



CITY OF SOMERVILLE, MASSACHUSETTS

Bicycle Advisory Committee

JOSEPH A. CURTATONE  
MAYOR



**Interdepartmental Meeting**

**Bicycle Transportation Safety  
Improvement Proposals**

**March 2014**

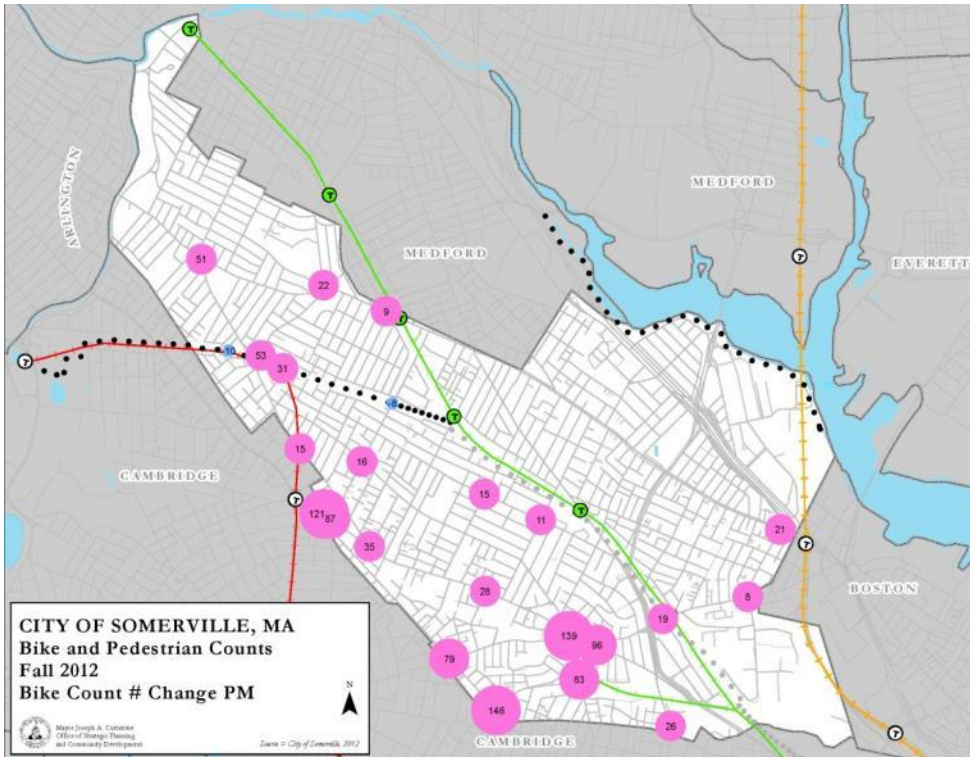
# Agenda

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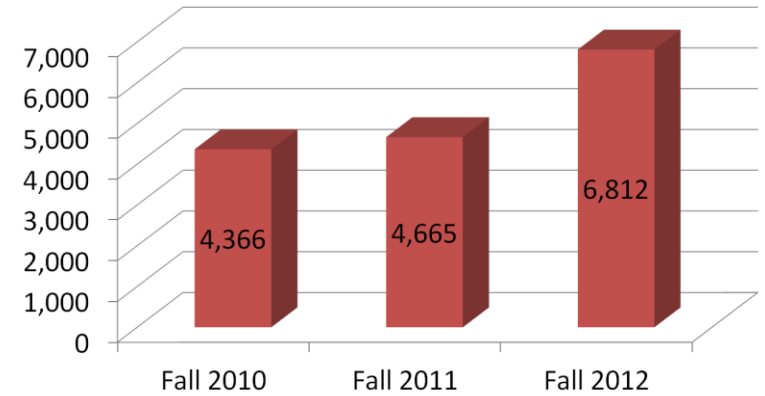
- ✓ Introductions
- ✓ Purpose and goal
- ✓ 2013 review
  - ✓ Bike facilities and programming advocacy
  - ✓ Events and awareness
    - ✓ Rush Hour Race and Kids Bike Parade
- ✓ Proposals for 2014
  - ✓ New road markings
  - ✓ Bicycle-truck safety equipment pilot
  - ✓ Bicycle parking requirements
  - ✓ Safety and programming
- ✓ Open discussion



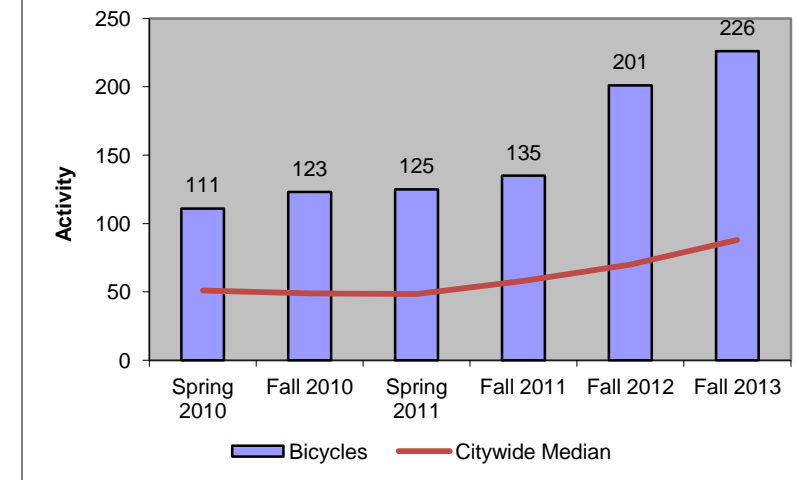
# Biking on the rise



**Total Cyclists Counted**



**Example Intersection: Washington + Somerville/Webster AM**



# Other Cycling Improvements

## **Bike corrals:**

- 14 bikes in the space of 1 car
- 10 corrals across city
- Year-round availability at select locations in 2013-14

## **Hubway:**

- 8 initial stations, 4 more last year
- Interest in future year-round operation, following Cambridge example



# Bike events for all ages

## 2<sup>nd</sup> Annual Rush Hour Race

- Davis Sq to South Station
- In partnership with LivableStreets Alliance
- Kicked off by the Mayor

## Kids bike parade at SomerStreets Highland Ave

- A dozen kids on bikes, plus parents
- Decorated their bikes, rode on mock-up cycletrack
- Helmets and taillights given out
- Led by SBC and SPD Officer Manfra



# Bike events for all ages

Generally, SBC rides have attracted increasing numbers...

## THE ILLUMINATIONS BIKE TOUR

A Wintry Ride Among Warmly Lit Homes

Saturday December 14, Somerville High School Main Entrance

5:50pm meet & 6pm departure



Holiday lights, costumes and festive cheer encouraged.

Bike lights required & dress warmly.

Heavy rain, snow, wind or ice cancels.



A Somerville Arts Council and  
Bicycle Committee Event.  
\$5 Donation Suggested.

\$10 Bike rentals available from  
Urban AdvenTours. Reserve  
your bike at 617-670-0637



URBAN ADVENTOURS

Over, Under, Around, & Through  
21st Annual Tour de Somerville  
Saturday, October 19, 2013

Bike Tour of Somerville's bridges & underpasses

10:00 AM | Meet at Seven Hills Park (behind Holland St Red Line entrance in Davis Square)

13 miles

Refreshments by Redbones

Rain date Sunday, October 20, same time & location

For more info go to: [www.somervillebikes.org](http://www.somervillebikes.org)



Sponsored by  
Bicycle Comm



# SBC proposals for 2014

New campaign of paint-based bicycle facilities

Bicycle-truck safety equipment pilot

Bicycle parking requirements

Programming / education



# SBC proposals for 2014

New campaign of paint-based bicycle facilities

Bicycle-truck safety equipment pilot

Bicycle parking requirements

Programming / education





# New paint-based bicycle facilities

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- **Goal** → Attain at least 10% of residents commuting by bike (2x today)
- **Strategy** → Make it safer and more comfortable for residents of all ages to bicycle
- **Objective** → Expand and connect our fragmented bicycle route network

**SBC recommends a campaign of low cost, paint-based, near-term bike facility additions:**

- Webster Avenue
- Prospect Street
- Park Street
- Central Street
- Summer Street
  - Bow Street
- Medford Street
- School Street

**Each conceptual design is based on surveyed dimensions and can be implemented.**



# New paint-based bicycle facilities

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## **Webster Avenue (north of Prospect)**



# Existing Conditions (School in Session)



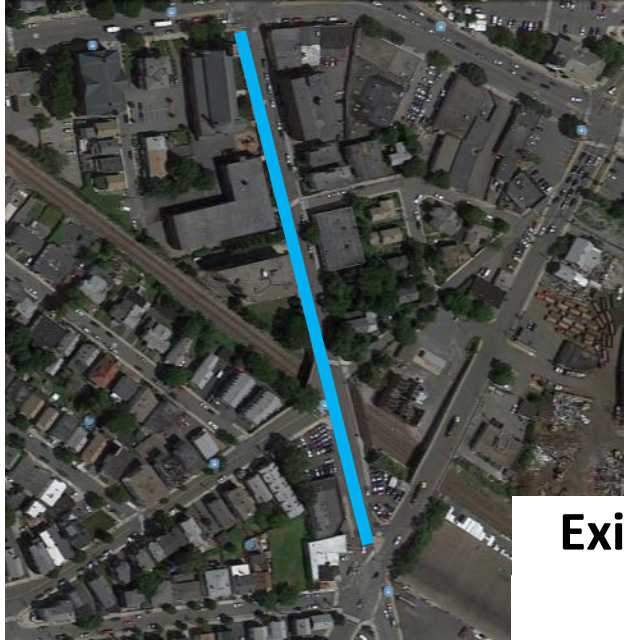
# Existing Conditions (School Not in Session)



Rough pavement to 8 ft

# Webster Ave: Somerville Ave to Prospect Street

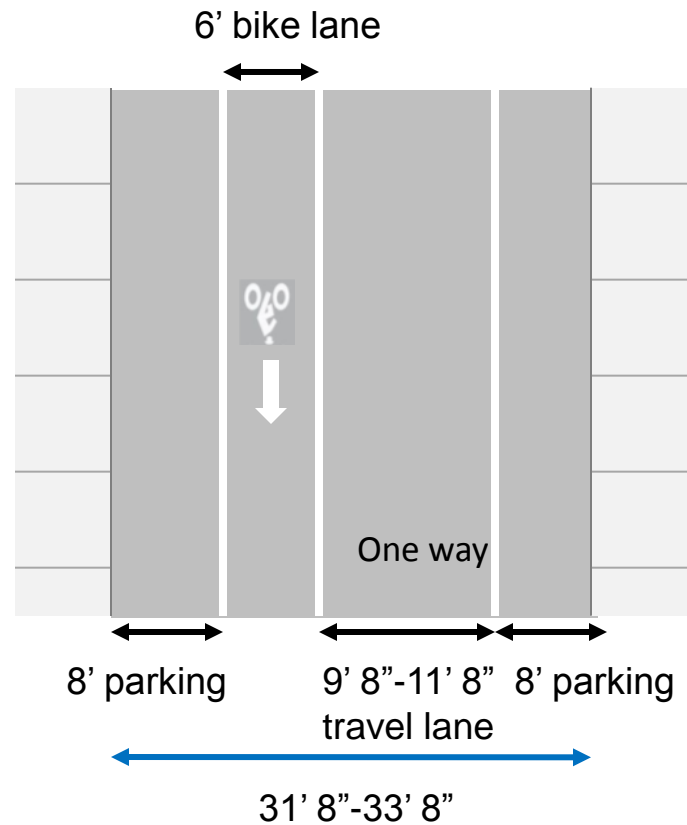
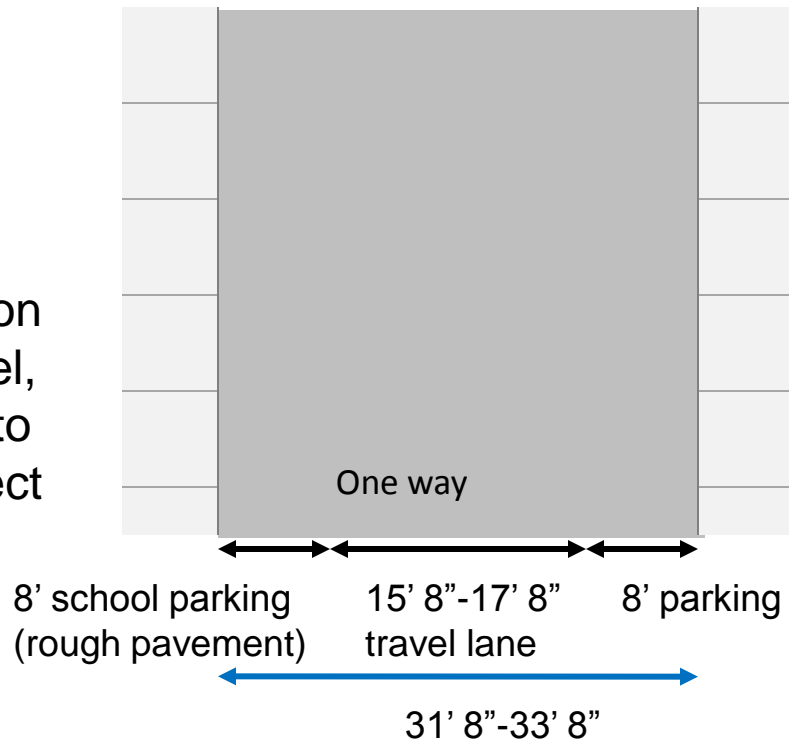
## Proposed bicycle lane



Existing

Proposed

Direction of travel, South to Prospect St

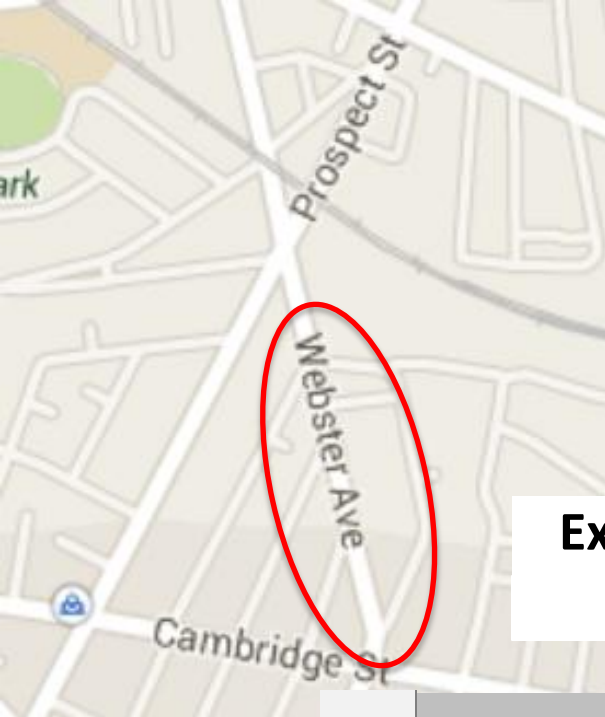


# New paint-based bicycle facilities

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## **Webster Avenue (south of Prospect)**





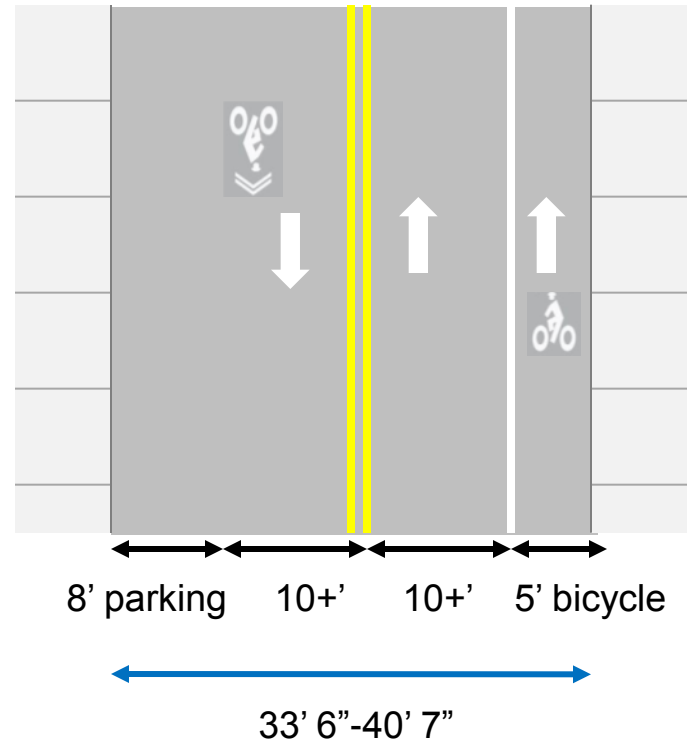
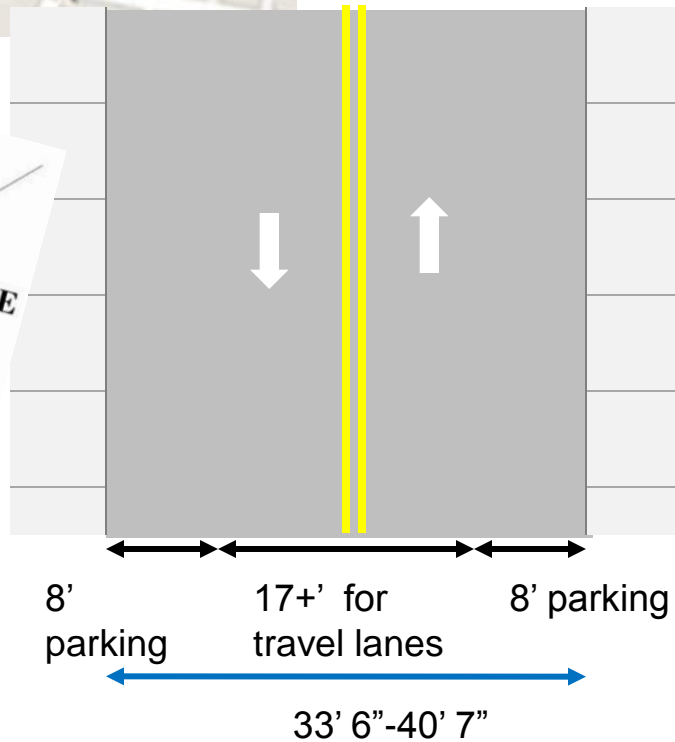
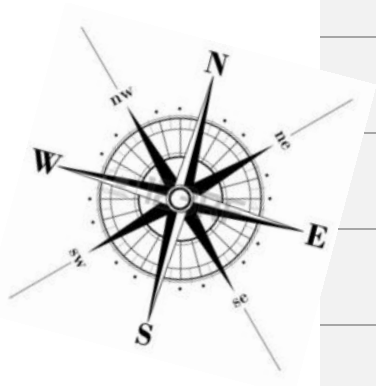
# Webster Ave

(from Cambridge St to 57 Webster Ave)

Replace east-side parking lane with new bicycle lane; add southbound sharrow

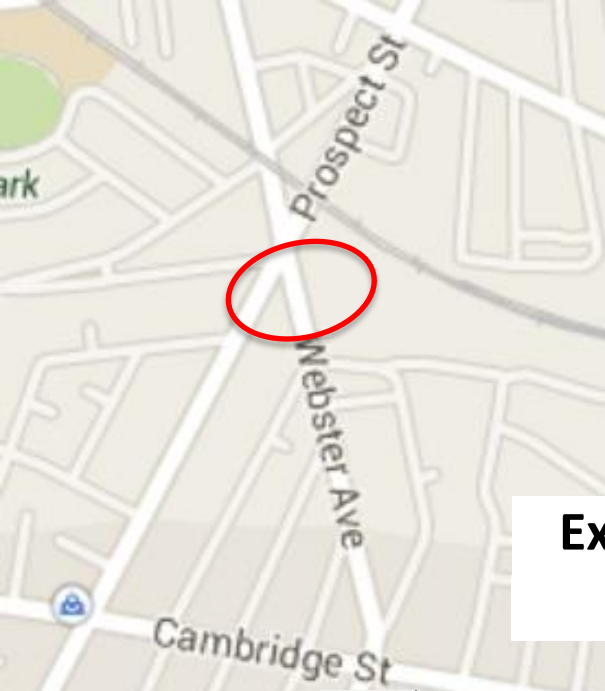
**Existing**

**Proposed**



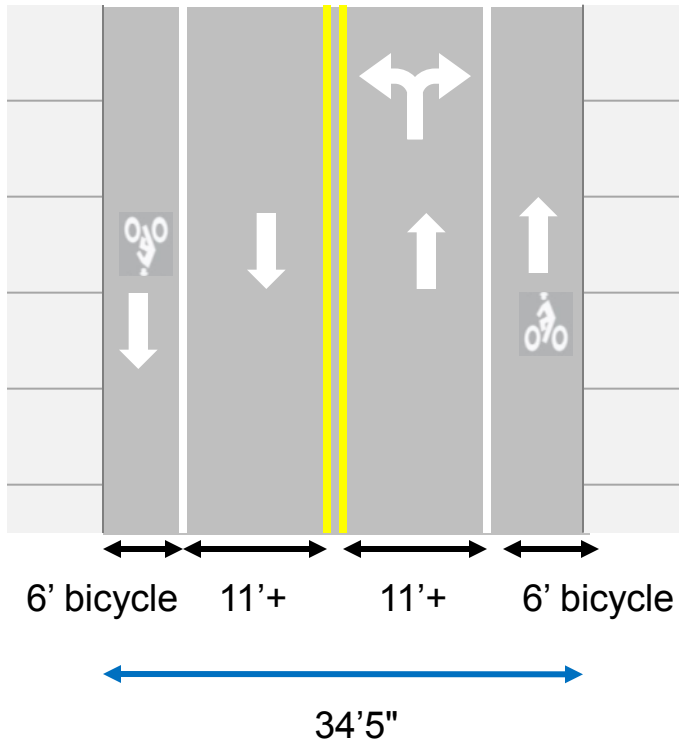
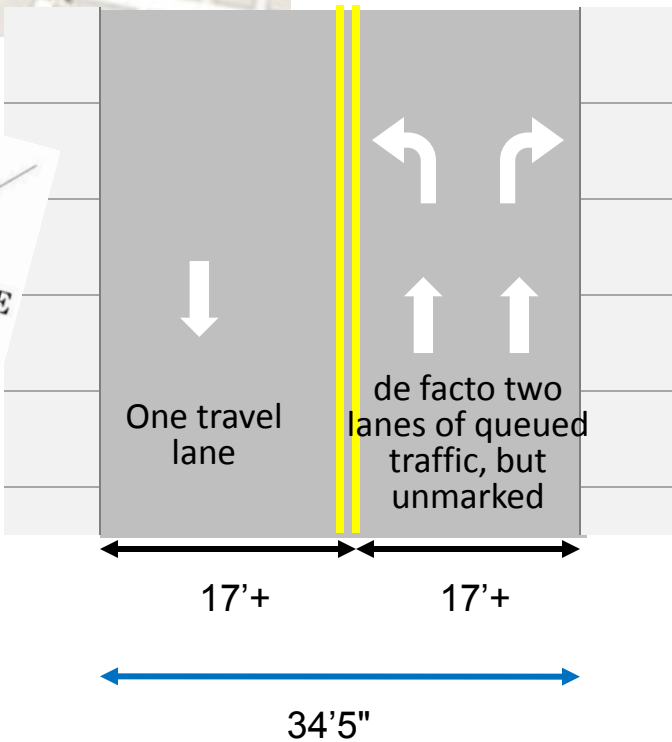
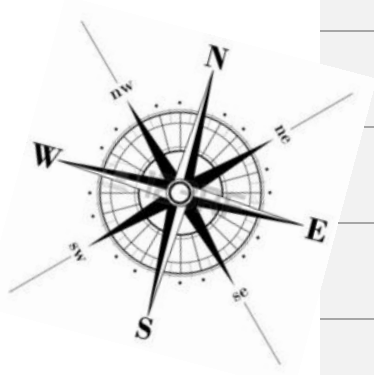
# Webster Ave at Prospect St (57 Webster Ave to Prospect St)

## Proposed bicycle lanes



Existing

Proposed





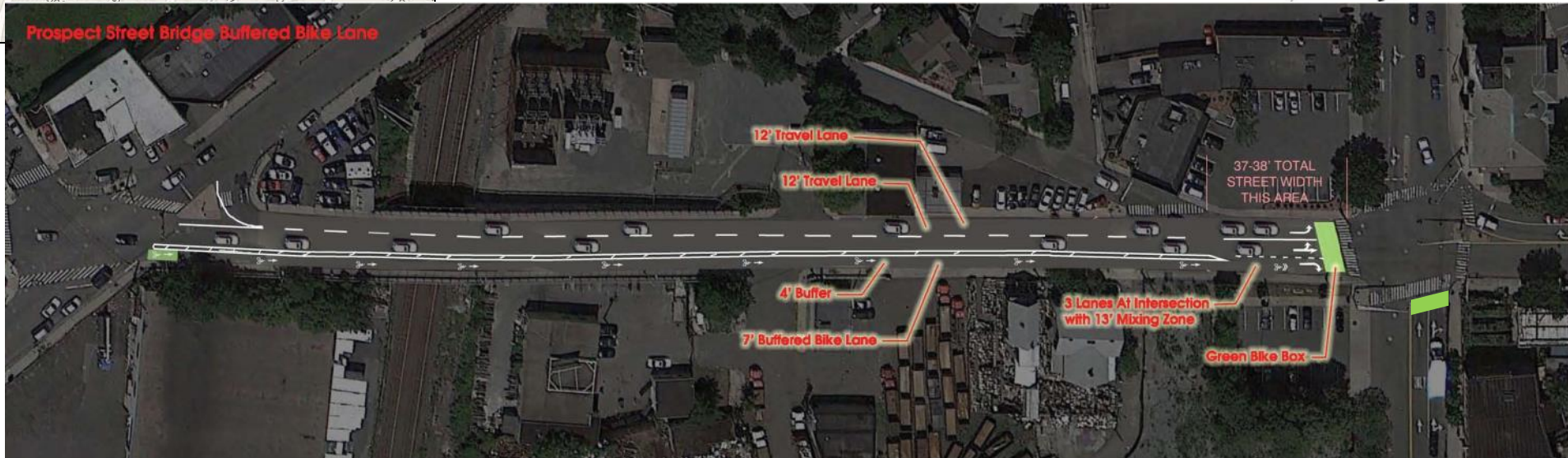
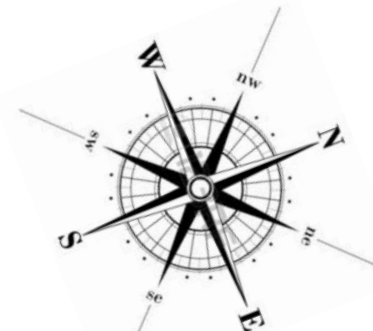
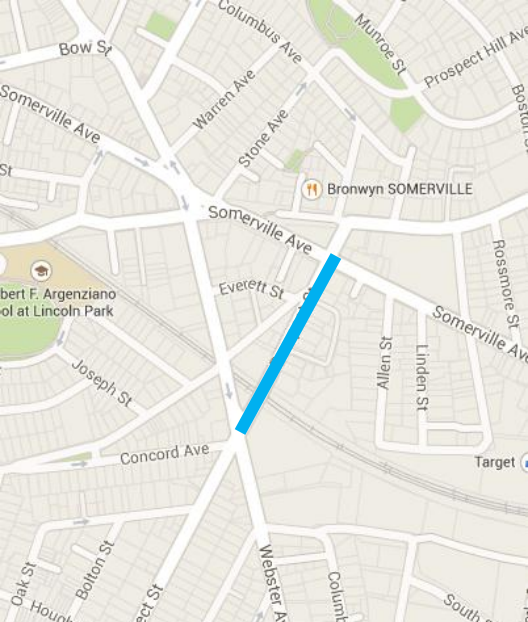
# New paint-based bicycle facilities

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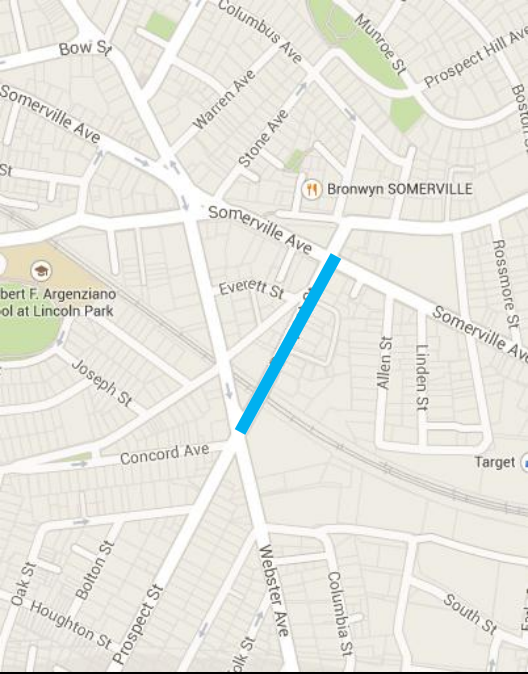
## Prospect Street



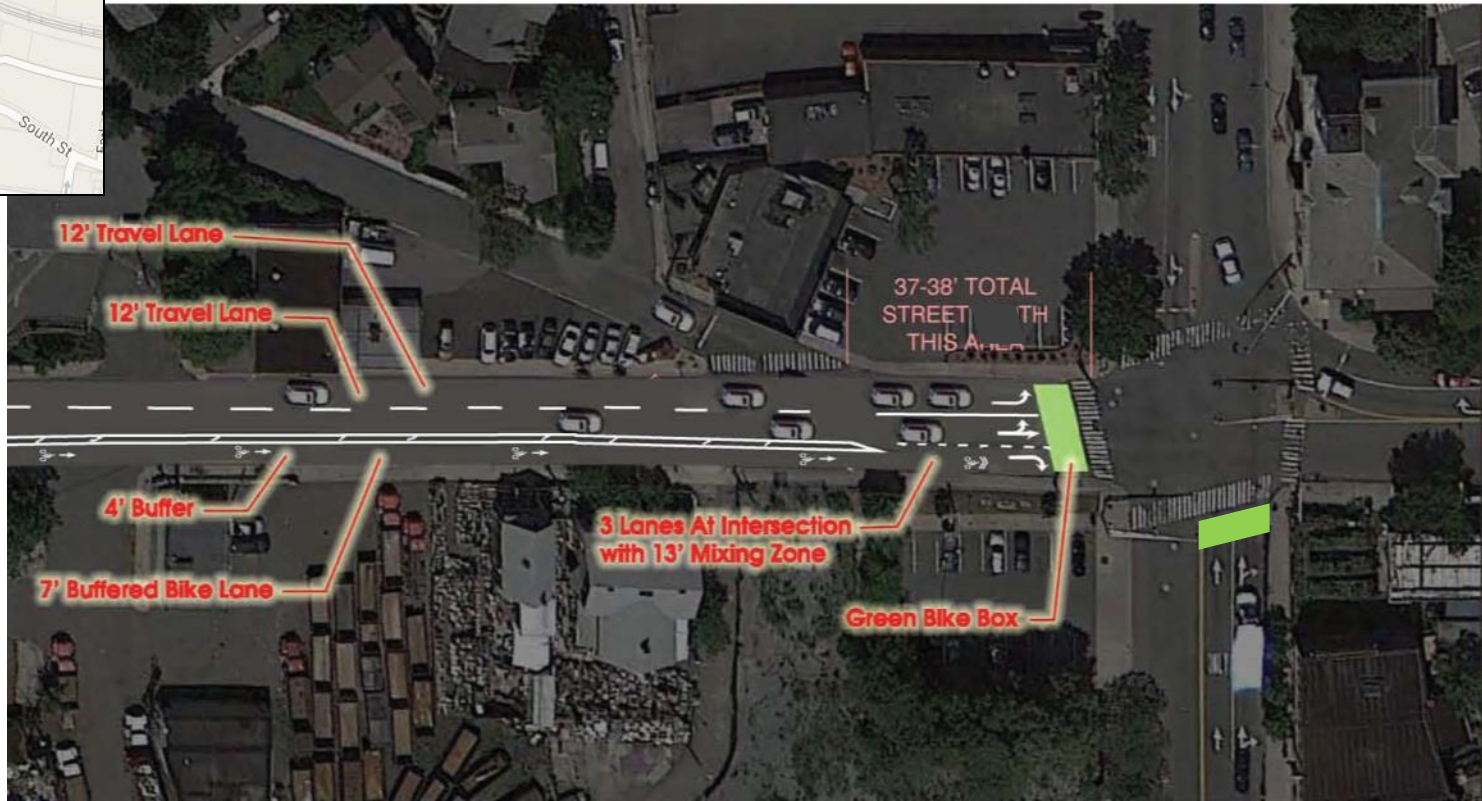
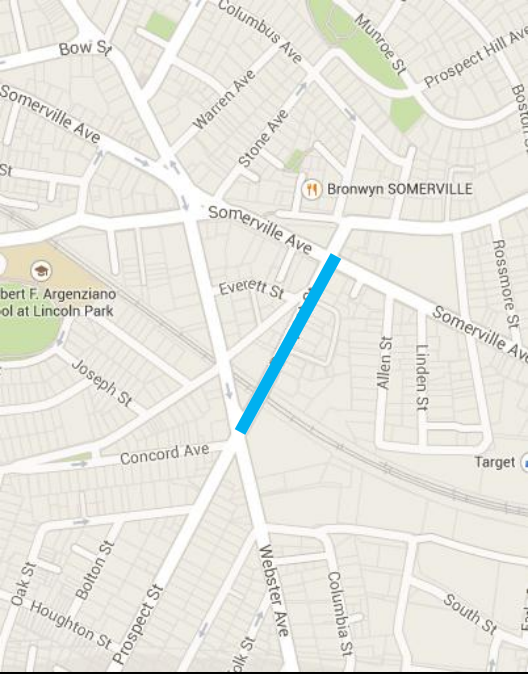
# Prospect Street



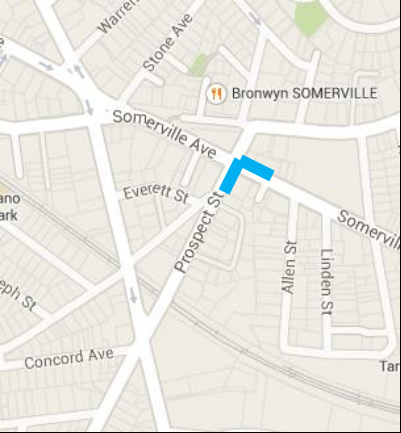
# Prospect Street



# Prospect Street



# Prospect Street



Red Arrows: Left turn from Somerville Ave EB to Prospect St NB

Blue Arrows: Left turn from Prospect St NB to Somerville WB



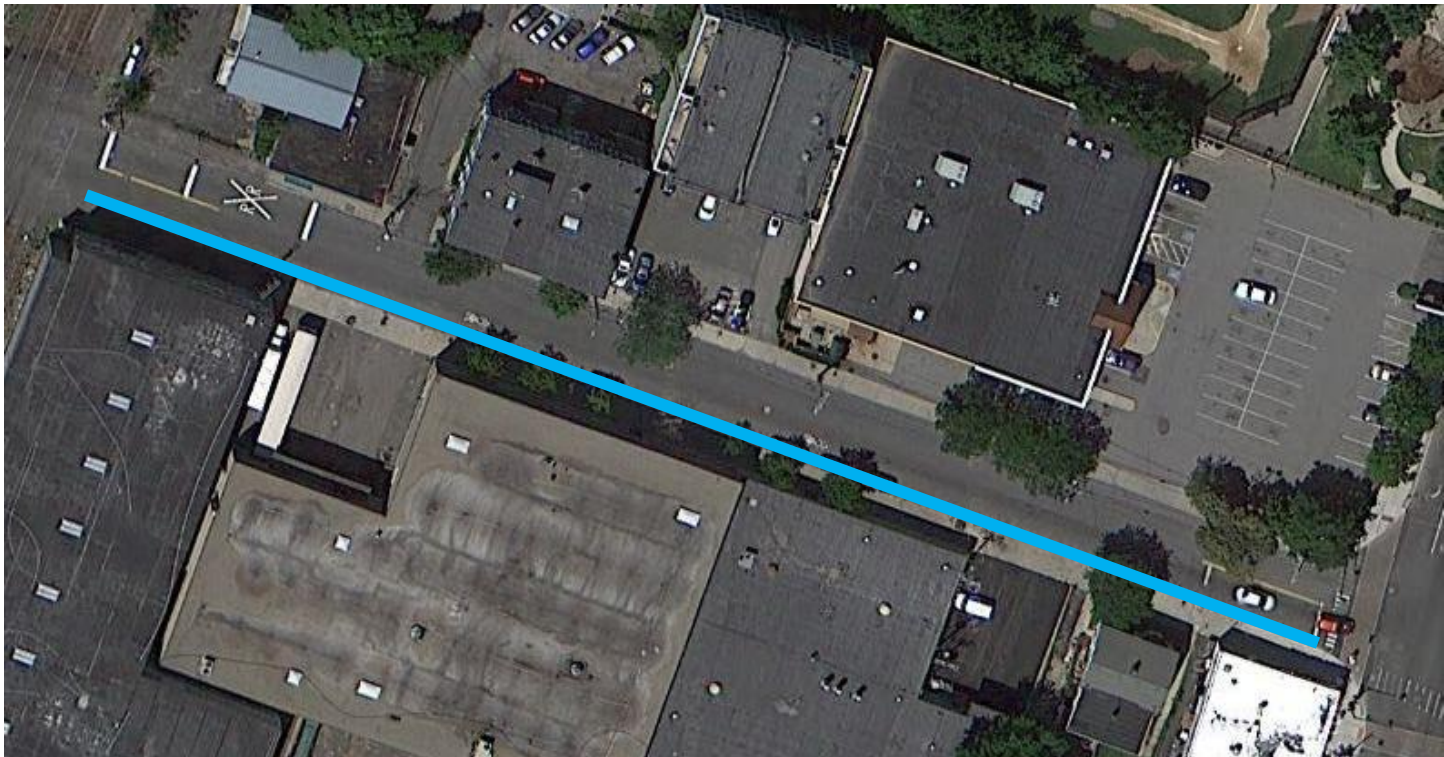
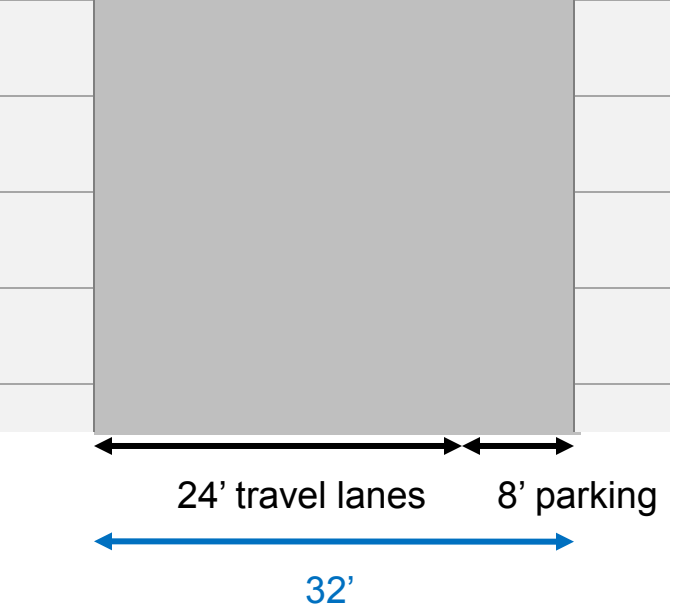
# New paint-based bicycle facilities

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## Park Street

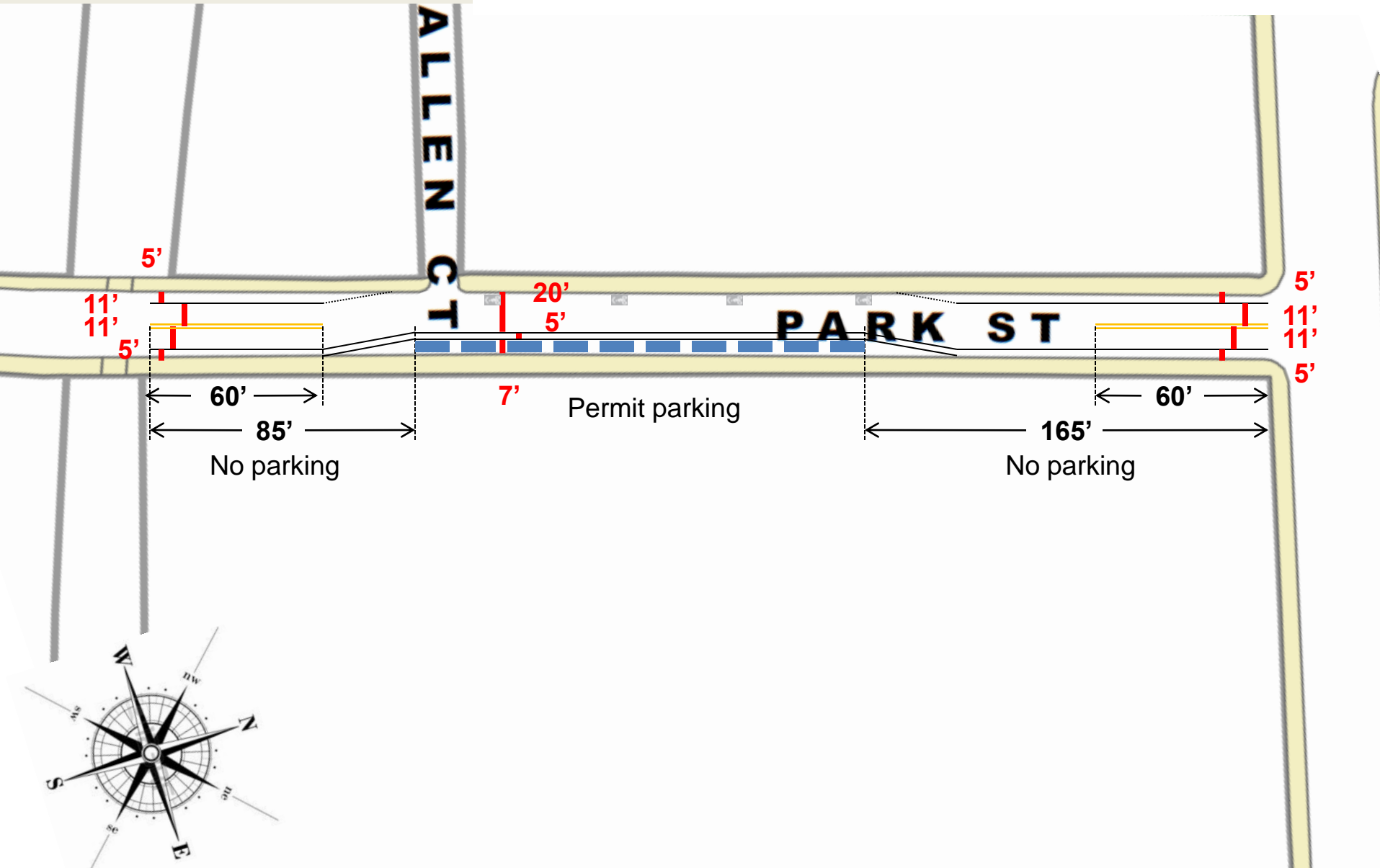


Park St: grade crossing to  
Somerville Ave  
Proposed bicycle lane



# Proposed NB bike lane

# Park Street





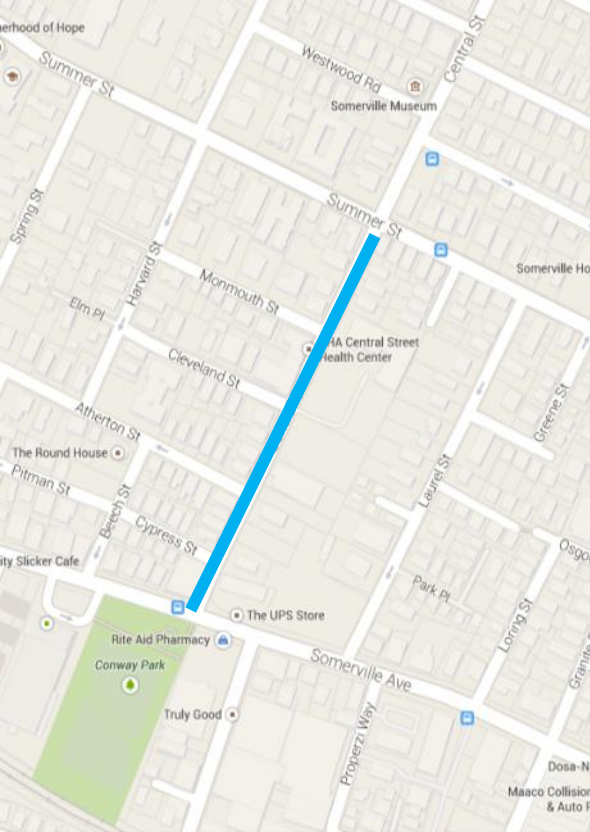
# New paint-based bicycle facilities

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## Central Street



# Central Street



# New paint-based bicycle facilities

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## Summer Street

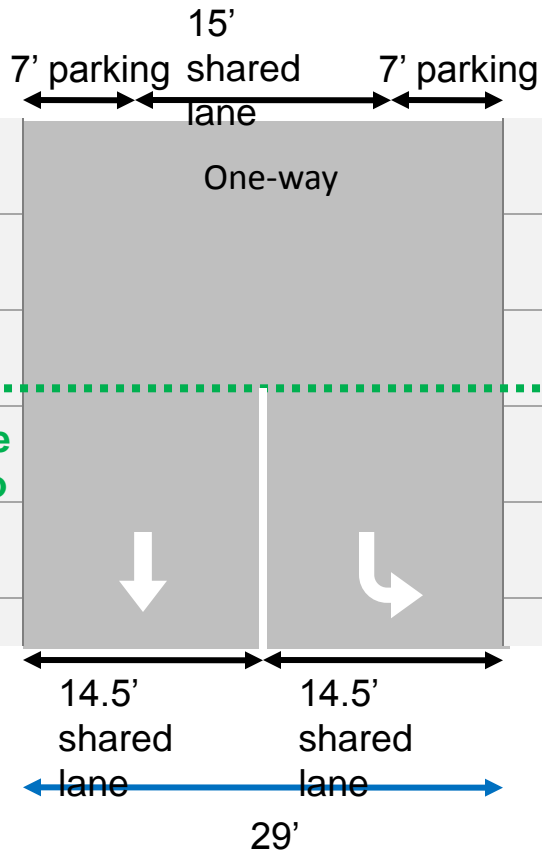




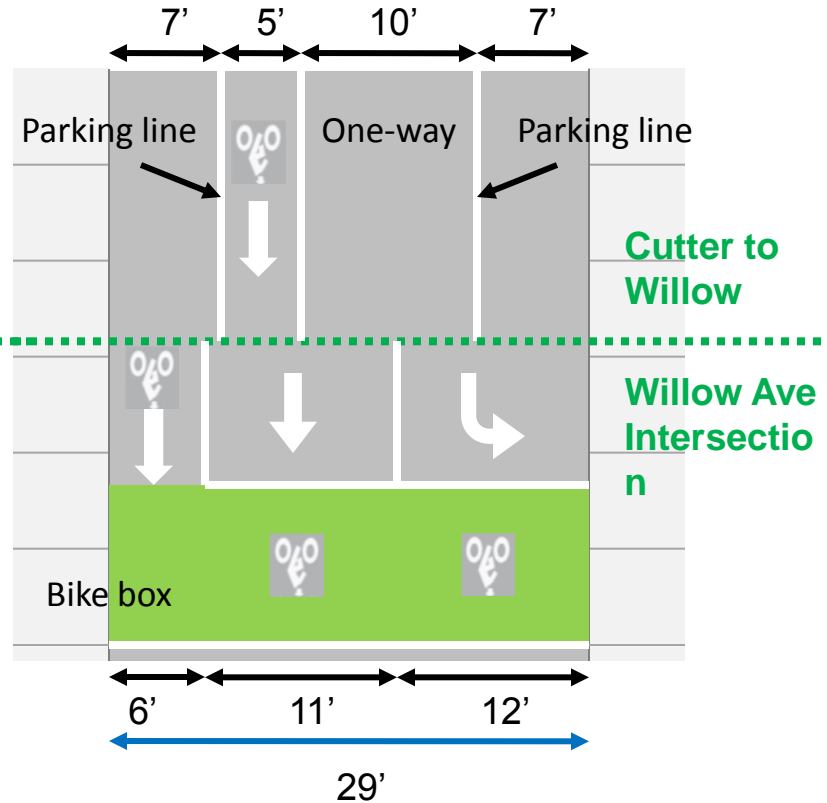
# Summer Street: Cutter Ave to Willow Ave

Eastbound bike lane  
Bike box at Willow Ave

## Existing



## Proposed



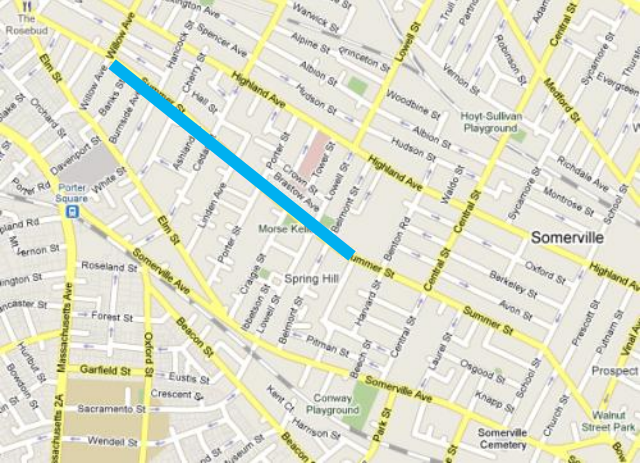
Cutter to Willow

Willow Ave Intersection

W to Cutter Ave

Cutter to Willow

Willow Ave Intersection



# Summer Street: Willow Ave to Spring St

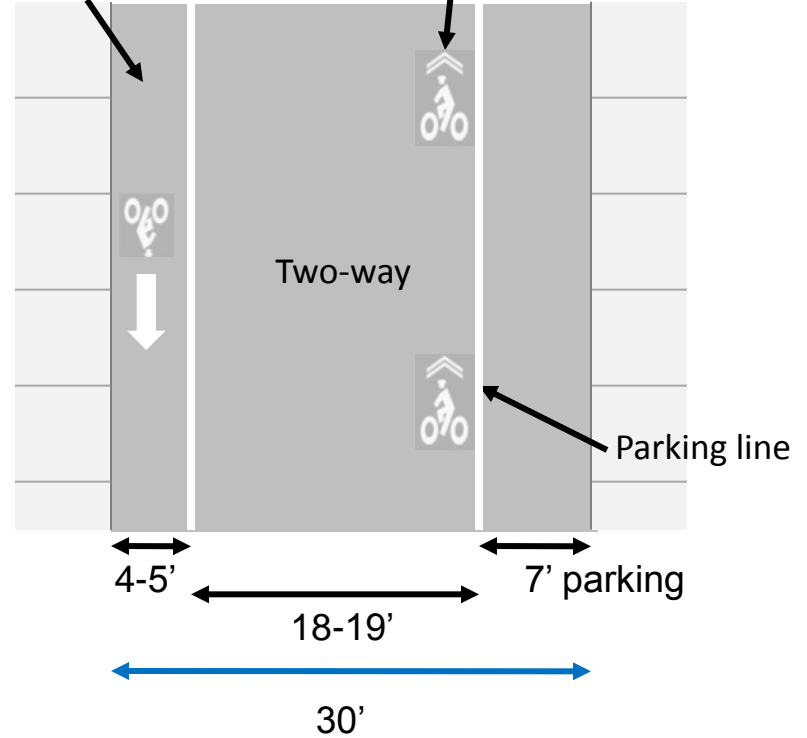
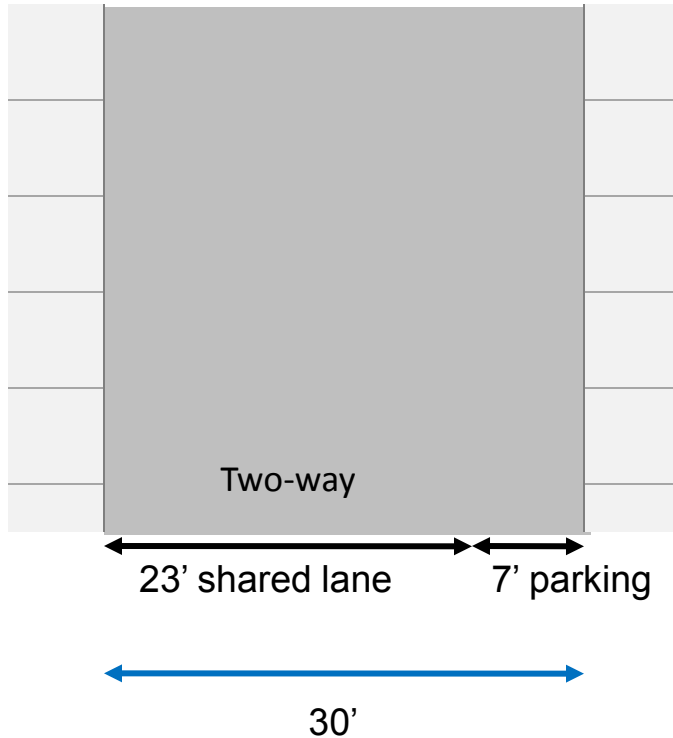
Eastbound bike lane  
Westbound sharrows

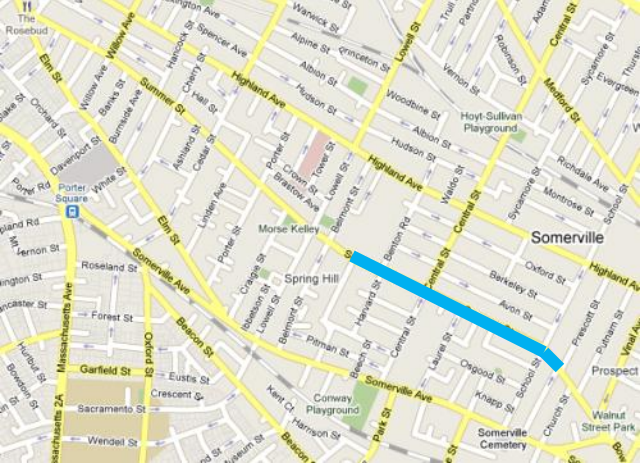
**Existing**

**Proposed**

4'-5' bike lane—dash 40' prior to stoplights and stop signs sharrows

W to Willow Ave





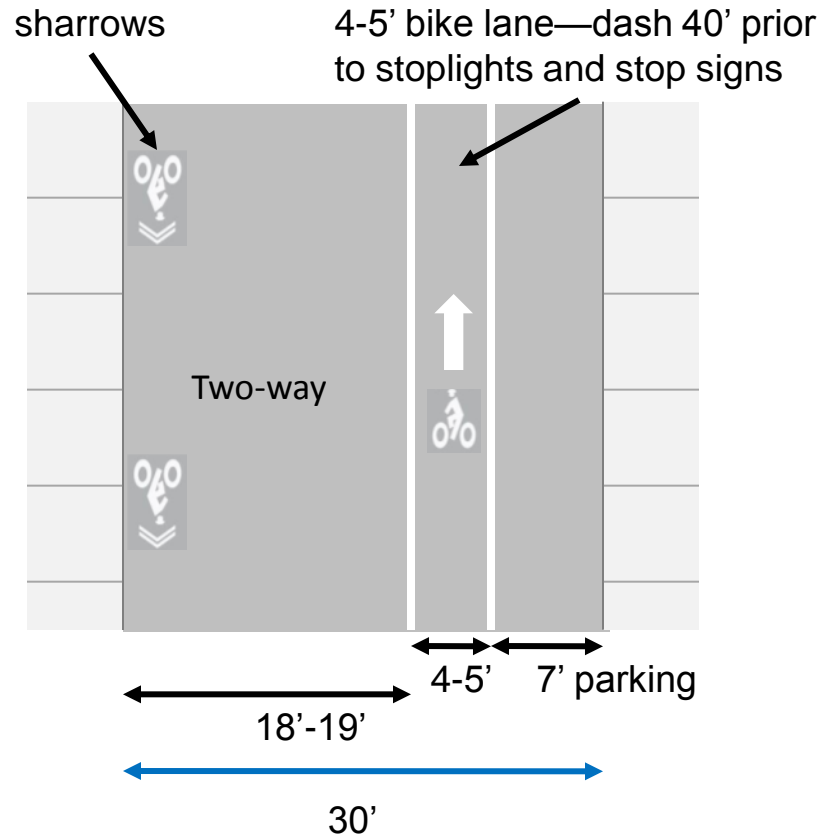
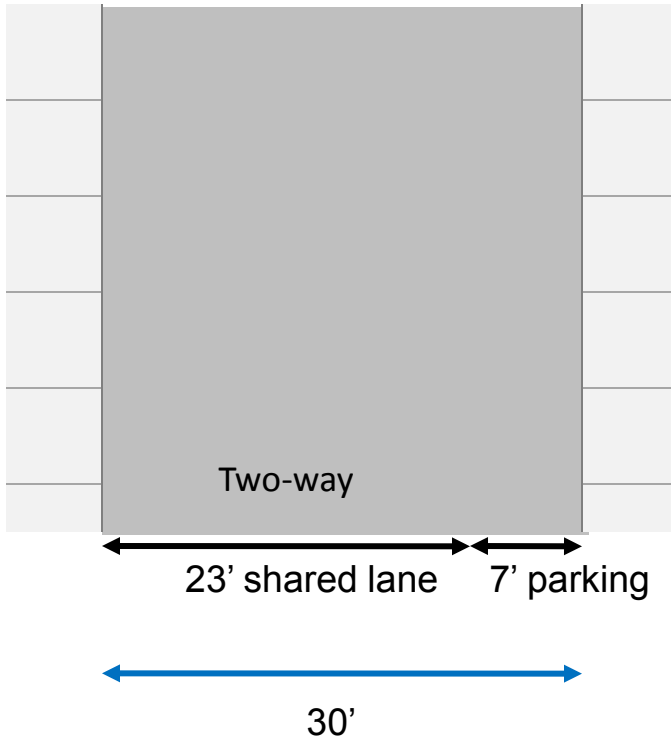
# Summer Street: Spring St to Prescott St

Westbound bike lane  
Eastbound sharrows

## Existing

## Proposed

W to Willow Ave





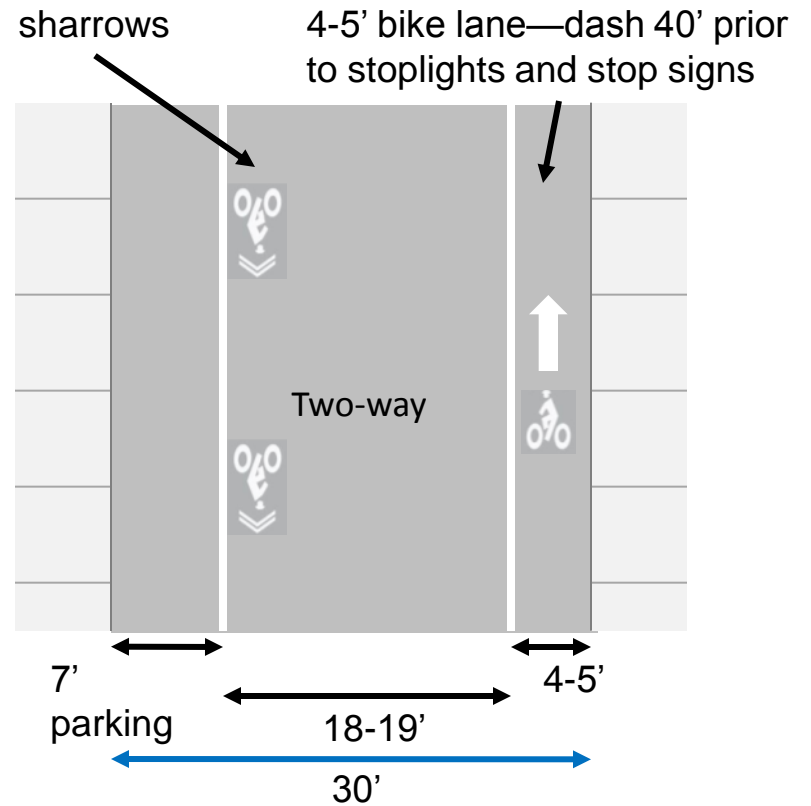
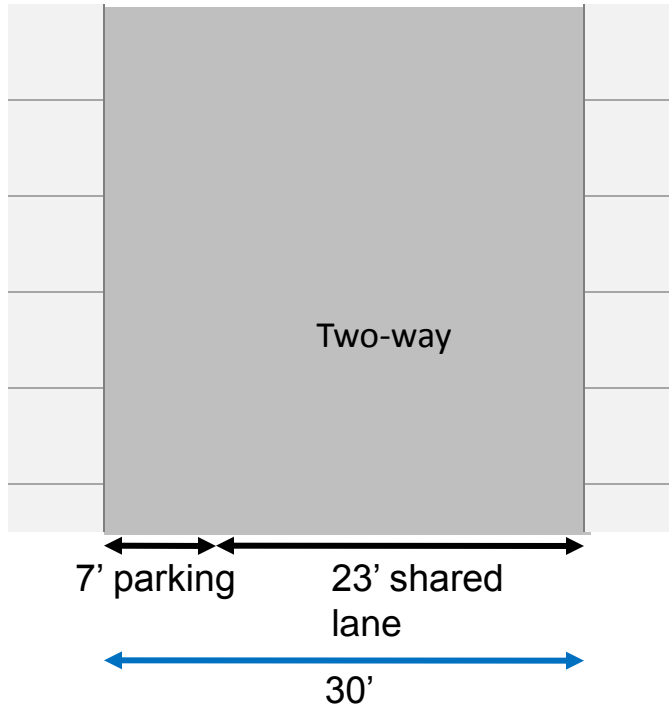
# Summer Street: Prescott St to Bow St

Westbound bike lane  
Eastbound sharrows

## Existing

## Proposed

↑  
W to  
Prescott  
St



# New paint-based bicycle facilities

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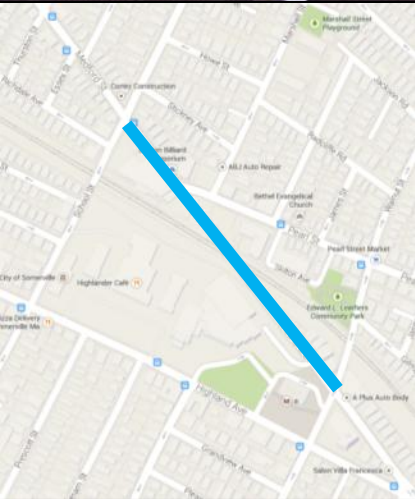
## Medford Street





# Medford Street

**PROPOSAL: Create a climbing lane on Medford Street between School and Highland**



**1. Connections sharrows on Medford prior to School with sharrows on Highland**

**2. Already no parking on uphill side, an easy place to add a bike lane**

**3. Prepares area for new Gilman Station/Sq.**



**Parking Lane**

**7'**

**11'**

**Wide Travel Lane w/ sharrows**

**Travel Lane**

**10'**

**Bike Lane**

**5'**

# New paint-based bicycle facilities

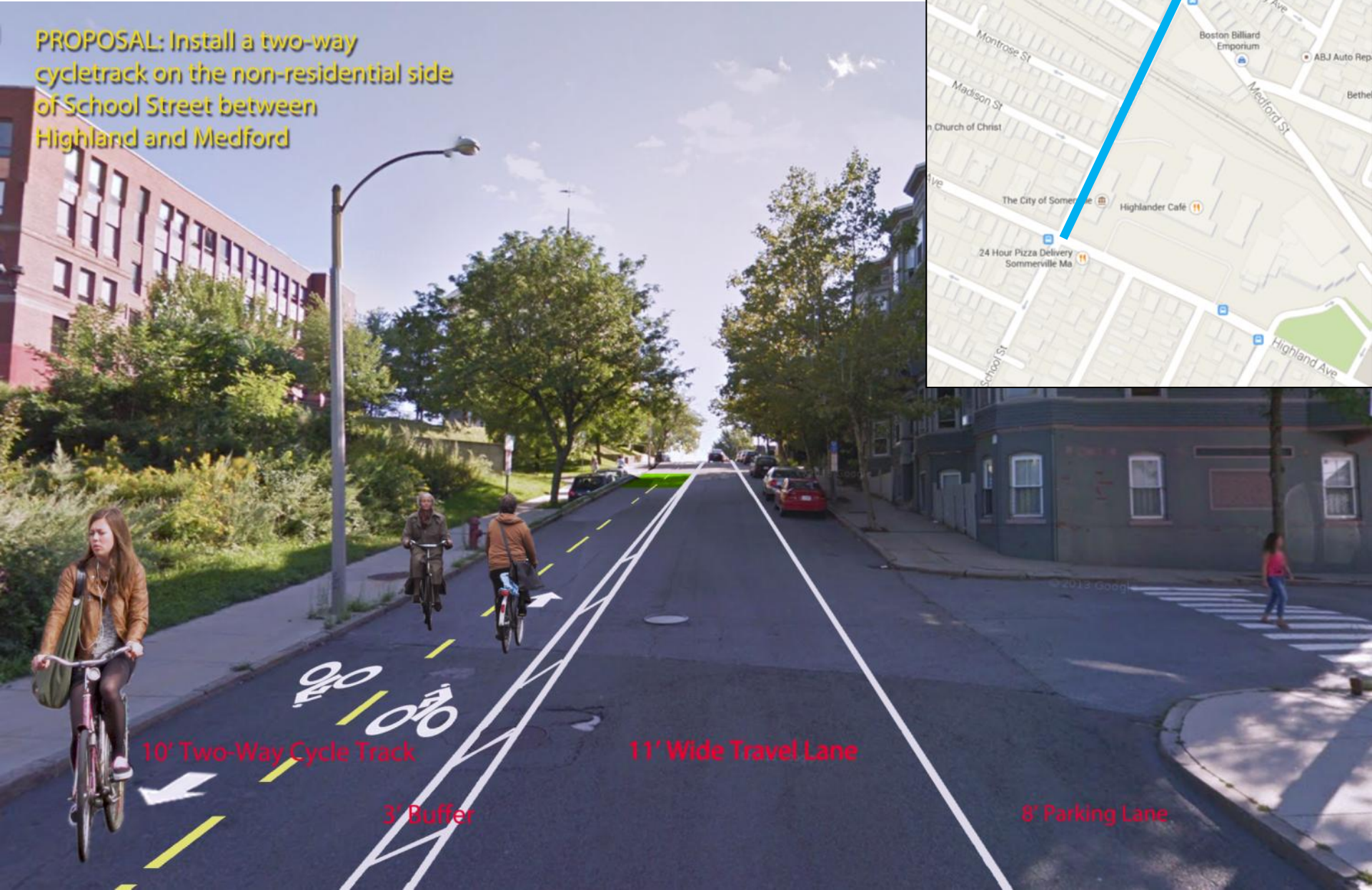
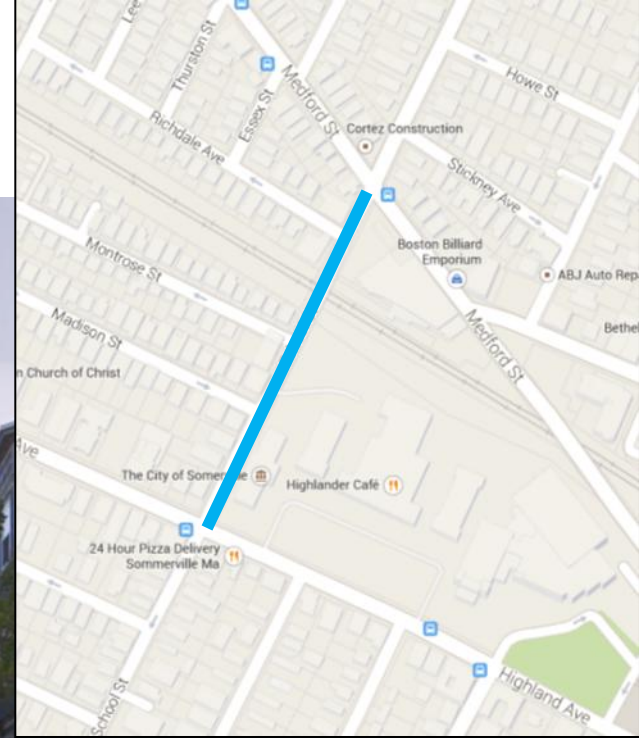
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## School Street



# School Street

**PROPOSAL:** Install a two-way cycletrack on the non-residential side of School Street between Highland and Medford



10' Two-Way Cycle Track

3' Buffer

11' Wide Travel Lane

6' Parking Lane

# SBC proposals for 2014

New campaign of paint-based bicycle facilities

**Bicycle-truck safety equipment pilot**

Bicycle parking requirements

Programming / education



# Bicycle-truck safety equipment pilot

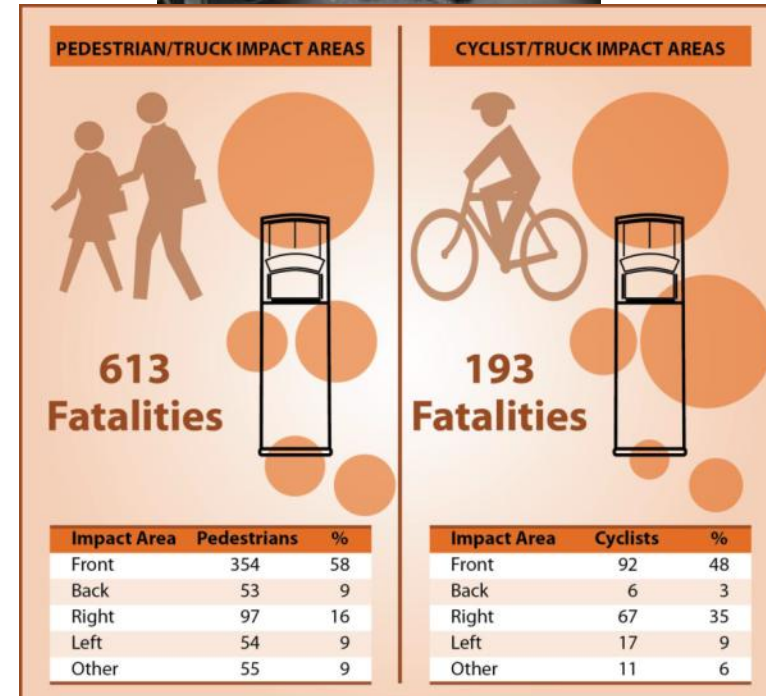
## Problem: Large trucks are disproportionately deadly to pedestrians and cyclists

- 4% of vehicles in U.S.
  - **11%** of cyclist fatalities, **7%** of ped fatalities
- 4% of London vehicles
  - **53%** of cyclist fatalities



## Why?

1. Blind spots
2. Side underride → cyclists/pedestrians fall under rear wheels in collisions



# Bicycle-truck safety equipment pilot

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## *Side underride guards (“sideguards”)*

Devices installed on large trucks to help prevent bike/pedestrian fatalities in overtaking, right-hook, and left-hook crashes

Blocks cyclists/pedestrians from sliding under the rear wheels in a collision

## *Precedent:*

- European Union, United Kingdom, Japan, China, Israel, Latin America...
- DC, NYC, Portland (OR), California.
- 2013: **Boston and Cambridge** piloting sideguards on 22 DPW vehicles, adding sideguard requirement to RFPs for city contracts. Partnering with USDOT.



# Bicycle-truck safety equipment pilot



City of Longueuil, Canada



Boston, MA



Foodshare (Toronto, Canada)



Portland, OR

# Bicycle-truck safety equipment pilot

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## ***Safety benefits:***

**61%** decrease in cyclist fatalities in UK in side-impact crashes with large trucks after national sideguard law

**20%** decrease in same types of pedestrian fatalities

## ***Costs:***

Multiple ways to cover the danger zone:

- Off-the-shelf sideguards (\$600+ per vehicle)
- Custom-made sideguards (\$2,500 per vehicle, Boston)
- Toolboxes and fuel tanks (cost varies, Portland)





# Bicycle-truck safety equipment pilot

## What could a Somerville pilot look like?

- DPW refuse and dump trucks
- Construction contracts, residential waste collection contracts
- Assess O&M impacts, perceived/actual public safety of different sideguard types

## Regional coordination opportunity

Boston, Cambridge, Somerville, Newton?  
USDOT evaluation input?



# SBC proposals for 2014

New campaign of paint-based bicycle facilities

Bicycle-truck safety equipment pilot

**Bicycle parking requirements**

Programming / education



# Zoning - Bicycle Parking Requirement

The SBC is reviewing and developing a series of recommendations for improvements to Section 9.15 (Bicycle Parking) of the Somerville Zoning Ordinance



# Zoning - Bicycle Parking Requirement

## Goals:

- Clarification of dimensional and layout standards
- Clarification of standards for location of bicycle parking
- Create standards for access to bicycle parking area from a public way
- Reconsider number of spaces required – match requirement with demand.



# SBC proposals for 2014

New campaign of paint-based bicycle facilities

Bicycle-truck safety equipment pilot

Bicycle parking requirements

**Programming / education**



# 2014 objectives

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*We want your ideas.*

- How can we **encourage safe cycling around schools** and with youth?
- How can we **engage the schools** (students, faculty, parents) so that they are more involved in the bike improvements the city makes?
- What is the **best way to involve your department** starting this year?
- What **partnerships and programs** is the city not taking advantage of that it could or should be?



# 2014 objectives

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- **Hold joint events** with Cambridge, Arlington, Medford, Charlestown to promote bike planning awareness and coordination
- **Beacon St cycletracks**: provide additional input for final design, monitor impact of construction on bike travel and make detour recommendations
- Continue **public engagement** by hosting bike-week related events, tabling at farmers markets and participating in SomerStreets
  - Organize a **kids bike race** or a cargo bike race at SomerStreets
- Participate in the Union Square Transportation Study, Davis Square Study, Central Broadway Initiative, Sullivan Square Disposition, and other **transformative opportunities**

*Also, check in on 2012 and 2013 goals:*

- Complete streets
- DPW abandoned bike tagging protocol
- “Except Bicycles” signage on select streets that are always two-way for abutters but are posted one-way for motorists only during certain hours



# Open discussion – ideas, priorities, concerns



Sarah Spicer, OSPCD

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Alex Epstein, Bicycle Committee Chair

[alexepstein@gmail.com](mailto:alexepstein@gmail.com)



## Webster Ave between Somerville Ave and Prospect St.

Rough pavement extends from the west curb to about 8 – 9 feet in. When school is in session, this portion of the road is used as a pick-up/drop-off lane. Even outside of these times, most cyclists ride at least 8 feet away from the curb to avoid rough pavement.

A bicycle lane will help cyclists safely avoid the far right section of the road.



Transect 1, road width 33'5"

Transect 2, road width 33'8"

Transect 3, road width 33'7"

Transect 4, road width 31'8"

Transect 5, road width 15'8"

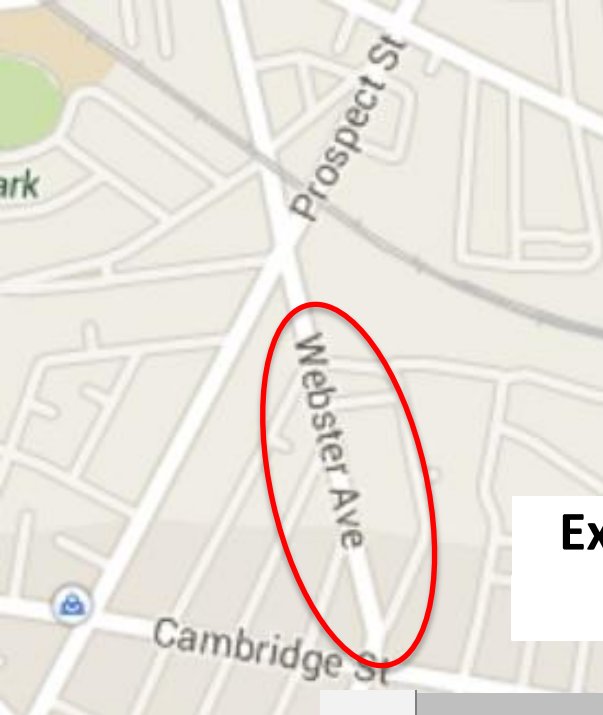
Google earth

Imagery Date: 6/18/2010 42°22'41.15" N 71°05'45.35" W elev 27 ft eye alt 1406 ft

1995

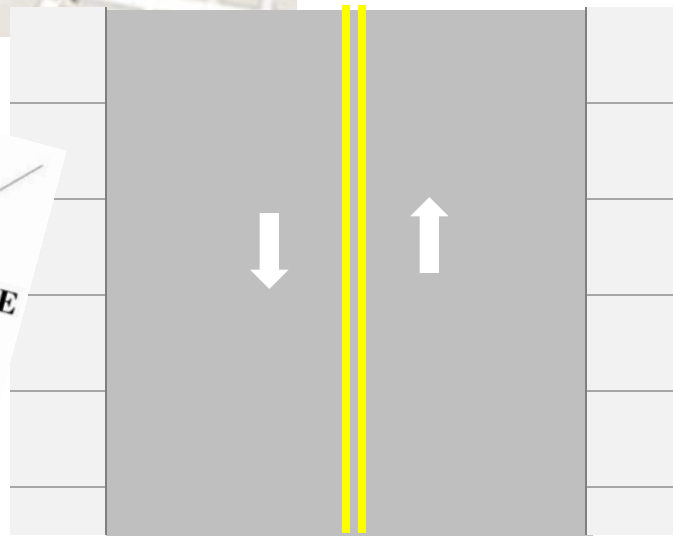
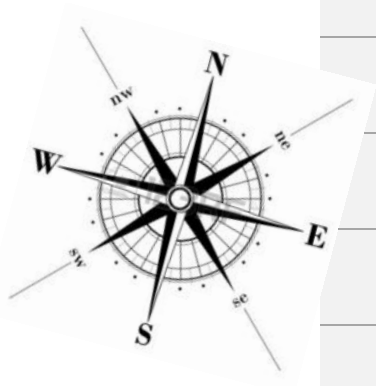
# OPTION 2 for Webster (from Cambridge St to 57 Webster Ave)

Add sharrows



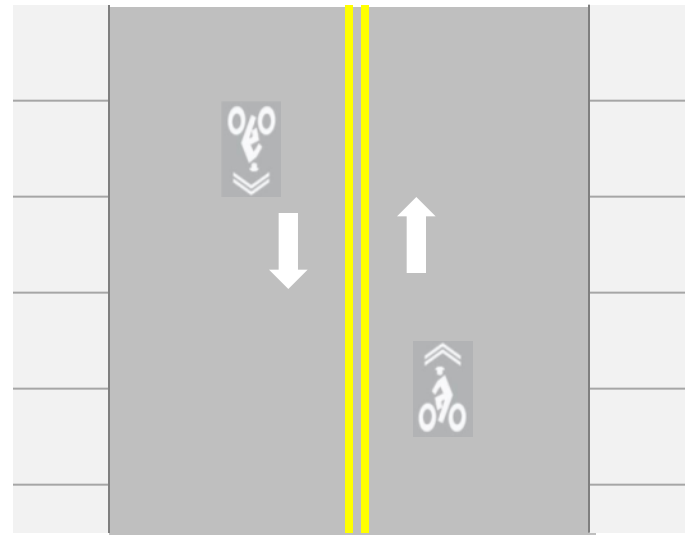
Existing

Proposed



8' parking    17' + for travel lanes    8' parking

33' 6"-40' 7"

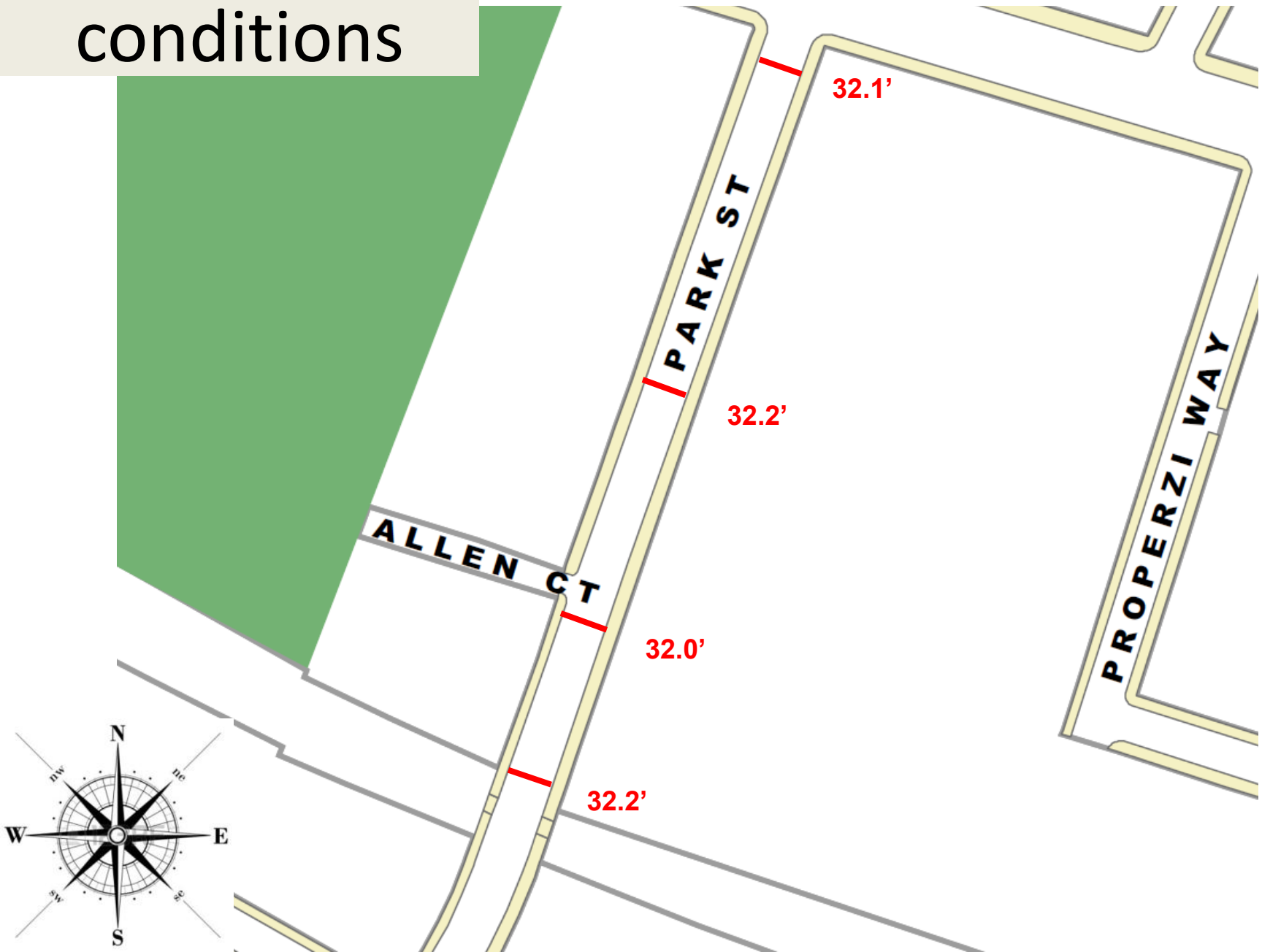


8' parking    17' + for travel lanes    8' parking

33' 6"-40' 7"

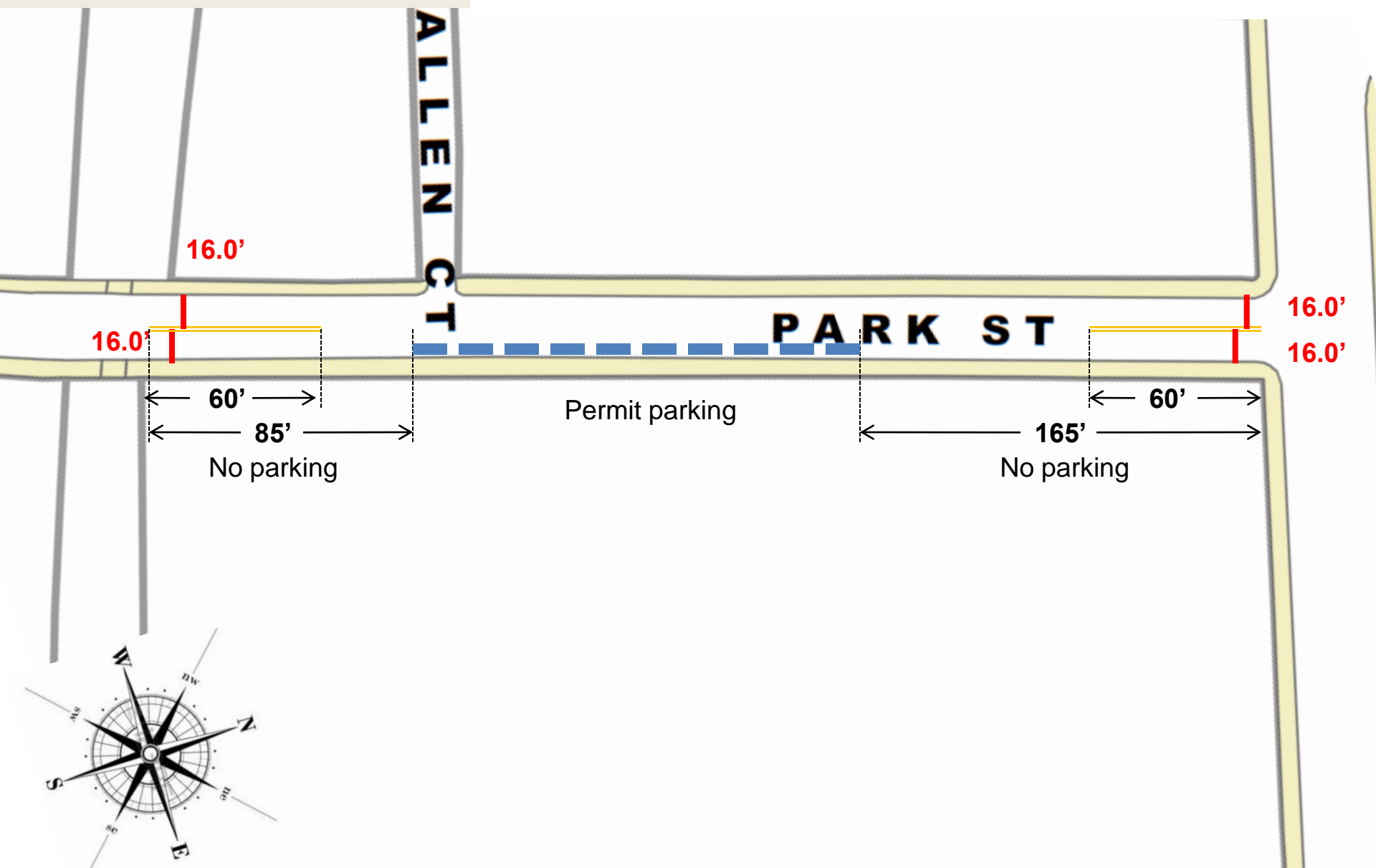
Existing  
conditions

# Park Street



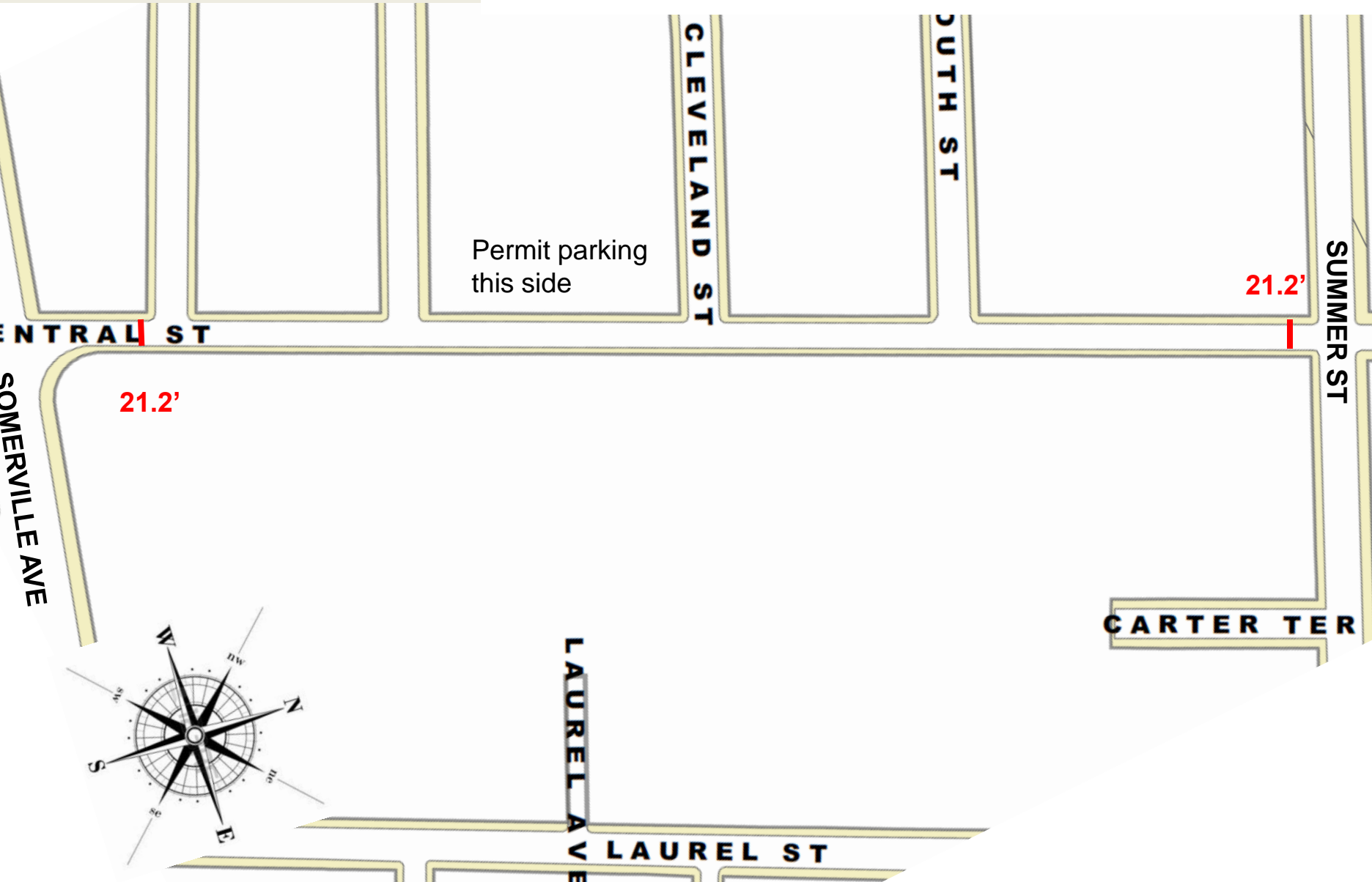
# Existing conditions

# Park Street



# Existing conditions

# Central Street

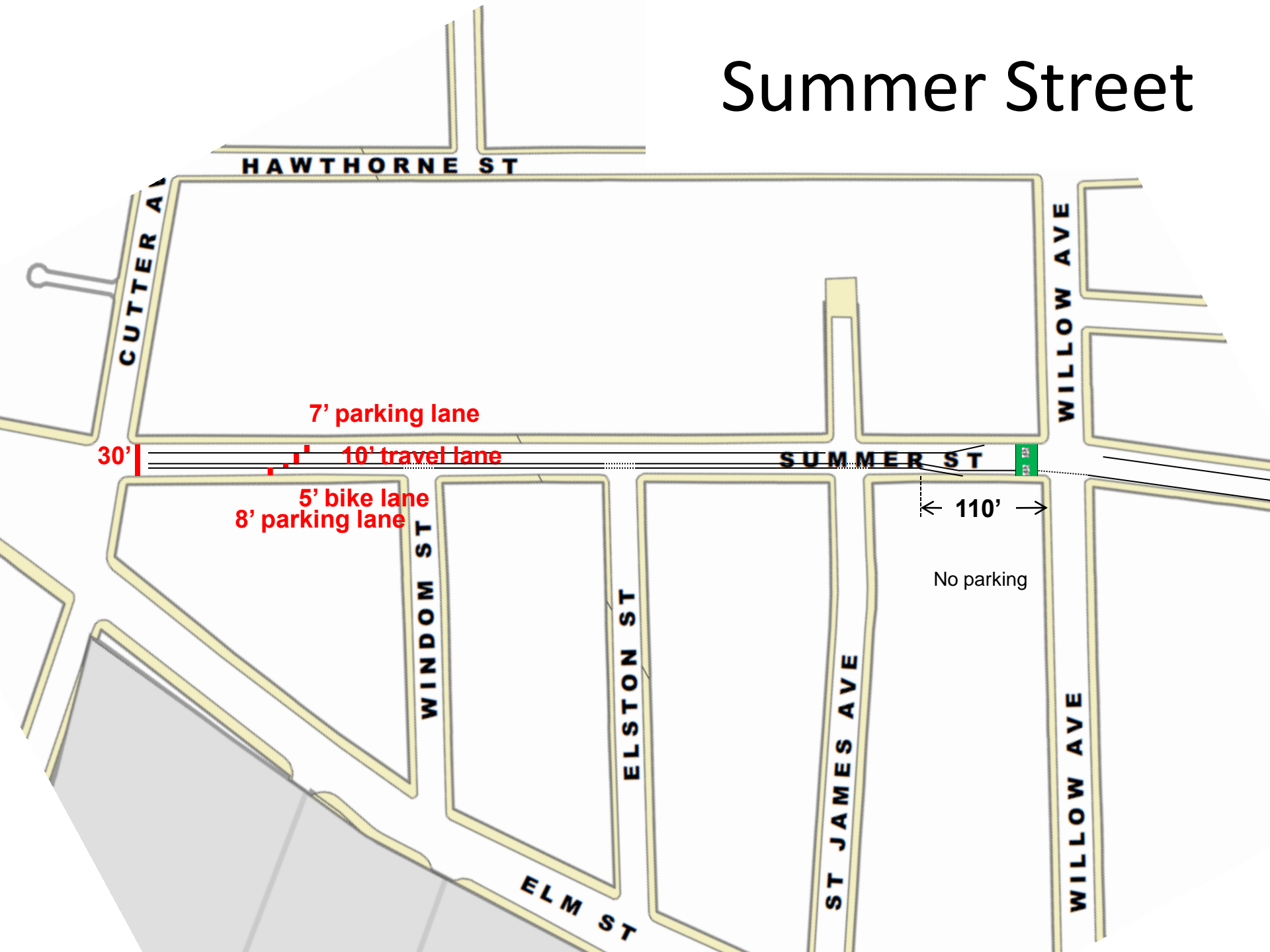


# Proposed NB bike lane

# Central Street



# Summer Street



HAWTHORNE ST

CUTTER AV

7' parking lane

30'

10' travel lane

SUMMER ST

WILLOW AVE

5' bike lane  
8' parking lane

← 110' →

No parking

WINDOM ST

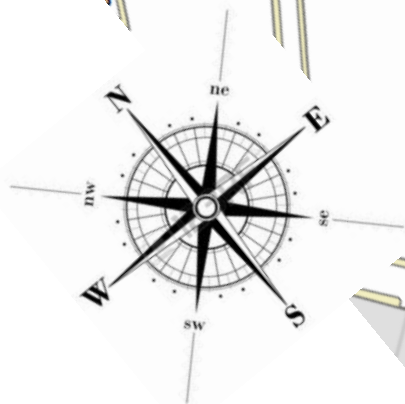
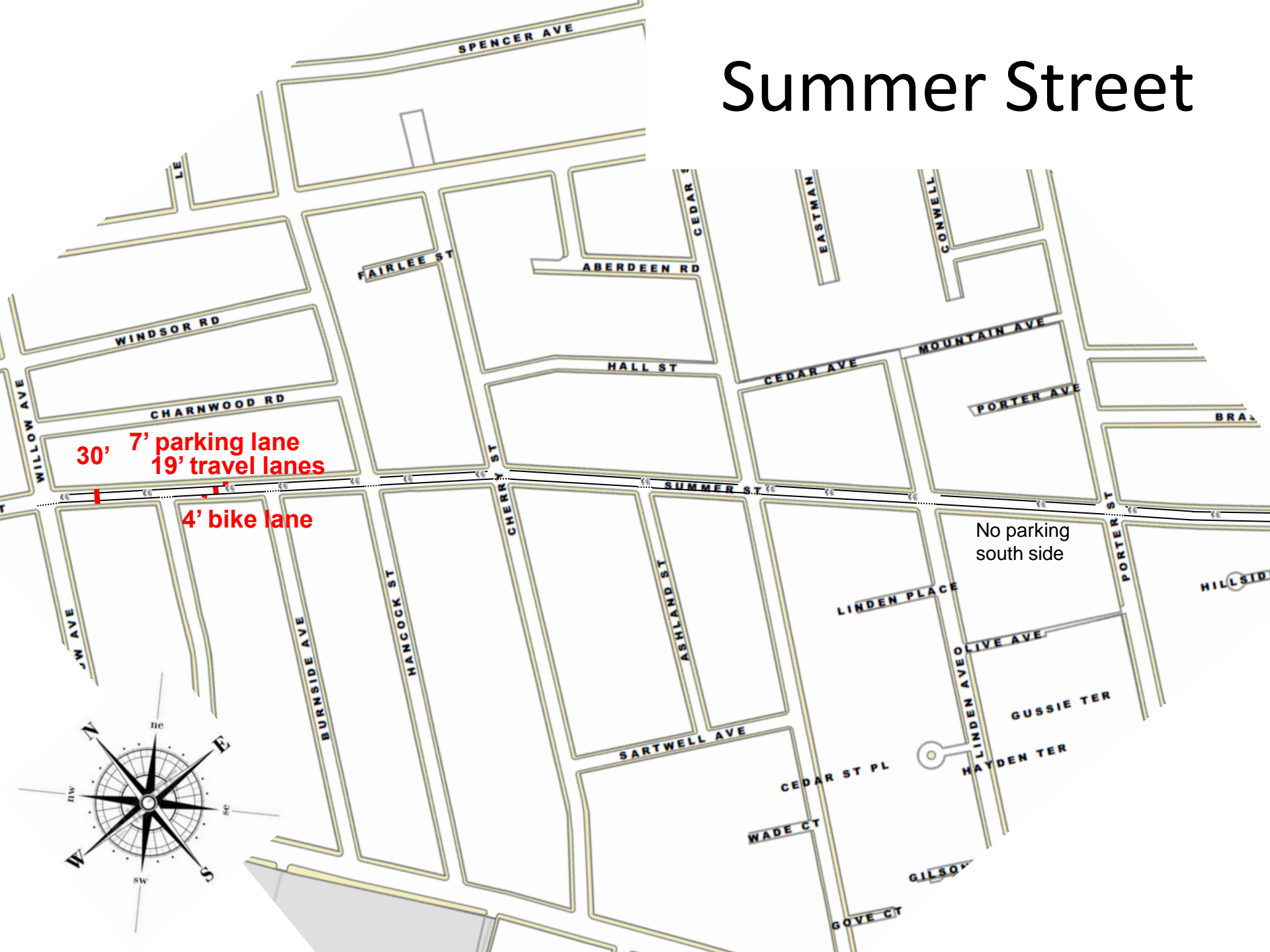
ELSTON ST

ST JAMES AVE

WILLOW AVE

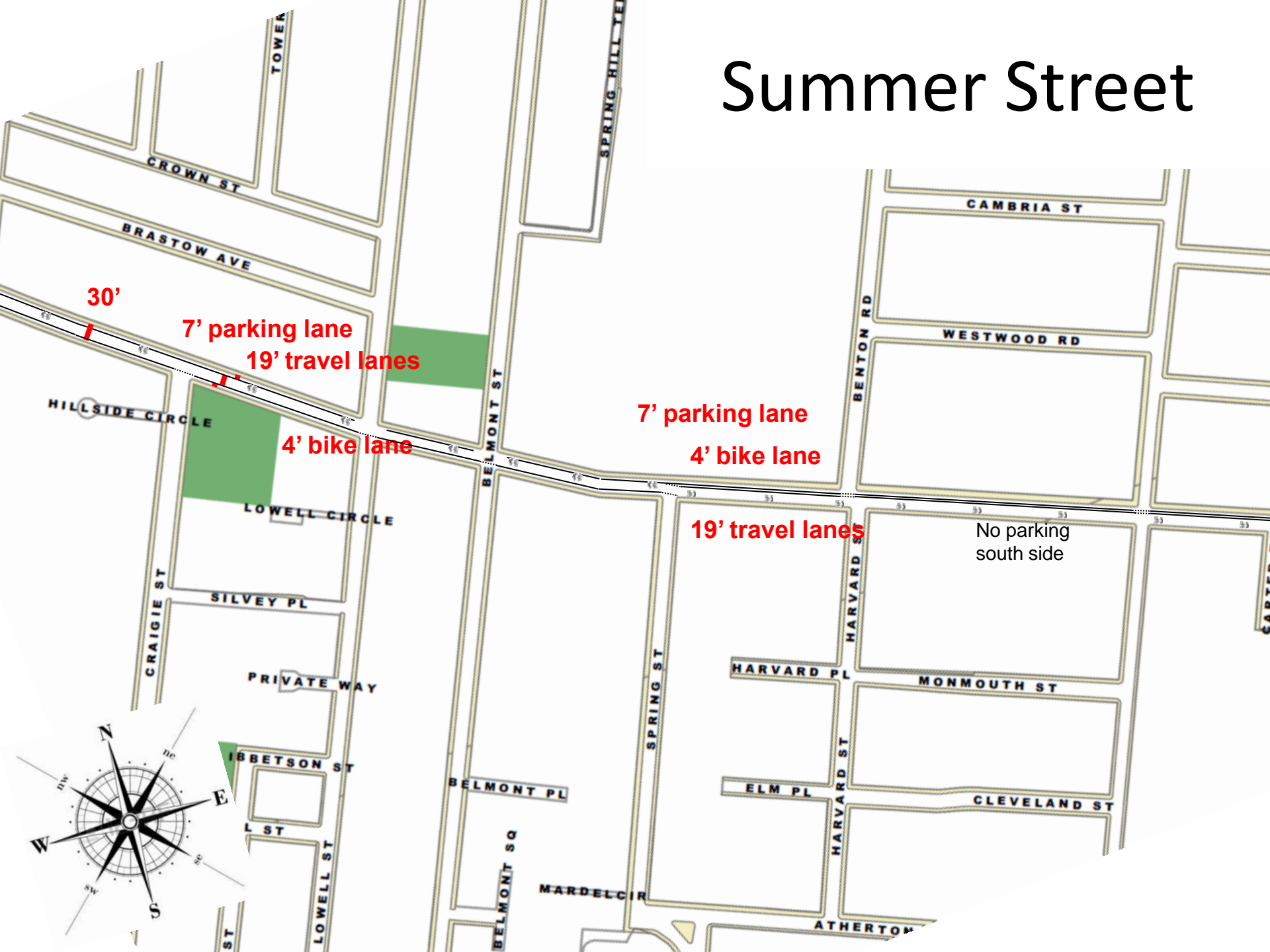
ELM ST

# Summer Street

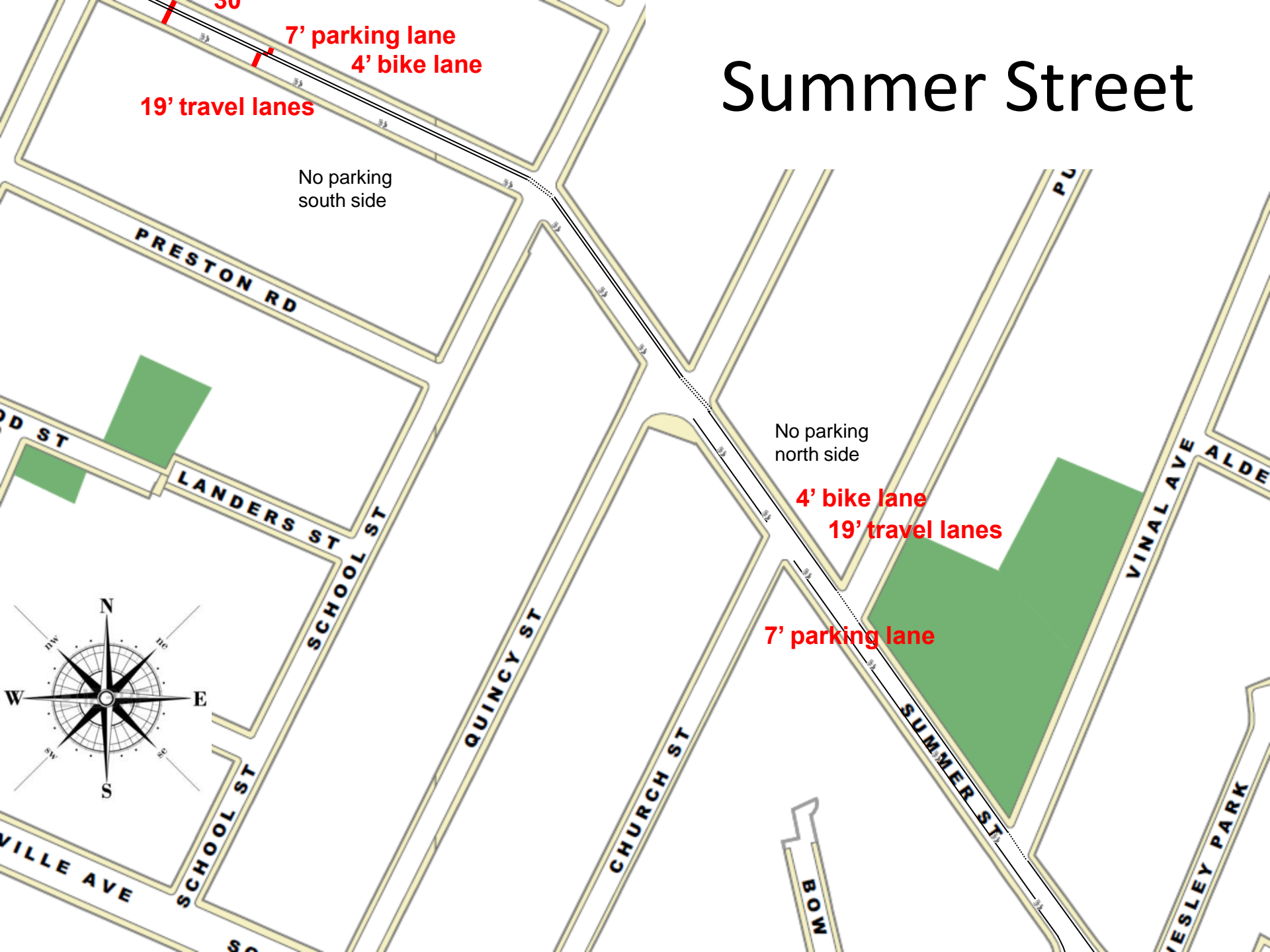




# Summer Street



# Summer Street



19' travel lanes

7' parking lane  
4' bike lane

No parking  
south side

PRESTON RD

DD ST

LANDERS ST

SCHOOL ST

QUINCY ST

CHURCH ST

7' parking lane

4' bike lane  
19' travel lanes

No parking  
north side

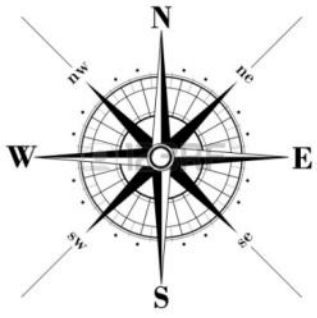
VINAL AVE

ALDE

SUMMER ST

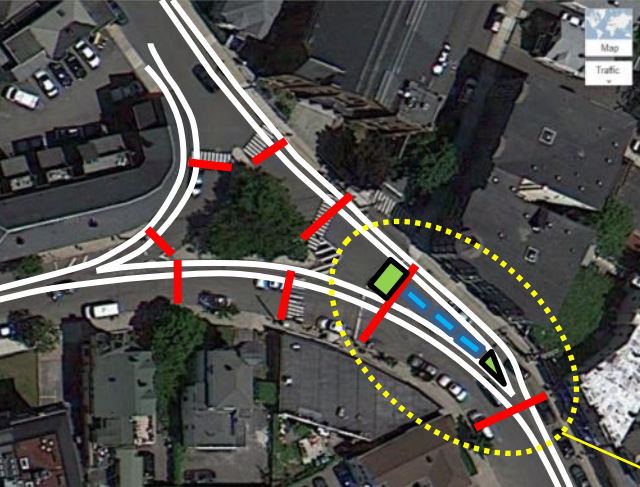
WESLEY PARK

BOW



VILLE AVE

SCHOOL ST

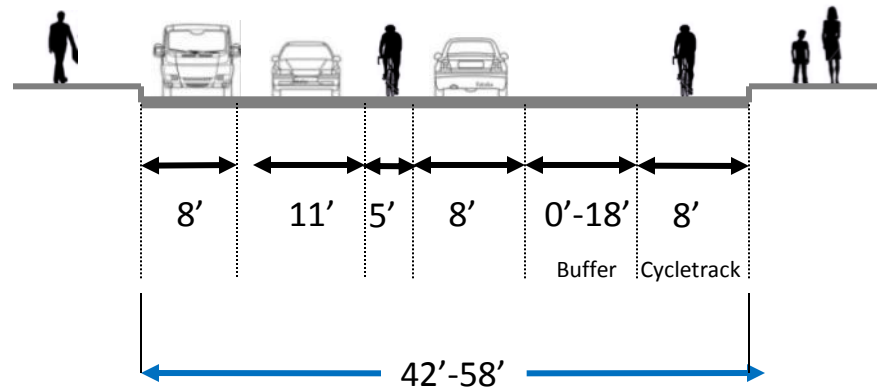
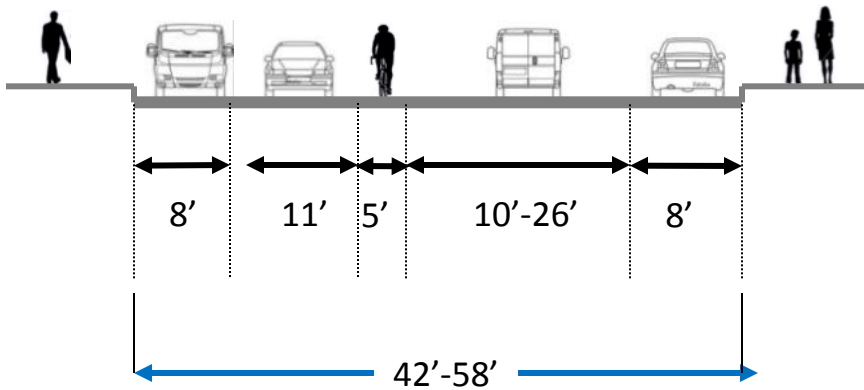


# Summer Street at Wesley Street

## Bicycle slip lane and floating parking

**Existing**

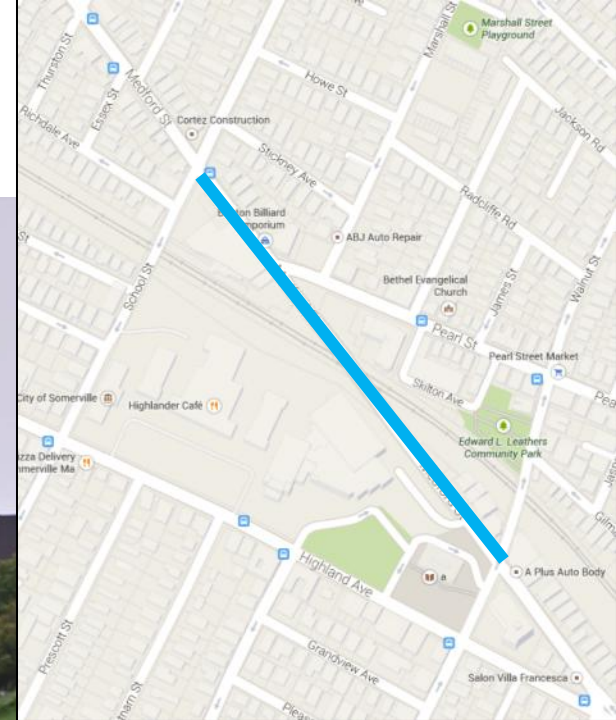
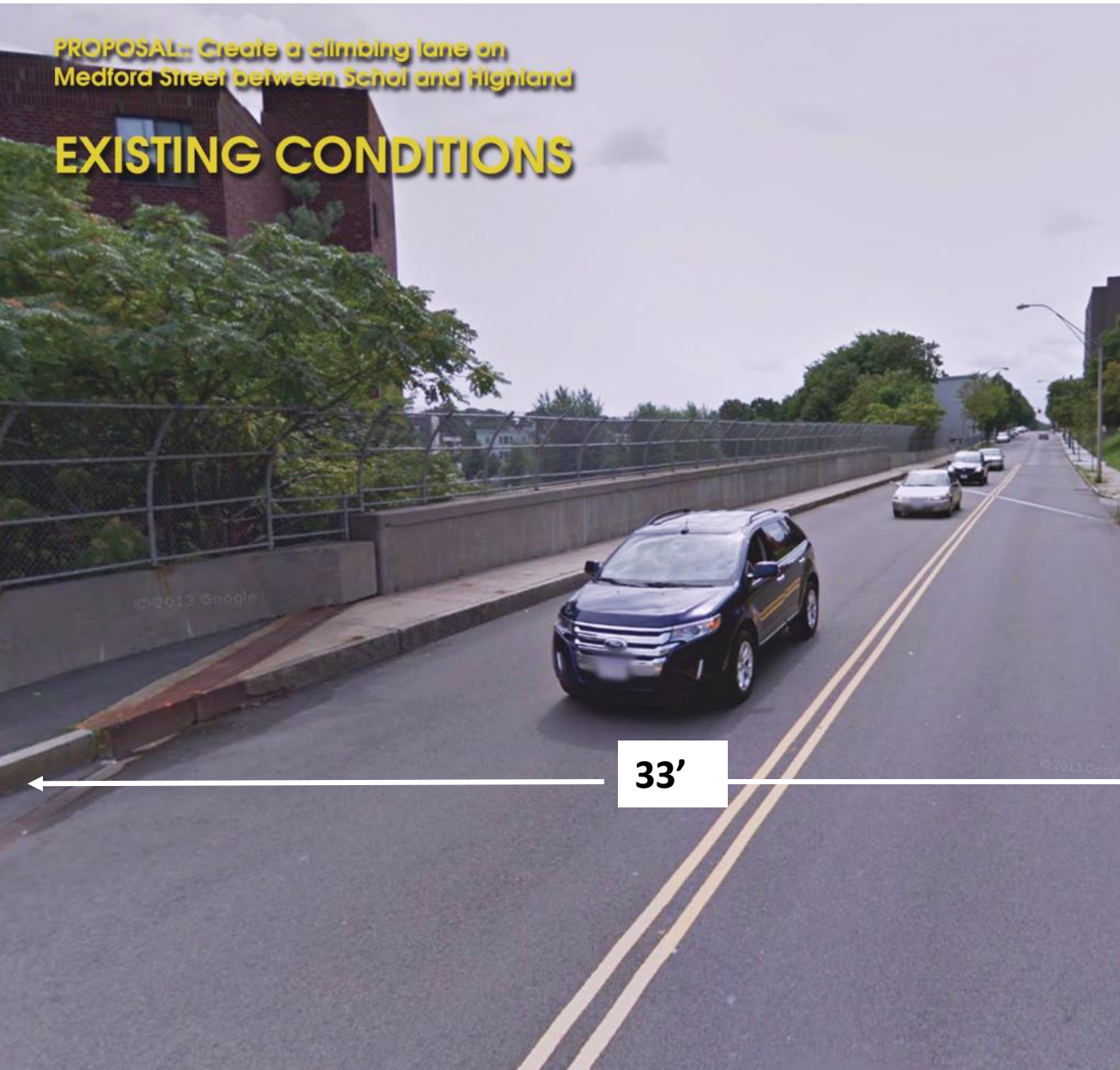
**Proposed**



# Medford Street

**PROPOSAL:** Create a climbing lane on Medford Street between Schol and Highland

**EXISTING CONDITIONS**



33'

# Somerville vs. Peer Cities

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## **Residential**

- High number of units needed to trigger requirement
  - Somerville: 7
  - Most peers: 3 or fewer
- No distinction between short-term/visitor and long-term/resident
- Required number of spaces lower than in Cambridge or Boston

## **Commercial/Industrial**

- Requirement in terms of number of car spaces
  - Does not account for differences in bike vs. car needs
- Required number of spaces lower than in Cambridge or Boston



# “Except Bicycle” for temporal Do Not Enter

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Temporal “Do Not Enter Except Abutters” signs are intended to prevent cut-through car traffic in one direction on two-way streets during specific times.

Bicycles are not cut-through traffic and do not cause jams. Yet temporal Do Not Enter signs force significant detours for bike commuters.

Proposal: add “Except Bicycles” plaques to “Except Abutters” at all locations.

PHOTO OF “EXCEPT ABUTTERS” SIGN

