BOSTON STREET MULTI-MODAL CORRIDOR STUDY

Baltimore Regional Transportation Board

June 27, 2017

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DEPARTMENT OF TRANSPORTATION
BALTIMORE CITY

Study Corridor

Project Purpose

This project will identify **multi-modal transportation options**, alignment, traffic and safety issues on Boston Street from I-95 to Fleet Street in order to close the transportation gap resulting from the proposed MTA rail transit project not moving forward.

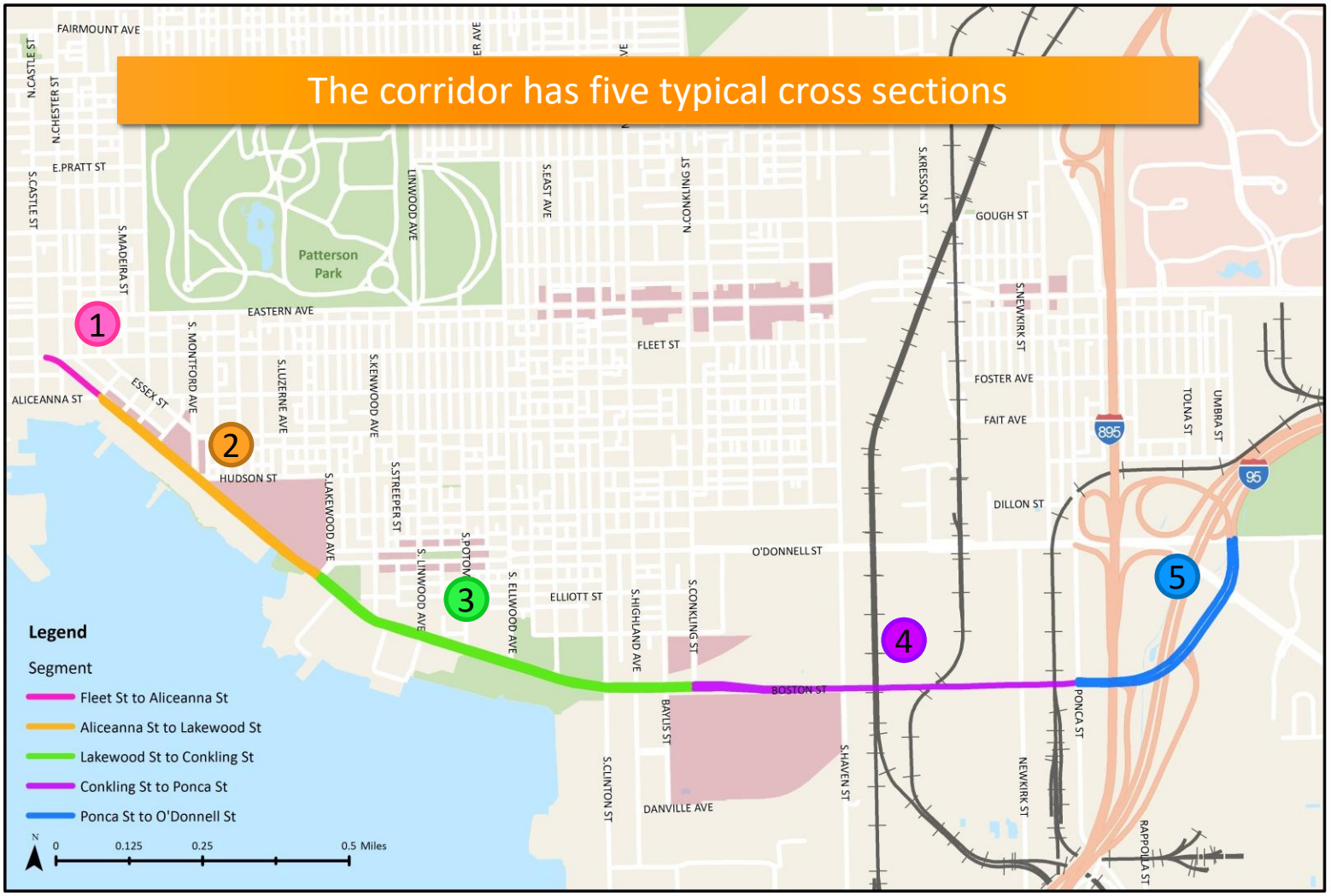
- Provide alternative recommendations & design for:
  - improved safety
  - pedestrian and bicycle accommodation
  - residential and commuter travel
  - improved truck access

Objectives

1. Review current planning and engineering documents for Boston Street (last 10 years)
2. Collect and analyze current traffic (vehicle, pedestrian, and bicycle) volume on Boston Street
3. Analyze current pedestrian, bicycle, commuter shuttle, and transit access
4. Analyze current truck routes.
5. Collect and analyze crash data along Boston Street within the study limits.
6. Make recommendations for multi-modal transportation improvements

- Existing Conditions
  - Roadway Design
  - Bicycle & Pedestrian Facilities
  - Traffic Operations & Safety
  - Curbside Parking Management & Operations
  - Transit Service Operations
  - Travel Market Evaluation
  - Freight Operations

Typical Cross Sections - Boston

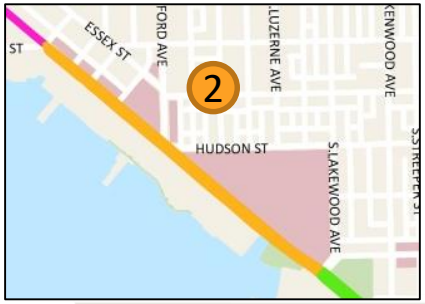


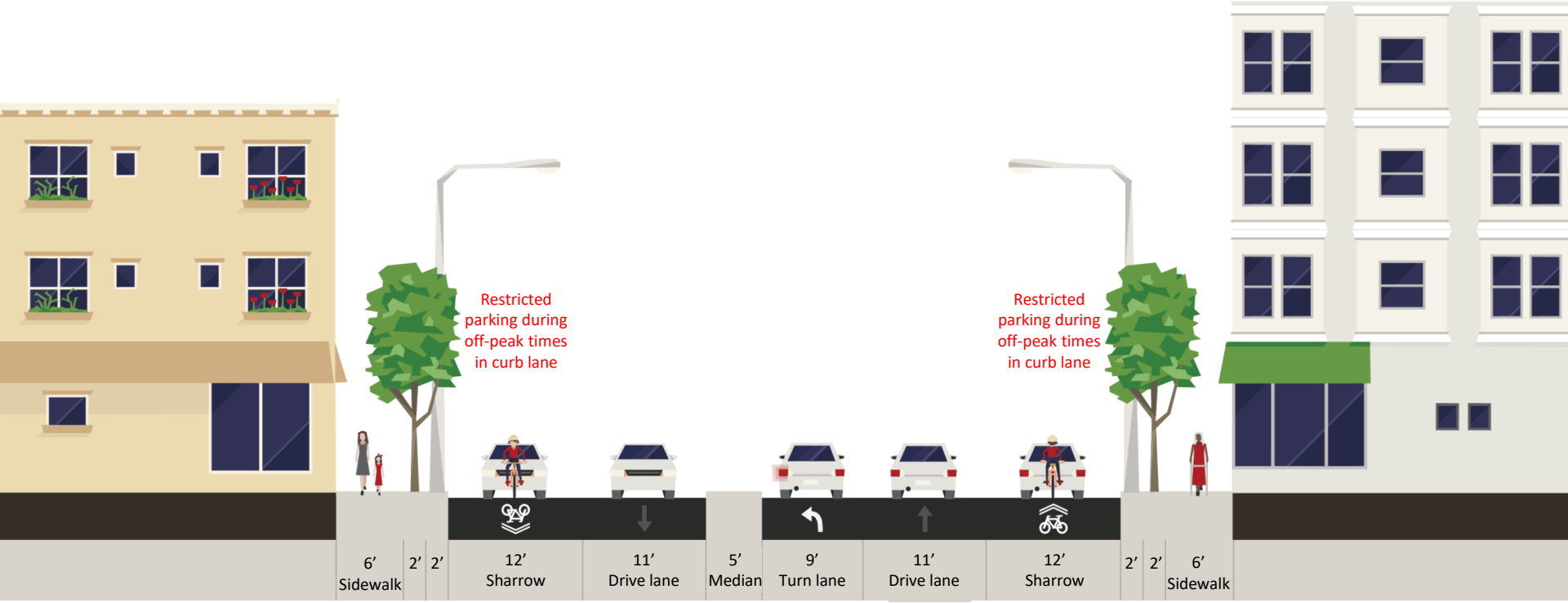
Boston Street Typical Cross-Sections

Fleet St to Aliceanna St

Boston Street Typical Cross-Sections

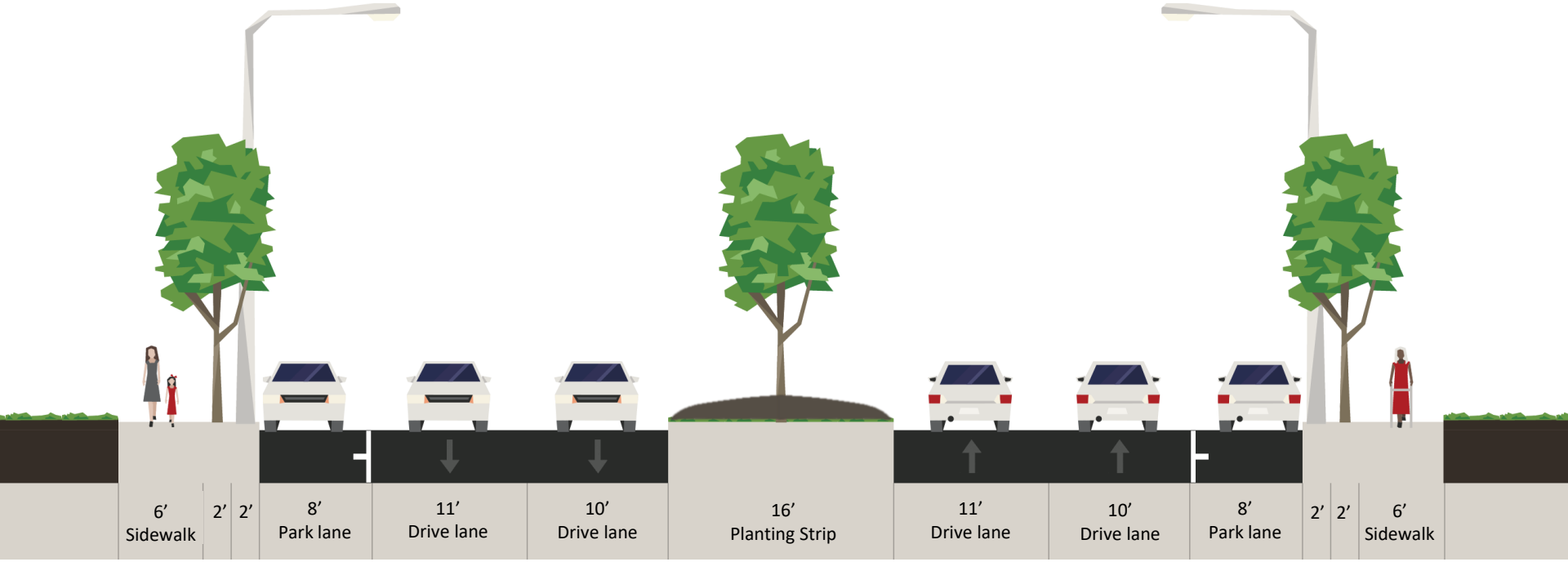
Aliceanna St to Lakewood Ave





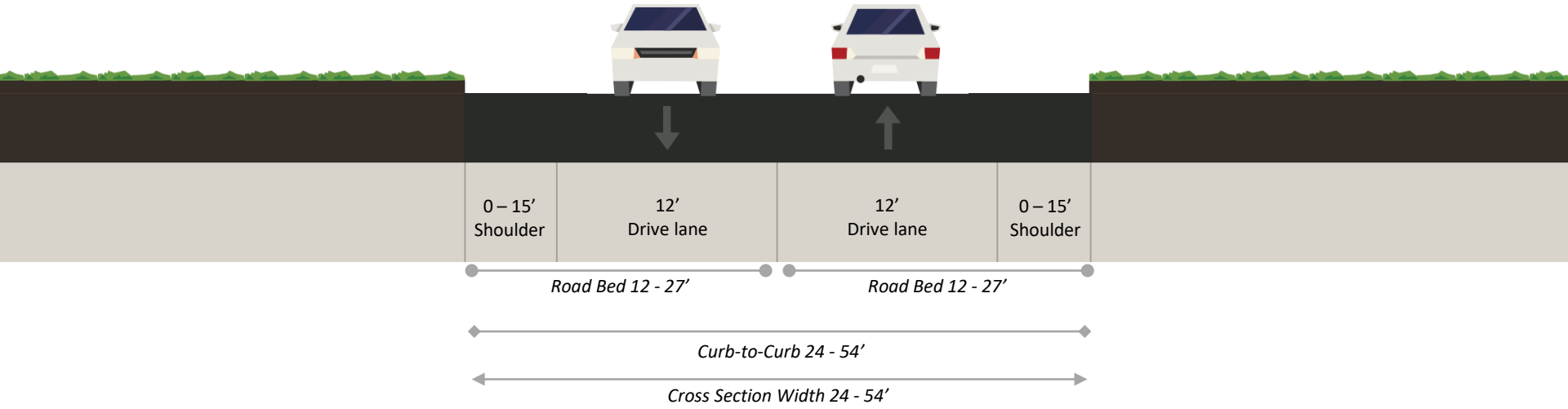
Boston Street Typical Cross-Sections

Lakewood Ave to Conkling St



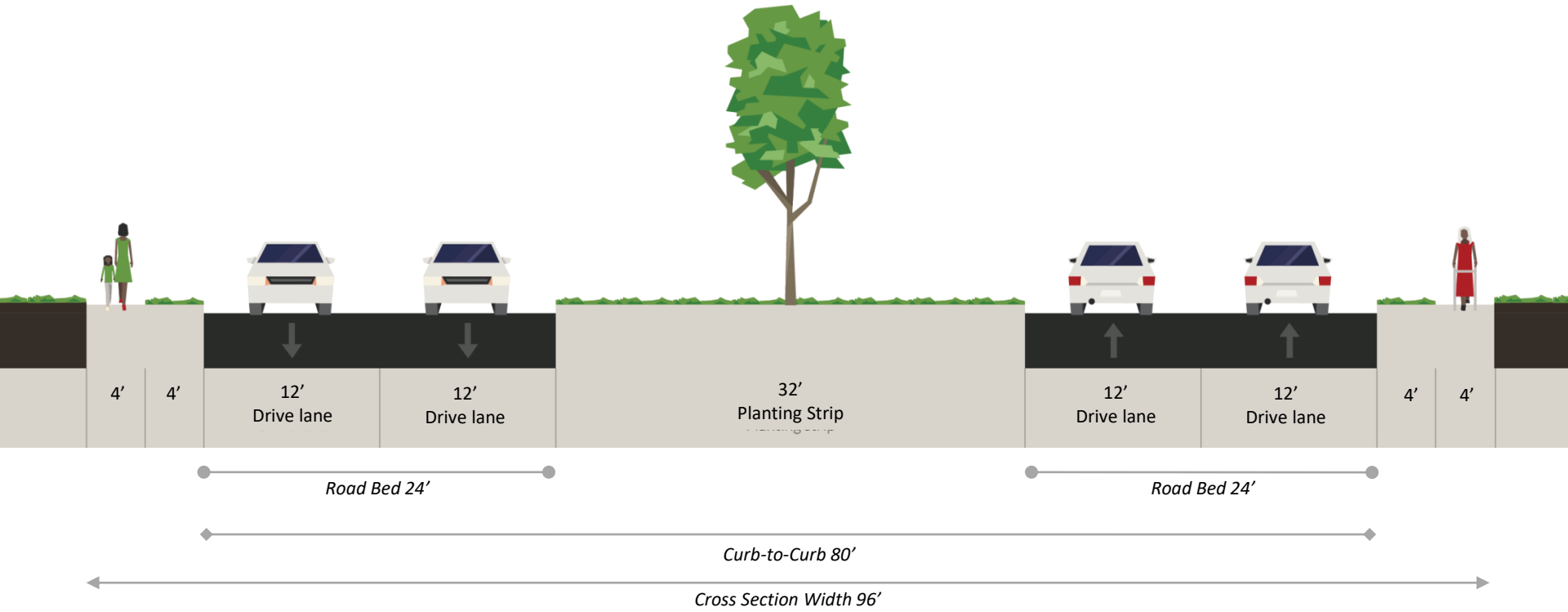
Boston Street Typical Cross-Sections

Conkling St to Ponca St

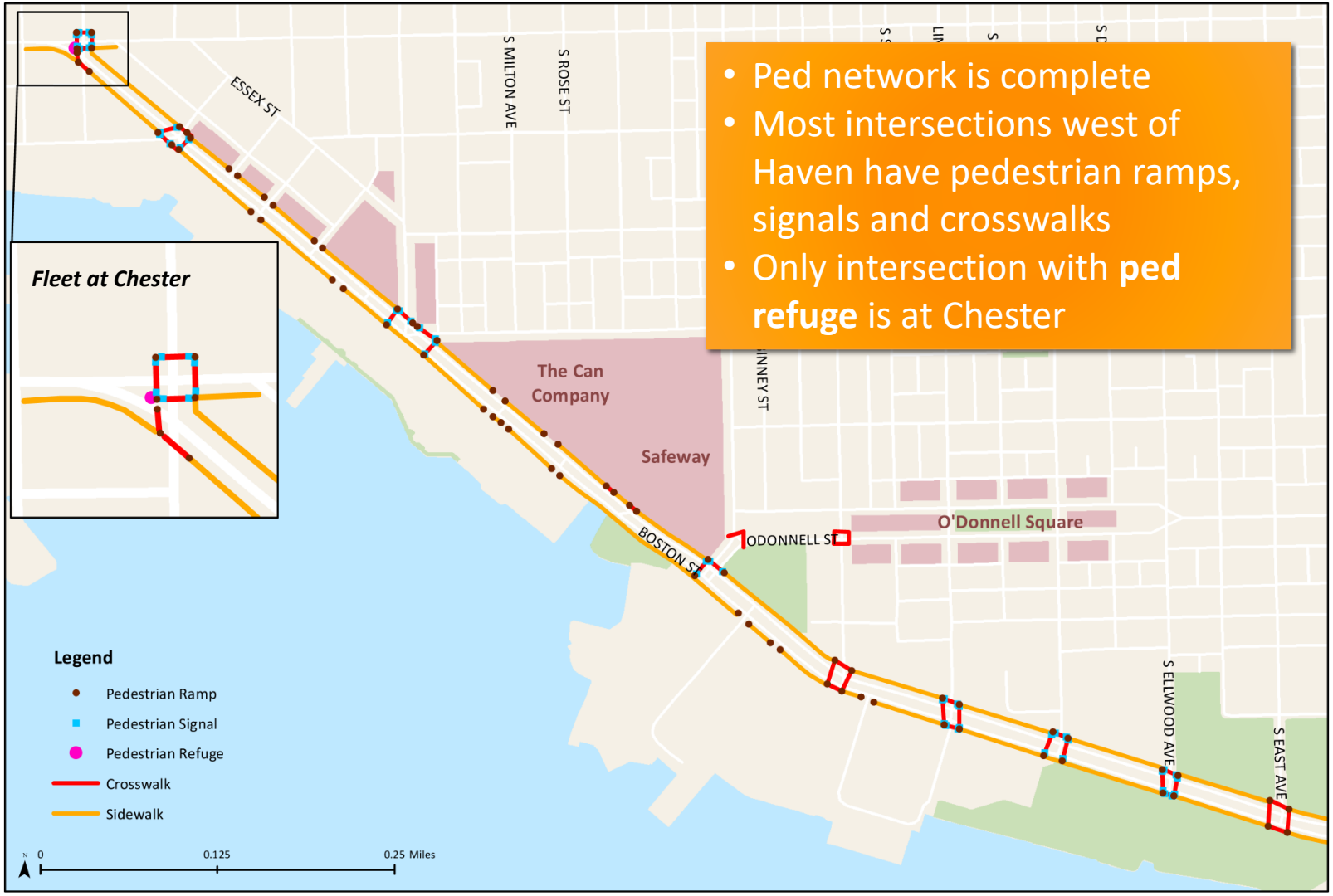


Boston Street Typical Cross-Sections

Ponca St to O'Donnell St

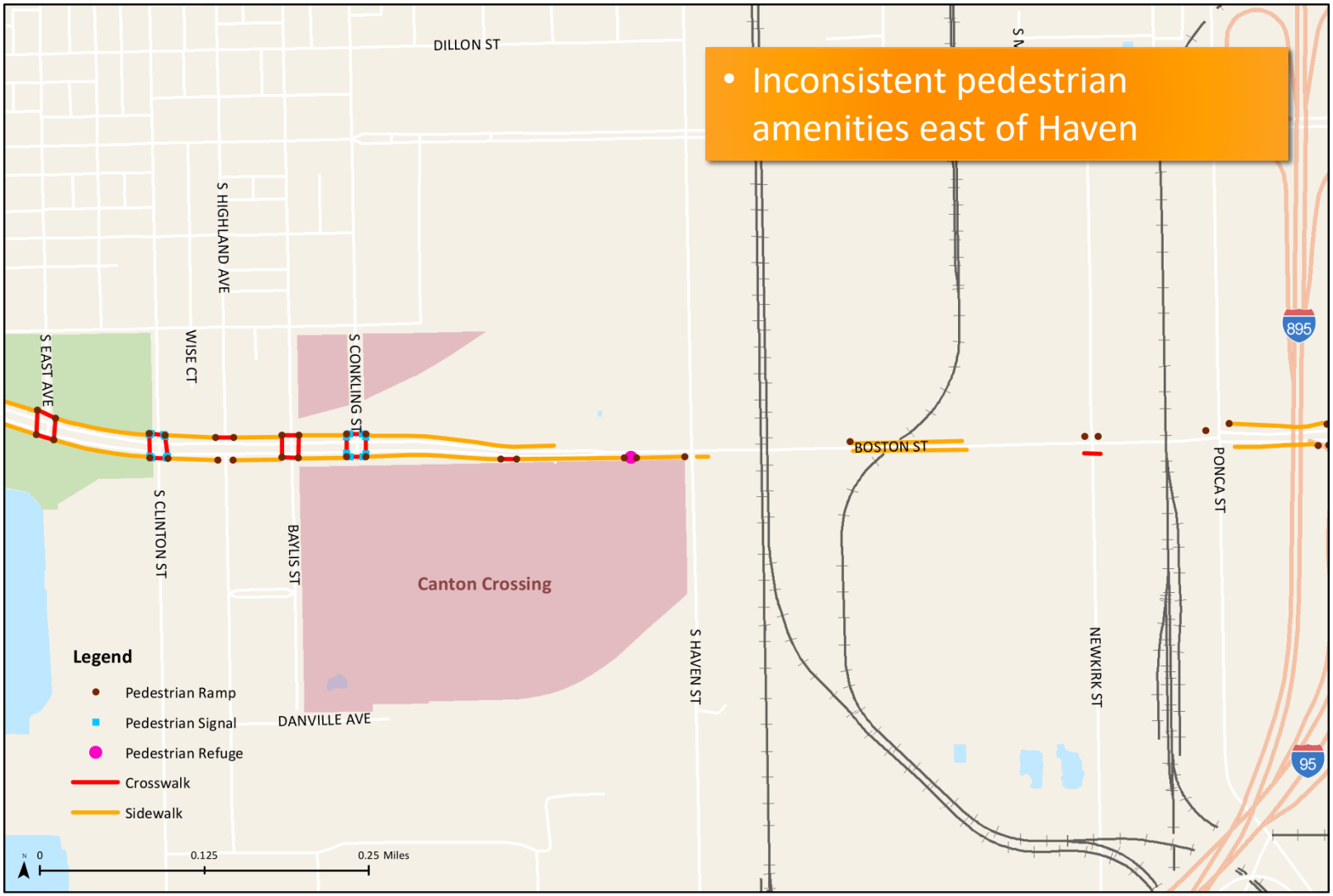


Pedestrian Amenities



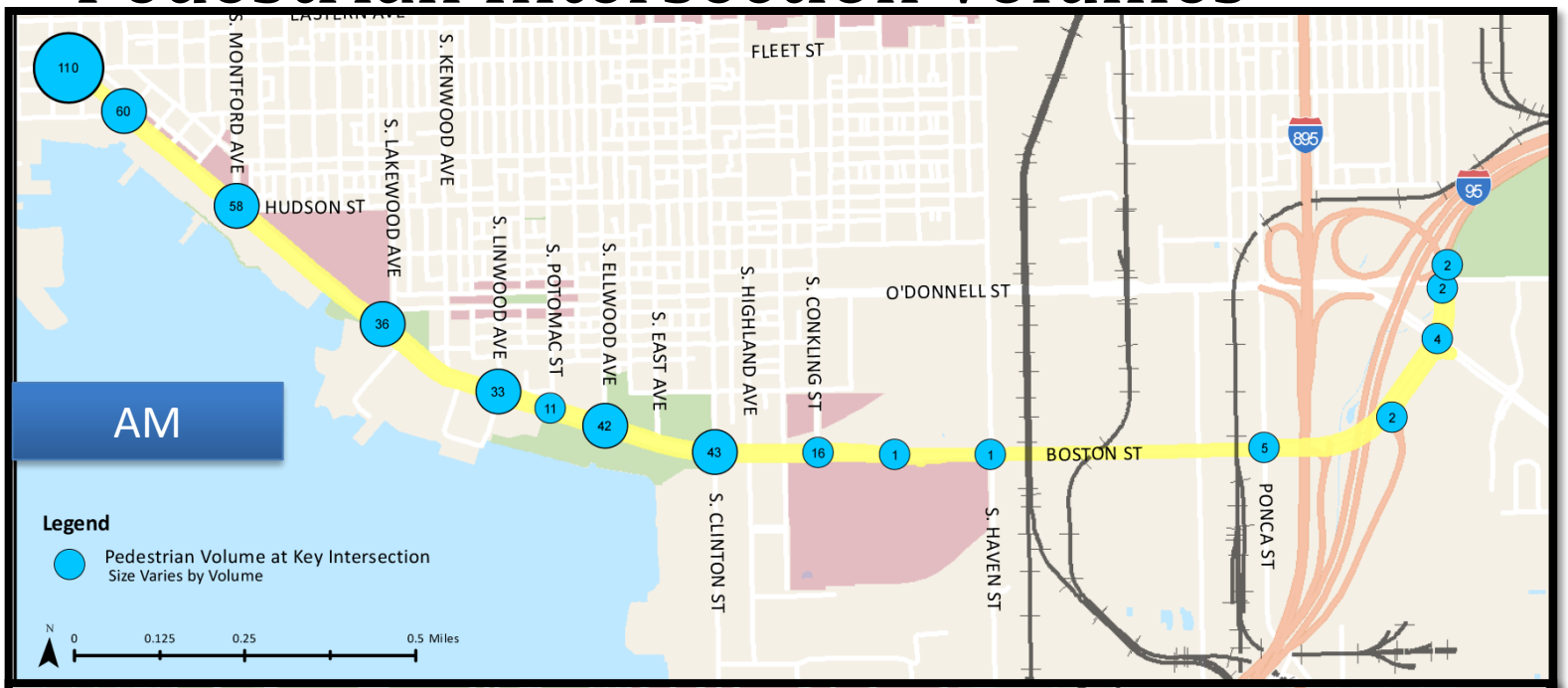
- Ped network is complete
- Most intersections west of Haven have pedestrian ramps, signals and crosswalks
- Only intersection with **ped refuge** is at Chester

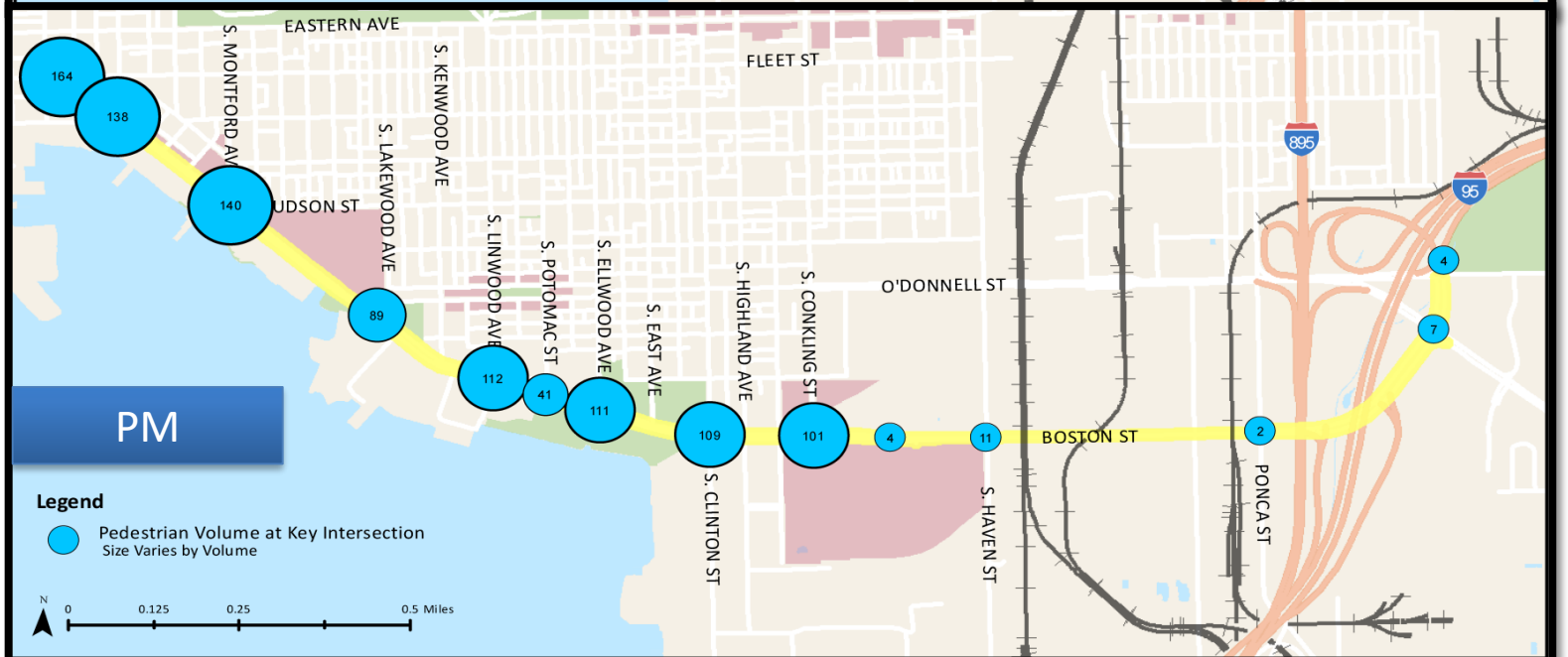
Pedestrian Amenities



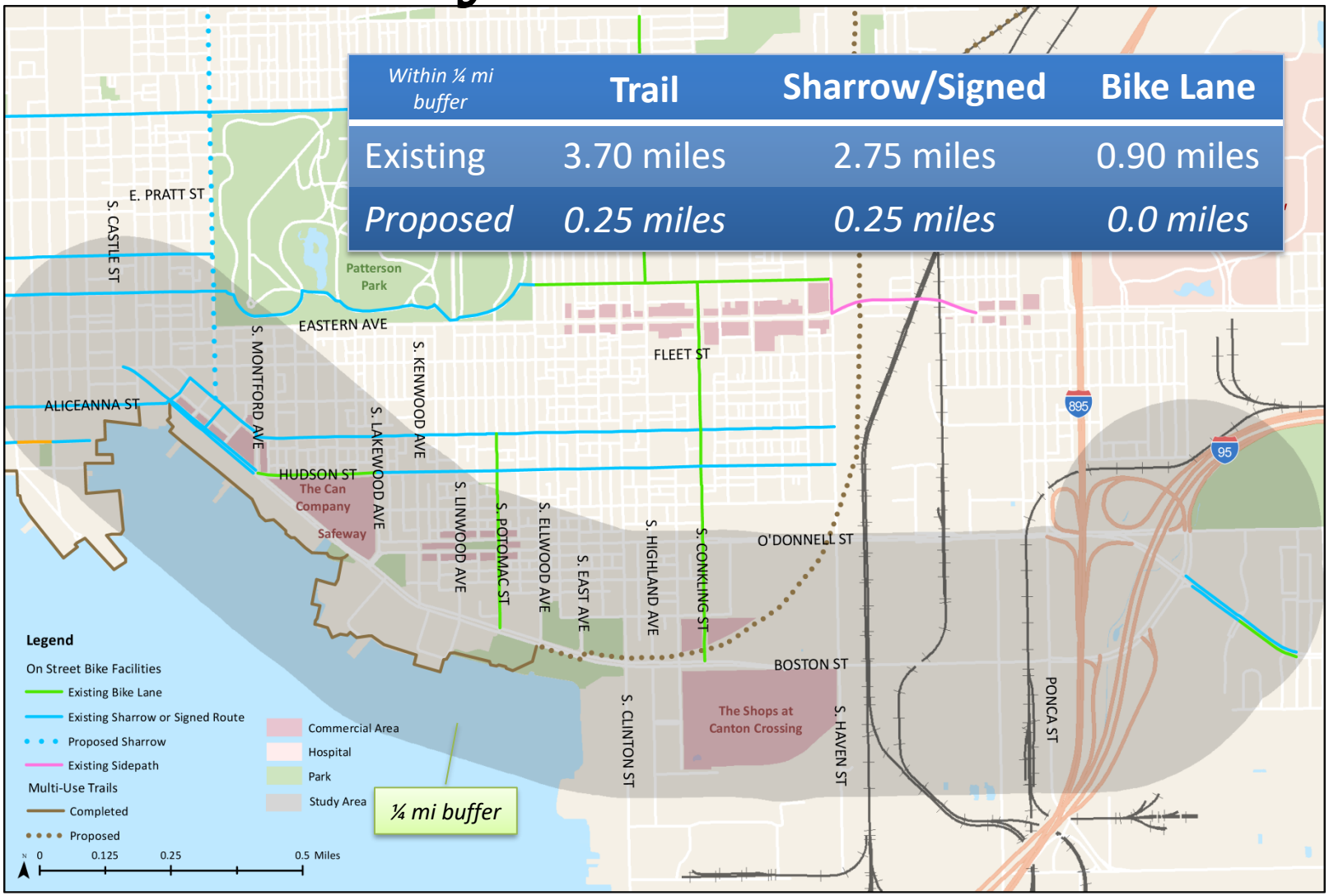
- Inconsistent pedestrian amenities east of Haven

Pedestrian Intersection Volumes

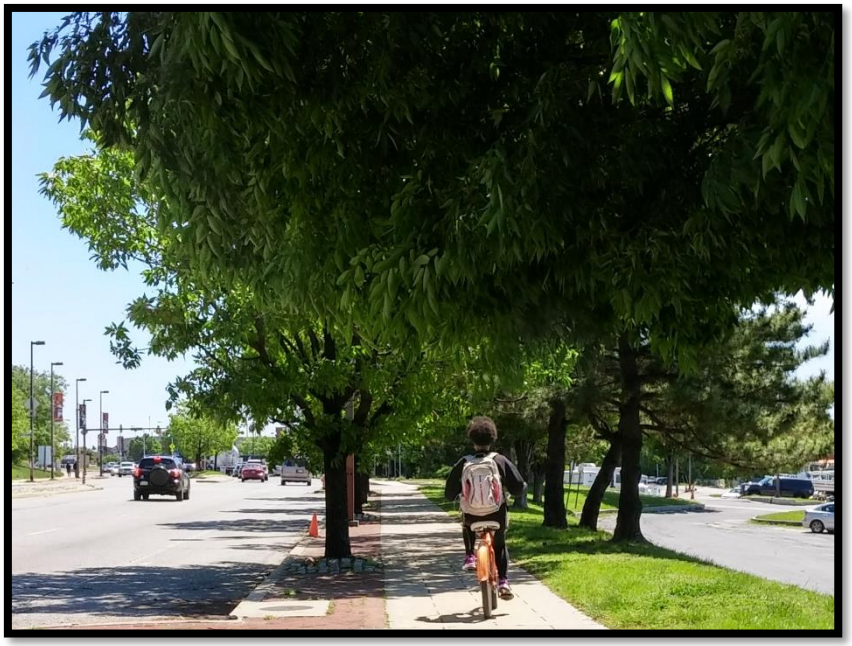




Bicycle Network

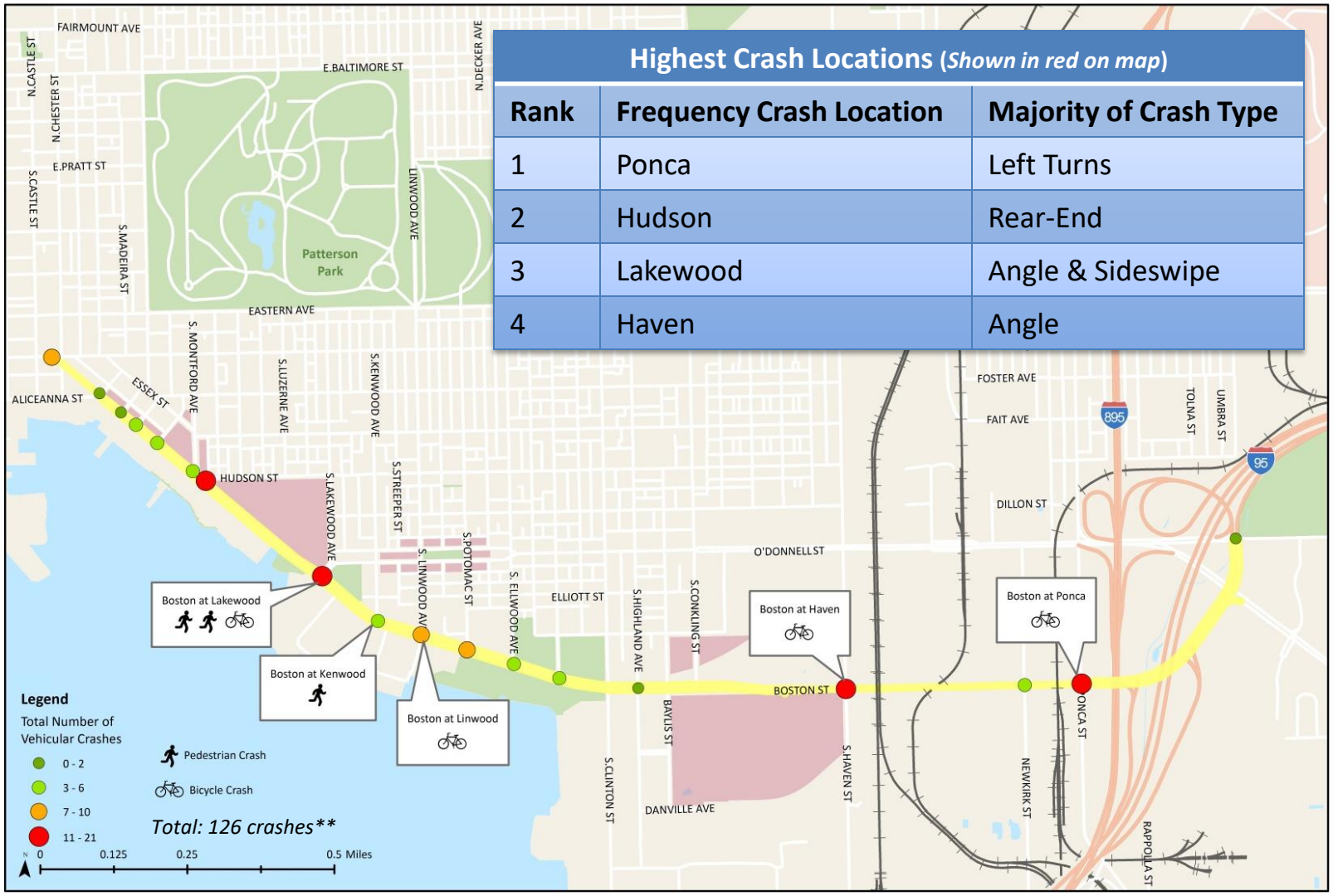


Multimodal Field Observations



Traffic Safety

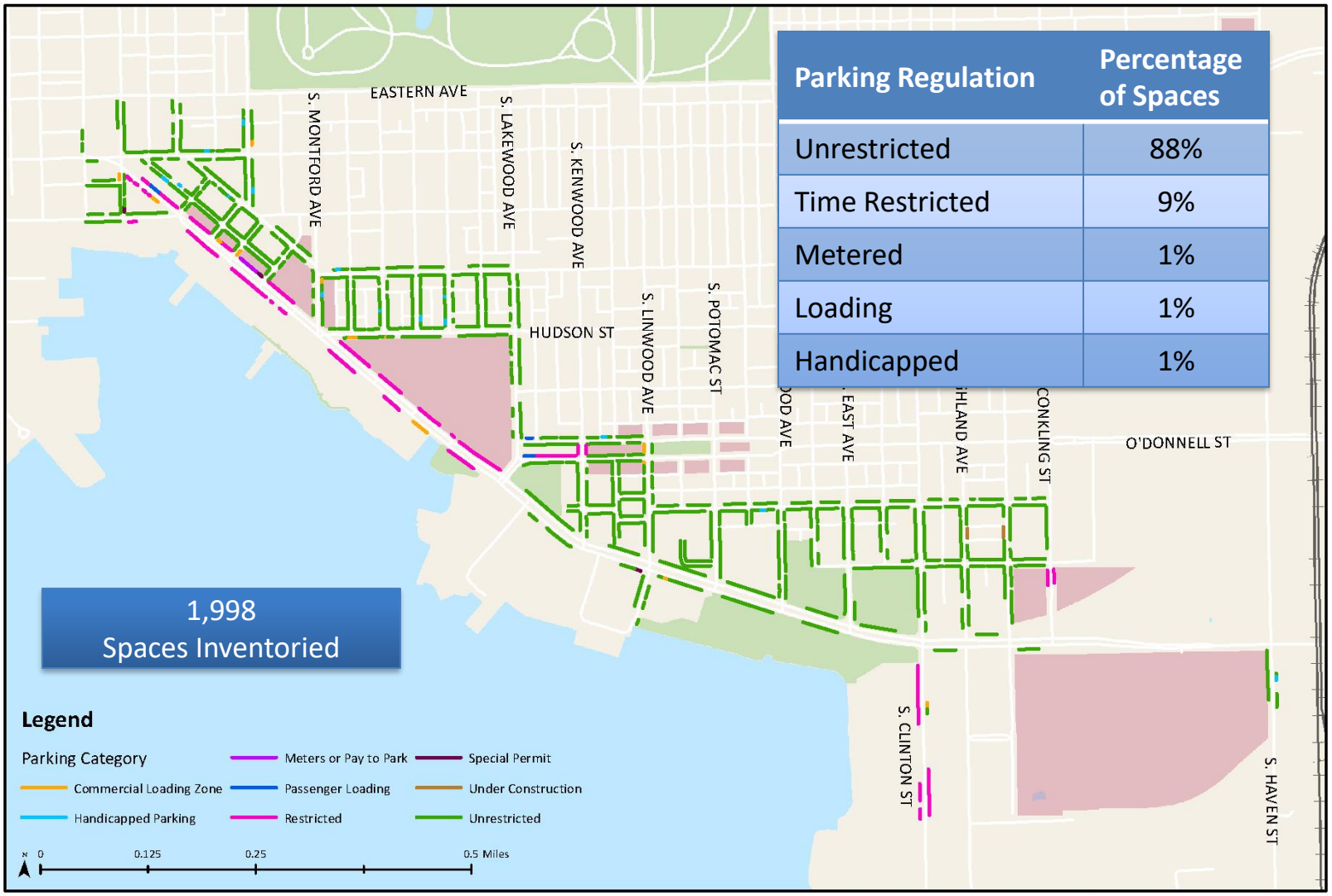
Highest Crash Locations (*Shown in red on map*)		
Rank	**Frequency Crash Location**	**Majority of Crash Type**
1	Ponca	Left Turns
2	Hudson	Rear-End
3	Lakewood	Angle & Sideswipe
4	Haven	Angle



*Data from 2012-2014

**Pedestrian and Bicycle related crashes are included in overall totals

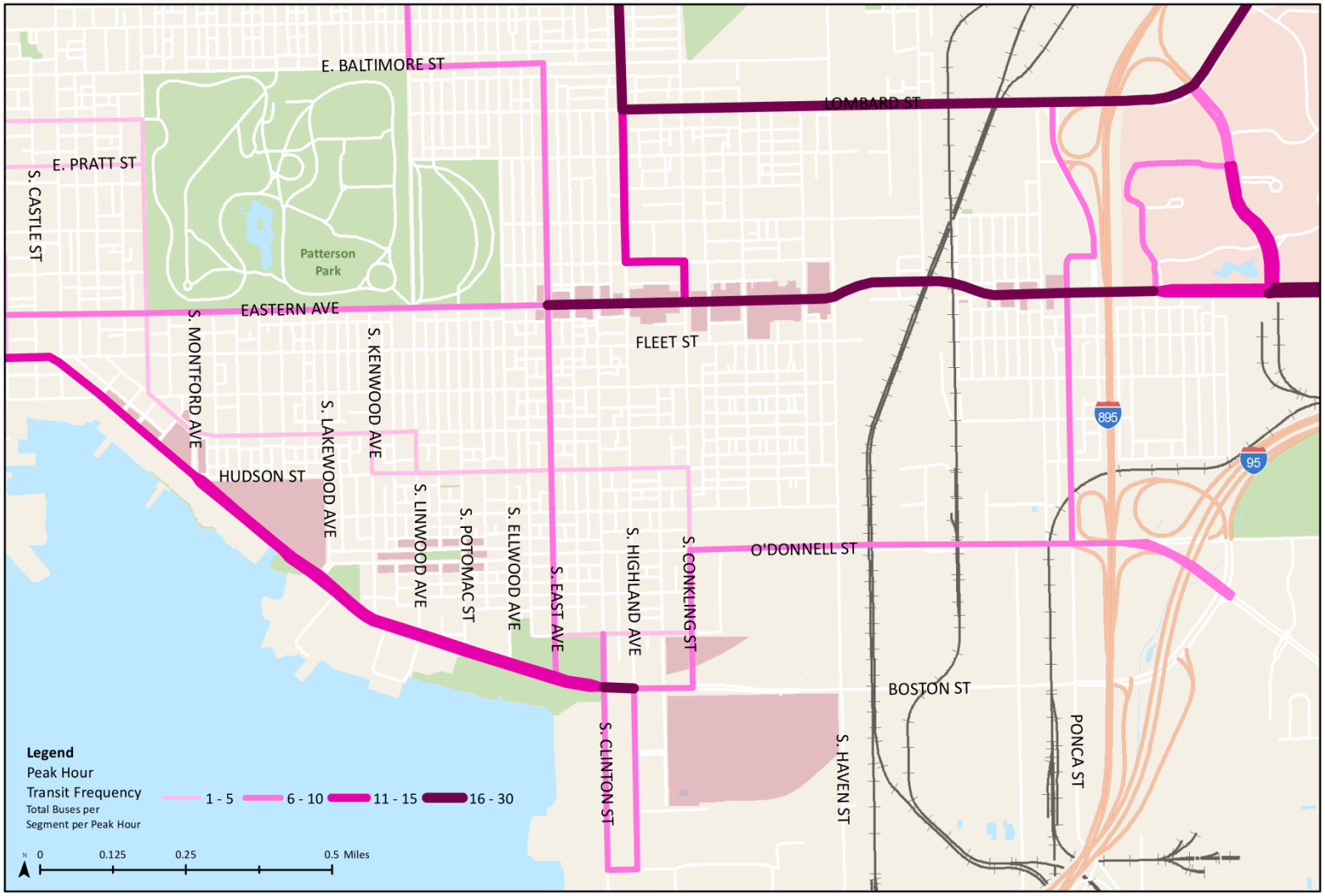
On- Street Parking Inventory



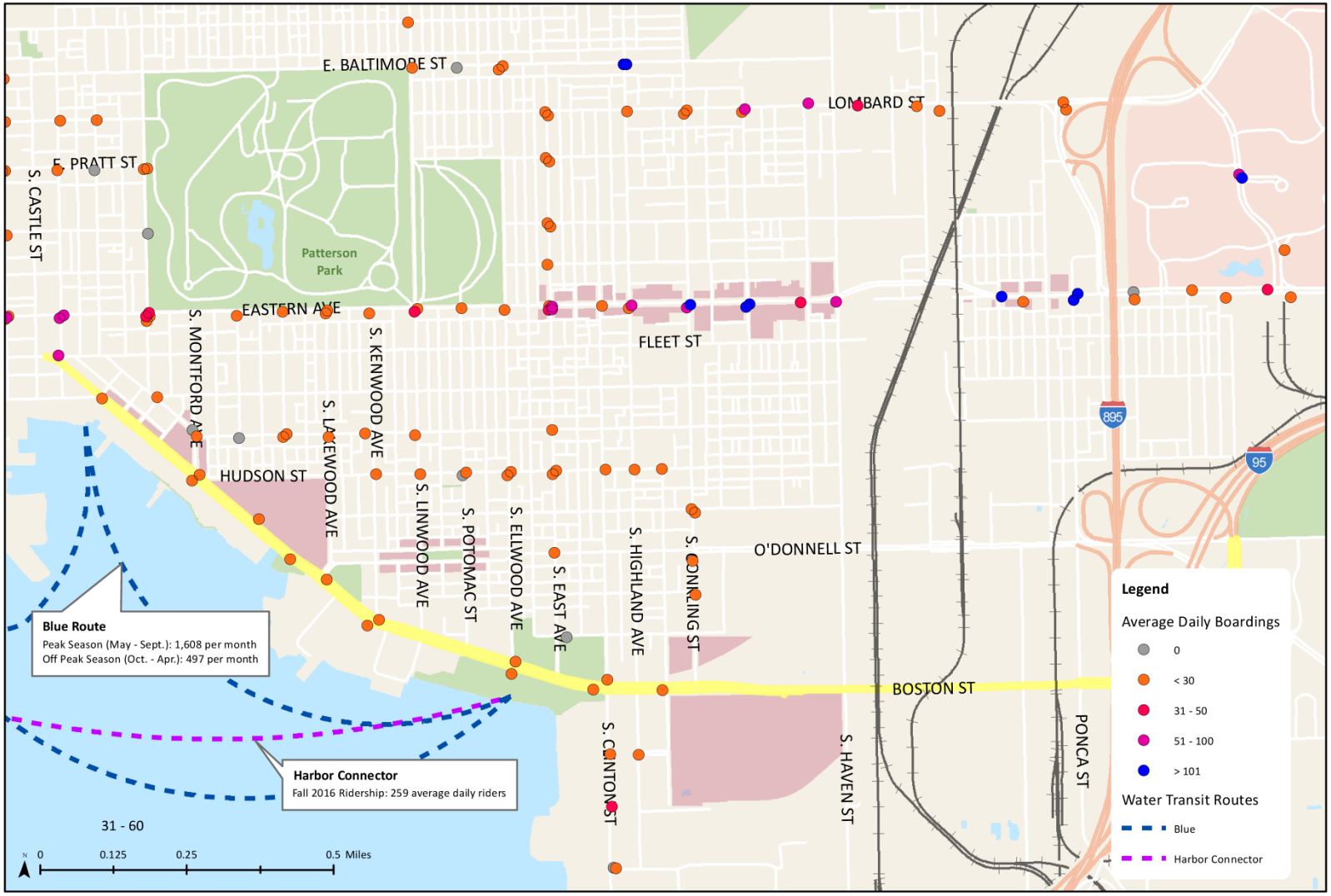
Parking Regulation	Percentage of Spaces
Unrestricted	88%
Time Restricted	9%
Metered	1%
Loading	1%
Handicapped	1%

*Data collected in the fall of 2016

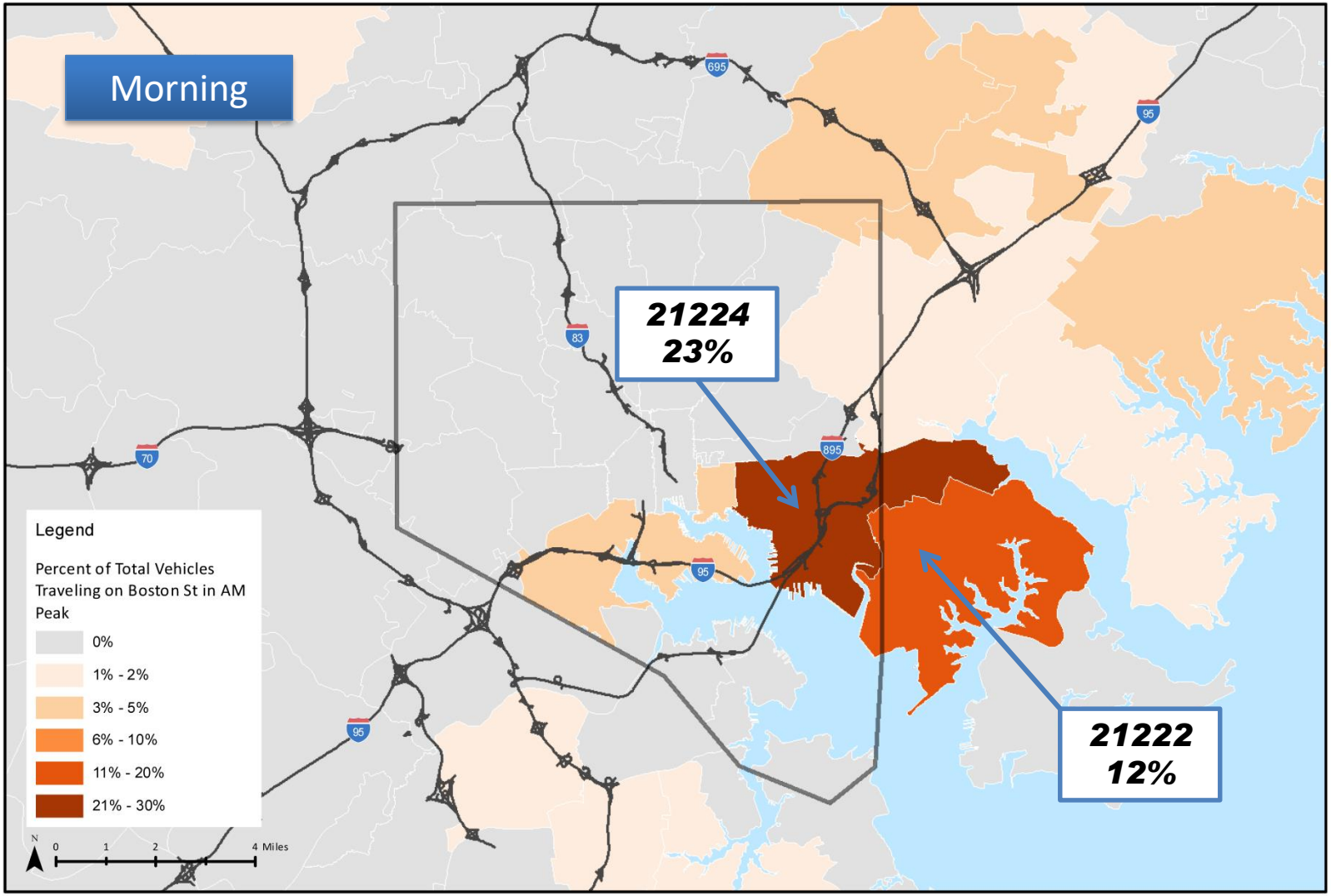
Transit Service Frequency



Transit Ridership



Commuter Shed



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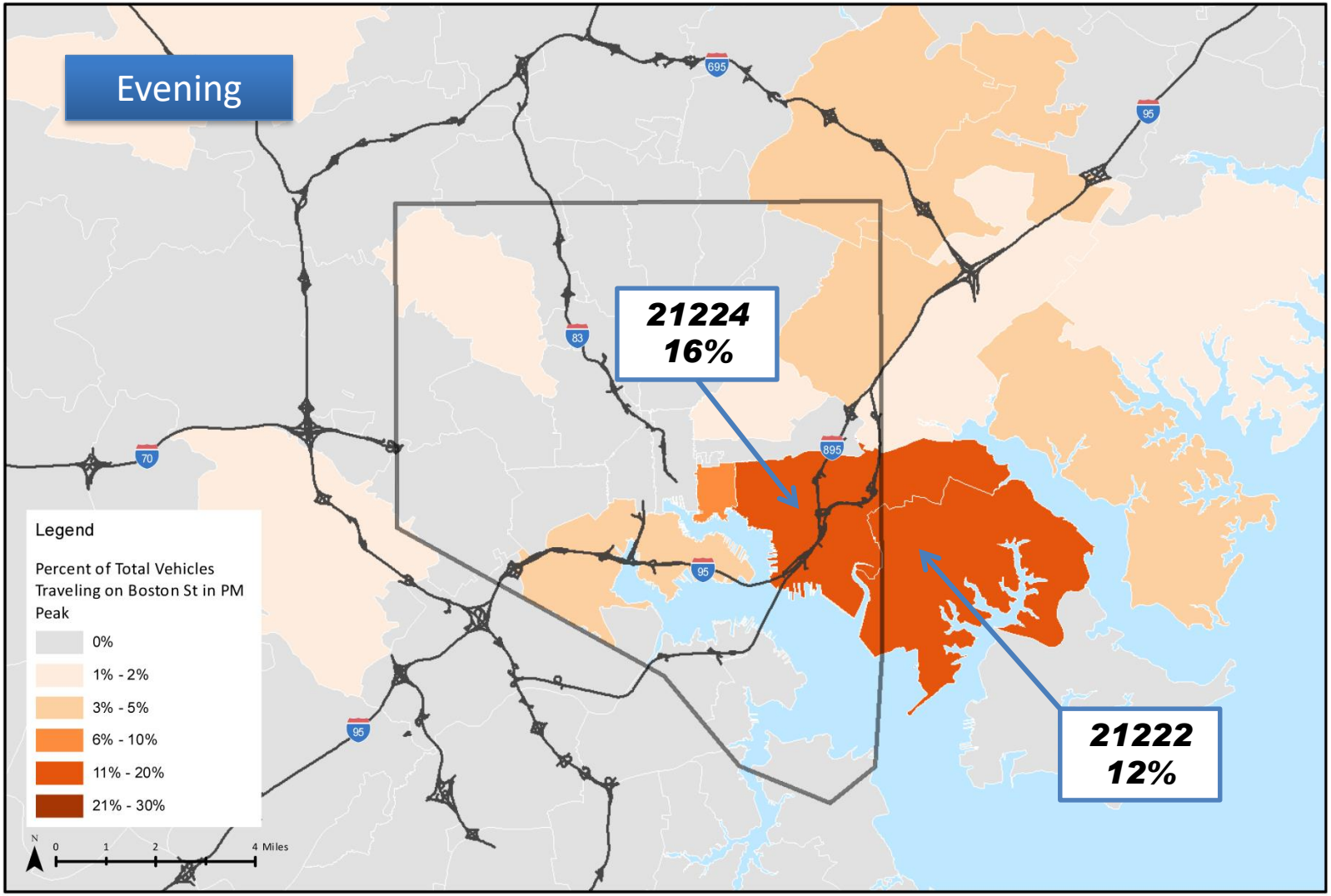
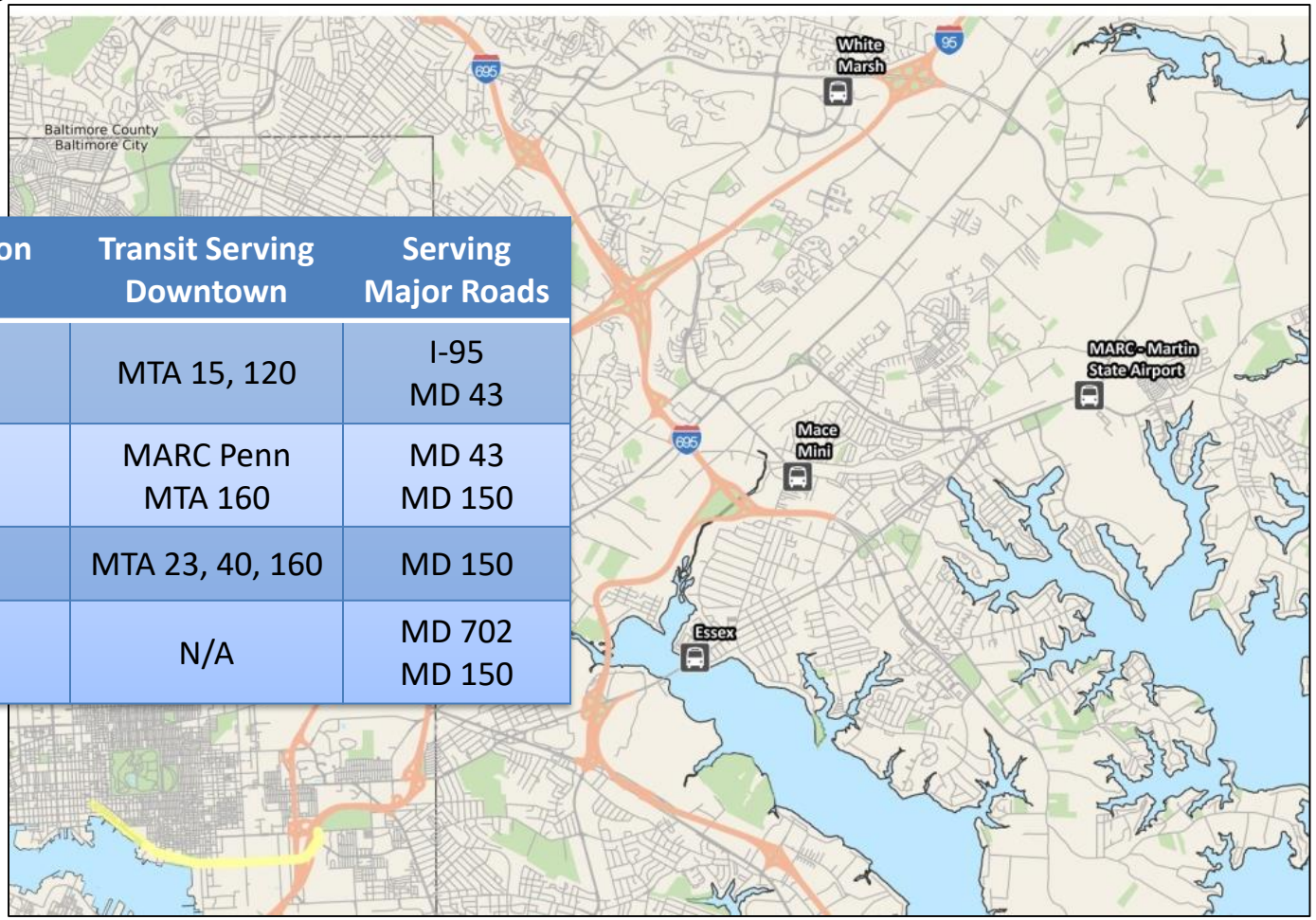


*Data collected on a typical Tuesday, Wednesday , or Thursday between 4:00 PM and 6:00 PM in the fall of 2016 . License plates recorded as vehicles pass Linwood while traveling eastbound on Boston

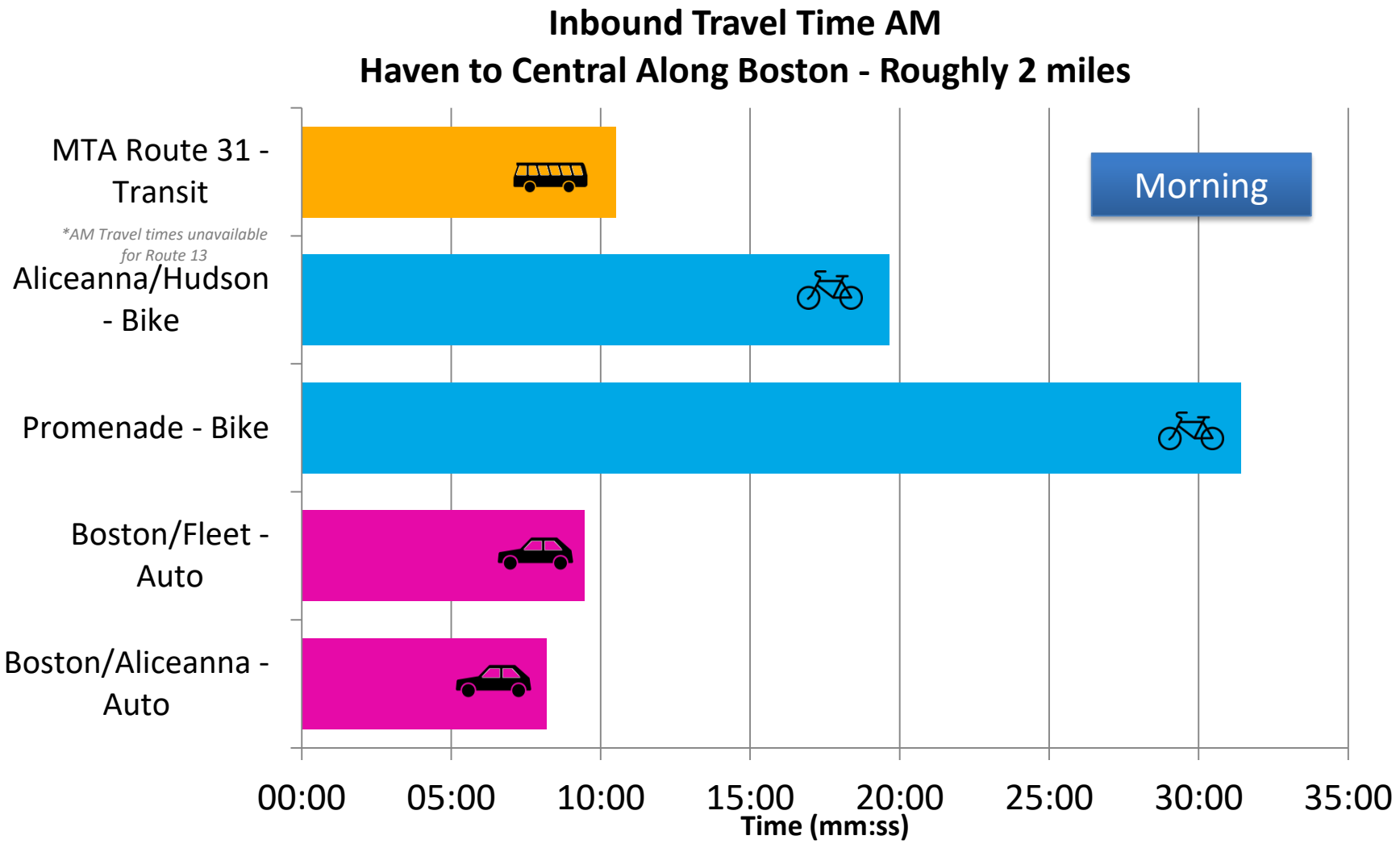
Regional Park-&-Ride Lots

Lot	Utilization	Transit Serving Downtown	Serving Major Roads
White Marsh	62%	MTA 15, 120	I-95 MD 43
MARC Martin State Airport	78%	MARC Penn MTA 160	MD 43 MD 150
Essex	28%	MTA 23, 40, 160	MD 150
Mace Mini	0%	N/A	MD 702 MD 150



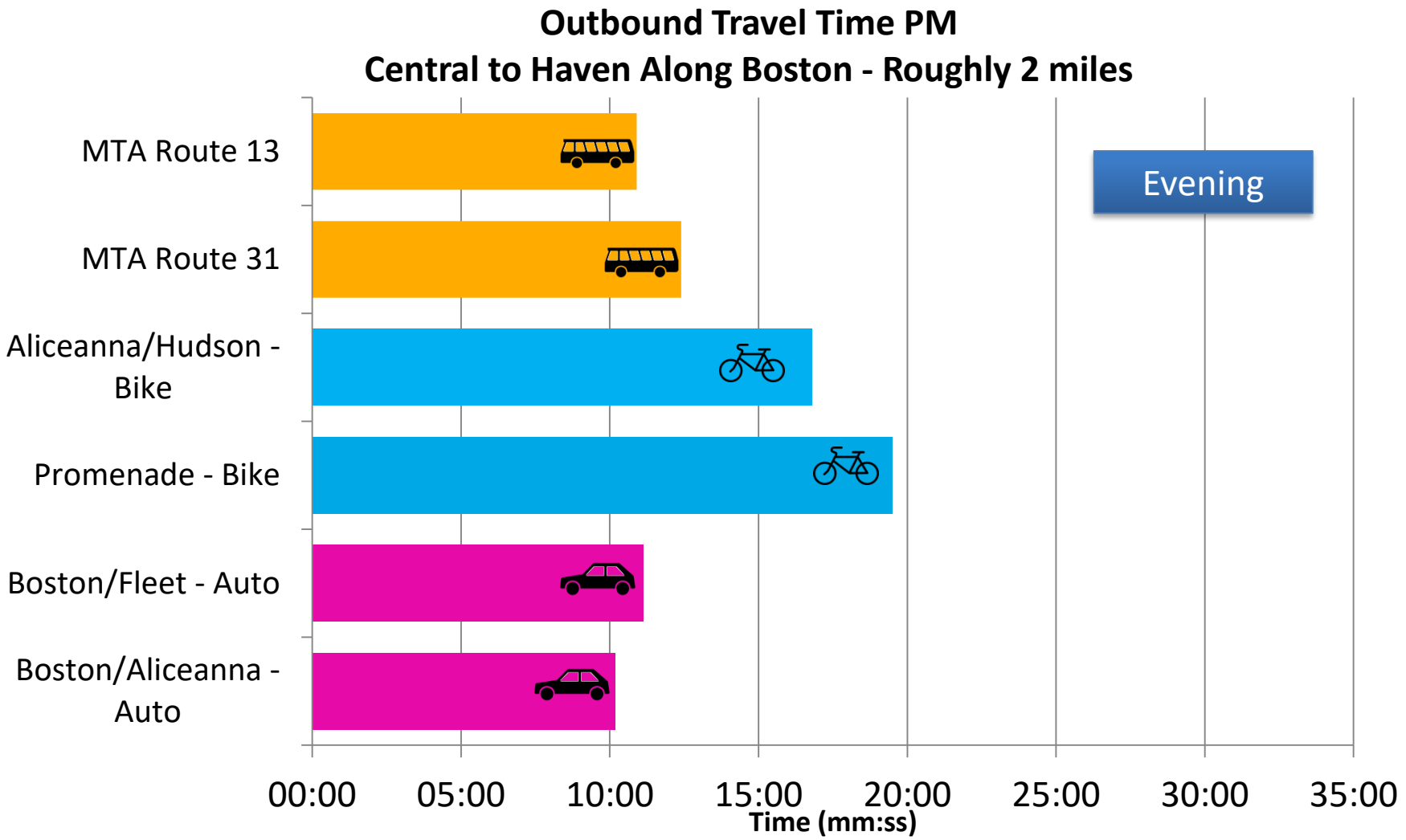
**Data collected on a typical Tuesday, Wednesday, or Thursday between 11:00 AM and 1:00 PM*

Travel Times Comparison - Boston



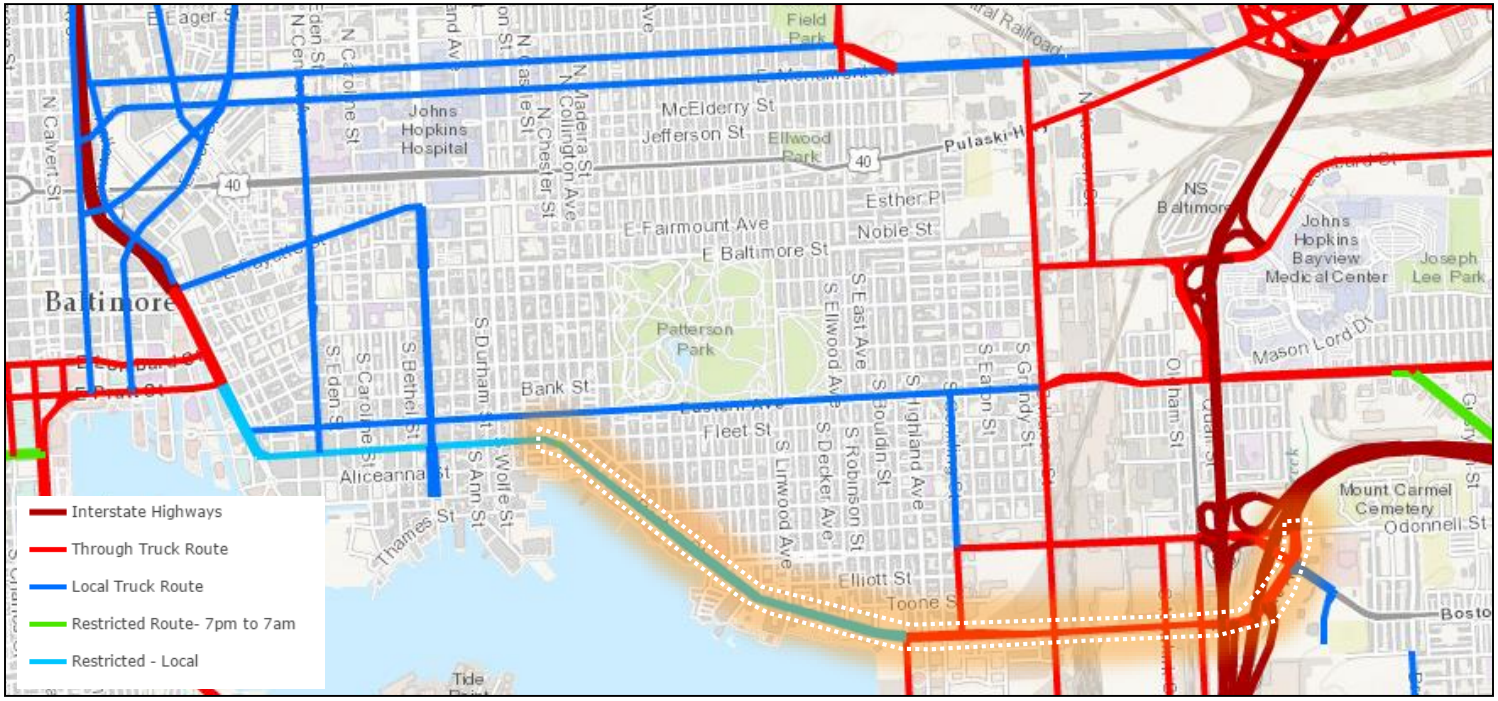
*Vehicle & Bike data collected in the fall of 2016 on typical Tuesday, Wednesday, or Thursday between 7:00 AM and 9:00 AM / Transit data received from MTA

Travel Times Comparison - Boston



** Vehicle & Bike data collected in the fall of 2016 on typical Tuesday, Wednesday, or Thursday between 4:00 PM and 6:00 PM / Transit data received from MTA*

Freight – Designated Truck Routes



Boston Street is restricted to **local** truck trips.
Eastern Avenue serves as the east-west truck route.

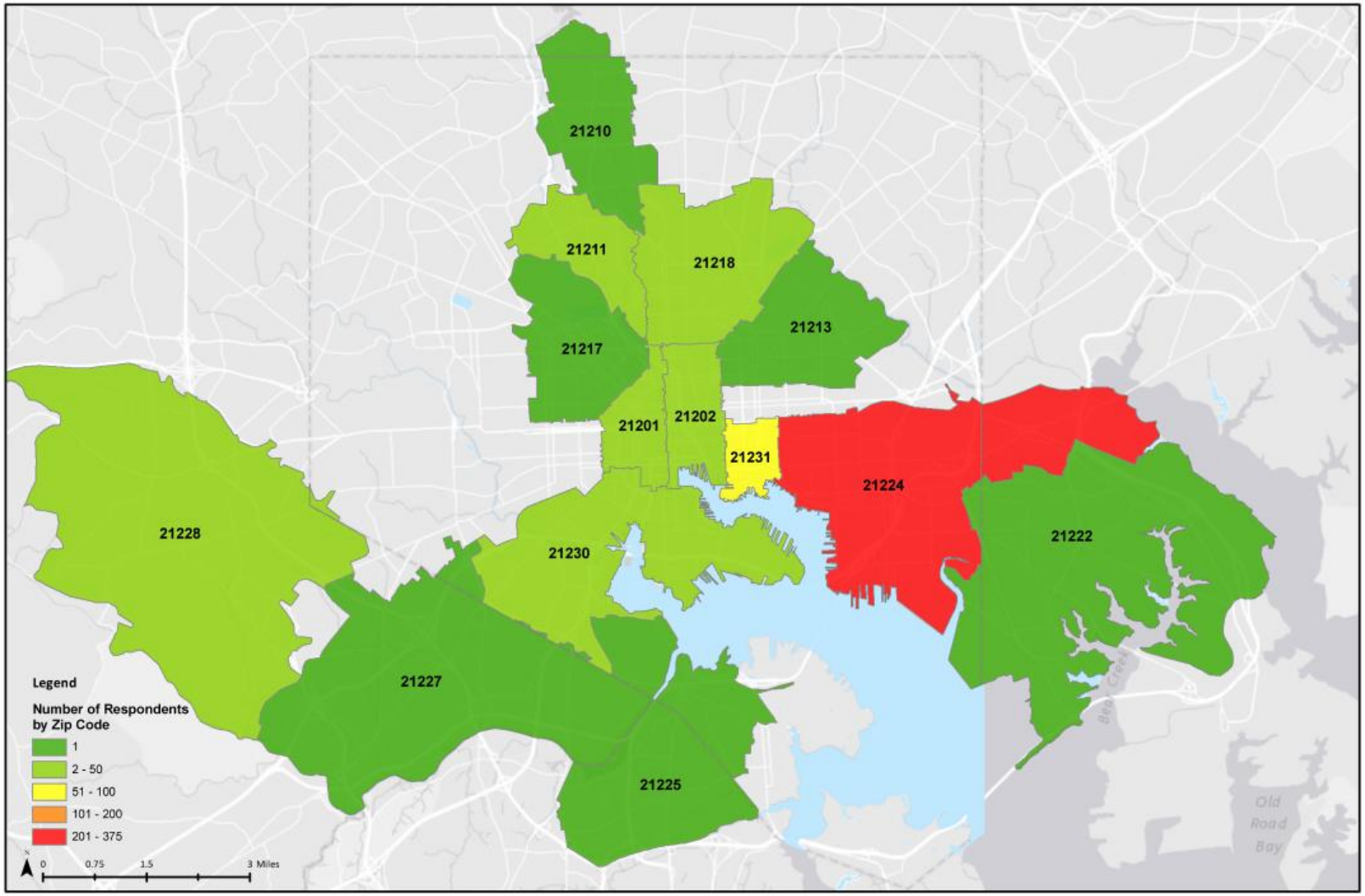
**Data sourced from Baltimore City Official Truck Routes*

Public Questionnaire

- 497 total responses received from Nov. 2016 to Apr. 2017
- 77% of respondents were from the zip code that contains the study area (21224 zip)
- Average respondent age was between 25 and 34
- Majority of respondents' households (55%) own two cars

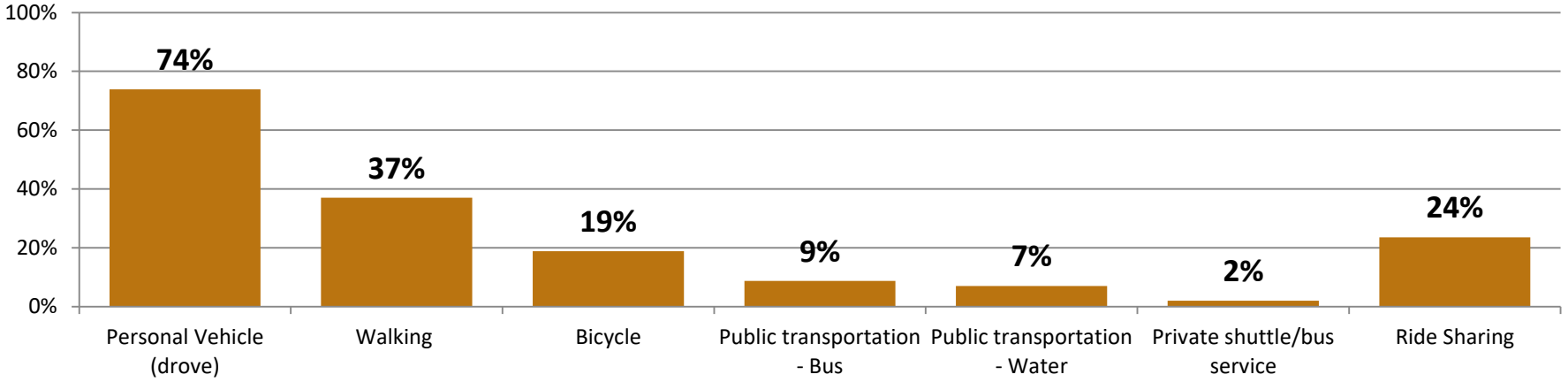
https://www.surveymonkey.com/r/BostonCorridorStudy

Zip Code of Respondent's Residence

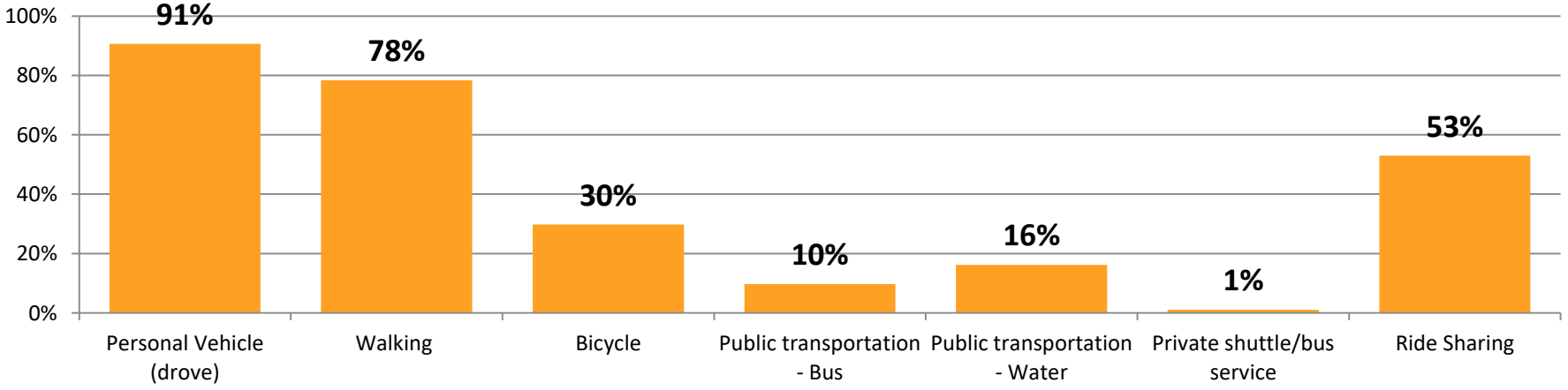


Percent of Respondents who travel on Boston Street

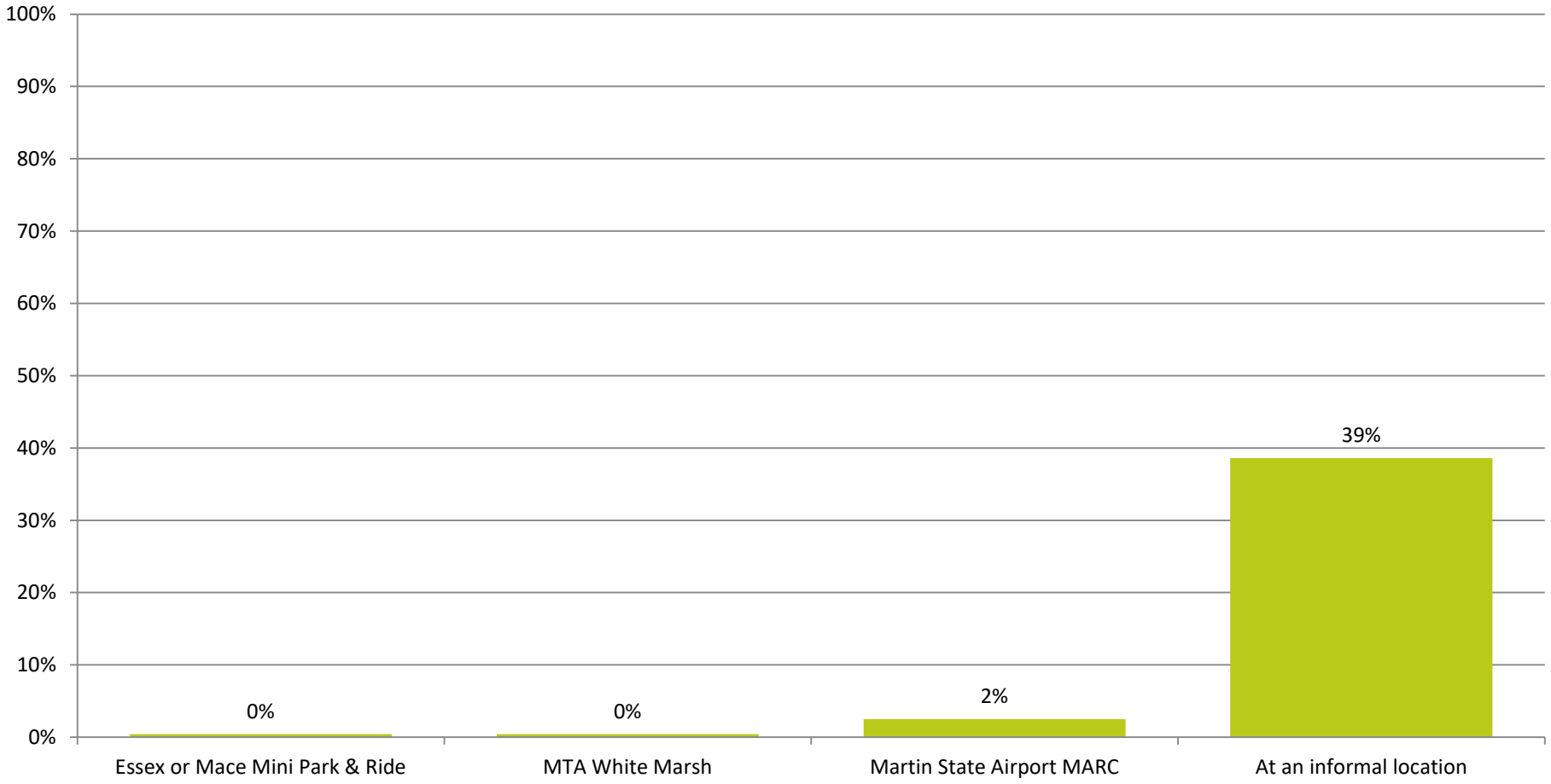
Work trips:



Non-work trips:



Percent who use park-&-ride lots at least once per week



Rank Modes of Travel

QUESTION

- Rank the following modes of travel: Personal Automobile, Walking, Public Transportation, Biking, Carpools/Ride sharing, Truck & Deliveries by the priority for study corridor.

TAKEAWAY

- Respondents prioritize

1- Personal Vehicle

2- Walking

3- Public Transit

4- Biking

Future Development

North & West of Study Area (Harbor East, etc.)
- 1.7M sf new office space
- 300,000 sf new retail space
- 2,100 new dwelling units
- 400 new hotel rooms

North of Study Area (Brewers' Hill, etc.)
- 586 new dwelling units

Hospital Area
- 112 new hotel rooms

Within Study Area:
- 700,000 sf new office space
- 480,000 sf new retail space
- 1,540 new dwelling units
- > 100,000 sf new industrial

South & East of Study Area
- > 1.6M sf new industrial

Recommendations

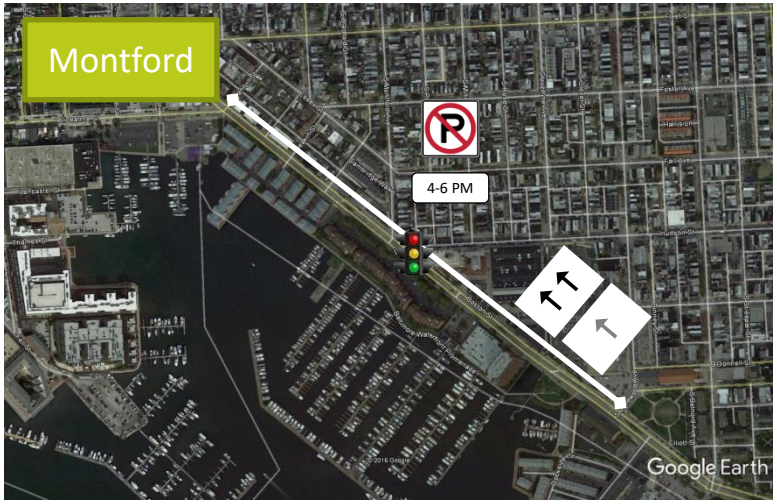
Developing the Recommendations

- Input from Stakeholders
- Fatal Flaw Analysis
- Technical analysis of infrastructure gaps and barriers
- Public Questionnaire

Categories

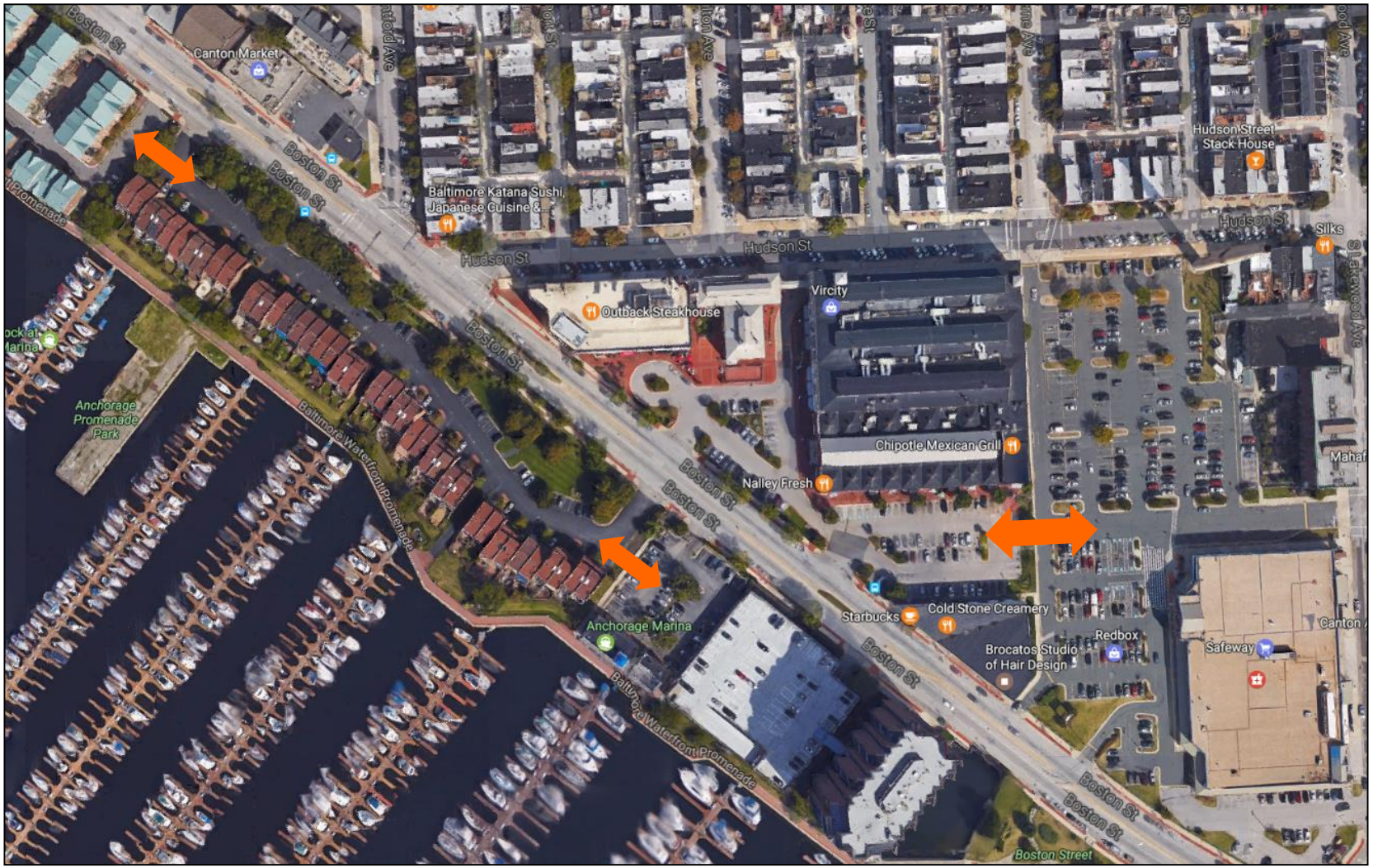
- Roadway Capacity & Traffic Operations
- Inter-Parcel Connectivity
- Pedestrian & Bicycle Improvements
- Parking
- Commuter Park-&-Ride Lots
- Transit & Harbor Connector

Intersections & Signals



Intersections & Signals

Inter-Parcel Connectivity



Pedestrian & Bike Improvements

- Pedestrian Refuge Islands
  - Boston and Hudson
  - Boston and Lakewood
  - Boston and Potomac
  - Boston and Ellwood

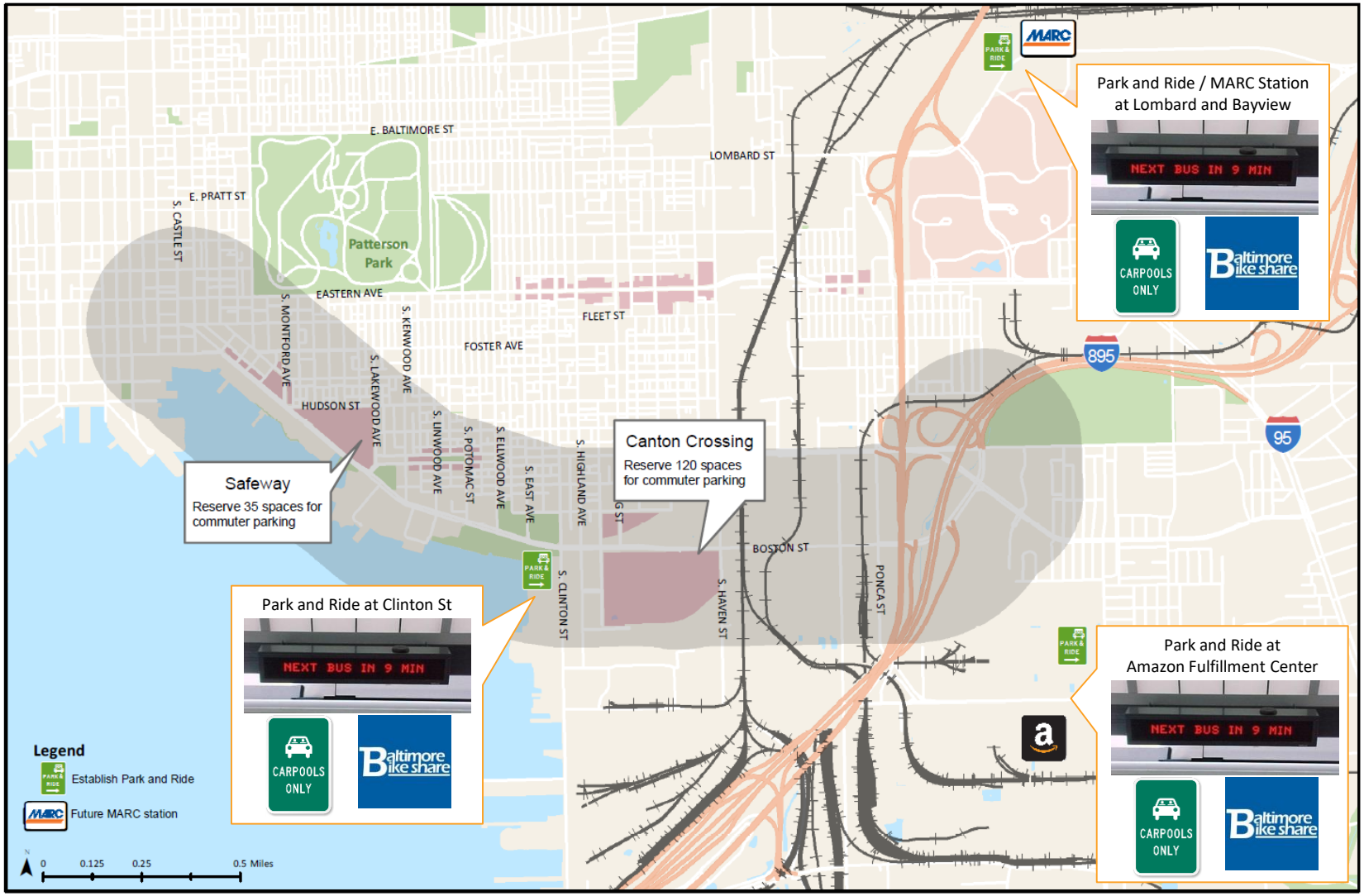
- Improved Pedestrian Infrastructure (ADA compliant curb ramps, crosswalk restriping, pedestrian signals, and sidewalks)

- Bike Boulevards
  - Foster and/or Hudson

- Bike Share Stations
  - O'Donnell Square Park
  - Canton Waterfront Park

- Promenade Connection Improvements
  - East/West Connections
  - Boston and Hudson

Commuter Park-&-Ride Lots
Intermodal Connections: Public/ Private Partnerships



Transit

- Improve Harbor Connector Landings

- Explore New Harbor Connector Routes from Canton Waterfront Park to Maritime Park & Harborplace

- Recommendations for MTA:
  - Extension of MTA Express Route from White Marsh to Boston Street

- Recommendation for Private and Public Partnership
  - Encourage the establishment of **subscription van pool service**
  - Encourage the establishment of privately funding **micro transit** and **employee shuttles**

Next Steps

- Complete Final Report - June 30, 2017
- Public Comment Period on Final Report (30 Days)
  - Post to DOT website
  - Email to Community Association
  - Can email DOT project manager for a PDF version

http://transportation.baltimorecity.gov/boston-street-multimodal-corridor-planning-study

Thank You

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