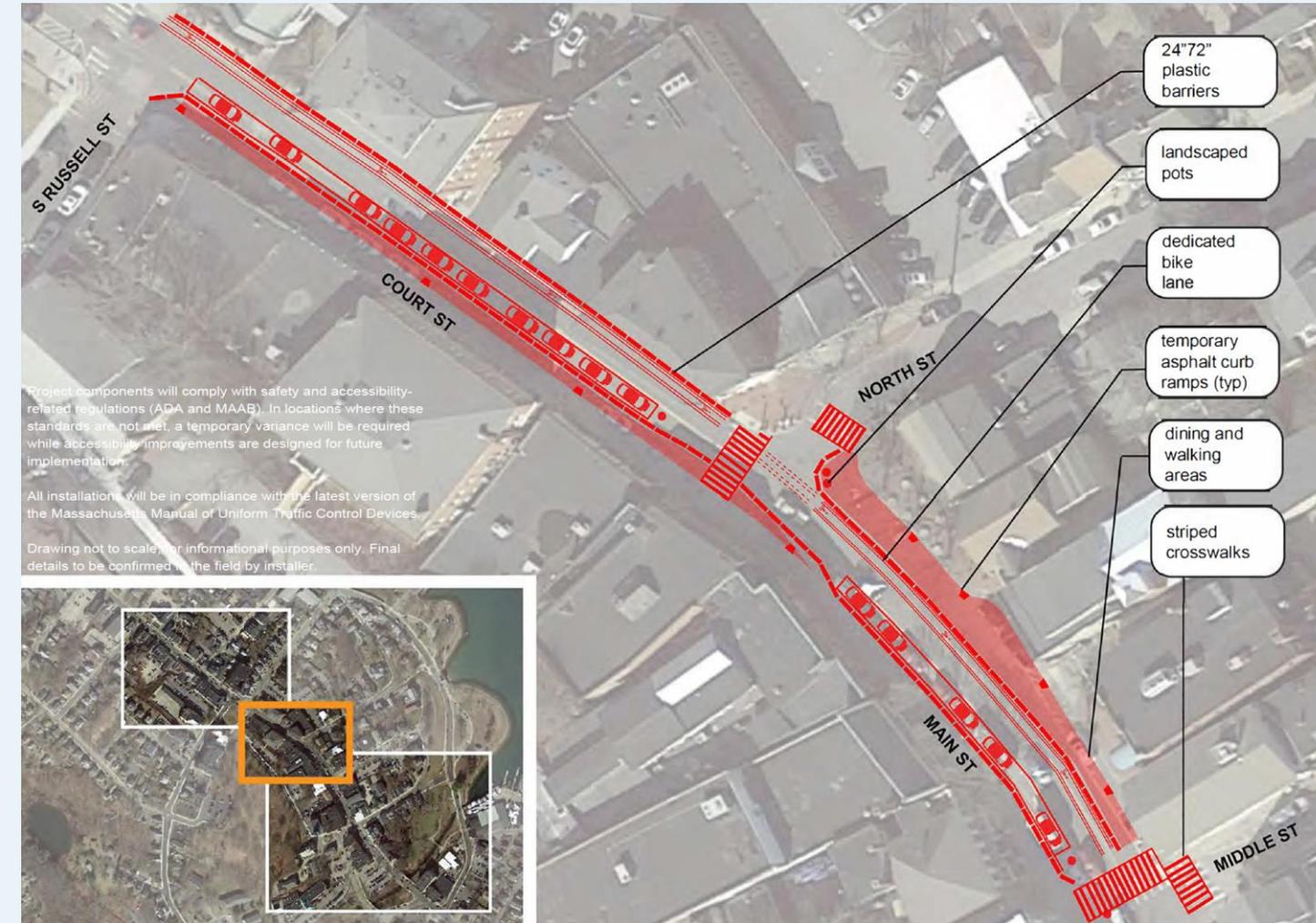
Main Street/Court Street prior to COVID-19 (2-way road)

Case Study

Town of Plymouth Court Street/Main Street Parking & Travel Lane Conversion – MassDOT Shared Streets Grant (Spring 2020)



Main Street/Court Street Before



Main Street/Court Street After

Case Study

Town of Plymouth Court Street/Main Street Parking & Travel Lane Conversion – MassDOT Shared Streets Grant (Spring 2020)



Main Street/Court Street post-installation- road converted to one-way southbound, outdoor dining areas, parking removed

Case Study

Town of Plymouth Court Street/Main Street Parking & Travel Lane Conversion – MassDOT Shared Streets Grant (Spring 2020)



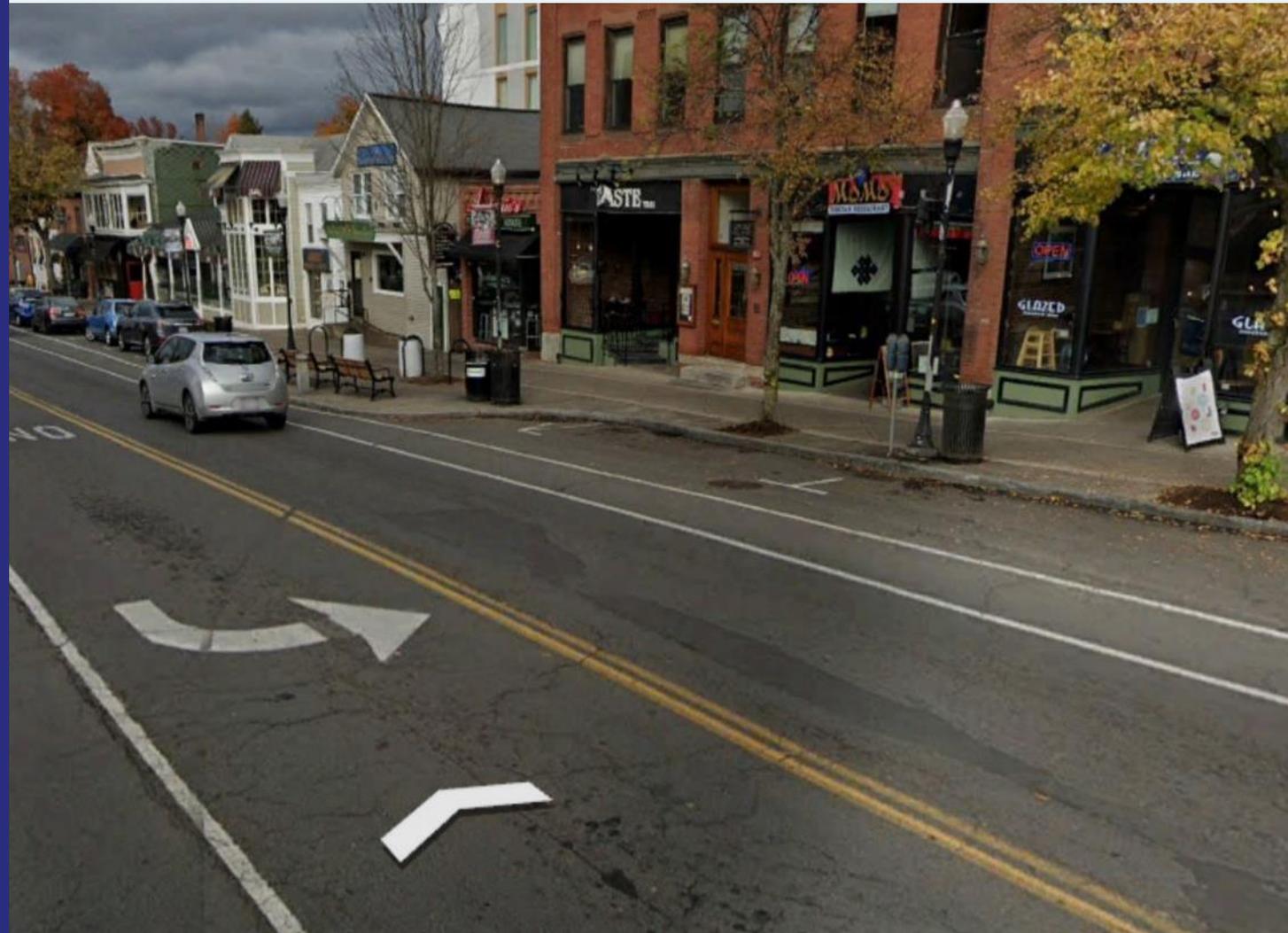
Main Street/Court Street post-installation- road converted to one-way southbound, outdoor dining areas, parking removed

Town of Amherst Shared Streets



Case Study

Town of Amherst – MassDOT Shared Streets Grant (Fall 2020)



N. Pleasant Street prior to COVID-19



S. Pleasant Street prior to COVID-19

Case Study

Town of Amherst – MassDOT Shared Streets Grant (Fall 2020)



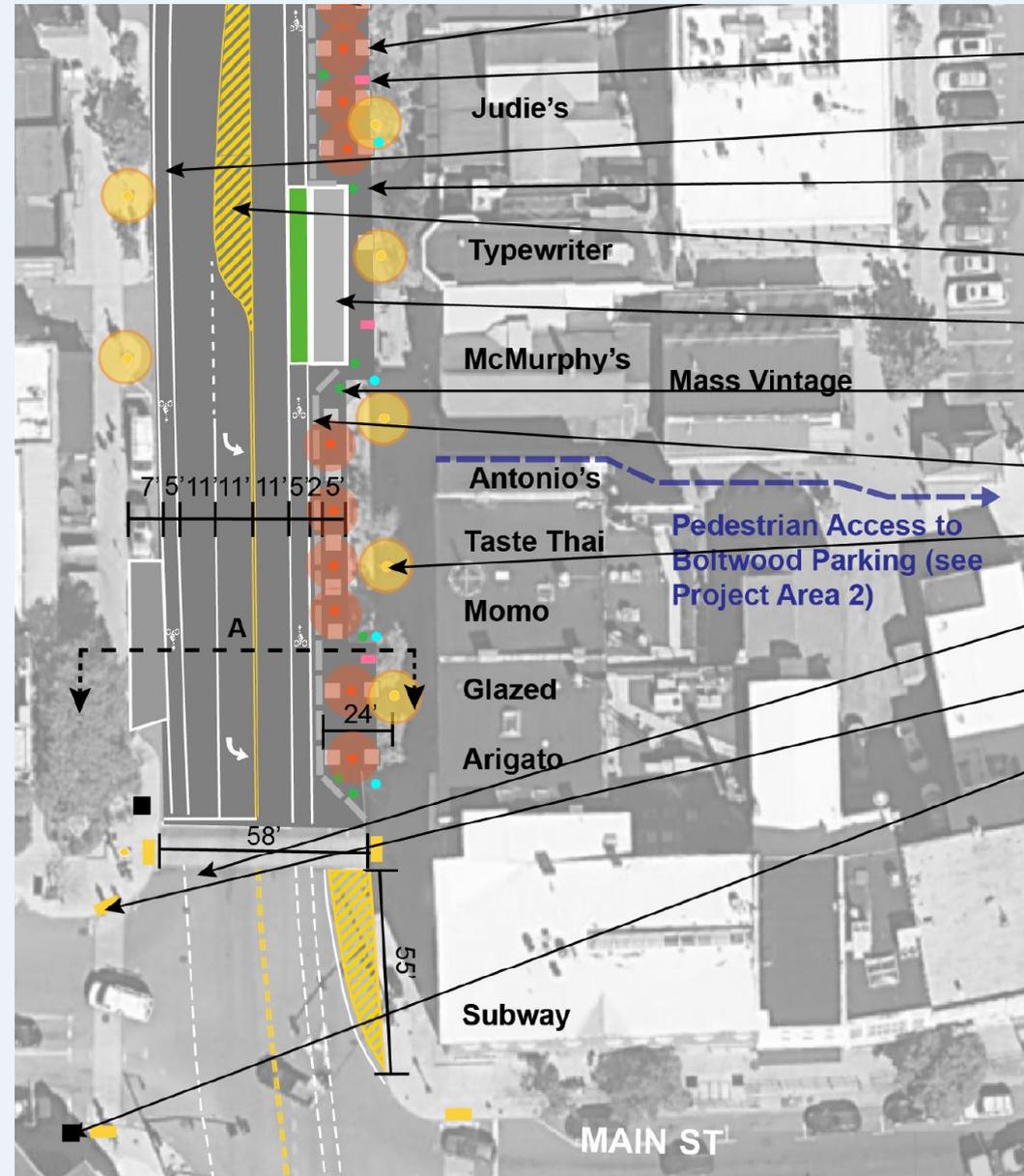
N. Pleasant Street post-COVID prior to the grant- Dining occupies parking spaces, however northbound bike lane is obstructed

Case Study

Town of Amherst- MassDOT Shared Streets Grant (Fall 2020)



N. Pleasant St. Before



N. Pleasant St. After

- EXISTING WOOD BLOCK ACCESS RAMPS (TYP.)
- 5 PARKING SPACES REMOVED
- 8 PARKING SPACES REMOVED (CURRENT)
- STRIPED GORES
- DESIGNATED DROP-OFF/PICK-UP ZONES
- LANDSCAPED POTS (TYP.)
- EXISTING JERSEY BARRIERS
- DOWNCAST LIGHT FIXTURES
- SKIPPED LANE MARKINGS
- DETECTABLE WARNING SURFACES
- SIGNAGE TO PUBLIC PARKING



Case Study

Town of Amherst- MassDOT Shared Streets Grant (Fall 2020)



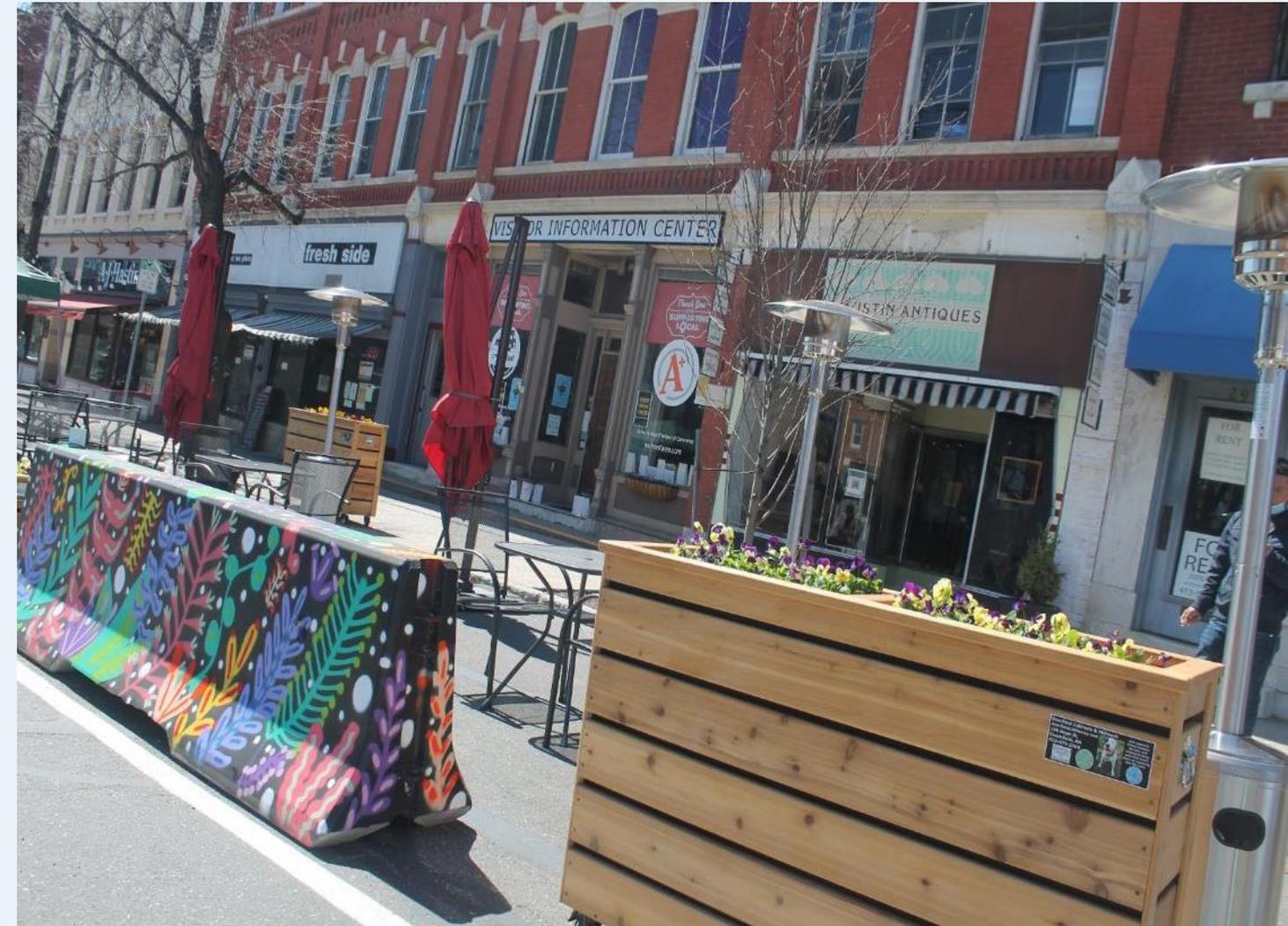
N. Pleasant Street roadway realignment- In order to expand dining areas and maintain a bike lane, one vehicle lane (right-turn only) was removed and the roadway was re-stripped



S. Pleasant Street roadway realignment- In order to expand dining areas and maintain a bike lane, a center median was removed and the roadway was re-stripped

Case Study

Town of Amherst- MassDOT Shared Streets Grant (Fall 2020)



N. Pleasant Street today- curbside pickup, outdoor dining area, realigned roadway, parking removed, bike lane maintained, heating element, art/landscape features

Case Study

Town of Amherst- MassDOT Shared Streets Grant (Fall 2020)



S. Pleasant Street today- expanded dining area accommodates more customers while allowing for social distancing



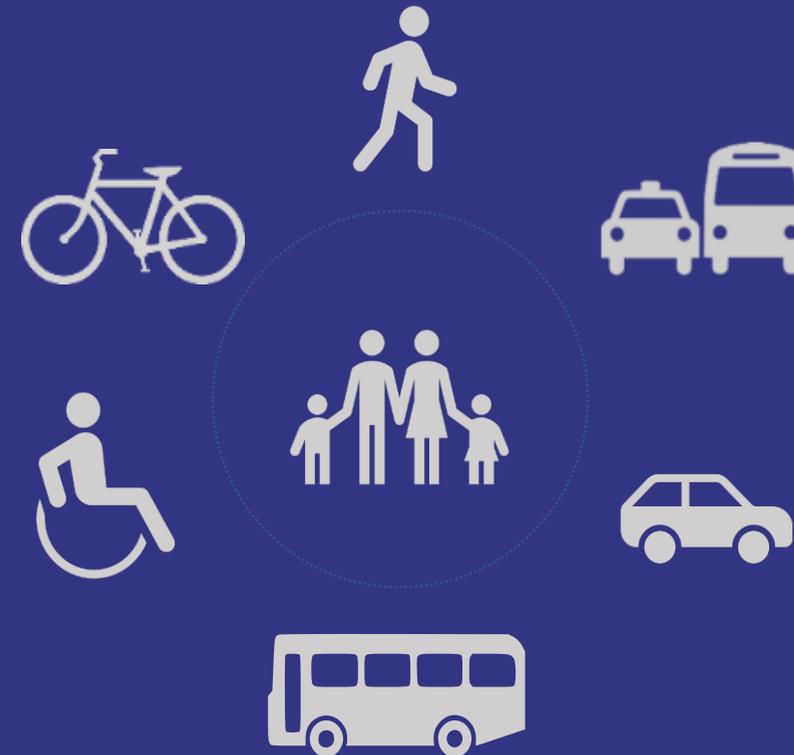
Town Common today- People utilize the new picnic tables and practice social distancing

Thank You!

Jason Schrieber

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Repurposing Roadway/ Parking space examples - Providing Connections

Case Studies

- East Providence, Rhode Island
- Wayland, Massachusetts
- Natick-Wayland, Massachusetts

Case Study

Watchemoket Square – 1st Street Pilot Project

East Providence, Rhode Island



- Provide separated bike lanes that close the gap in the East Bay Bike Path
- Activates businesses that builds on open space, recreational opportunities, art, and outdoor activity
- Generates public awareness and improves safety for cyclists of all ages
- First step in a long-range plan to activate development/redevelopment, recreational opportunities, open space, and public art

1st Street Pilot Project

Watchemoket Square
East Providence, Rhode Island

PROVIDENCE

1st St.

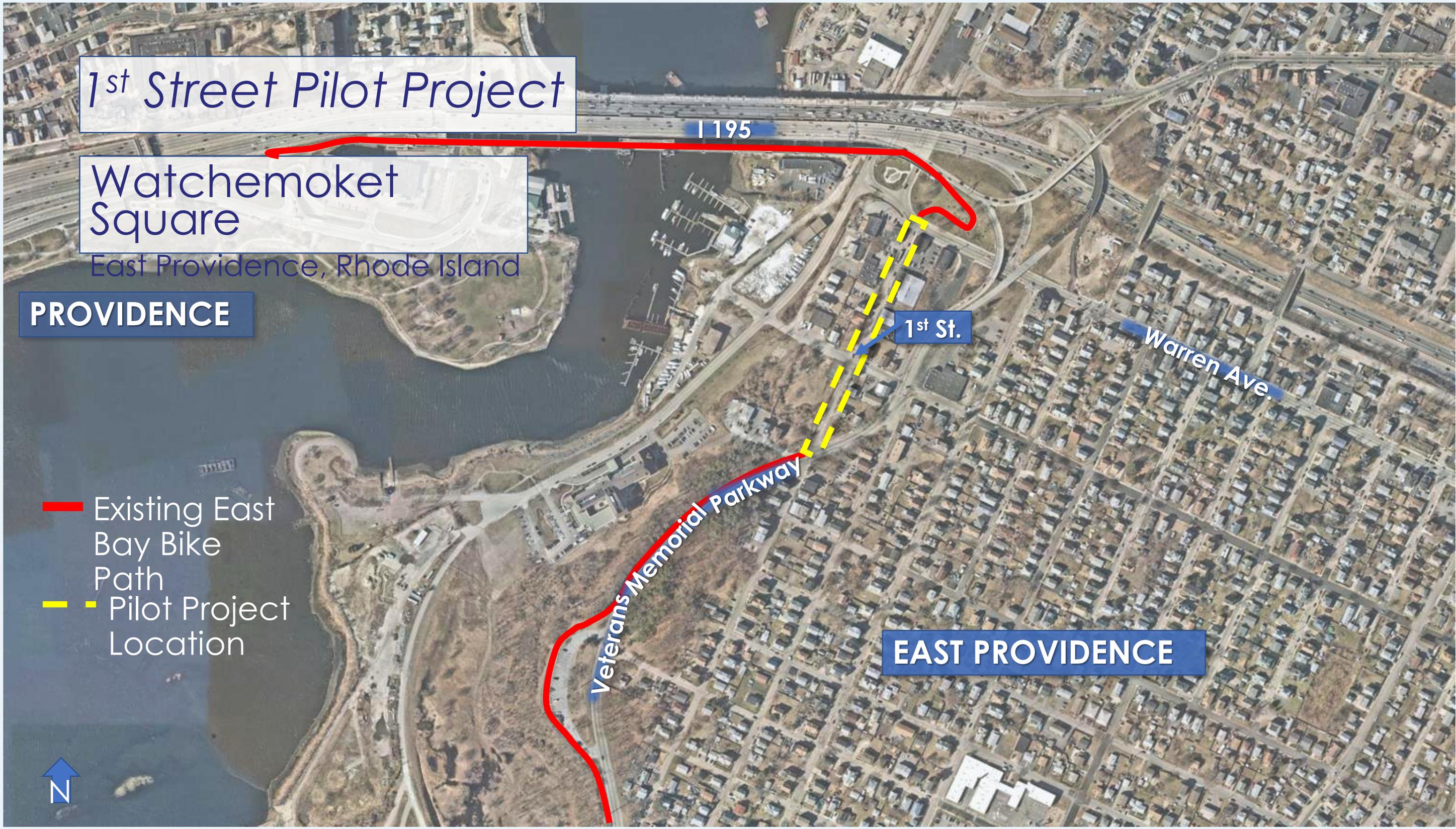
Warren Ave.

Veterans Memorial Parkway

EAST PROVIDENCE

I 195

- Existing East Bay Bike Path
- Pilot Project Location





1st Street Pilot Project

Watchemoket Square

East Providence, Rhode Island



Existing Conditions

1st Street Pilot Project

Watchemoket Square

East Providence, Rhode Island



On-Street Separated Bike Lanes

1st Street Pilot Project

Watchemocket Square

East Providence, Rhode Island



Separated Bike Path

Case Study

Watchemocket Square

First Street Pilot Project
East Providence, Rhode Island

How can active transportation stimulate business?

- Less auto-centric population
- Commuters and recreational riders of all ages
- Opportunities to serve active Lifestyle users: outdoor eating, recreation, placemaking, art, bike shop



Case Study

Shared Winter Streets and Spaces

Wayland, MA – 336 Boston Post Road



- Repurpose off-street parking for outdoor dining
- Provides a new connection between Boston Post Road (Rt.20) and Mass Central Rail Trail/East Coast Greenway
- Provides connection to Wayland Town Center
- Stimulate business and improve connectivity

Case Study

Shared Winter Streets and Spaces

Wayland, MA – 336 Boston Post Road



Case Study

Shared Winter Streets
and Spaces
Wayland, MA –
336 Boston Post Road



Case Study

Shared Winter Streets and Spaces

Wayland, MA – 336 Boston Post Road



Case Study

Shared Winter Streets and Spaces

Wayland, MA – 336 Boston Post Road



Case Study

Shared Winter Streets and Spaces

Wayland, MA – Wayland Town Center



- Repurpose Elissa Avenue (private road) for outdoor dining
- Provides a new connection between Town Center and Mass Central Rail Trail/East Coast Greenway
- Links to Boston Post Road through #336 project
- Activates restaurants
- Creates pedestrian area and opportunities for additional recreation (pickle ball)

Case Study

Shared Winter Streets and Spaces

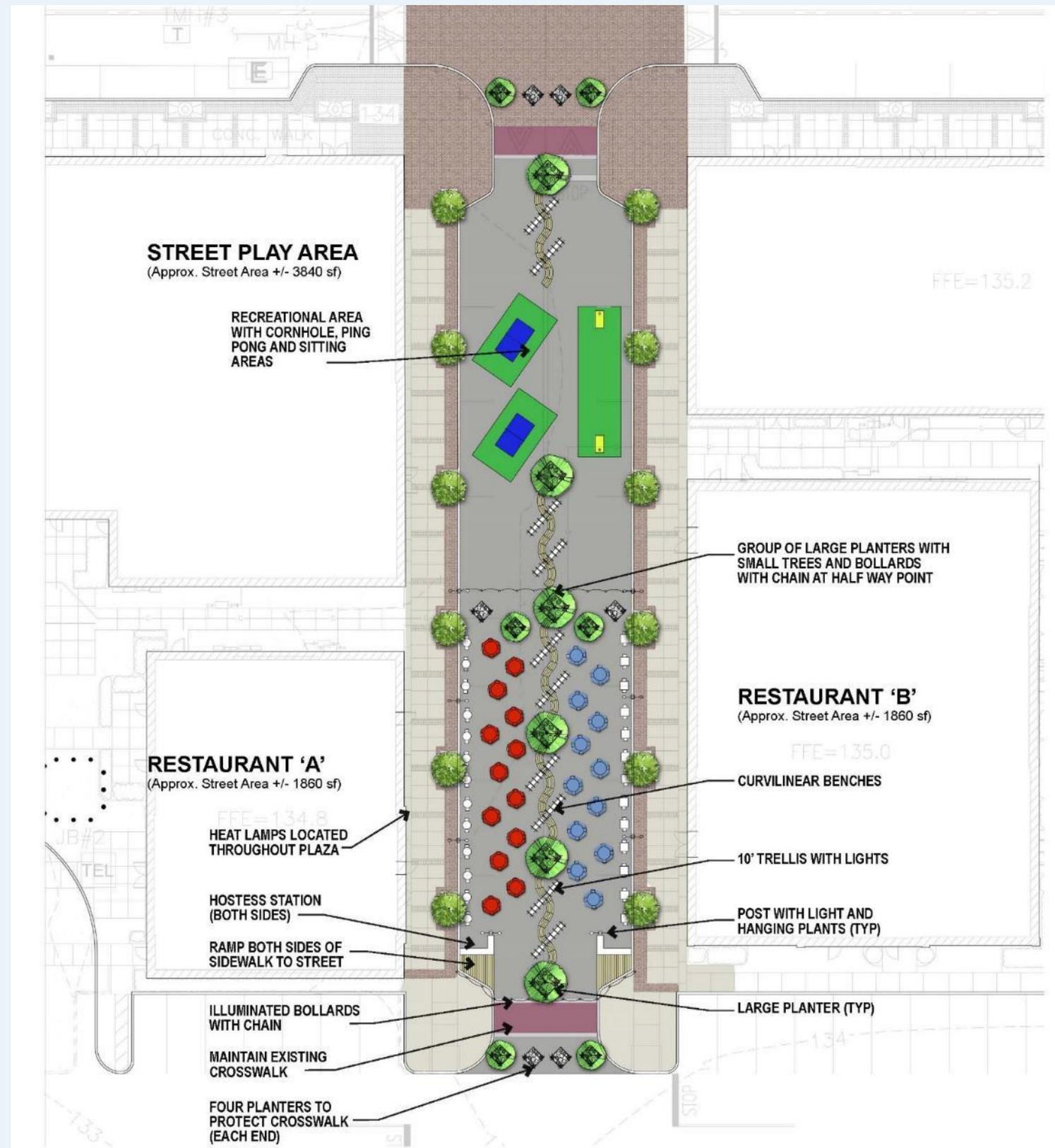
Wayland, MA – Wayland Town Center



Case Study

Shared Winter Streets and Spaces

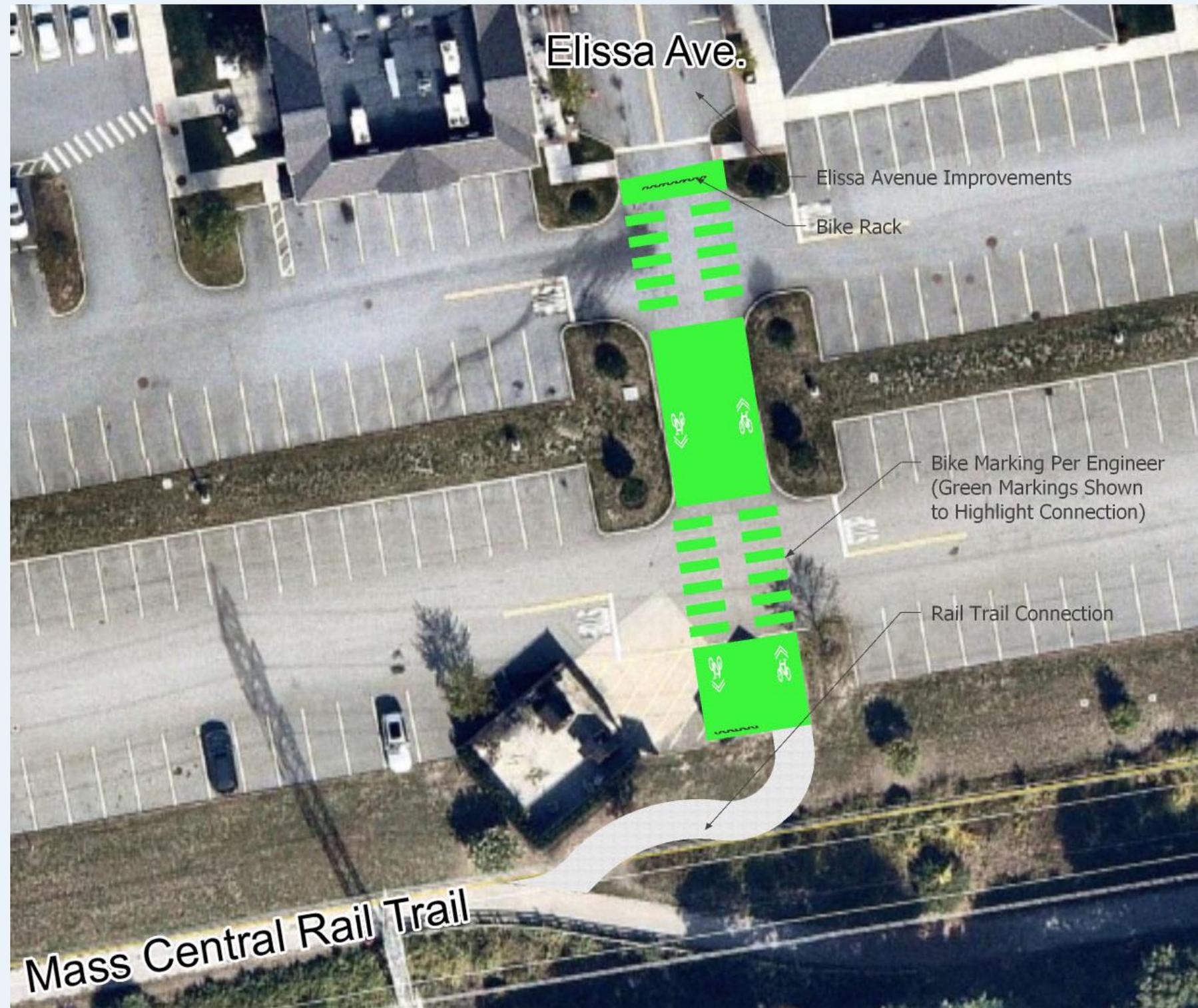
Wayland, MA – Wayland Town Center



Case Study

Shared Winter Streets and Spaces

Wayland, MA - Elissa Ave Wayland Town Center



Case Study

Shared Winter Streets and Spaces

Natick-Wayland, MA – Route 30 Pedestrian and Bicycle Facility

- Repurpose existing shoulders on Rt. 30 (Commonwealth Road)
- Increase bicycle and pedestrian accessibility, safety, and connectivity
- Provide connections with Cochituate State Park, Cochituate Rail Trail, and office employees
- Collaborative effort between Natick and Wayland
- Coordinate with MassDOT and DCR



Case Study

Shared Winter Streets and Spaces

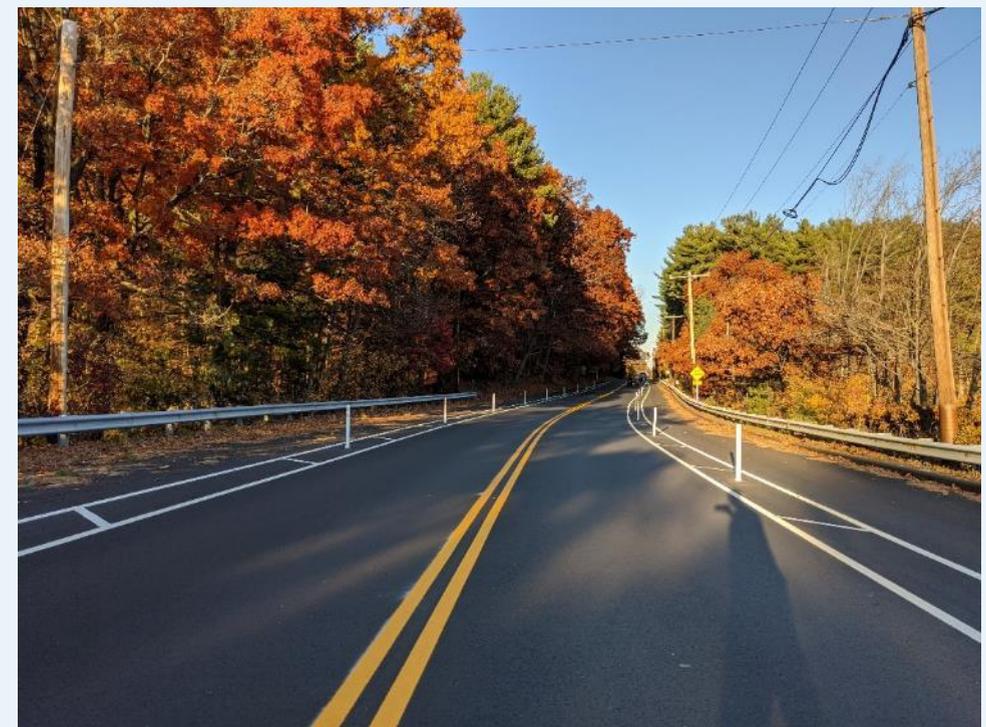
Natick-Wayland, MA – Route 30
Pedestrian and Bicycle Facility



Case Study

Shared Winter Streets and Spaces

Natick-Wayland, MA – Route 30 Pedestrian and Bicycle Facility



Thank You!

Jeff Maxtutis

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Developing transportation systems to promote broader community goals of mobility, equity, sustainability, health, and economic development

We Put People First



Transit



Transit Corridors



Active Transportation and Safety



Cities and Streets



Parking and Demand Management



Paratransit and Community Transit

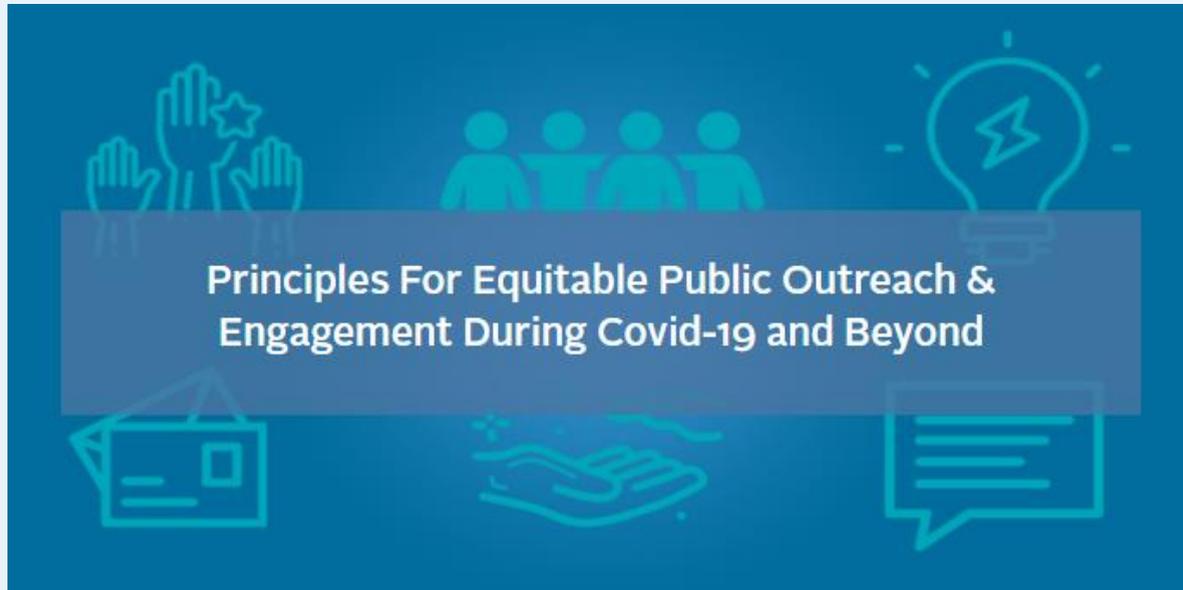


Emerging Mobility



Engineering and Design

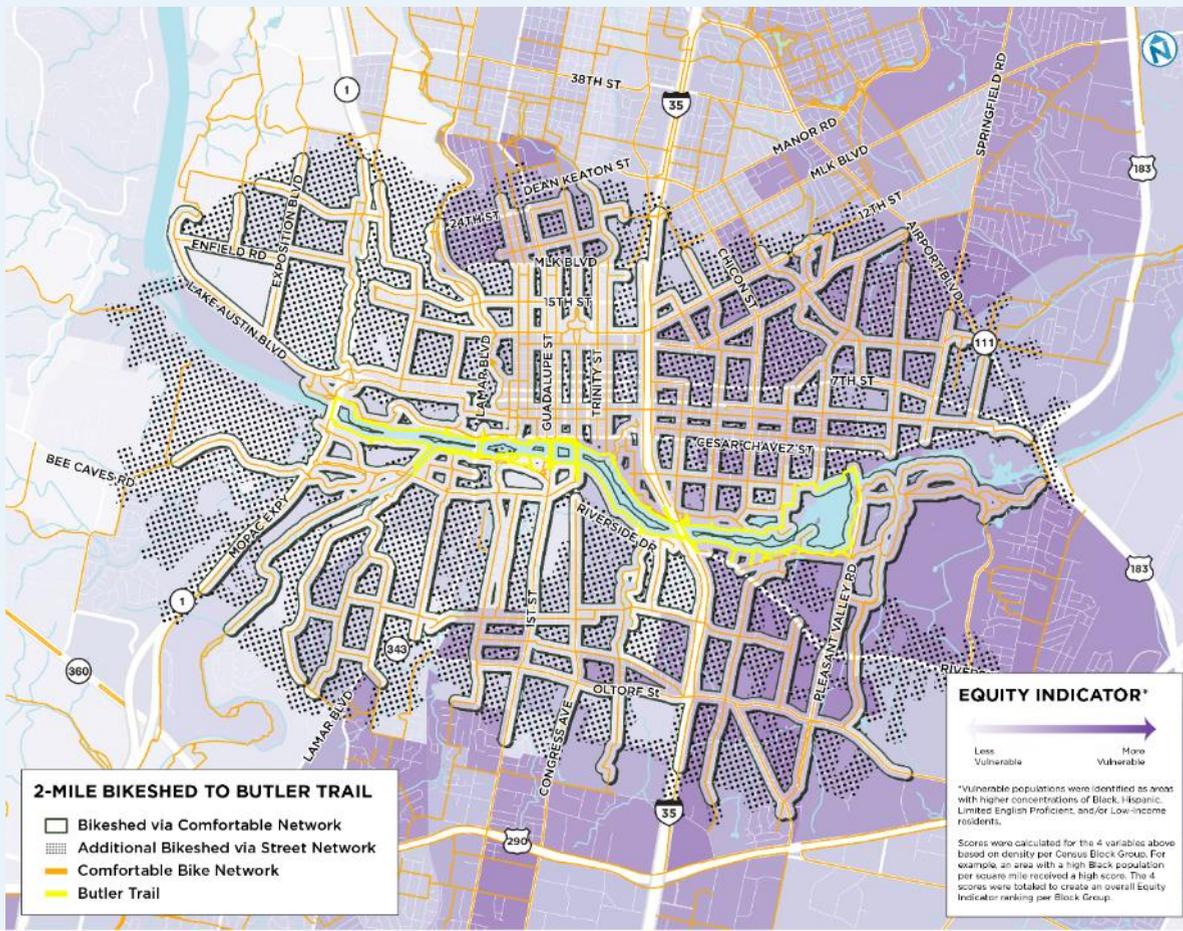




Principles For Equitable Public Outreach & Engagement During Covid-19 and Beyond



The New TDM Challenge: Flattening the Return-to-Work SOV Curve



2-MILE BIKESHED TO BUTLER TRAIL

- Bikeshed via Comfortable Network
- ▨ Additional Bikeshed via Street Network
- Comfortable Bike Network
- Butler Trail

EQUITY INDICATOR*

Less Vulnerable → More Vulnerable

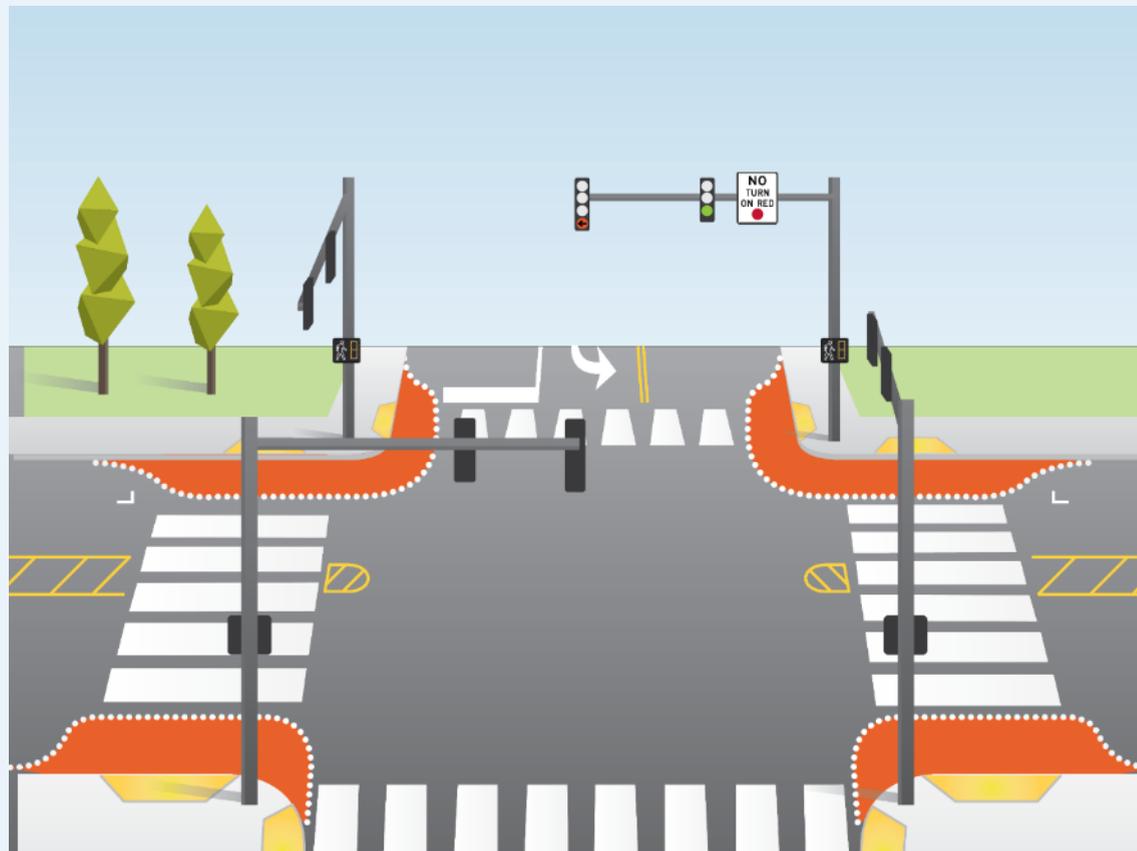
*Vulnerable populations were identified as areas with higher concentrations of Black, Hispanic, Limited English Proficient, and/or Low-income residents.

Scores were calculated for the 4 variables above based on density per Census Block Group. For example, an area with a high Black population per square mile received a high score. The 4 scores were totaled to create an overall Equity Indicator ranking per Block Group.

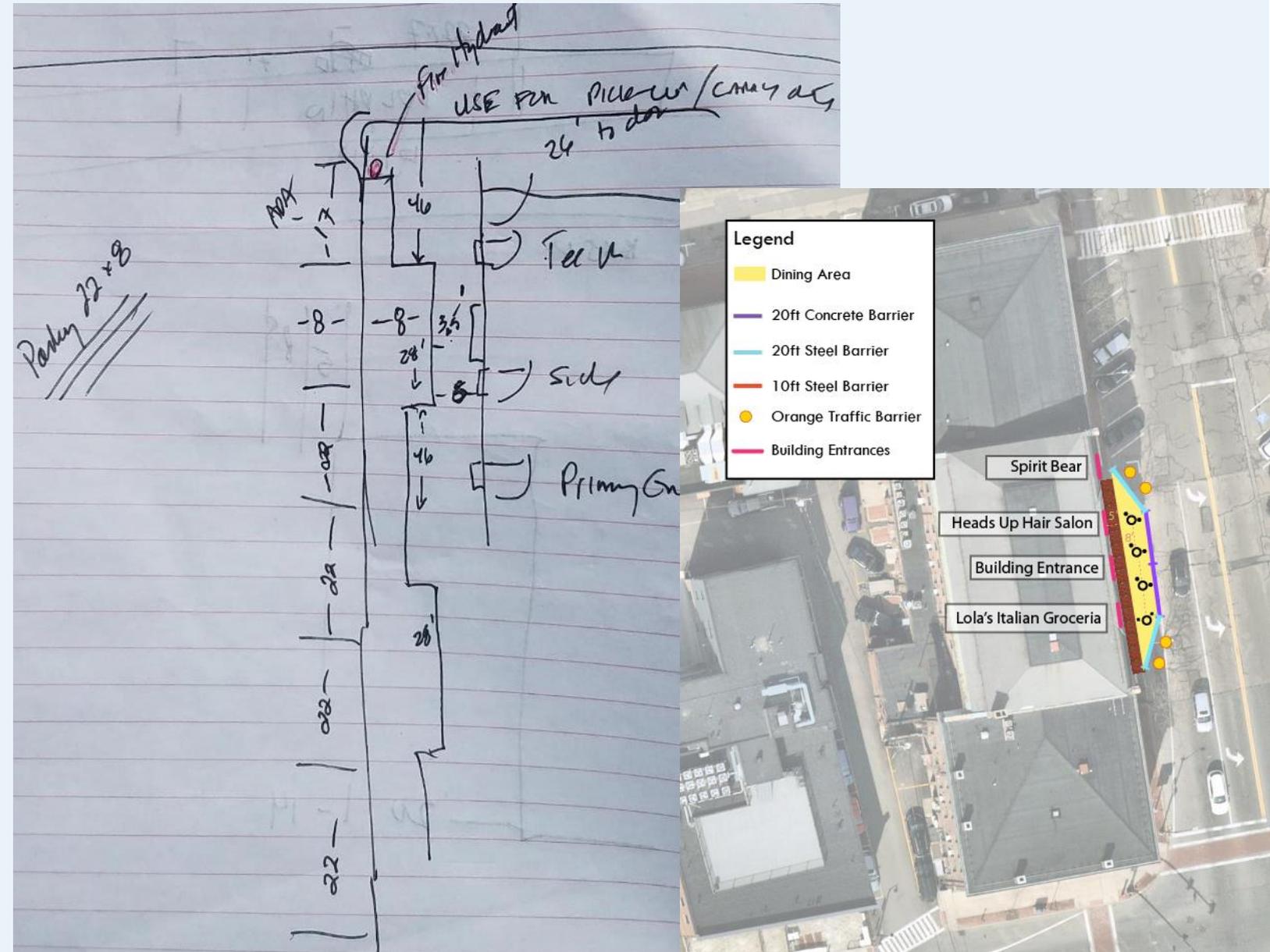


Case Study

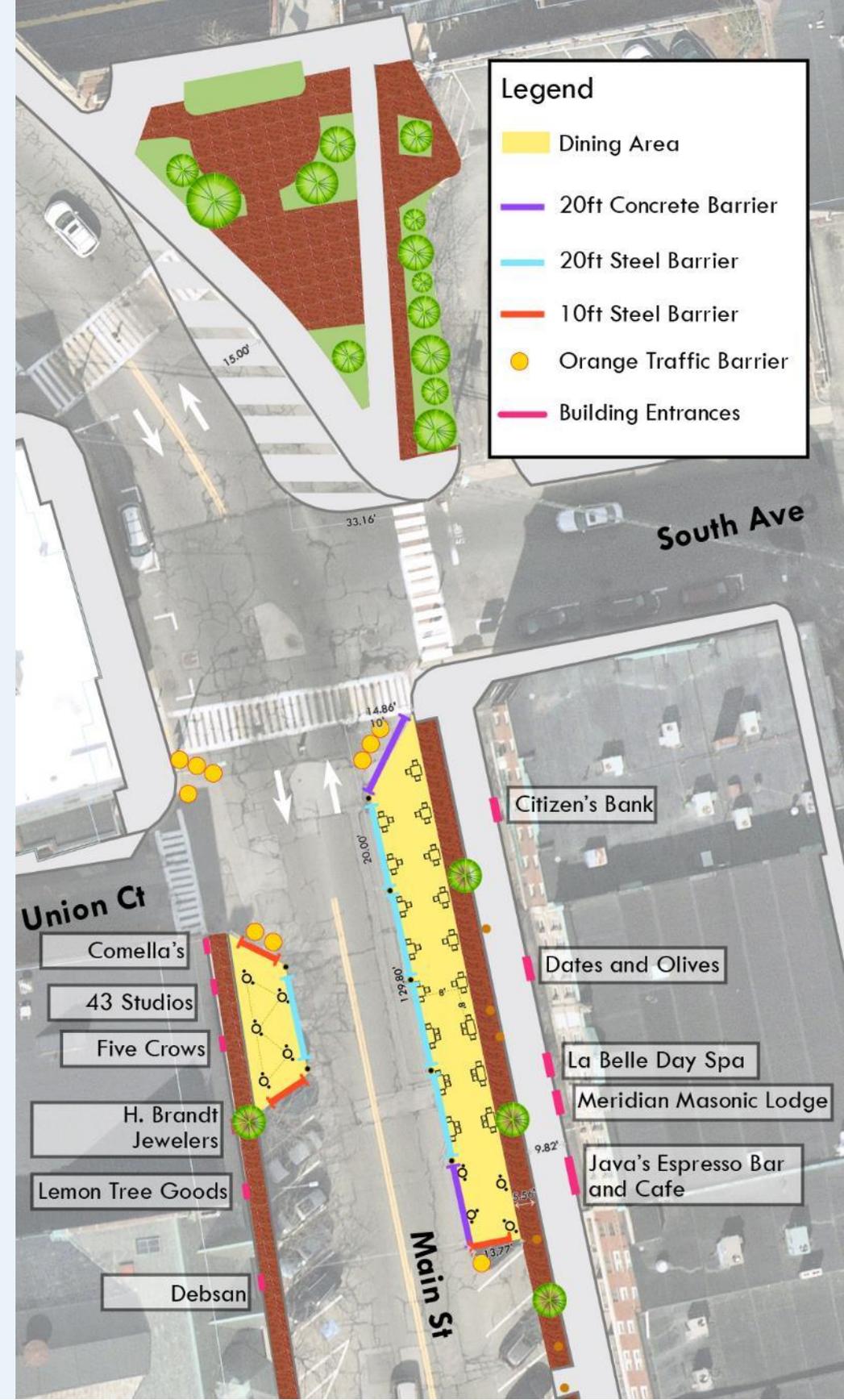
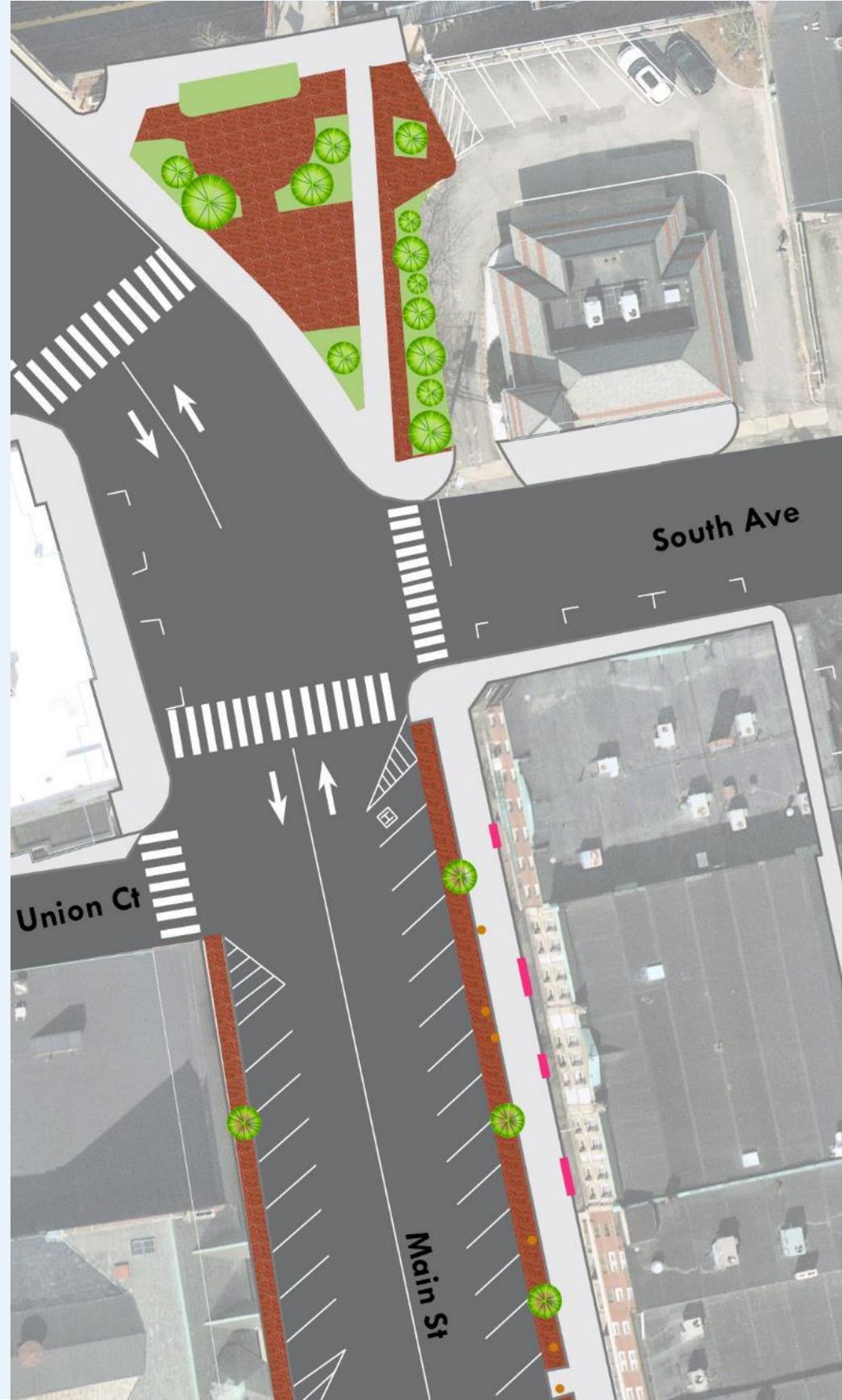
- Public Realm Planning in Natick

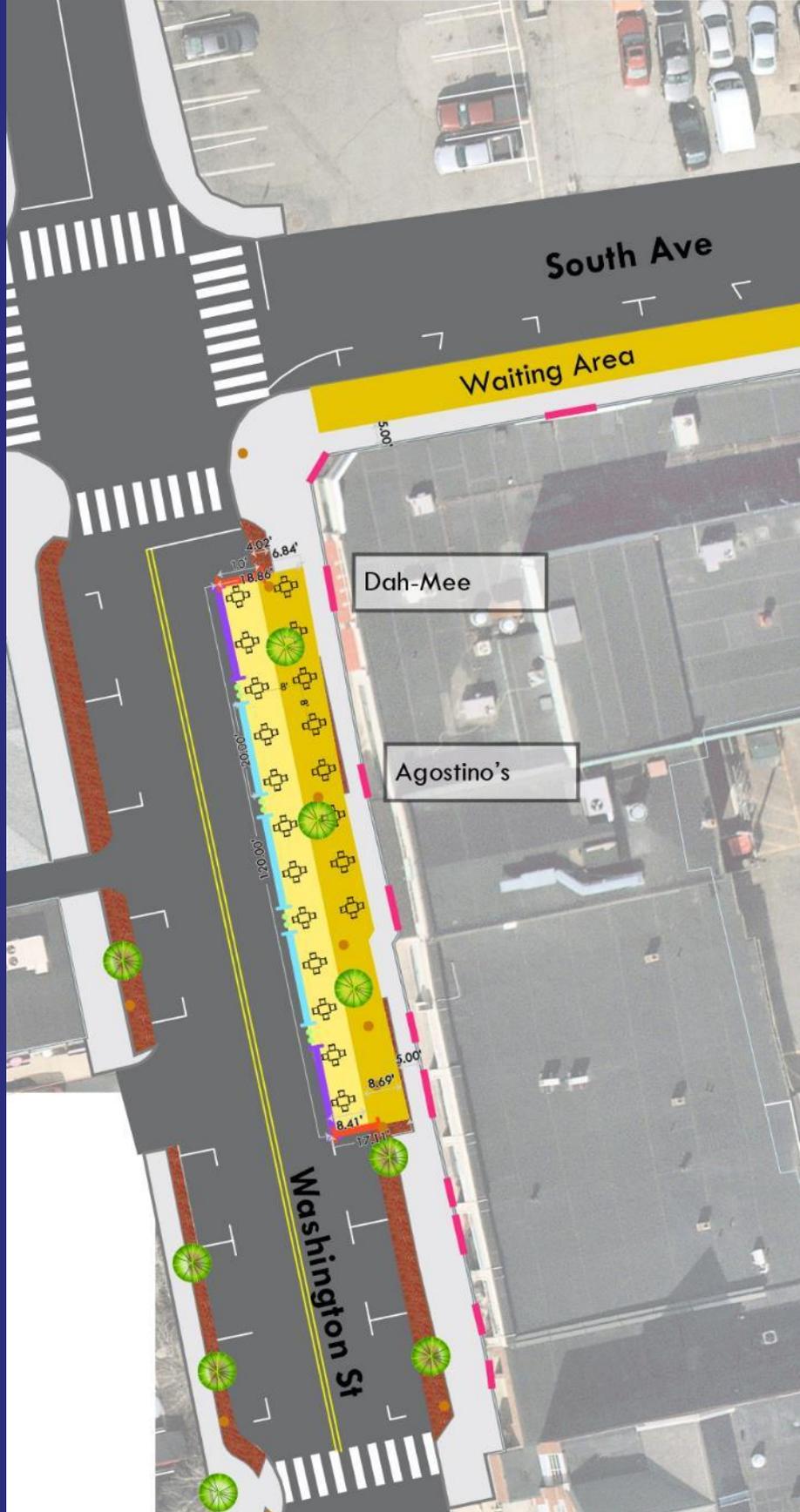


Safety Demonstration Pilots



Converting On-Street Parking to Streeteries







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Sponsored By
The Lawrence & Lillian
Solomon Foundation
Barr
Foundation

Natick Center Pedestrian Safety Test

This safety test uses temporary materials to explore opportunities to **increase user safety and reduce speeding, creating a comfortable and attractive walking and biking environment without reducing throughput.**

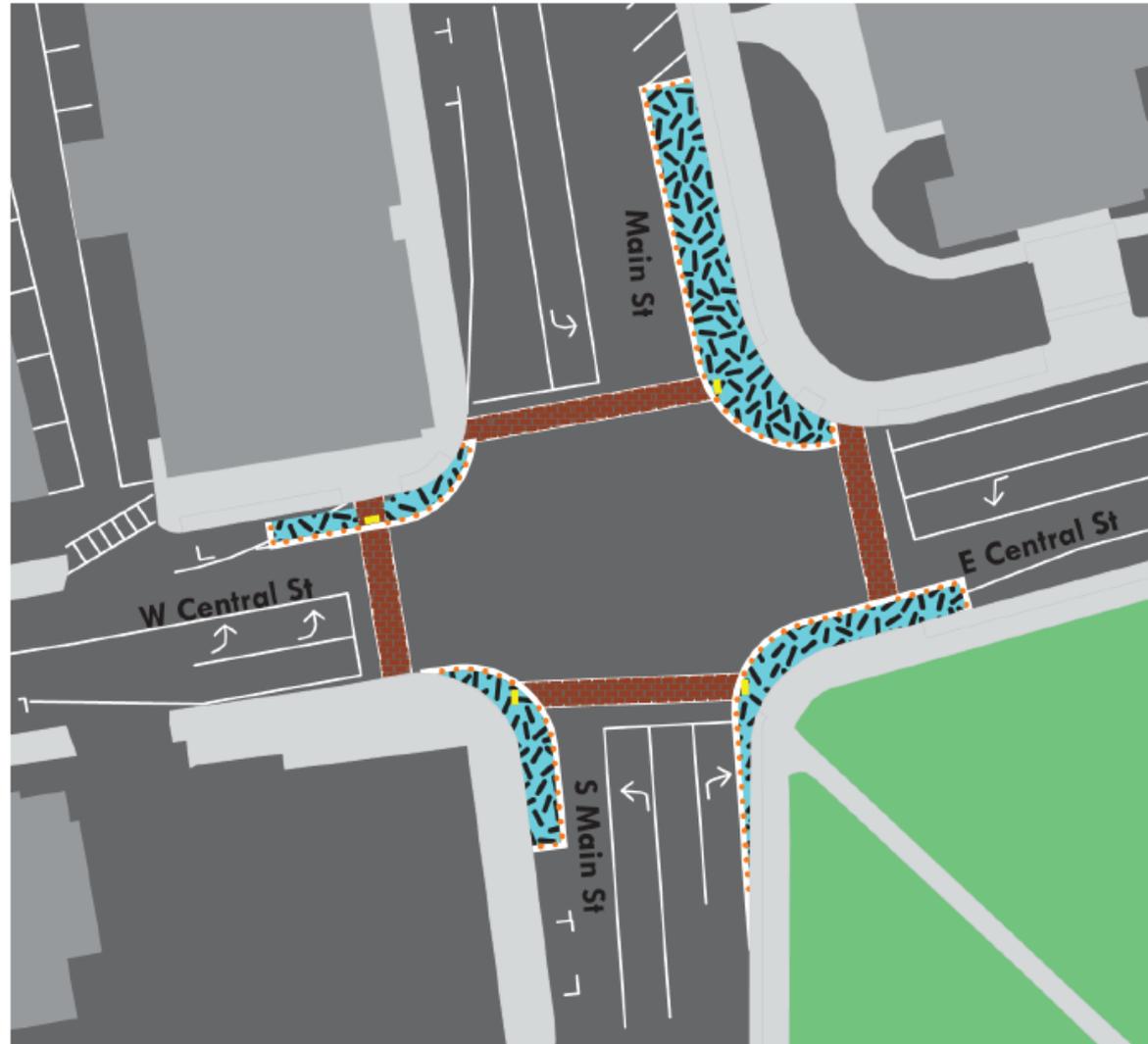
Schedule: 9/25 + 9/26 - Observations and adaptations based on performance of straw tube and cone layout.

10/2 Weekend - Apply paint and bollards to updated layout. TBD Date - Remove bollards around first snow.

Increase visibility of people walking.

Pedestrians are more visible and safe when in the crosswalk. Bumpouts reduce the distance and time a pedestrian spends crossing the streets. The longer a pedestrian is in a crosswalk, the more vulnerable they are to being struck by a vehicle and the longer it takes to cross, the less likely people of all ages could make their way across the street on foot.

Reducing speeds of turning vehicles enhances intersection safety.



People-oriented Natick Center

Reclaiming excess pavement opens up opportunities for seating areas, green space, public art and more.

Reduced traffic congestion and parking demand.

A more comfortable and attractive pedestrian environment encourages people to walk or bike rather than drive to the Center. This reduces congestion and makes more parking available for those that need it.

Let us know what you think! Please complete this survey: <https://www.surveymonkey.com/r/NatickCenterSafety>



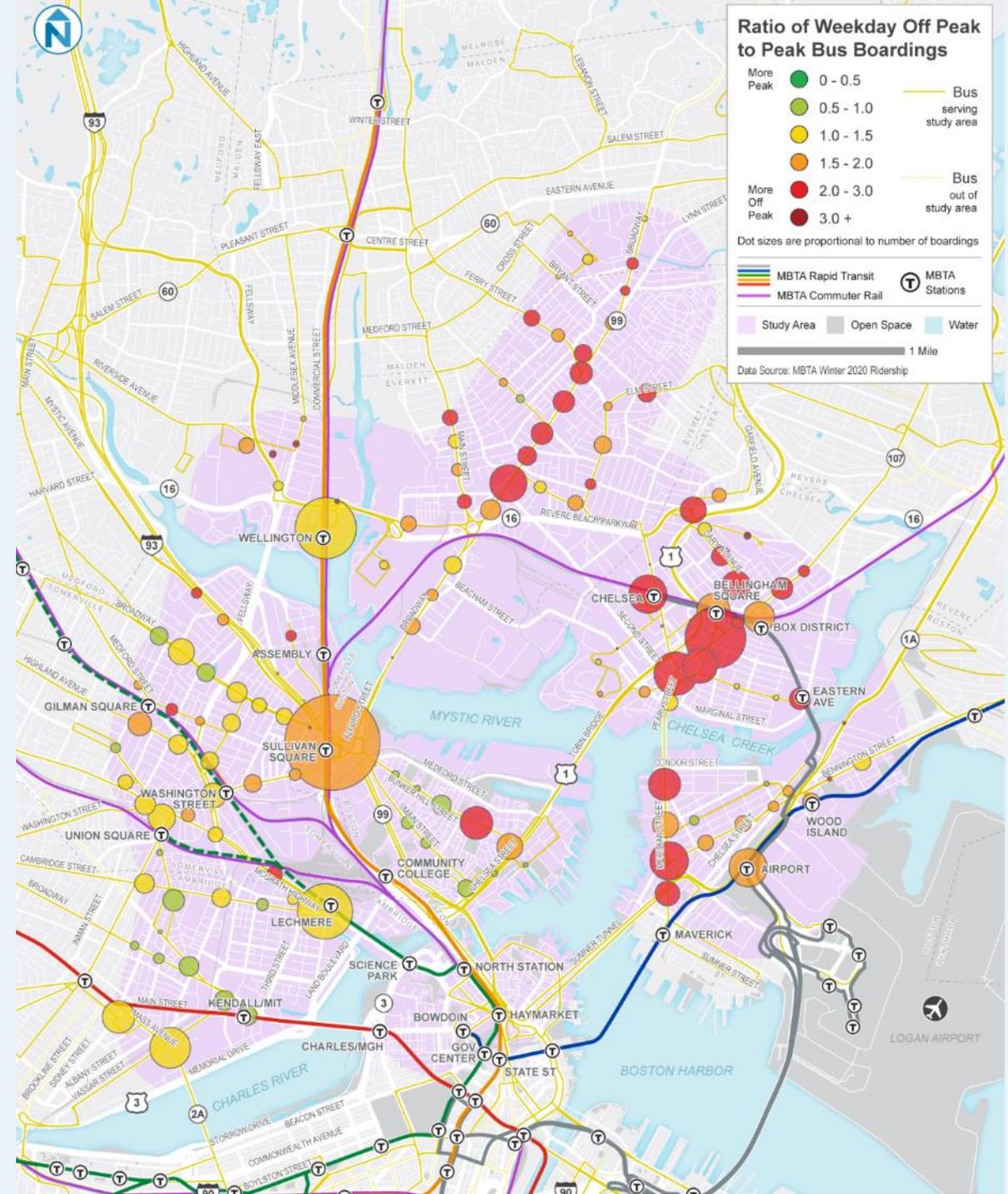


Case Study

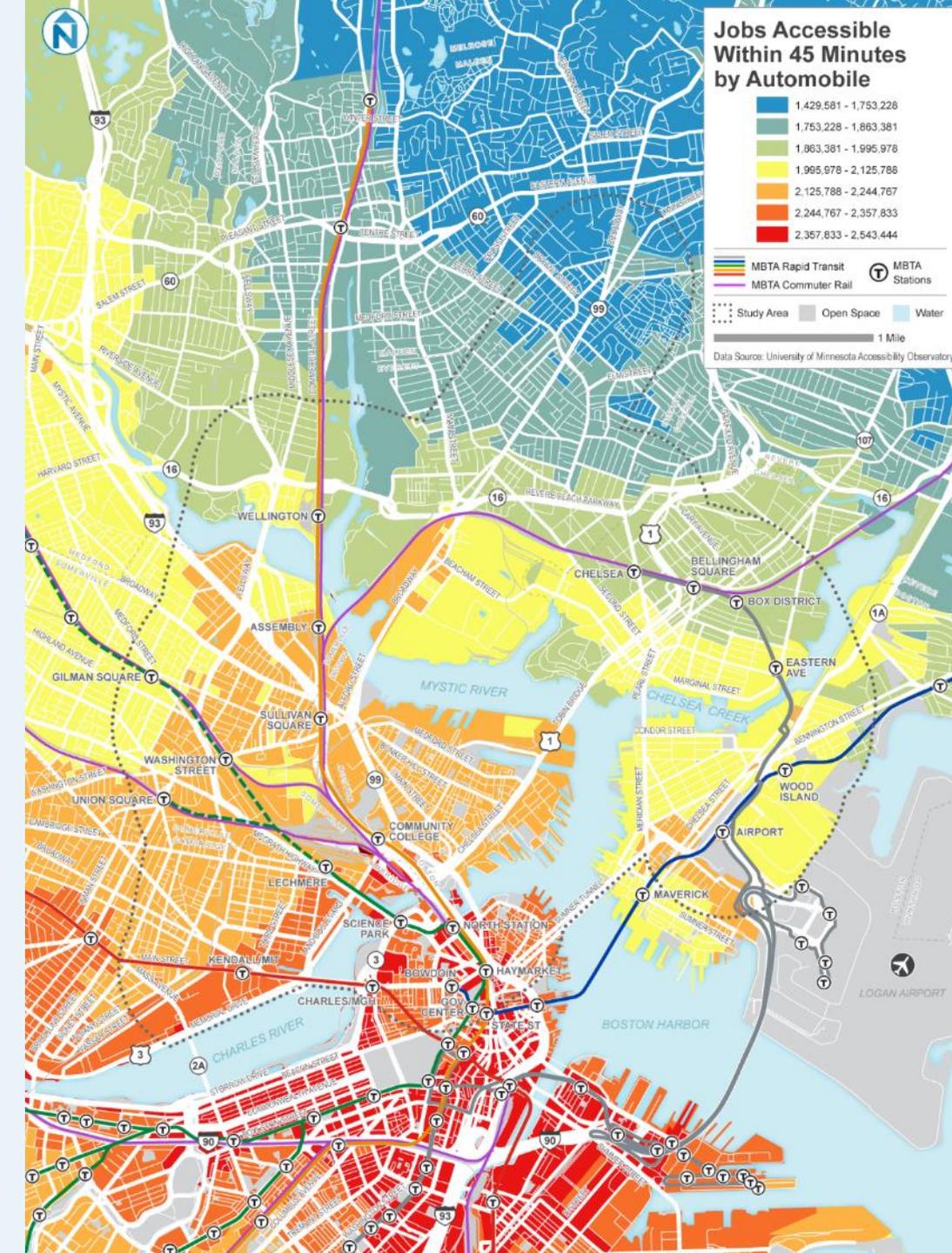
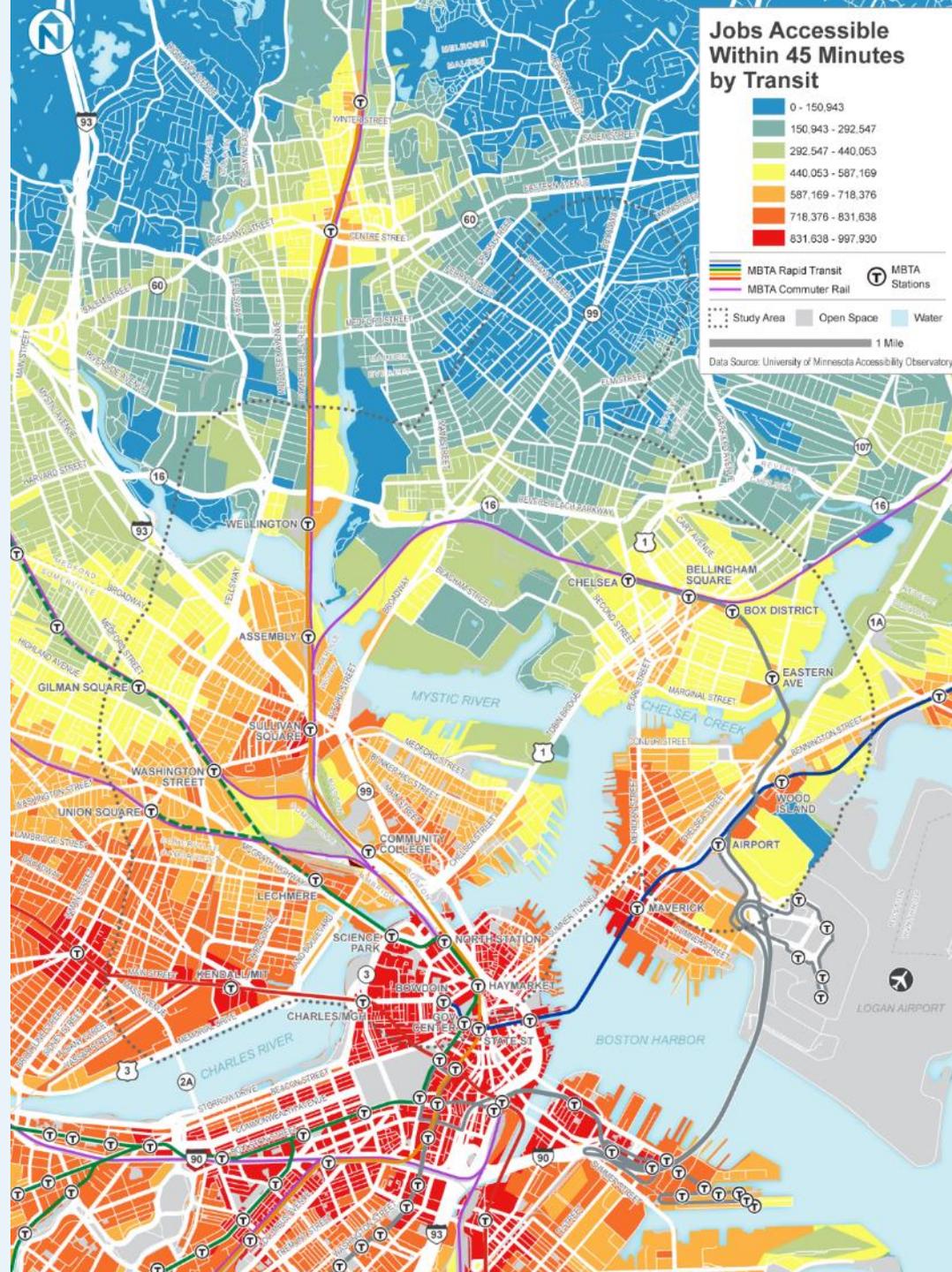
- Silver Line Alternatives Analysis



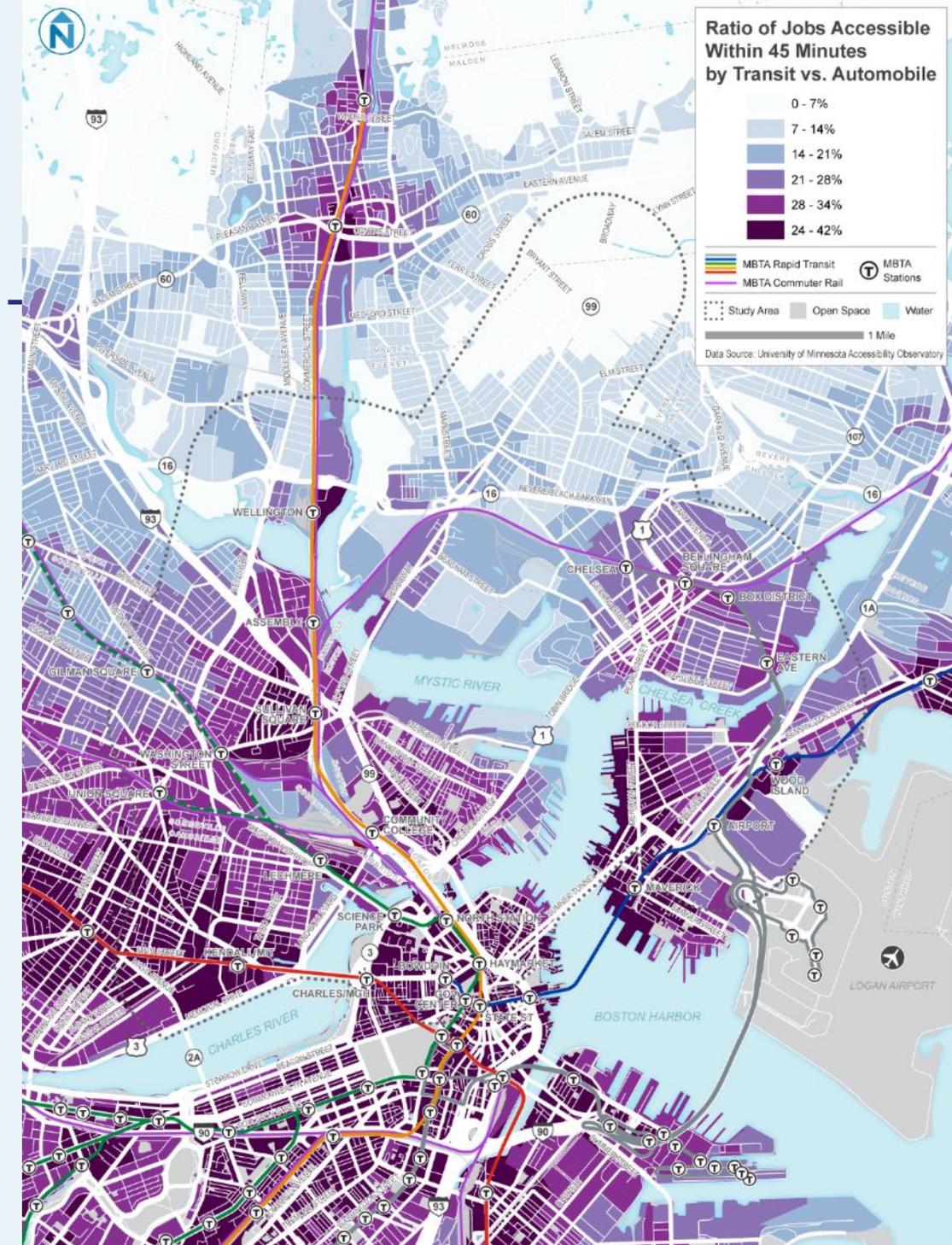
Ridership Trends



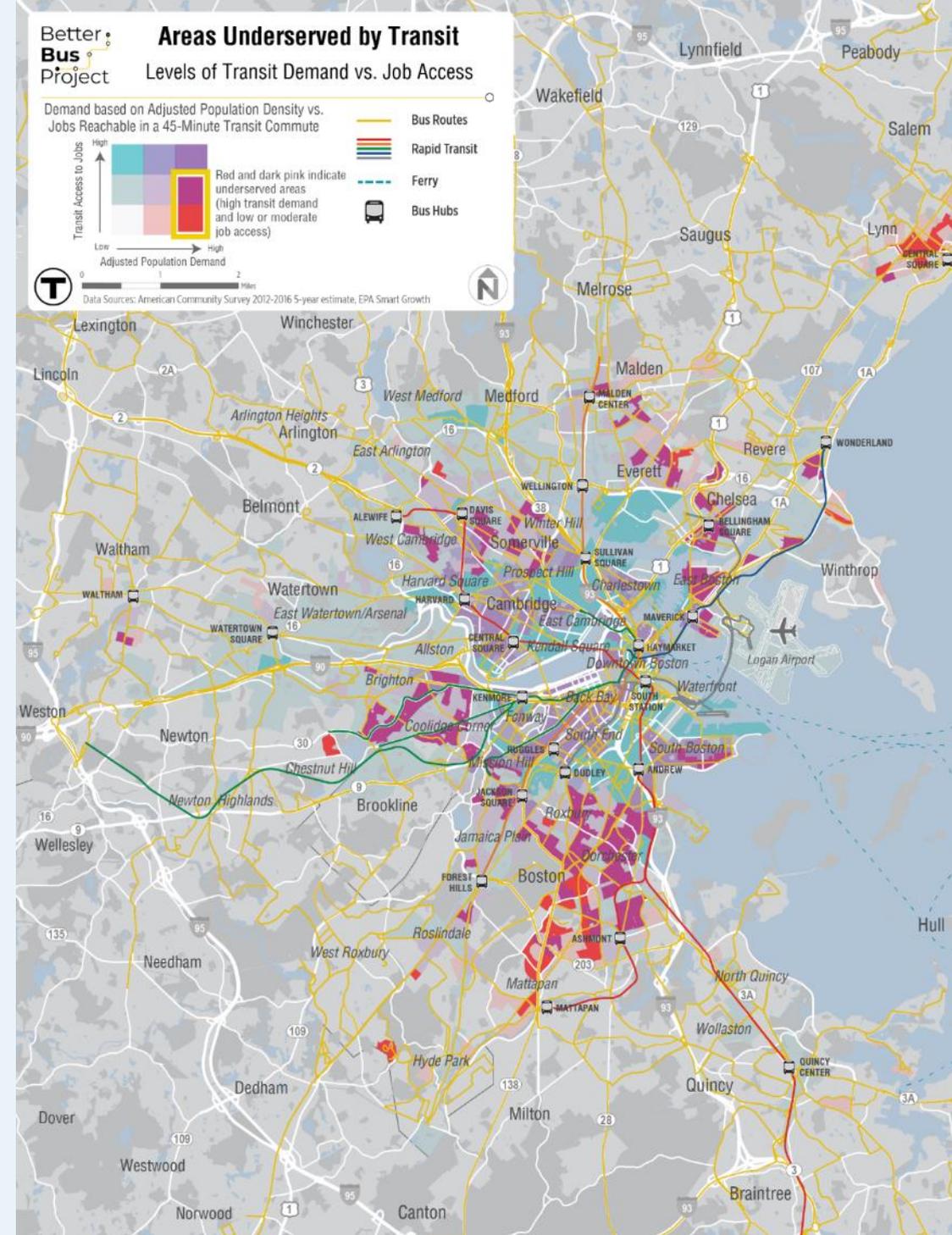
Temporal Boarding Trends



Many areas close to major job centers are poorly integrated via transit and these areas often have large minority and low-income populations; Everett and Chelsea have poor access to jobs both via transit and auto considering Downtown Boston proximity



Percentage of jobs accessible by transit compared to auto



Boston area: high demand based on population density and socioeconomic characteristics vs. access to jobs

Thank You!

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