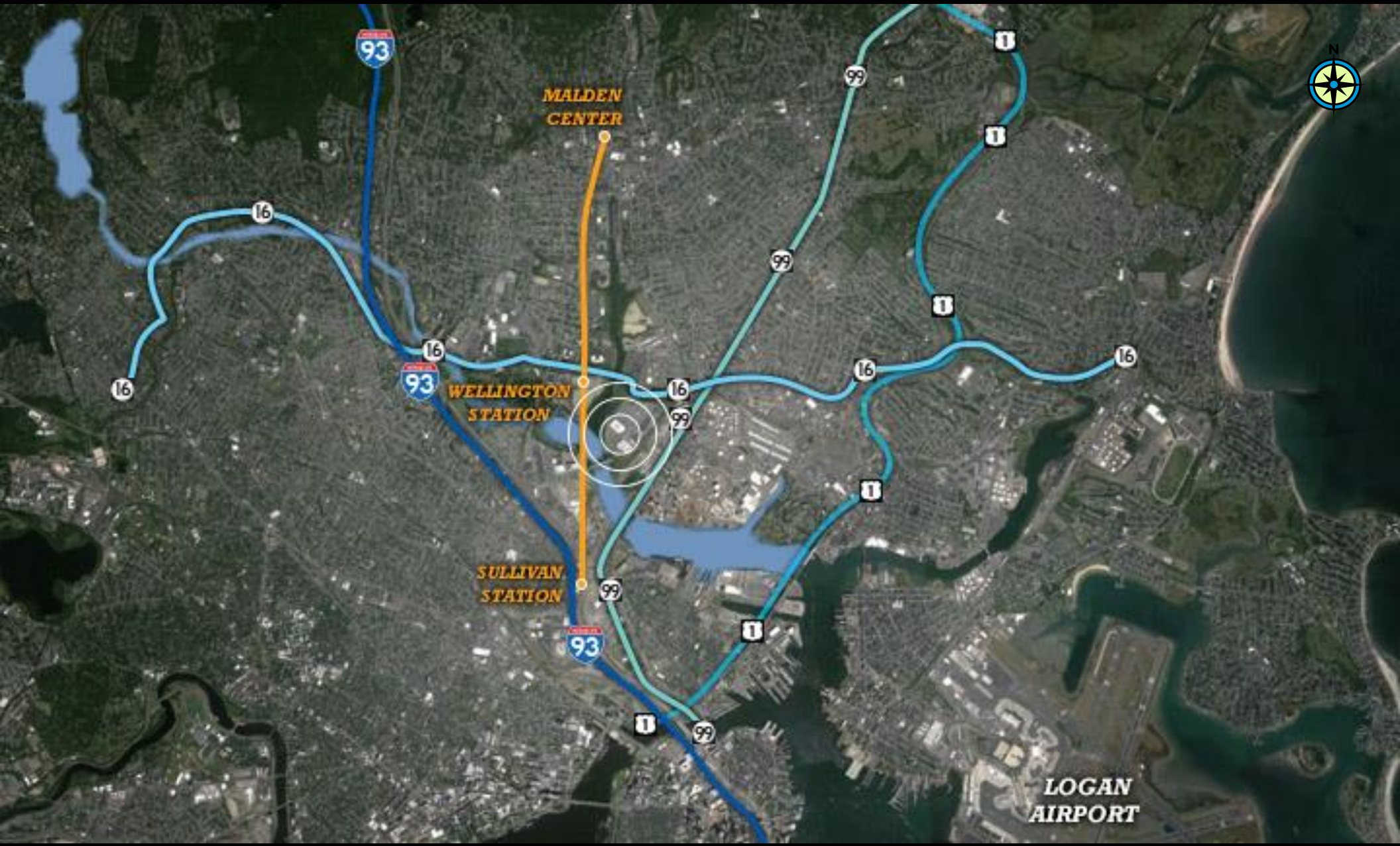
Wynn Everett Transportation Plan

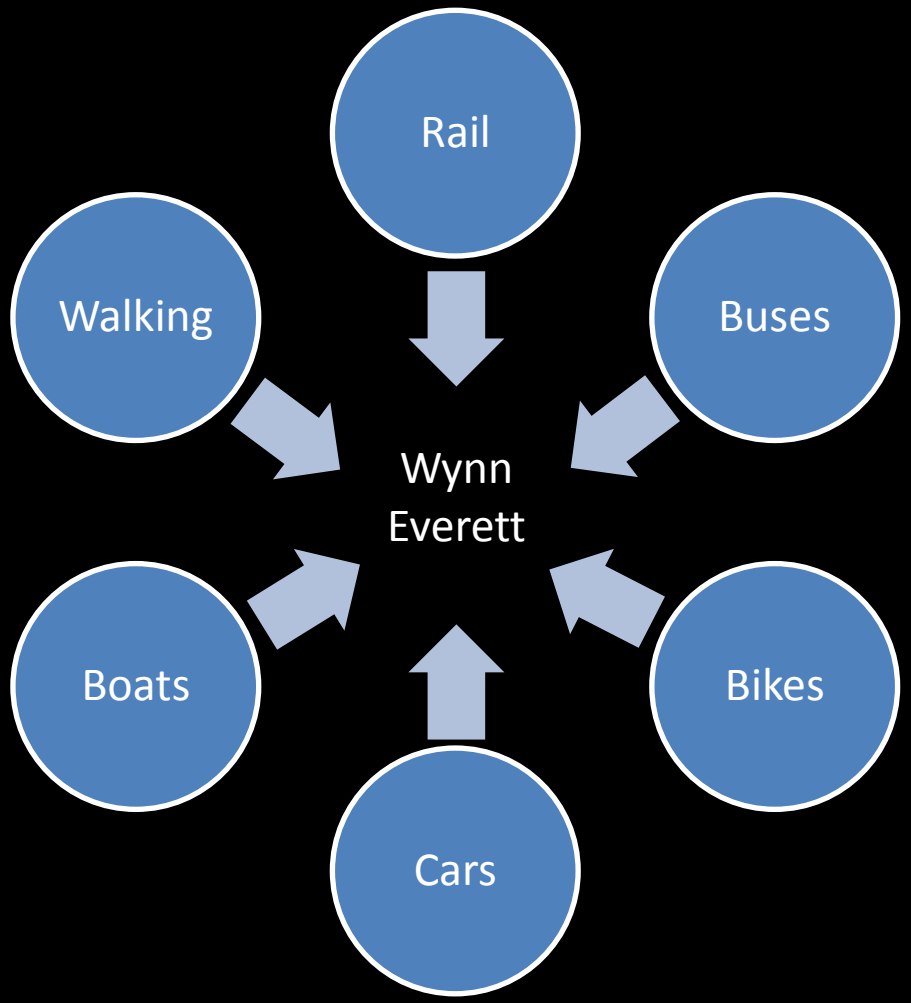
June 20, 2014

Overview

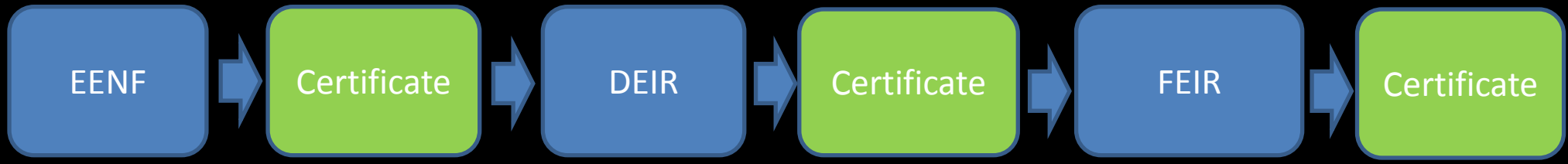
Ideal Location in Regional Transportation Network



Holistic, Multi-Modal, Sustainable Transportation Strategy



MEPA TimeLine



- Expanded Environmental Notification Form (EENF), filed May 31, 2013
- Secretary's Certificate on EENF and scope of DEIR, issued on July 26, 2013
- Draft Environmental Impact Report (DEIR), filed December 16, 2013
- Secretary's Certificate on DEIR and scope of FEIR, issued on February 21, 2014
- FEIR filing June 30th—Secretary's Certificate anticipated by August 15, 2014

Chris Gordon, P.E.

- President, The Dirigo Group
  - International consulting practice focused on management of large capital projects
  - Example projects in Boston, Abu Dhabi, Saudi Arabia

- Senior Lecturer – Massachusetts Institute of Technology and Harvard Business School
  - 22 years of graduate school teaching on project delivery and development
  - Additional teaching in China, Argentina, UK, Peru, UAE

- Role on Wynn Everett Project
  - Development Manager – responsible for all aspects of onsite development

- Experience
  - Nearly 30 years of managing complex capital projects
  - Chief Operating Officer for Allston Development Group, the real estate development arm of Harvard University
  - Director of Capital Programs and Logan Modernization for the Massachusetts Port Authority
  - Consulting work throughout the world

Chris Gordon, P.E. (cont.)

- Education
  - Masters Degree in Civil Engineering, MIT
  - Bachelors Degree in Civil Engineering, University of Maine
  - Licensed Professional Engineer

- Awards & Recognition
  - 2001 Person of the Year for the Construction Management Association of America for both the New England region and the country
  - 2000 Government Engineer of the Year by the Boston Society of Civil Engineers
  - 2003 Manuel Carballo Governor's Award for Excellence in Public Service
  - Governor appointee as Co-Chair of the Special Commission on Public Construction Reform that, in 2004, resulted in landmark reform of all public construction laws in the Commonwealth.
  - Board member of the National Research Council's Board on Infrastructure and the Built Environment
  - Trustee of the Engineering Center Education Trust, a corresponding editor of the American Society of Civil Engineers *Engineering Management Journal,* and has been a speaker at numerous conferences.

Keri Pyke, P.E., PTOE

Summary of Qualifications

- B.S. in Civil Engineering, Rensselaer Polytechnic Institute, 1993
- Registered Professional Engineer in MA, CT, NY, RI, NH, NC
- Certified Professional Traffic Operations Engineer (PTOE) by the Institute of Transportation Engineers (ITE)
- Over 21 years' experience in traffic engineering and transportation planning

Representative Project Experience

- Seaport Square in South Boston
- Bulfinch Triangle development parcels, Boston
- Residences @ Malden Station, Malden
- East Milton Square Parking and Access Study, Milton
- EMC Westborough-Southborough Campus*
- Water Street Mills, Stonington, CT*
- I-93/I-95 Interchange Transportation Study, Woburn/Reading/Stoneham*

*completed while at another firm

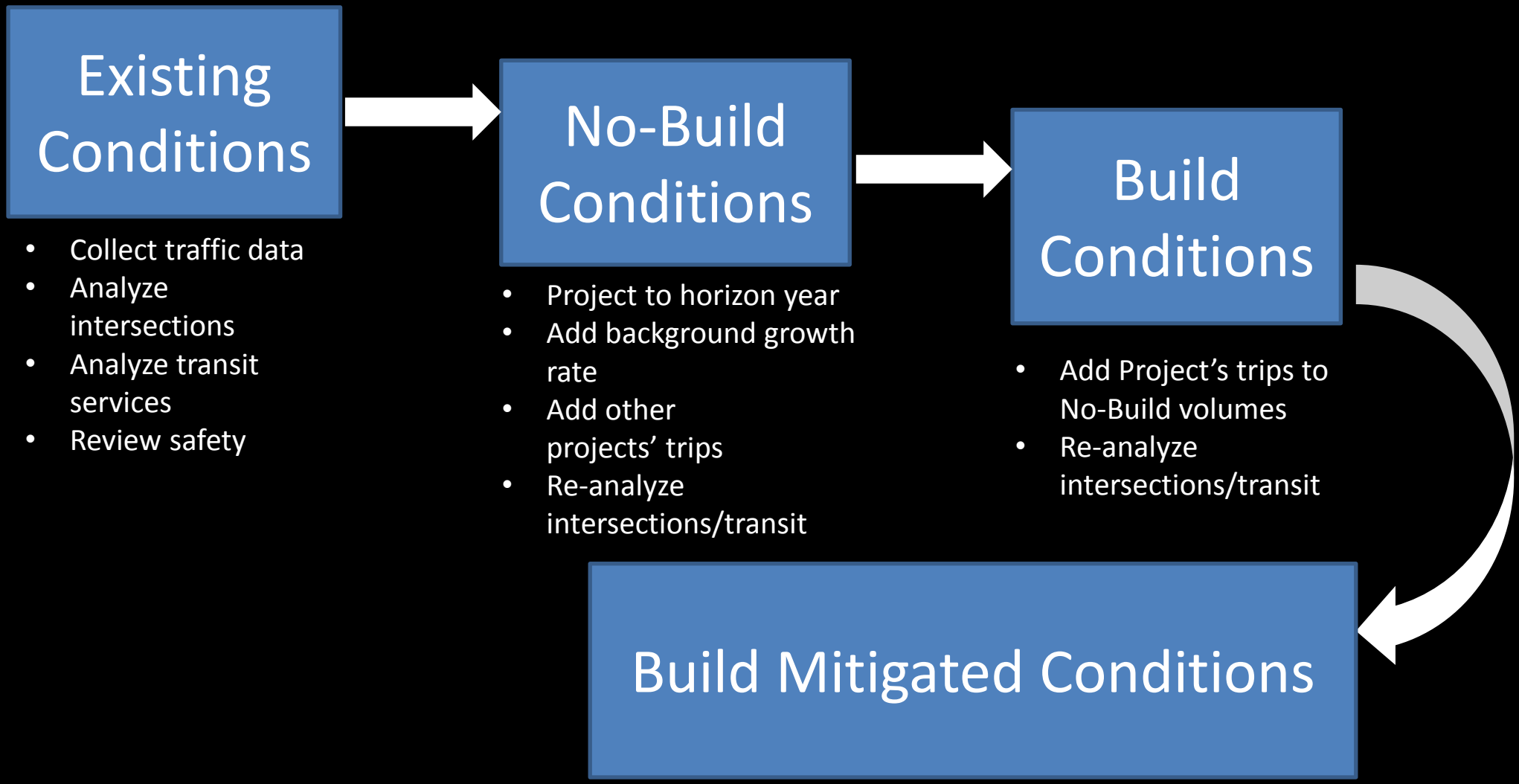
Transportation Analysis

Transportation Analysis

- Traffic impact analysis focuses on intersections; they are the most constrained element of the transportation system
- Primary measure of effectiveness (MOE) = Level of Service (LOS)
- In urban areas, LOS D is considered acceptable.

Signalized Intersections	
Level of Service	Average Delay (Seconds)
A	0-10
B	10-20
C	20-35
D	35-55
E	55-80
F	> 80

Transportation Analysis Steps

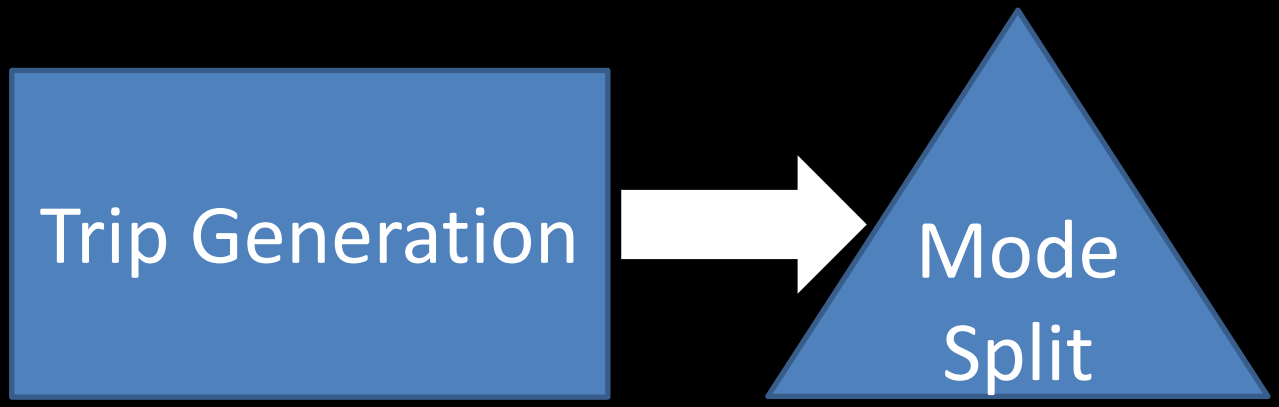


Trip Assignment Process

Trip Generation

- ITE's *Trip Generation Manual,* 9th edition, 2012
- Trips generated based on land use, usually floor area, can also be rooms/units or employees
- Trip rates vary by time period (daily, peak hour)
- No ITE data for gaming component; collected data at 6 other gaming facilities
- For a multi-use development, determine "captured" trips
- Credit for "pass-by" trips
- Sum all land uses to determine total vehicle trips

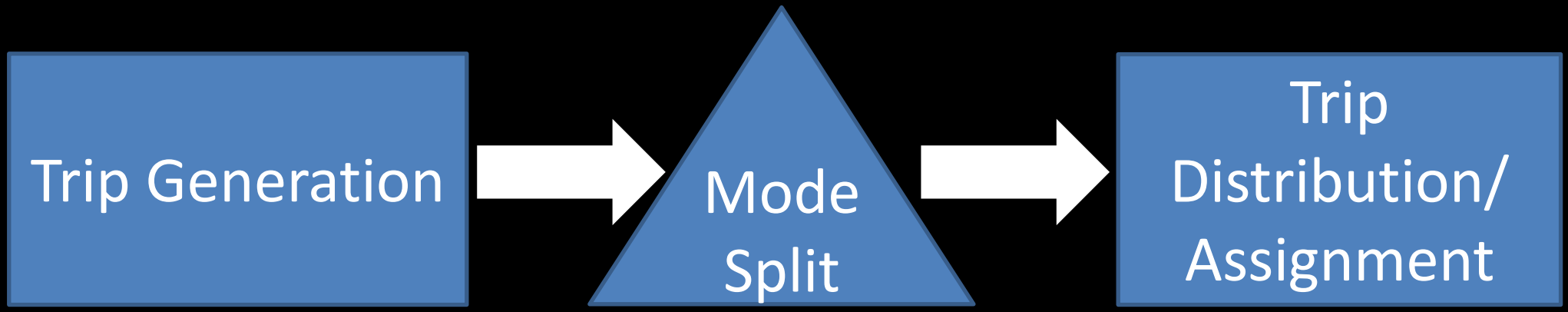
Trip Assignment Process



- Disaggregates vehicle trips to person trips
- VOR varies by type of trip (work, home, recreation, etc.) and by vehicle type
- Apply VOR to unadjusted vehicle trips
- Apply percentage by mode (auto/taxi, transit, tour bus, walk/bike, water shuttle, etc.)
- Mode split percentages based on U.S. Census data and TMG market analysis
- For modes that use autos or other non-transit vehicles, divide by VOR to convert person trips back to vehicle trips

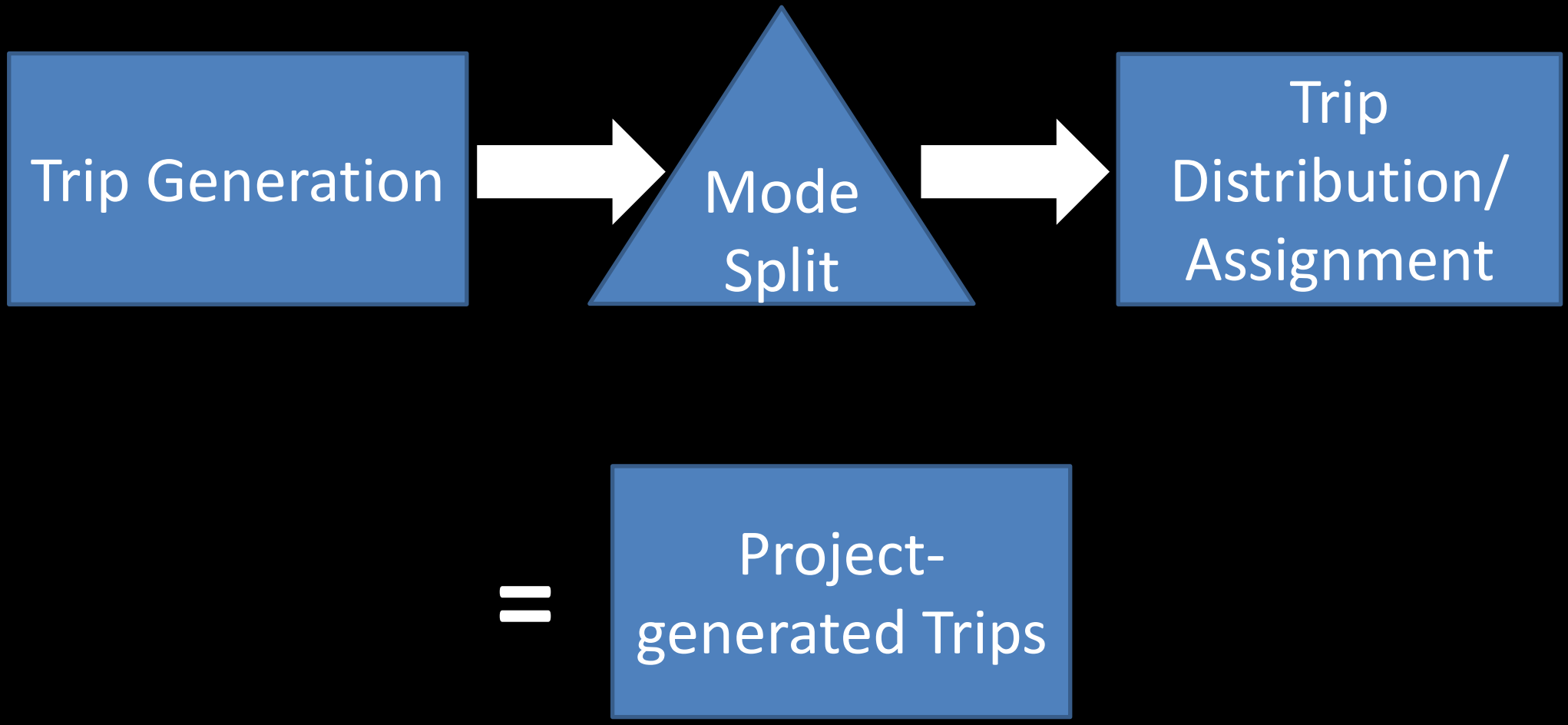
(total vehicle trips) x (VOR) x mode split (%) = person trips by mode
person trips /VOR = adjusted vehicle trips

Trip Assignment Process



- Assigns vehicle trips to the roadway network
- For patrons, based on TMG market study
- Patron trips assigned to Project site garage
- For employees, based on city/town populations within one hour's drive of the site
- Employee trips assigned to three off-site parking locations

Trip Assignment Process



MEPA

MA Environmental Protection Act

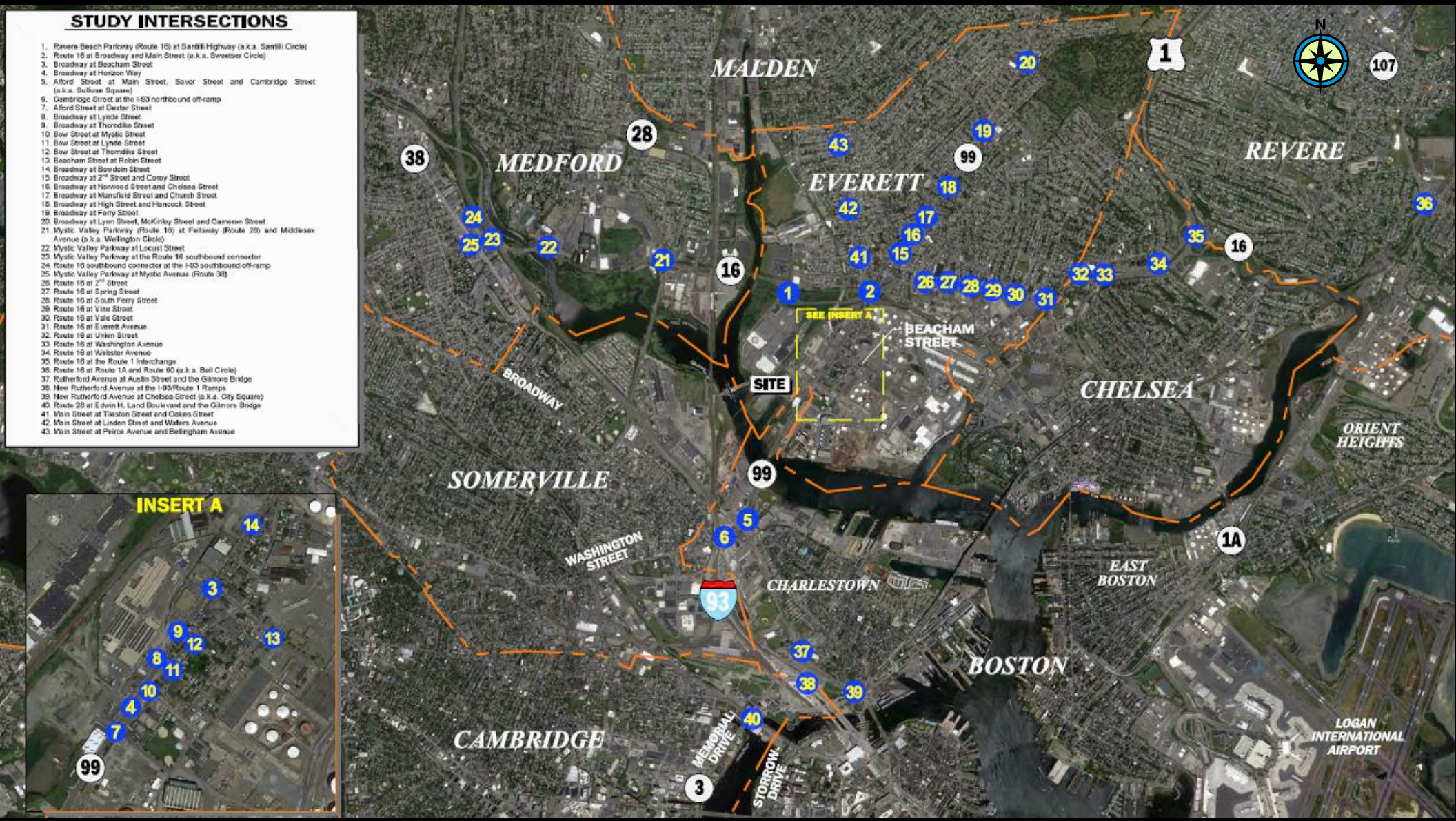
- Requires that state agencies and major projects involving state agencies study the environmental consequences of their actions.
- “Use all practicable means and measures to minimize damage to the environment," by studying alternatives to the proposed project, and developing enforceable mitigation commitments, which will become conditions for the project if and when they are permitted.
- It is NOT a permitting process
- It DOES include significant public participation, seeking comment from citizens, state, regional and local agencies.

EENF Transportation Analysis

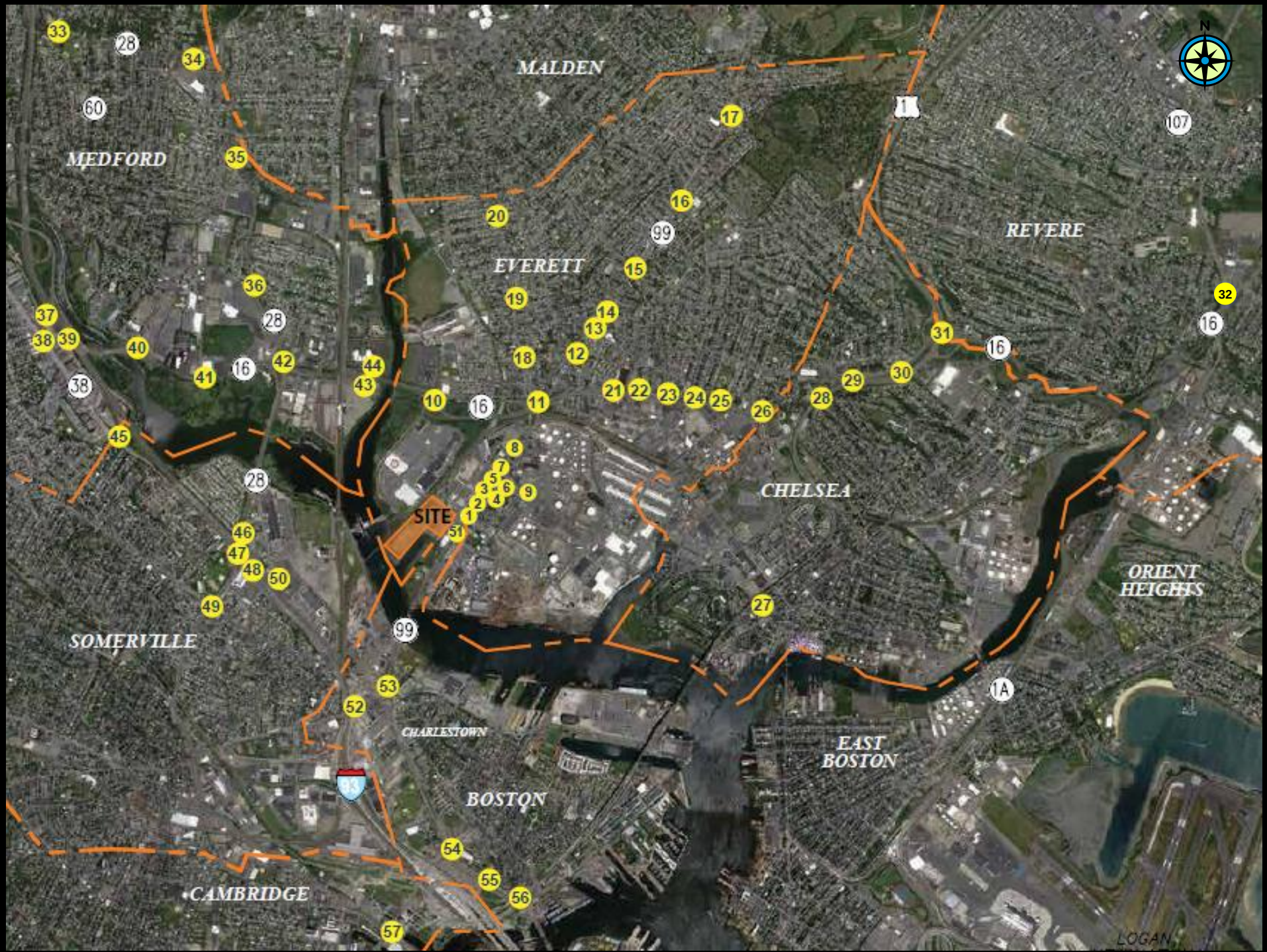
- Evaluated existing traffic volumes at 5 locations
- Summarized existing pedestrian, bicycle, and transit facilities
- Summarized future conditions analysis in DEIR
  - Future background traffic growth
  - Permitted projects to be included in No- Build case
  - Other transportation network improvements
- Initial estimates of project trip generation
- Proposed study area for DEIR (43 locations)
- Proposed recommended access to Project site
- Proposed TDM measures to reduce auto trips
- Proposed transportation mitigation

EENF Study Area

EENF – Proposed DEIR Study Area



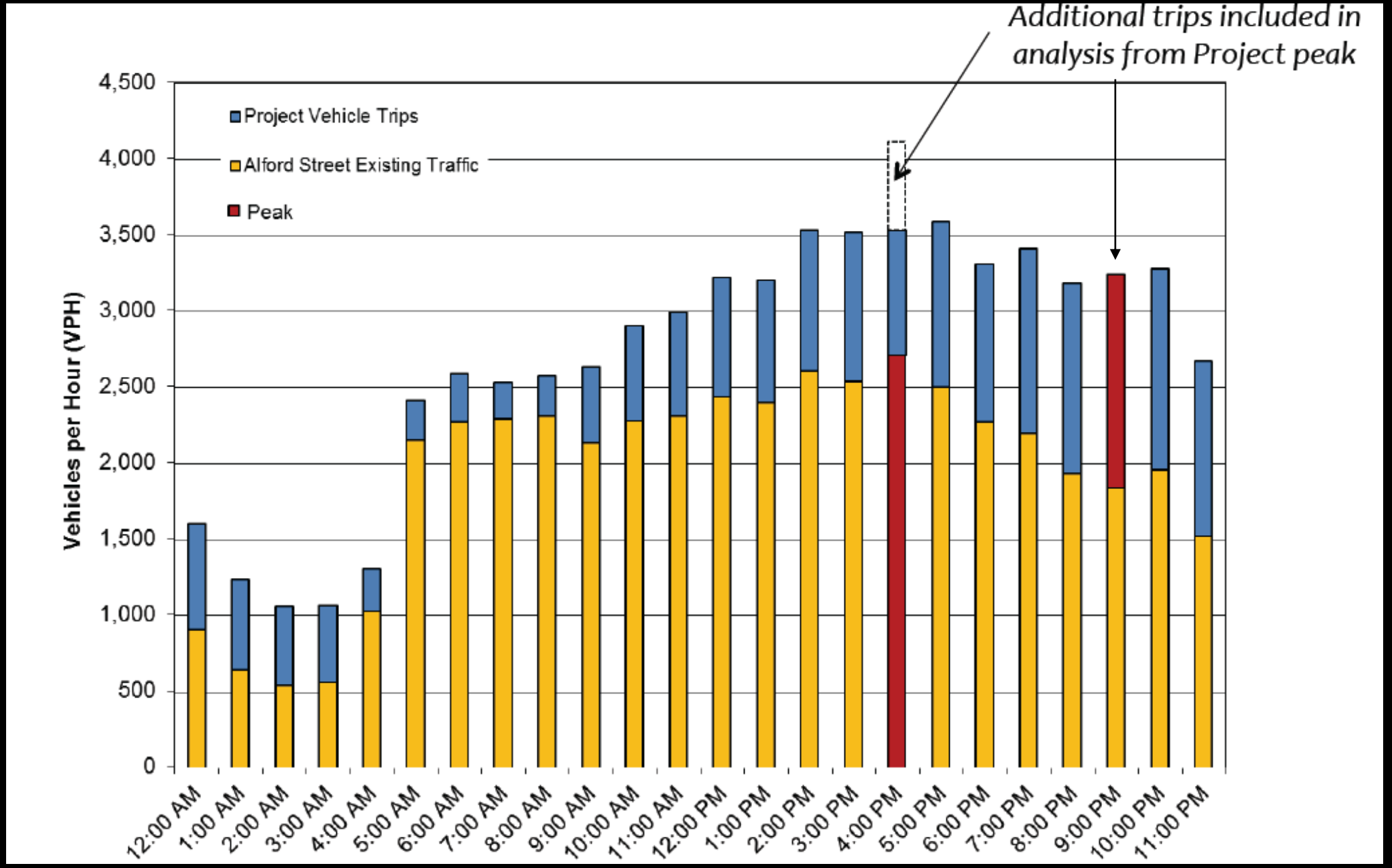
DEIR Study Area



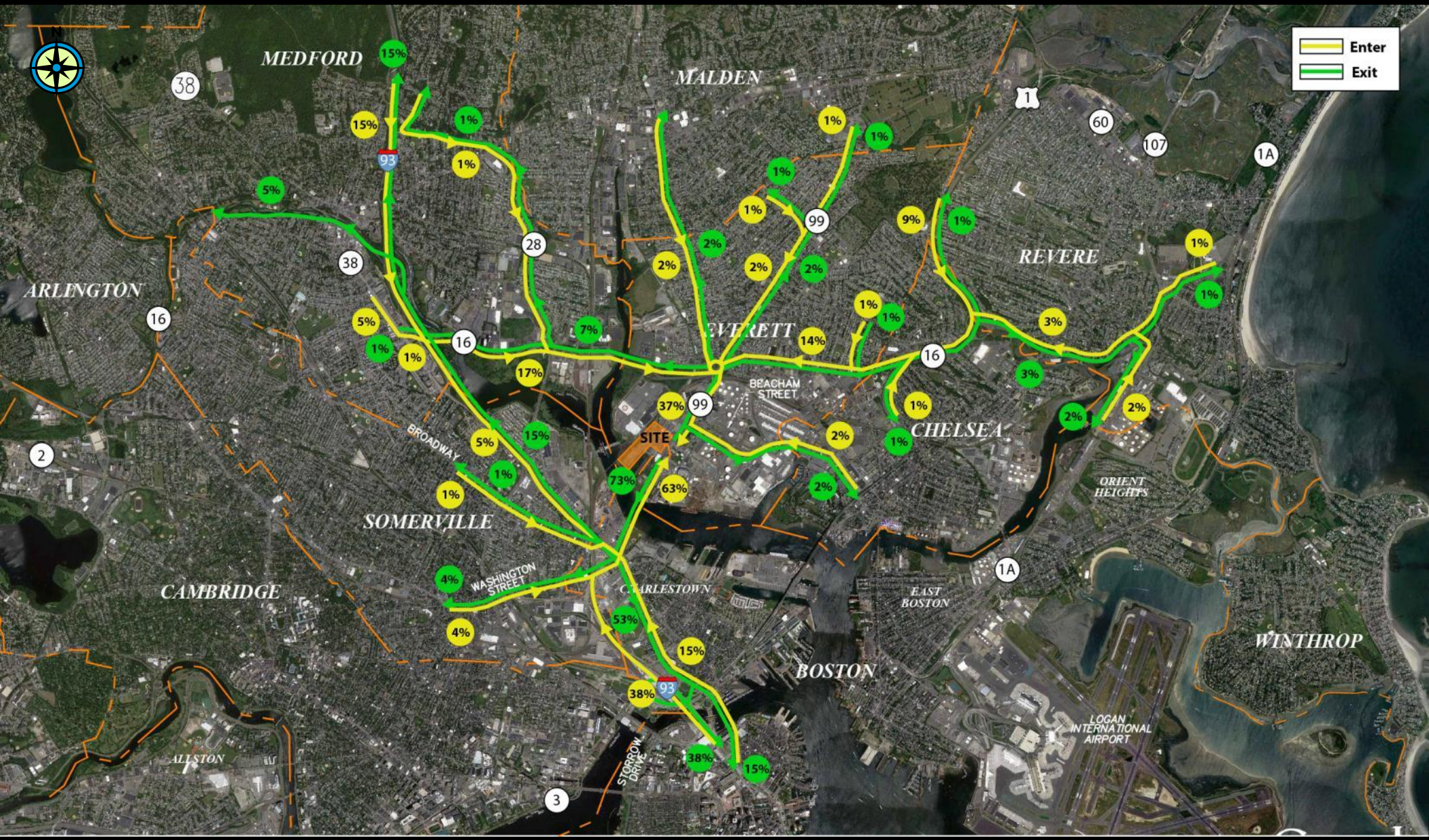
DEIR Transportation Analysis

- Analyzed intersection capacity at 57 locations (7 cities)
- Analyzed transit capacity for MBTA Orange Line and local bus service
- Prepared detailed Project trip generation
- Prepared detailed Project trip distribution
- Proposed recommended access to Project site
- Proposed TDM measures to reduce auto trips
- Proposed transportation mitigation

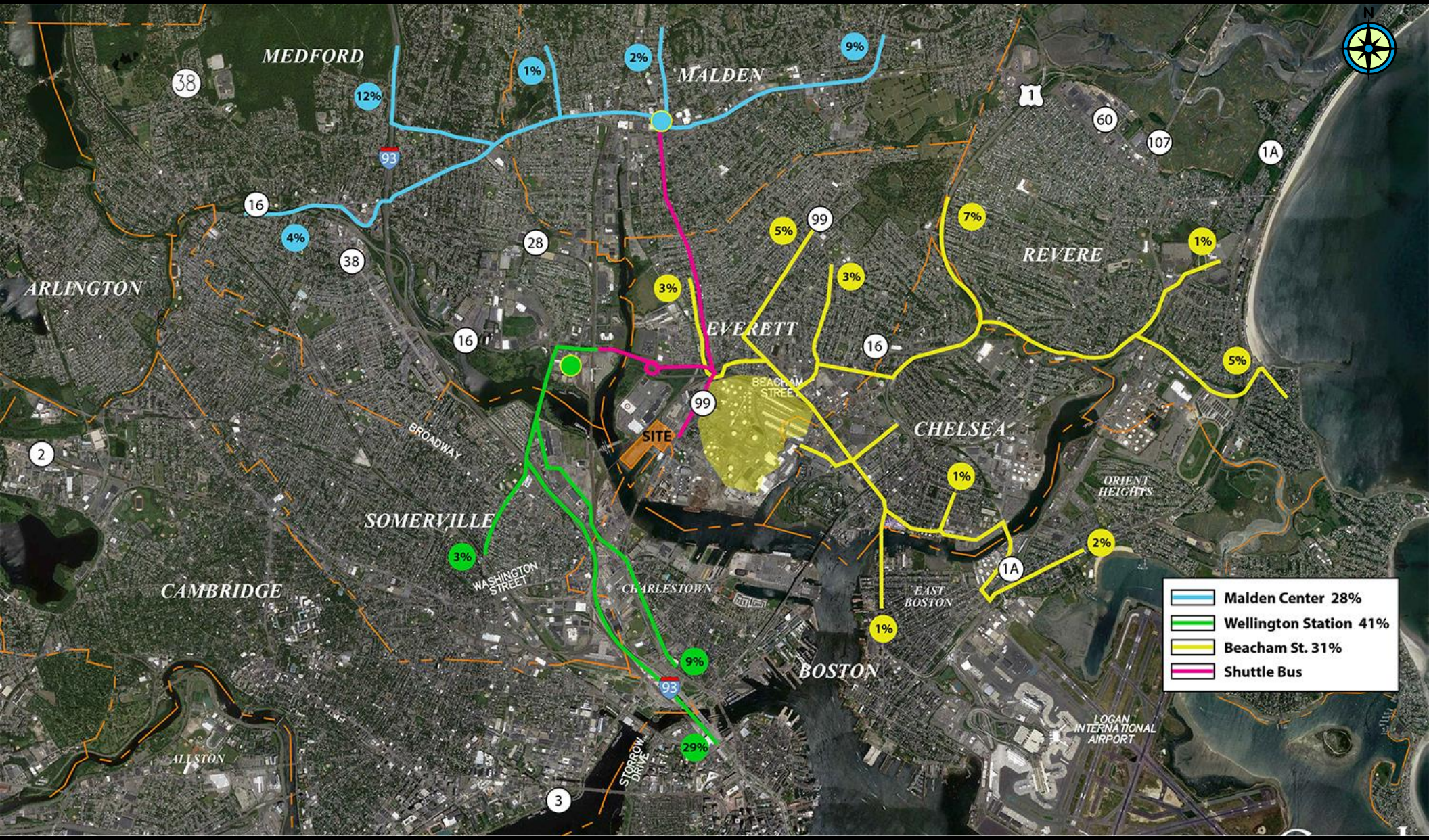
DEIR – Comparison of Roadway and Resort Friday Peak Hours



Trip Distribution – Patrons



Trip Distribution – Employees



DEIR and FEIR Travel Mode Shares

	DEIR		FEIR	
Travel Mode	Patrons	Employees	Patrons	Employees
Automobile				
Park on-site	69%	0%	63%	0%
Taxi	8%	0%	8%	0%
Park remotely (connect to employee shuttle)	0%	44%	0%	41%
Subtotal	77%	44%	71%	41%
Public Transportation				
Orange Line (connect to transit shuttle)	10%	20%	10%	20%
Local bus	0%	10%	0%	10%
Water transportation	3%	3%	6%	3%
Subtotal	13%	33%	16%	33%
Tour Bus	10%	0%	10%	0%
Premium Park and Ride	0%	0%	3%	3%
Walk/Bicycle	0%	3%	0%	3%
Neighborhood Employee Shuttle	0%	20%	0%	20%
Total	100%	100%	100%	100%

DEIR and FEIR Trip Summaries

		DEIR			FEIR		
		Patron Vehicle Trips	Employee Vehicle Trips	Total Vehicle Trips	Patron Vehicle Trips	Employee Vehicle Trips	Total Vehicle Trips
Friday Daily (vpd)	In	8,983	1,793	10,776	8,289	1,459	9,748
	Out	8,983	1,793	10,776	8,289	1,459	9,748
	Total	17,966	3,586	21,552	16,578	2,918	19,496
Friday p.m. Peak Hour (vph)	In	745	126	871	723	12	735
	Out	703	169	872	672	12	684
	Total	1,448	295	1,743	1,395	24	1,419
Saturday Daily (vpd)	In	10,656	2,072	12,728	10,354	1,817	12,171
	Out	10,656	2,072	12,728	10,354	1,817	12,171
	Total	21,312	4,144	25,456	20,708	3,634	24,342
Saturday Afternoon Peak Hour (vph)	In	880	148	1,028	880	135	1,015
	Out	836	177	1,013	824	114	938
	Total	1,716	325	2,041	1,704	249	1,953

Change in Friday p.m. Peak Hour Volumes

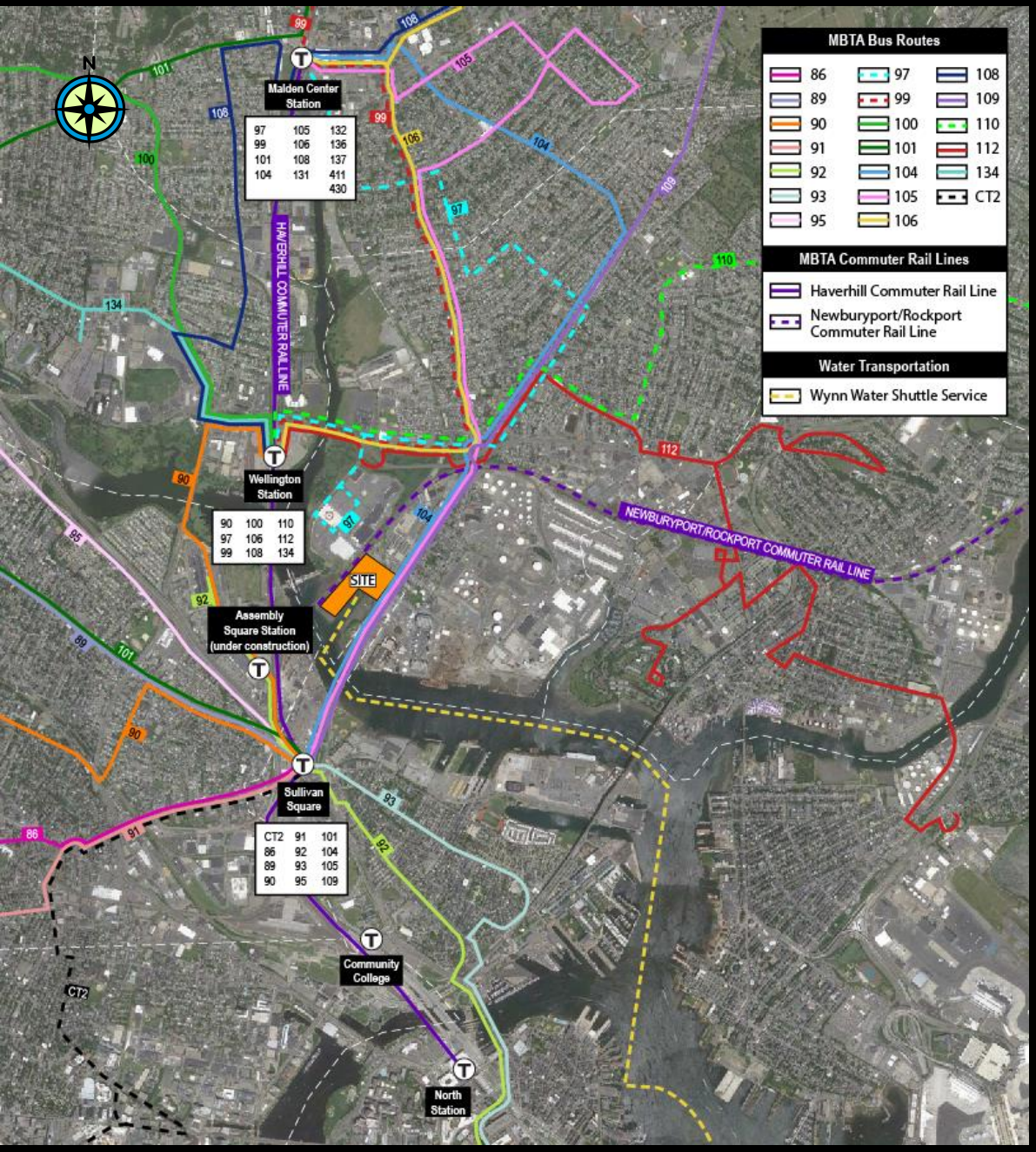
Location	Existing (2013) Volume (vph)	No-Build (2023) Volume (vph)	Project-generated Trips (vph)	Build (2023) Volume (vph)	Change in Volume Build to No-Build (%)
Alford Street (Route 99) Bridge, Charlestown	2,702	3,220	540	3,760	17%
Rutherford Avenue (Route 99), north of City Square, Charlestown	2,814	2,955	197	3,152	7%
Mystic Valley Parkway (Route 16), east of Wellington Circle, Medford	5,778	6,764	105	6,869	2%
Revere Beach Parkway (Route 16), east of Sweetser Circle, Everett	4,886	5,417	112	5,529	2%

Note: Friday p.m. peak hour of roadways is 4:30-5:30 p.m.
Wynn's peak hour occurs between 9:00-10:00 p.m. on a Friday night.

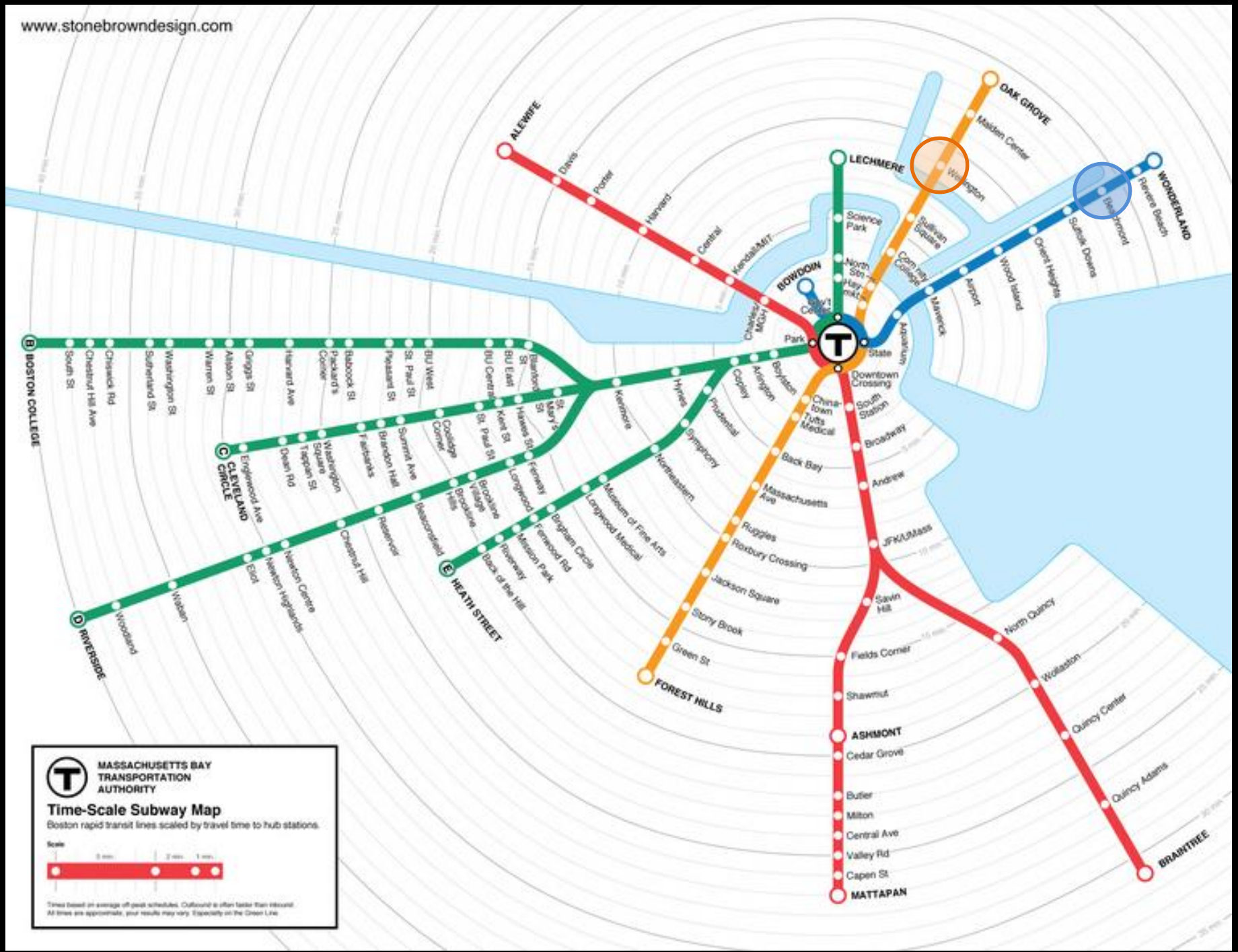
Transportation Plan

- Rail Connections
- MBTA Subway Connections
- Water Transportation
- Premium Park and Ride
- MBTA Local Bus
- Pedestrians and Cyclists
- Off-site Employee Parking
- Improved Roadway Network
- Transportation Demand Management (TDM)

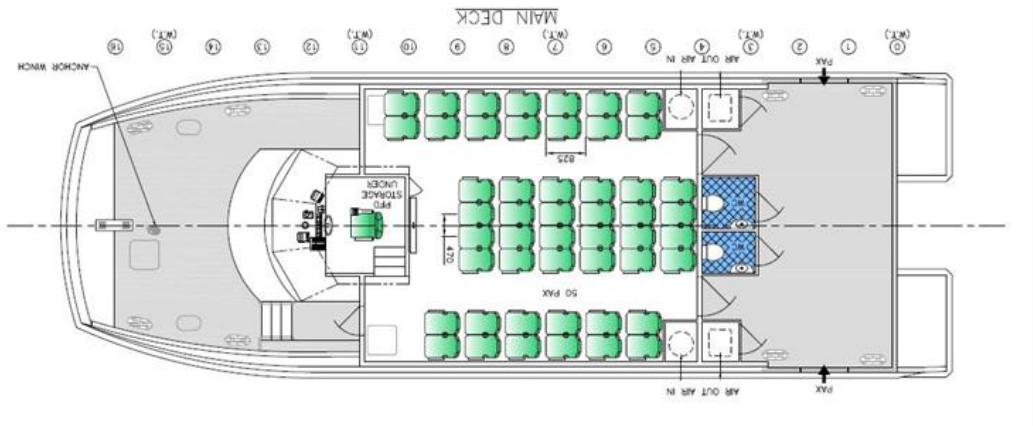
Rail Connections



MBTA Subway Connections

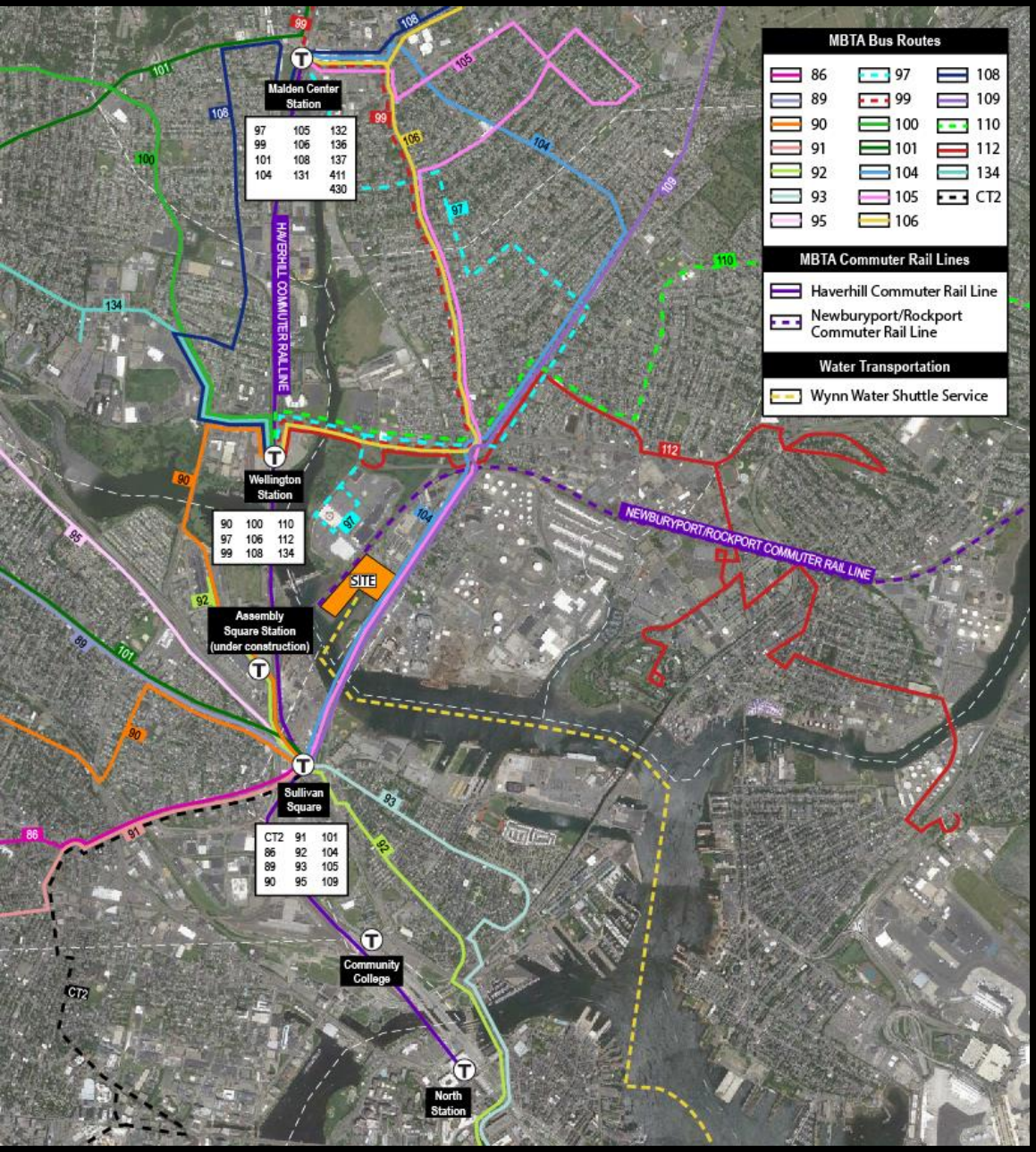


Water Transportation

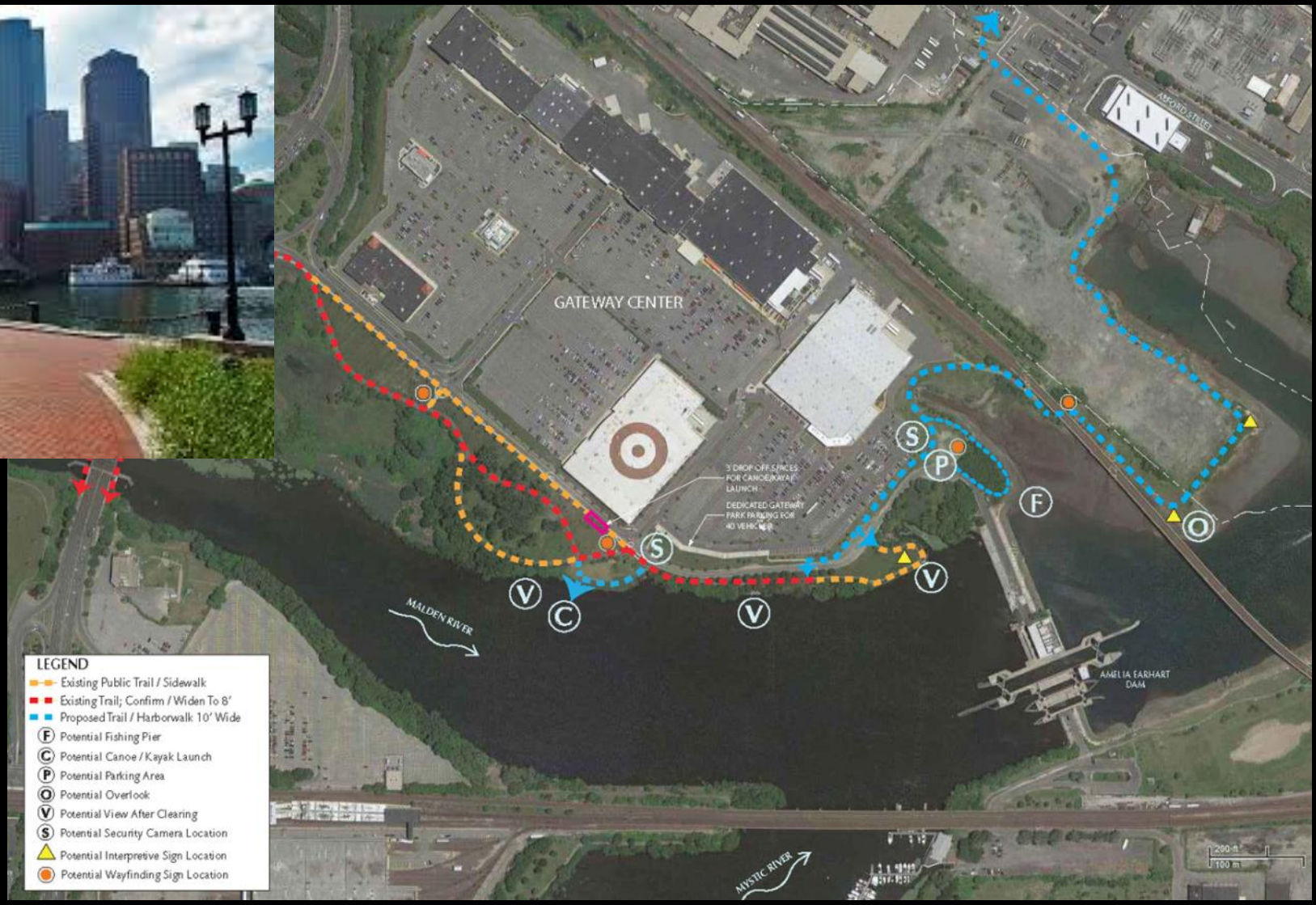


Premium Park and Ride

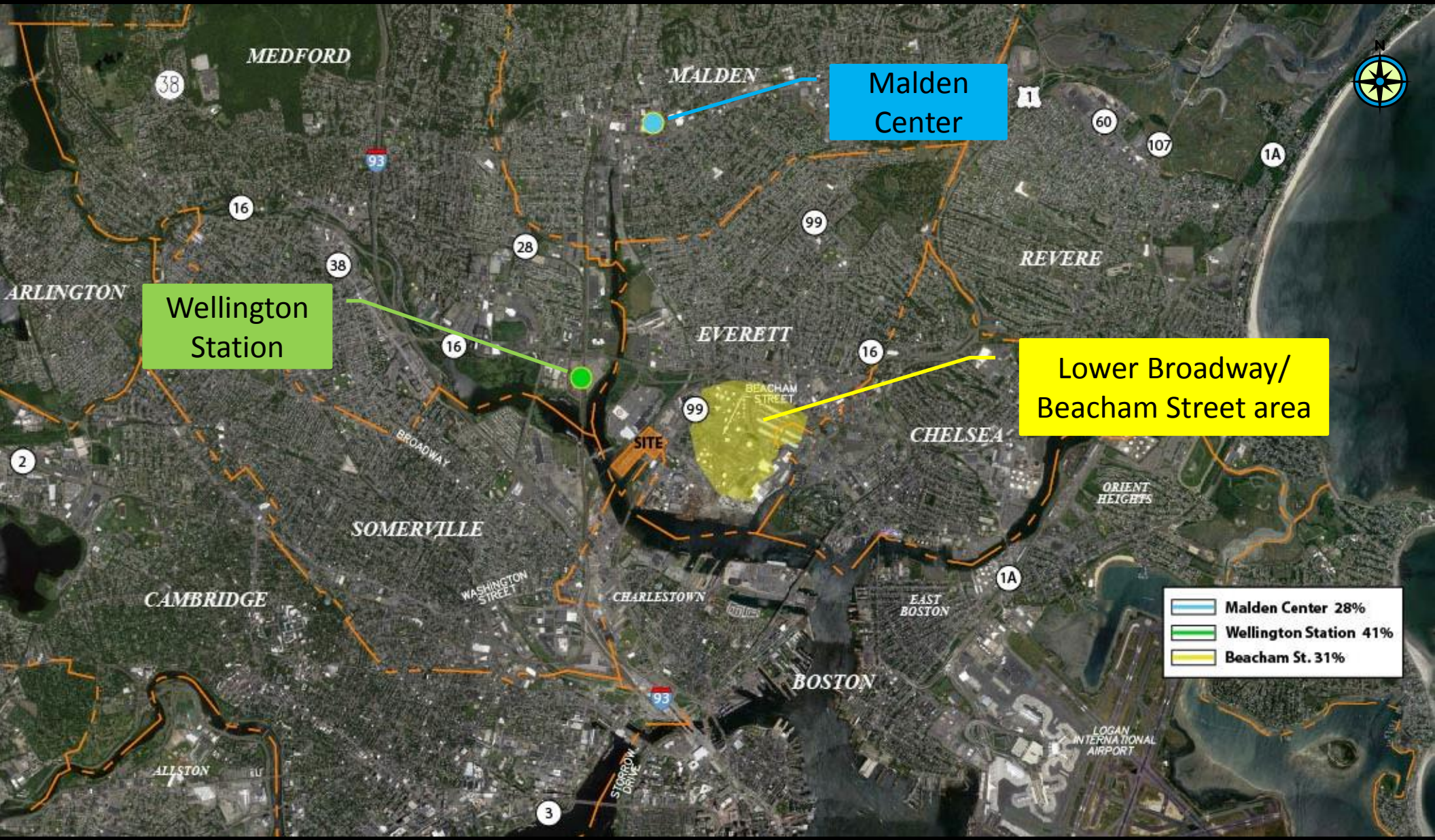
MBTA Local Bus



Pedestrians and Cyclists

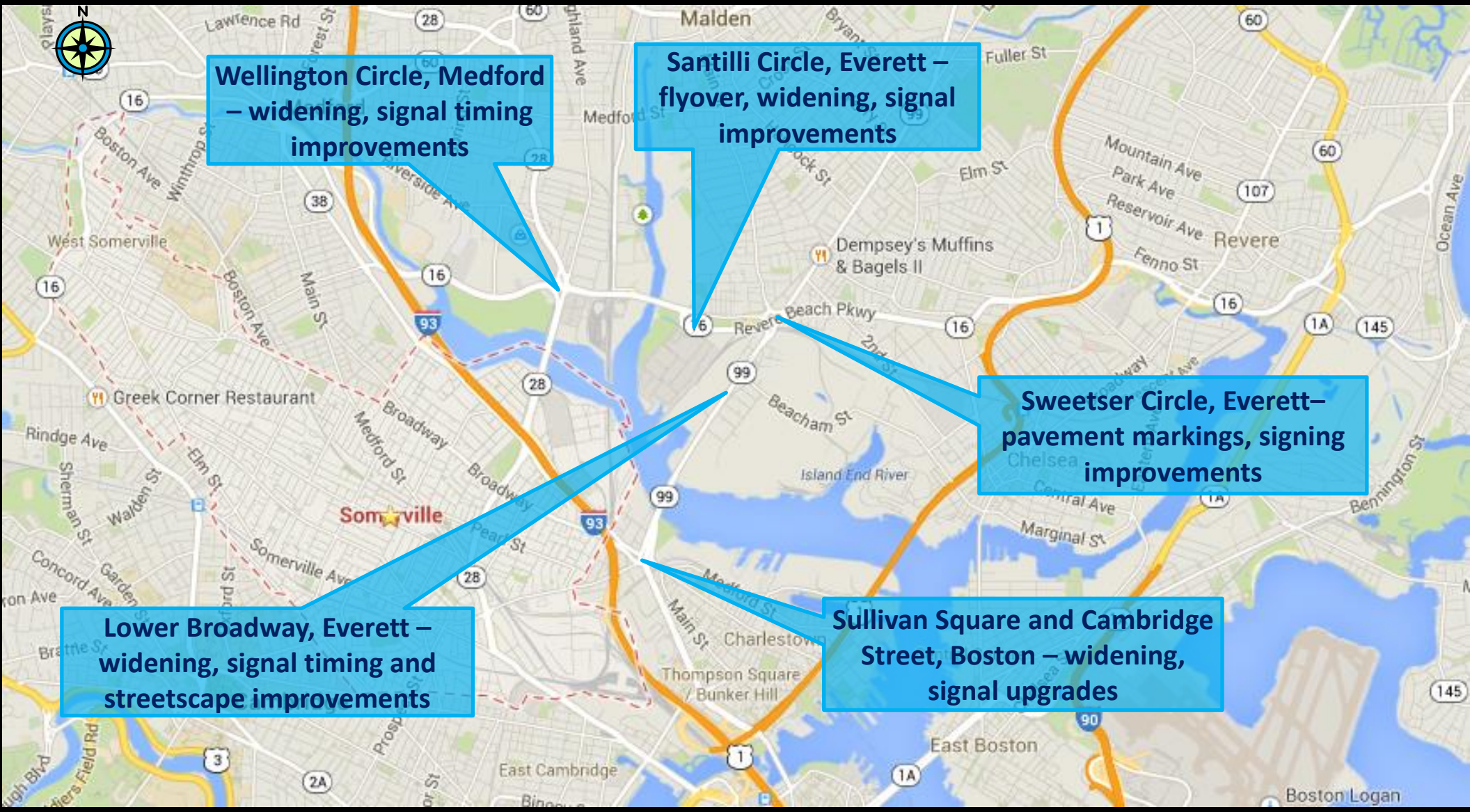


Off-site Employee Parking



Improved Roadway Network

Wynn's Proposed Transportation Improvement Plan
$50 Million

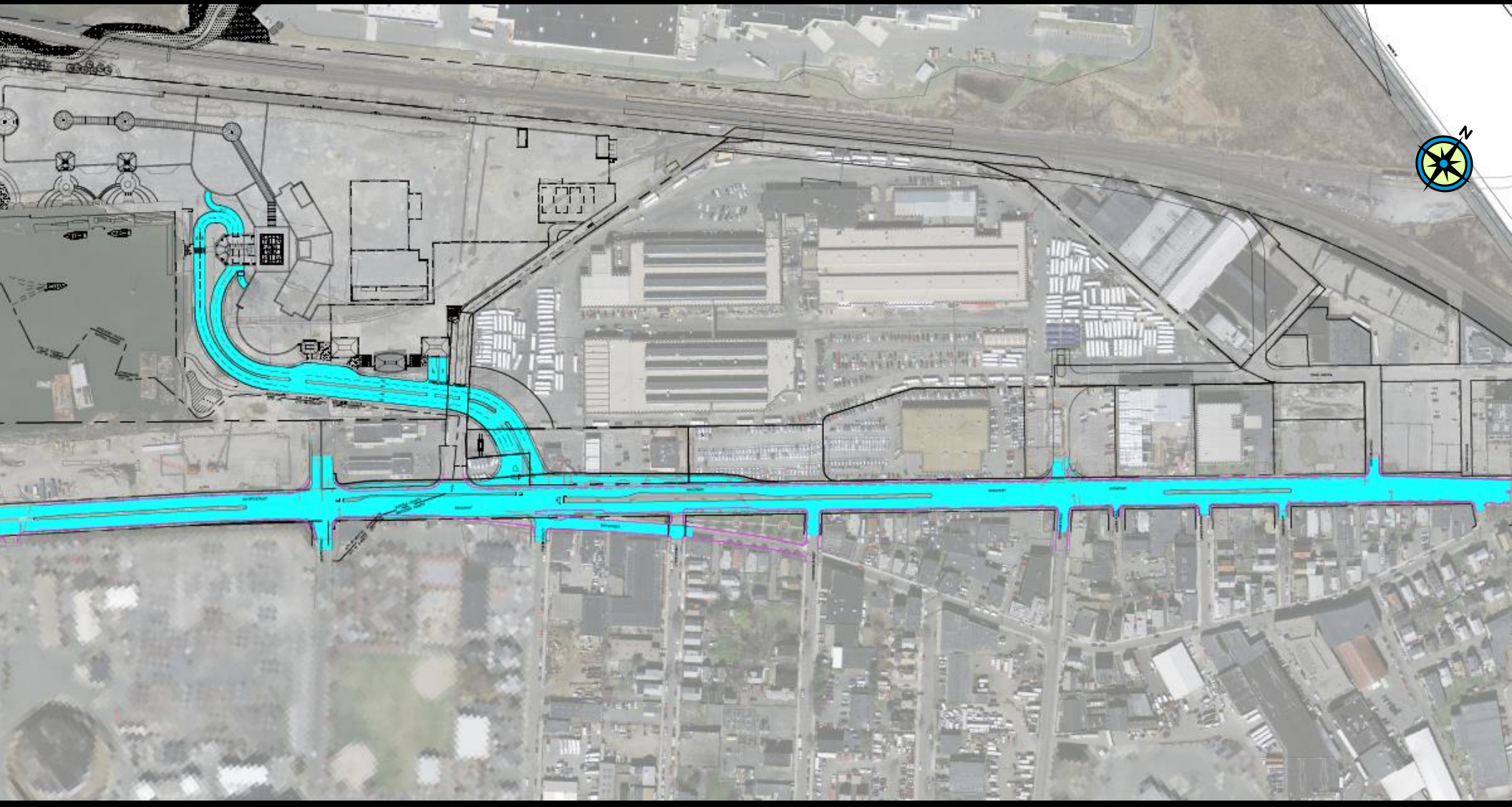


Comparison of Transportation Mitigation among Large Projects in the Commonwealth

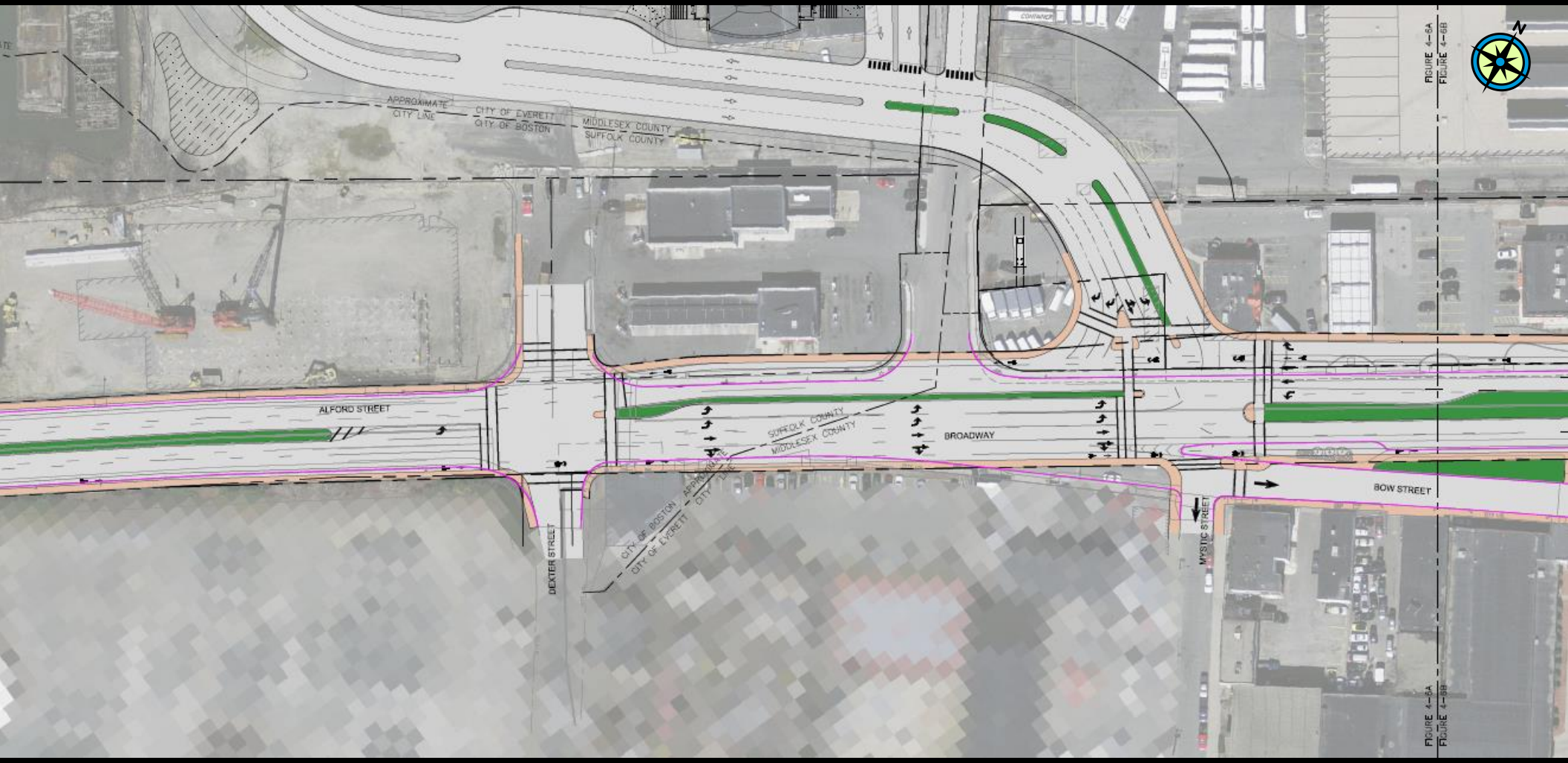
Location	Development Area (million square feet)	Developer's Transportation Mitigation ($ Millions)	Public Expenditure ($ Millions)
Seaport Square, South Boston	**6.3**	**31**	**0**
Assembly Row, Somerville	**5.7**	**20**	**(100)**
NorthPoint, Cambridge	**5.2**	**1**	**(120)**
Wynn Everett	**2.6**	**50**	**0**
Station Landing, Medford*	**1.1**	**5**	**0**

*Amount includes improvements to utility infrastructure and open space

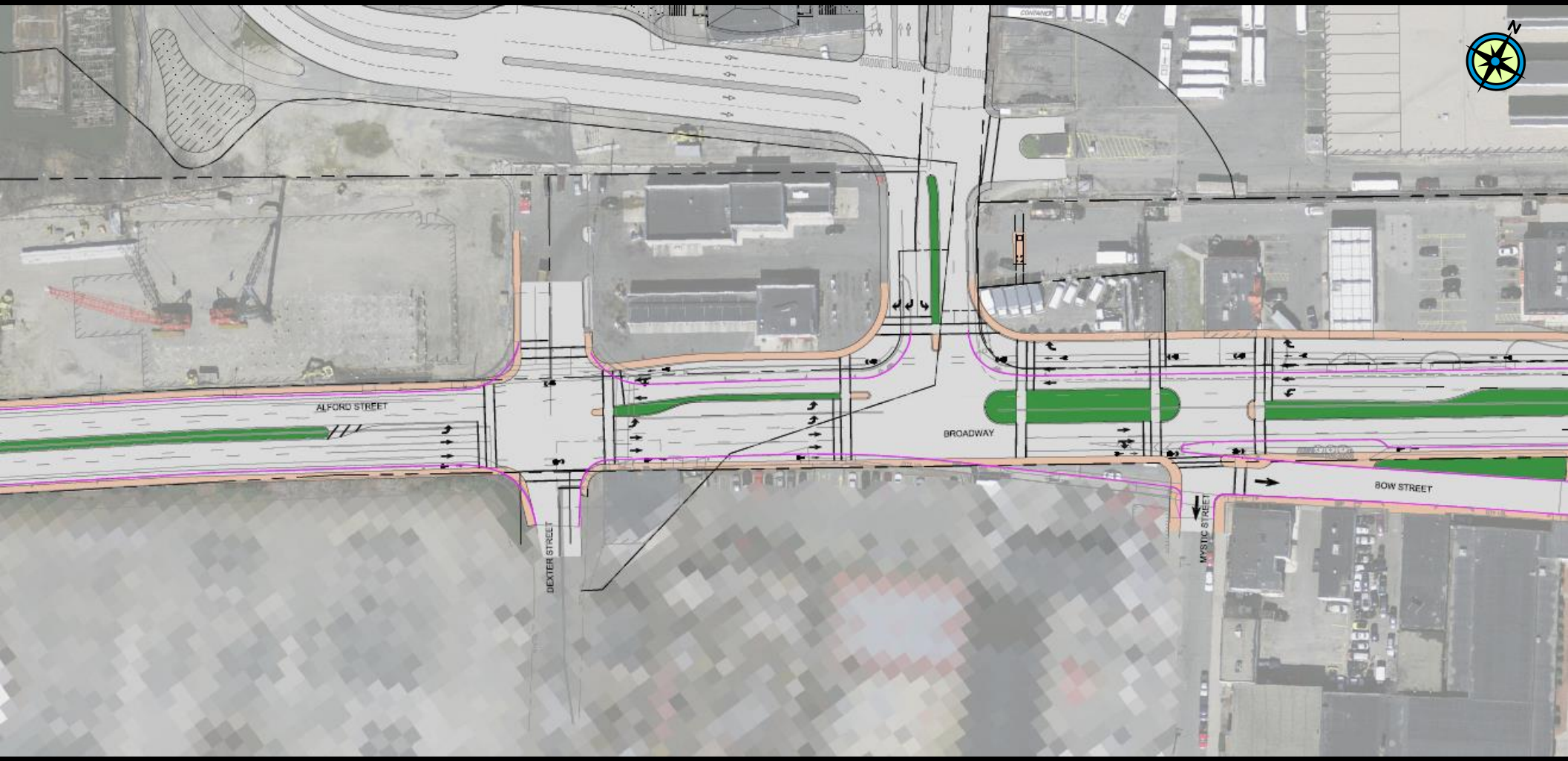
Lower Broadway Improvements



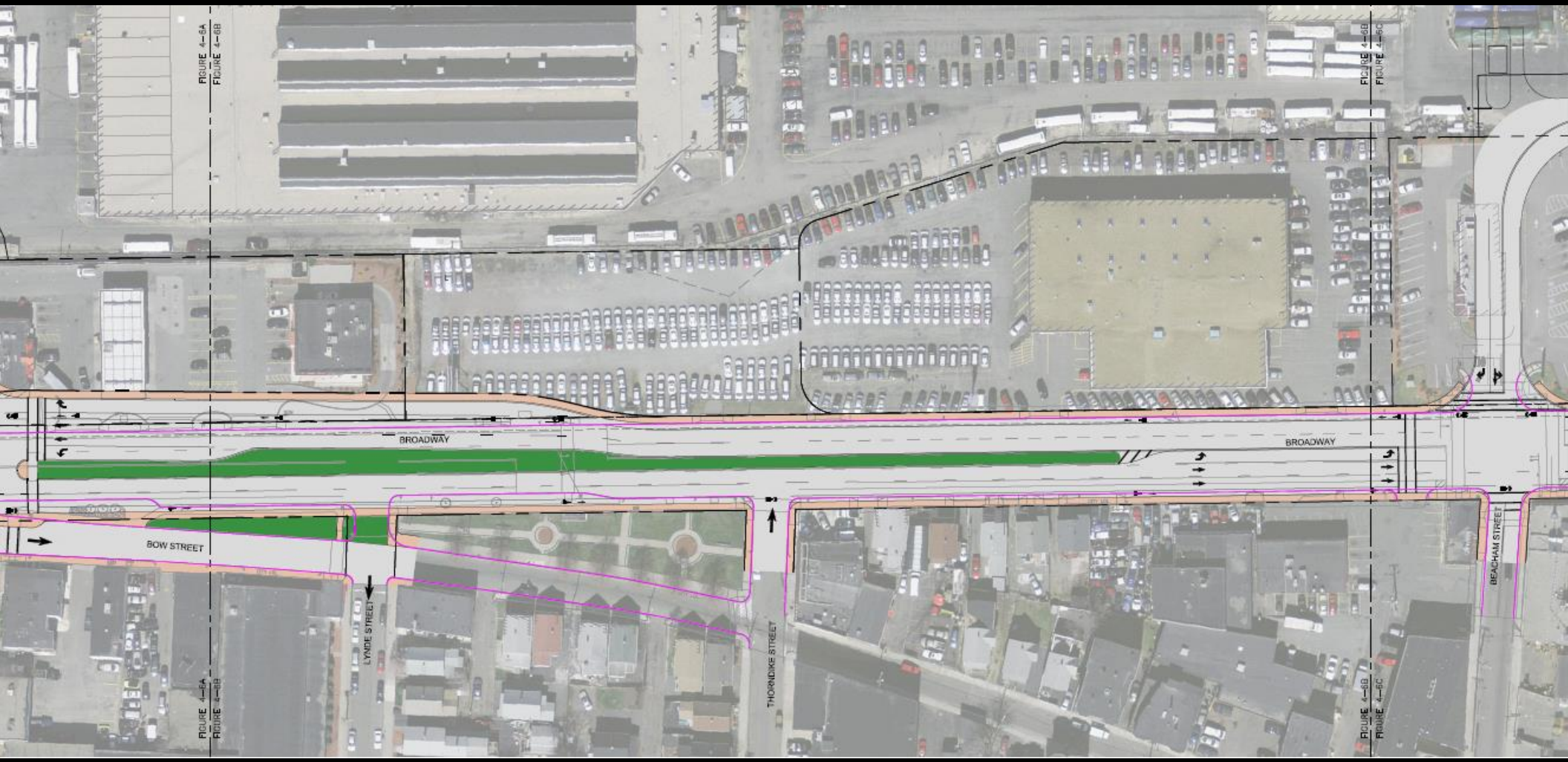
Lower Broadway Improvements
Preferred Site Access Plan



Lower Broadway Improvements
Alternate Site Access Plan

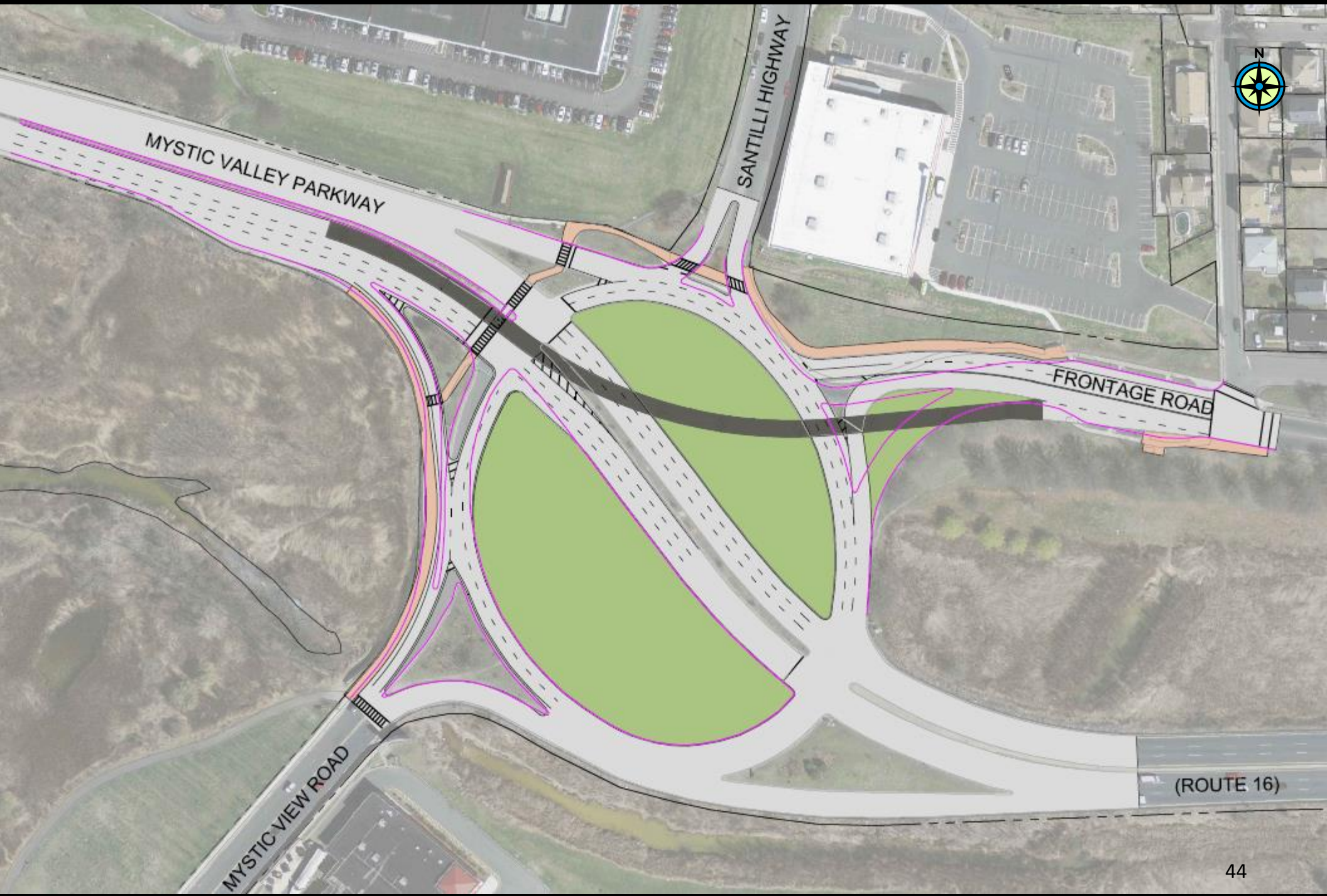


Lower Broadway Improvements

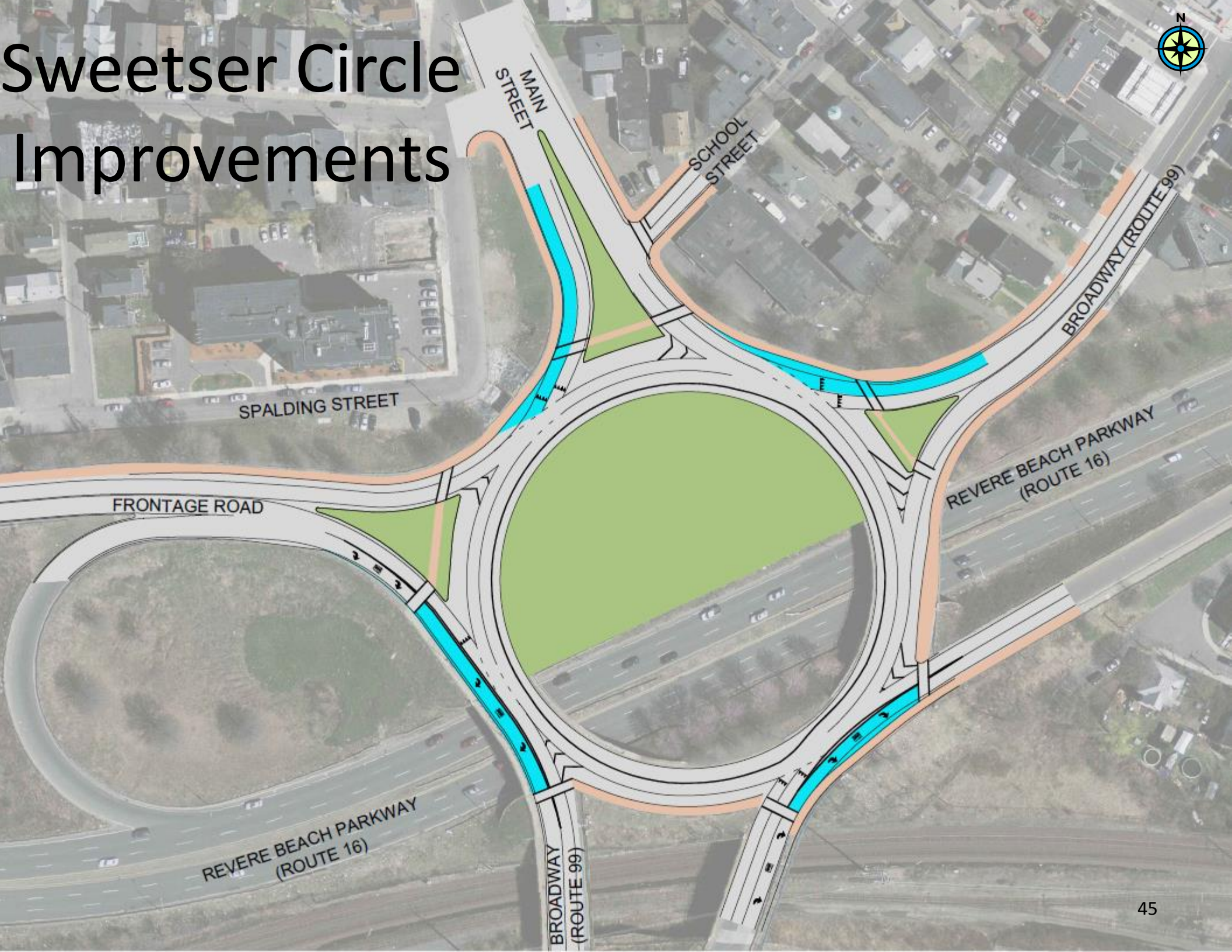


Lower Broadway Improvements

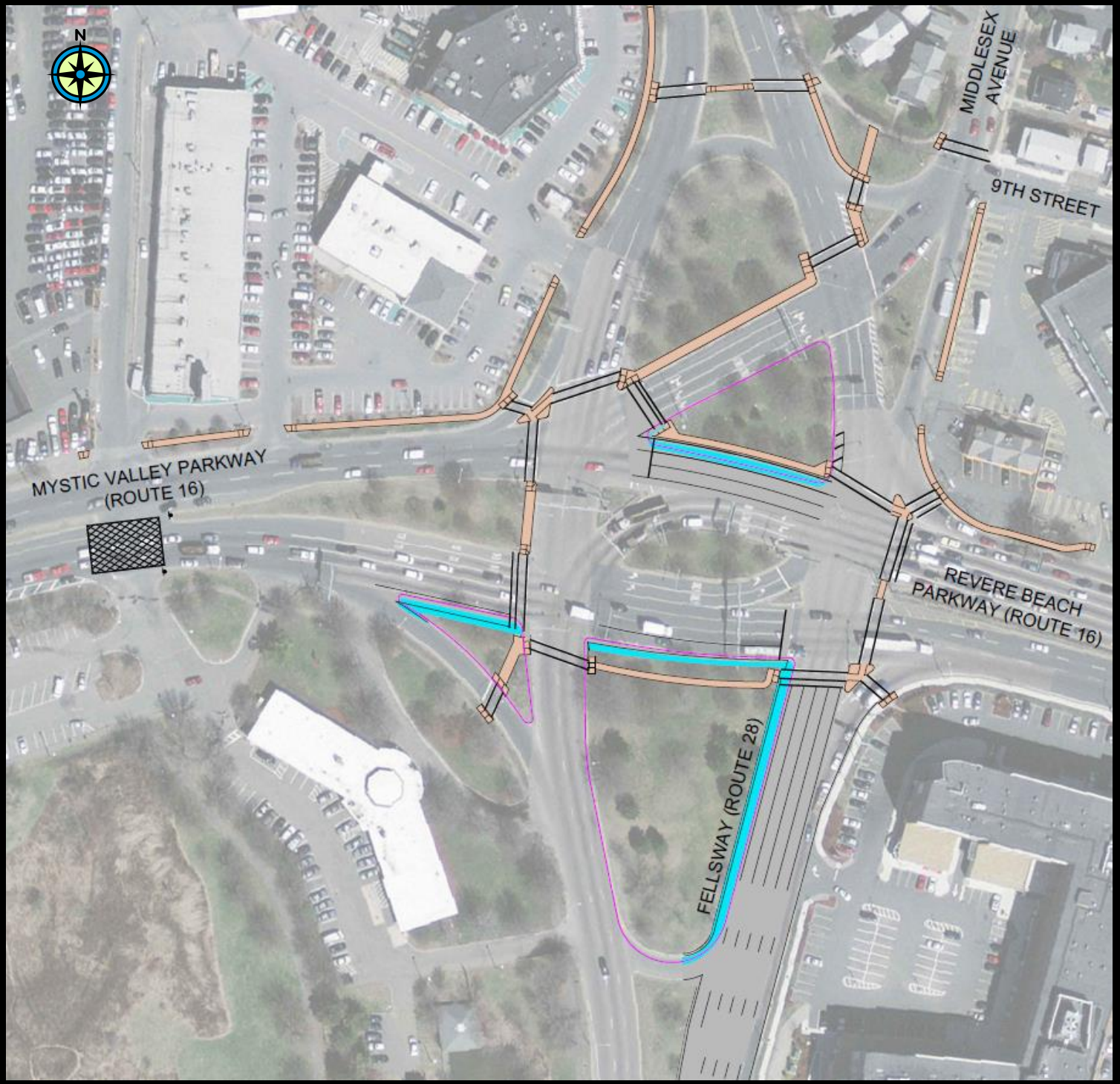
Santilli Circle Improvements

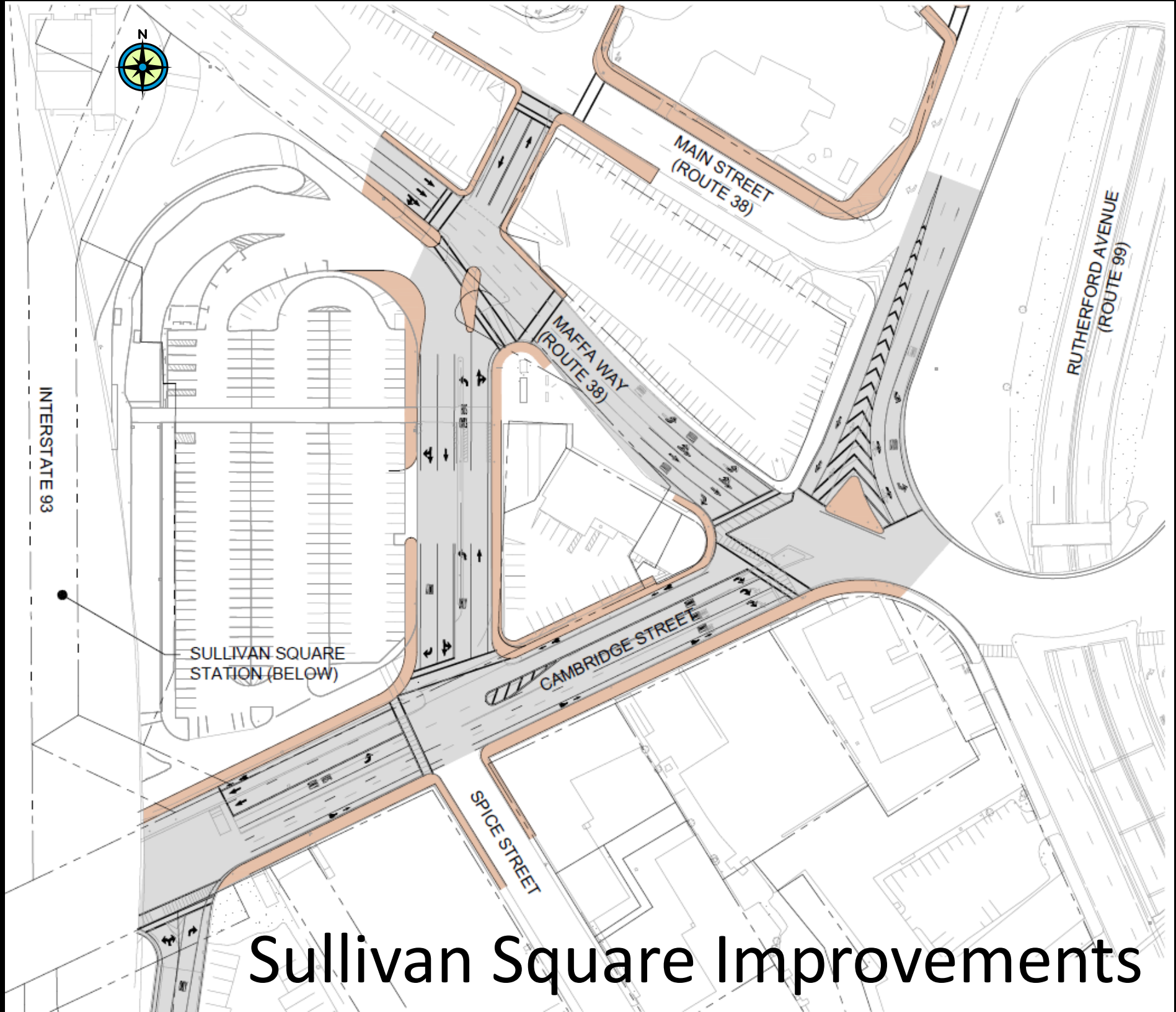


Sweetser Circle Improvements



Wellington Circle Improvements





Sullivan Square Improvements

Truck Loop - Everett

Transportation Demand Management

- Transportation coordinator on-site
- Guaranteed ride home
- Ride sharing program
- MBTA Charlie Cards provided for employees and sold on-site for guests
- Provide information regarding public transportation services to employees and guests
- ZipCar on-site
- Hubway bike share on-site
- Covered, secure bicycle parking in parking garage
- Electric vehicle charging stations in parking garage
- Employee and patron shuttles to Malden and Wellington stations
- Water shuttle to downtown Boston
- Aggressive marketing and incentive plans

Summary

- Comprehensive, exhaustive analysis
- Holistic, multi-modal approach
- All impacts mitigated
- On-going monitoring and refinements
- High performing transportation network