



Town of Marblehead

# Complete Streets Prioritization Plan



TOWN OF  
**MARBLEHEAD**  
MASSACHUSETTS



# Agenda

1. Introduction to Complete Streets Process
2. Benefits
3. Progress toward MassDOT Funding Program
4. Evaluation
5. Potential Project Prioritization
6. Next Steps







# Safety Moment

When driving, walking, or biking be considerate and watchful of ***all*** public road users.

- ***Always expect the unexpected.***
- ***Watch for movement*** all around you.
- ***When on the road stay alert,*** distracted driving, walking, or biking can be hazardous.



# Progress

- Town adopted and MassDOT approved policy, received funding for consultant & formed ad hoc Complete Streets Committee
- Committee has met 3 times & worked on more than 20 project options (minimum 15 for a MassDOT *priority chart*)
- Committee assessing a DRAFT priority chart w/goal to submit to MassDOT by end of March 2019.



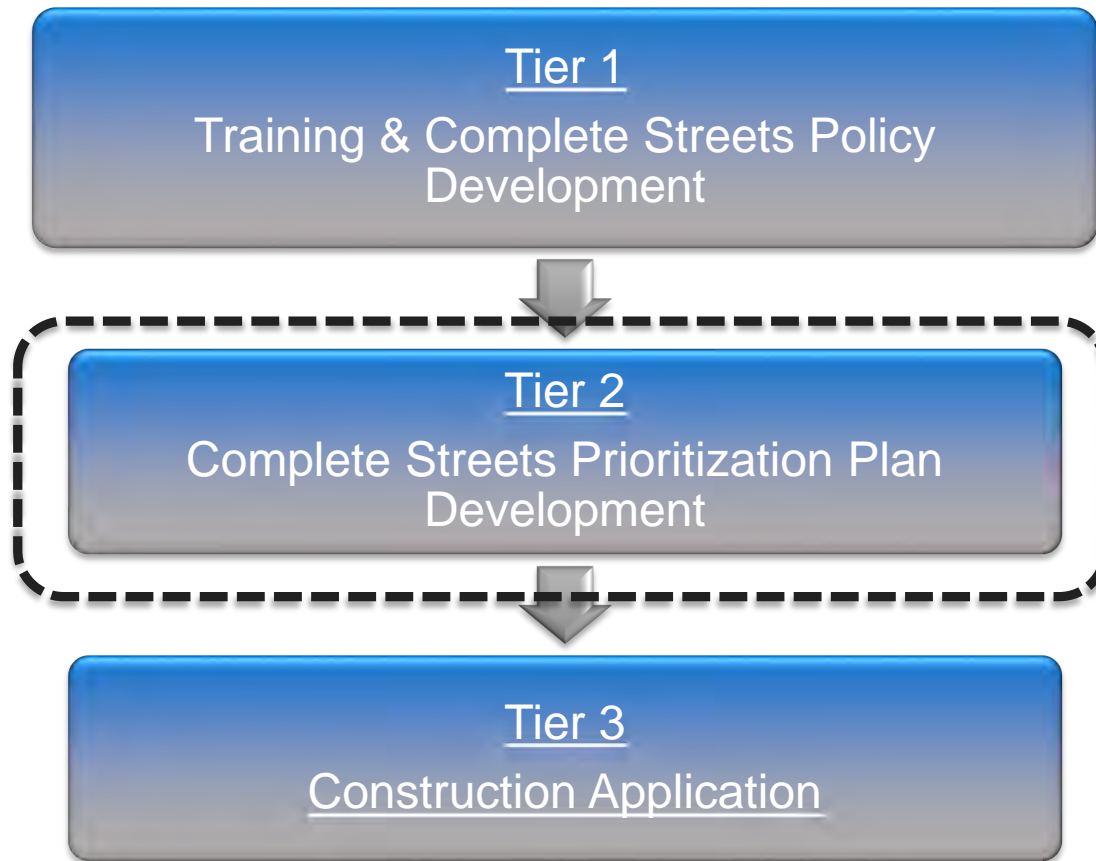
# Marblehead Complete Streets Committee:

Name	Title
Jason Silva	Town Administrator
Rebecca Curran Cutting	Town Planner
Judith R. Jacobi	Selectman
James E. Nye	Selectman
Arthur Graves	DPW Director
Peter James	Recreation & Parks Department Superintendent
Ed Lang	Disabilities Commission Representative
Maryann Perry	School Superintendent
Doug Jones	Design Review Representative
Robert O. Picariello	Chief of Police
Charles Quigley	Town Engineer
Felix Twaalhoven	Biking Community
David Kucharsky	Sustainable Marblehead
Stantec Consultant: Alan Cloutier Gary Hebert	Project Manager Advisor





# MassDOT Complete Streets Funding Eligibility – 3 Tier Process





# Tier FY19 Review Deadlines

## Tier 1 – Policy

Progress: Done, Marblehead completed and MassDOT approved on **February 20, 2018**,

## Tier 2 – Prioritization Plan due to MassDOT on or before **April 1, 2019**

Progress: Underway

## Tier 3 – Construction Applications

Progress: After Tier 2 priority plan is completed. Due on **May 1 and October 1, 2019**. Marblehead intends to submit funding request for 1-2 pf its highest priority applications this year. Other Priority list projects to be submitted in subsequent years. Priorities on list may shift over time.



# Tier 3 – Project Application

- Marblehead identifies projects from its Prioritization Plan for funding
- MassDOT review
- Marblehead enters into a contract with MassDOT for reimbursement
- Reimbursement process through District Aid office similar to Chapter 90



# What is a Complete Street?

## Complete Streets Defined:

**Complete streets** provide safe and accessible options not only for autos and truck drivers and their passengers, but for all users— pedestrians, bikers, bus riders, and – for people of all ages and physical abilities.

Complete Streets improvements may be large or small scale.



# Purpose of Complete Streets

To accommodate ALL people

- Pedestrians
- Transit
- Bicyclists
- Drivers
- Goods movement



# Benefits of Complete Streets

- Safety
- Equity
- Fitness and health
- Increase demand for environmentally-friendly modes
- Improved mobility for:
  - People with disabilities
  - Children and aging population





# Wide Range of Eligible types

- Multi-modal Safety
- Bicycle Enhancements
- Pedestrian Enhancements
- Transit Use Enhancements

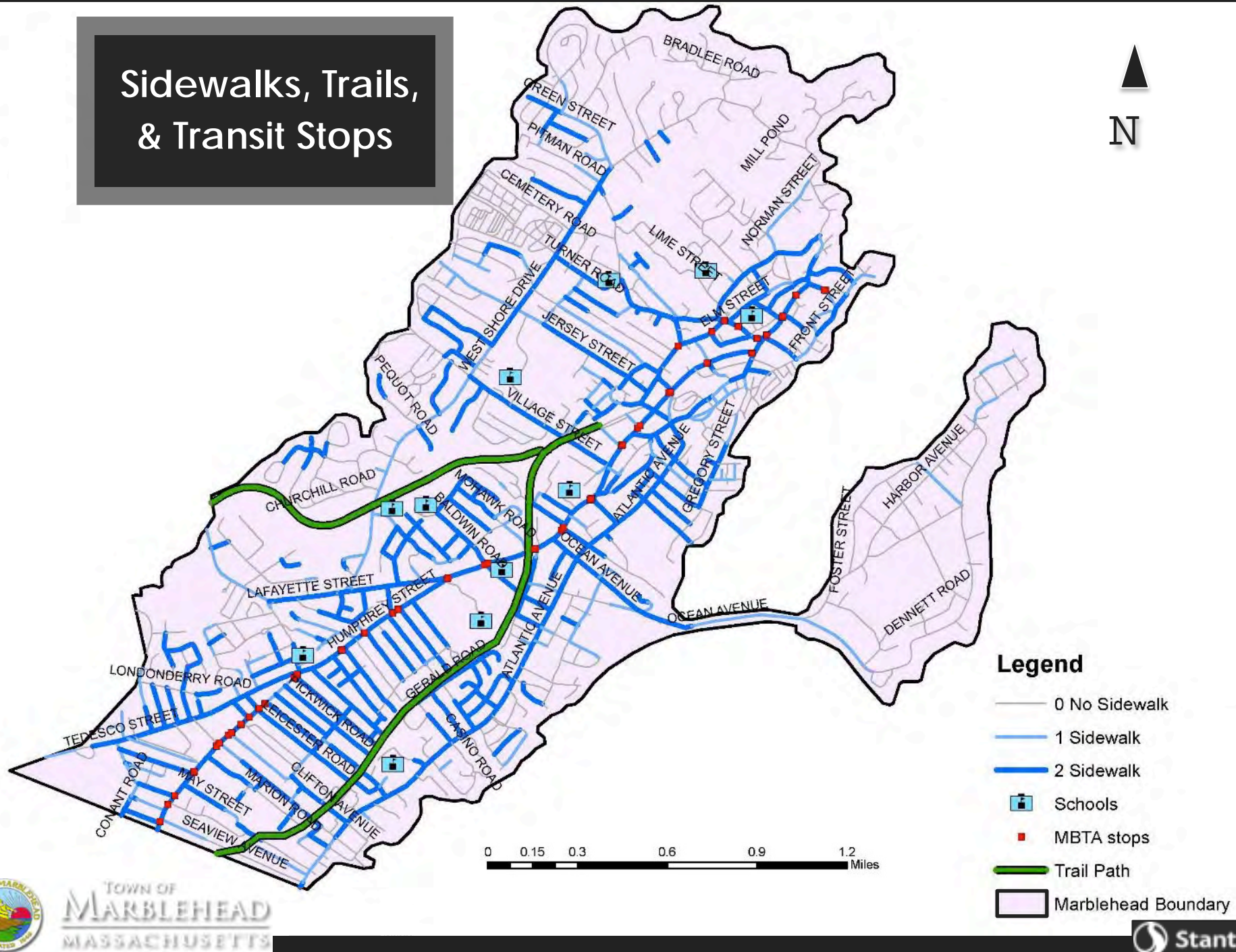
Synergy is best – multiple user benefits



# Developing the Complete Streets Priority Plan

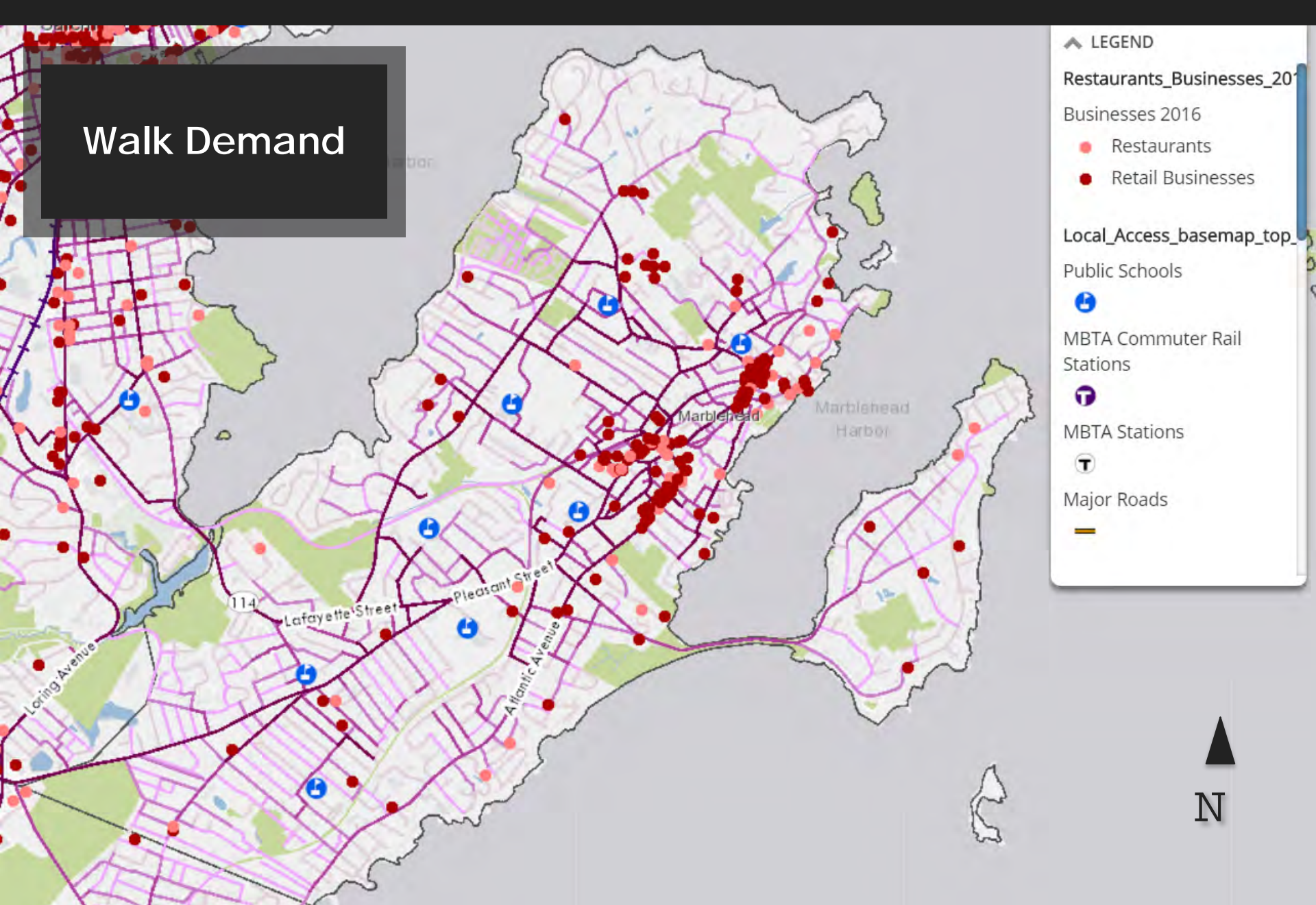
- **Identify deficiencies**
- **Recommend projects**
- **Create prioritized list of projects**
- **Discuss and review with Committee and Community**

# Sidewalks, Trails, & Transit Stops

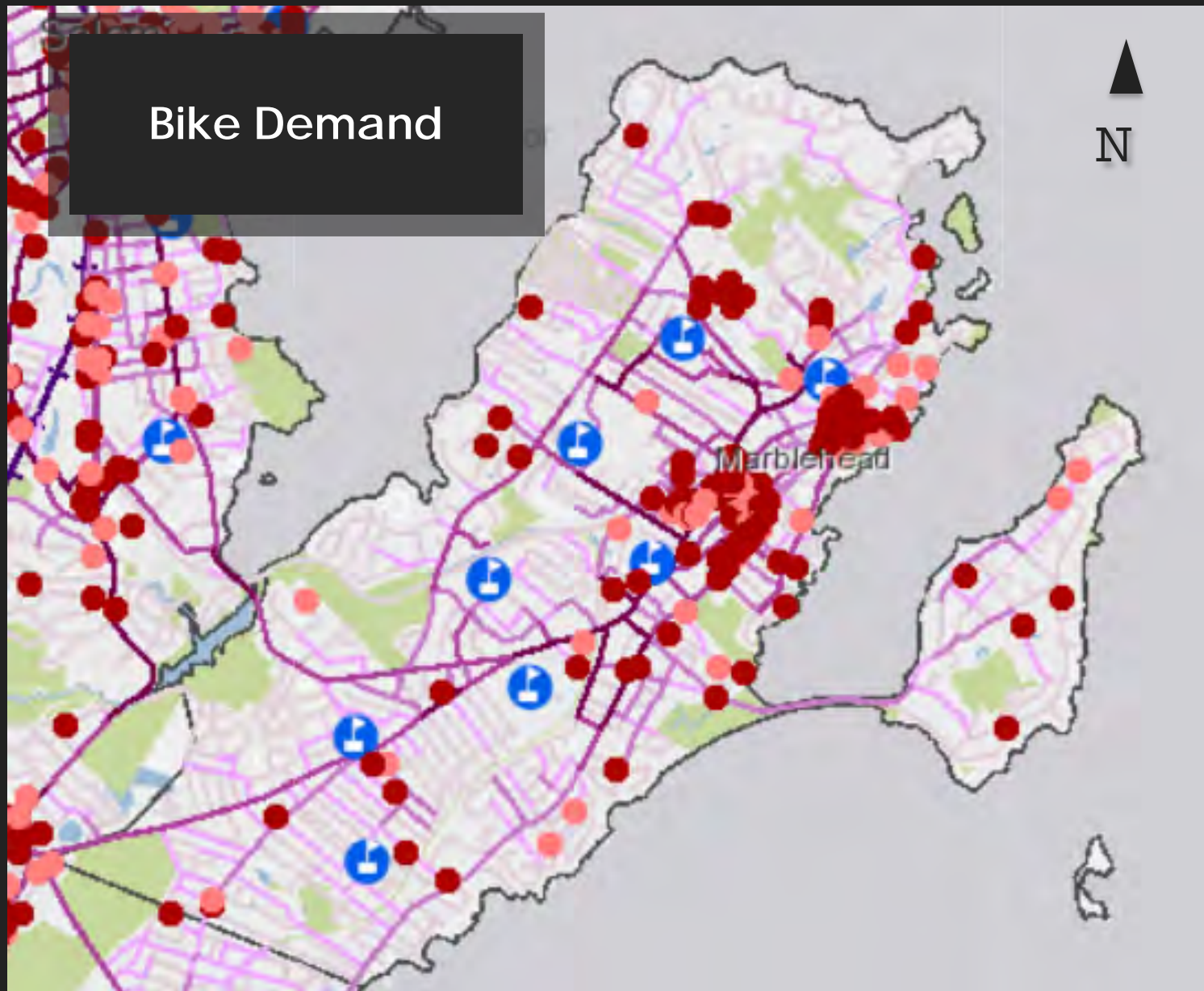




# Walk Demand



## Bike Demand



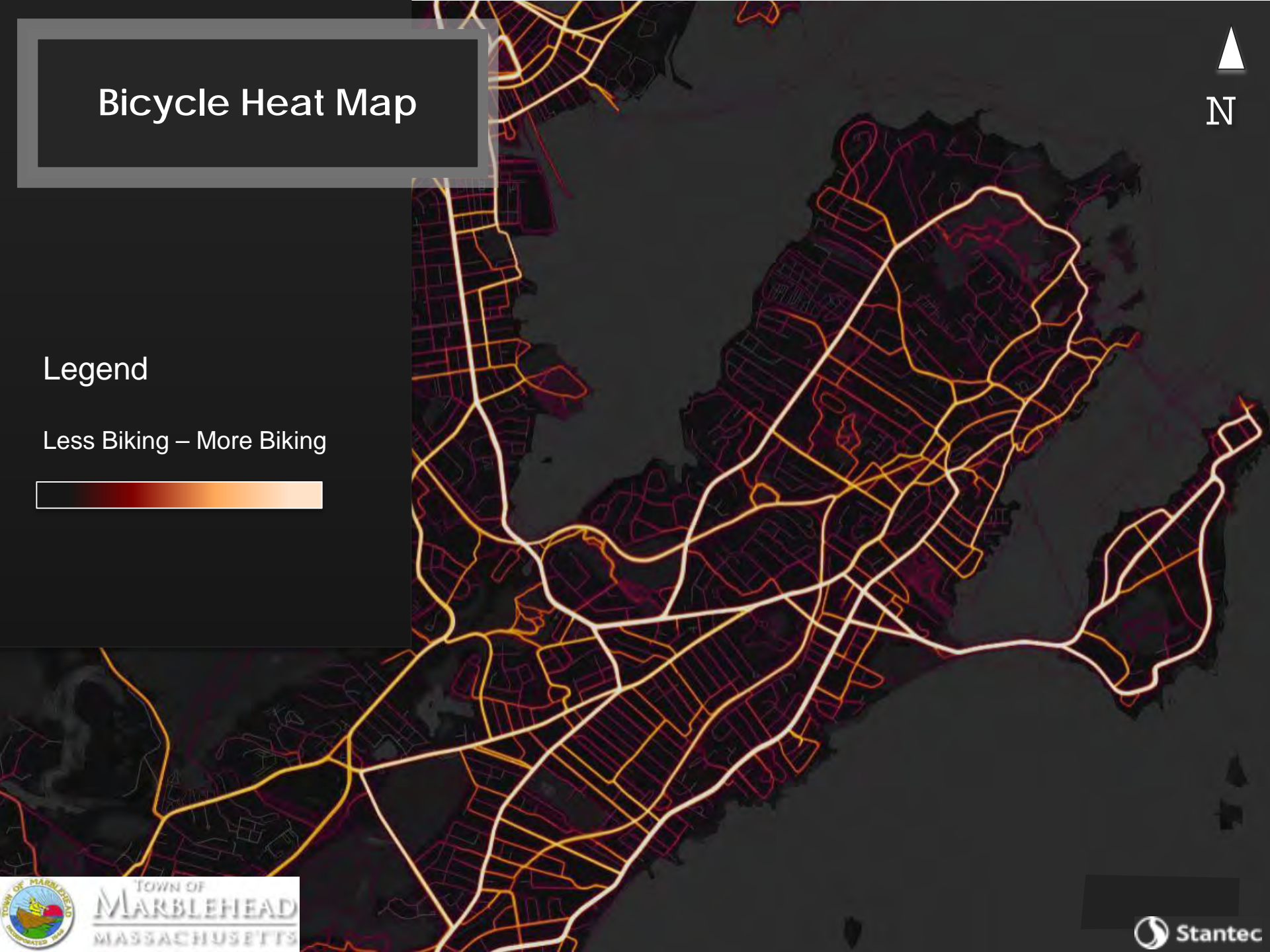


# Bicycle Heat Map



## Legend

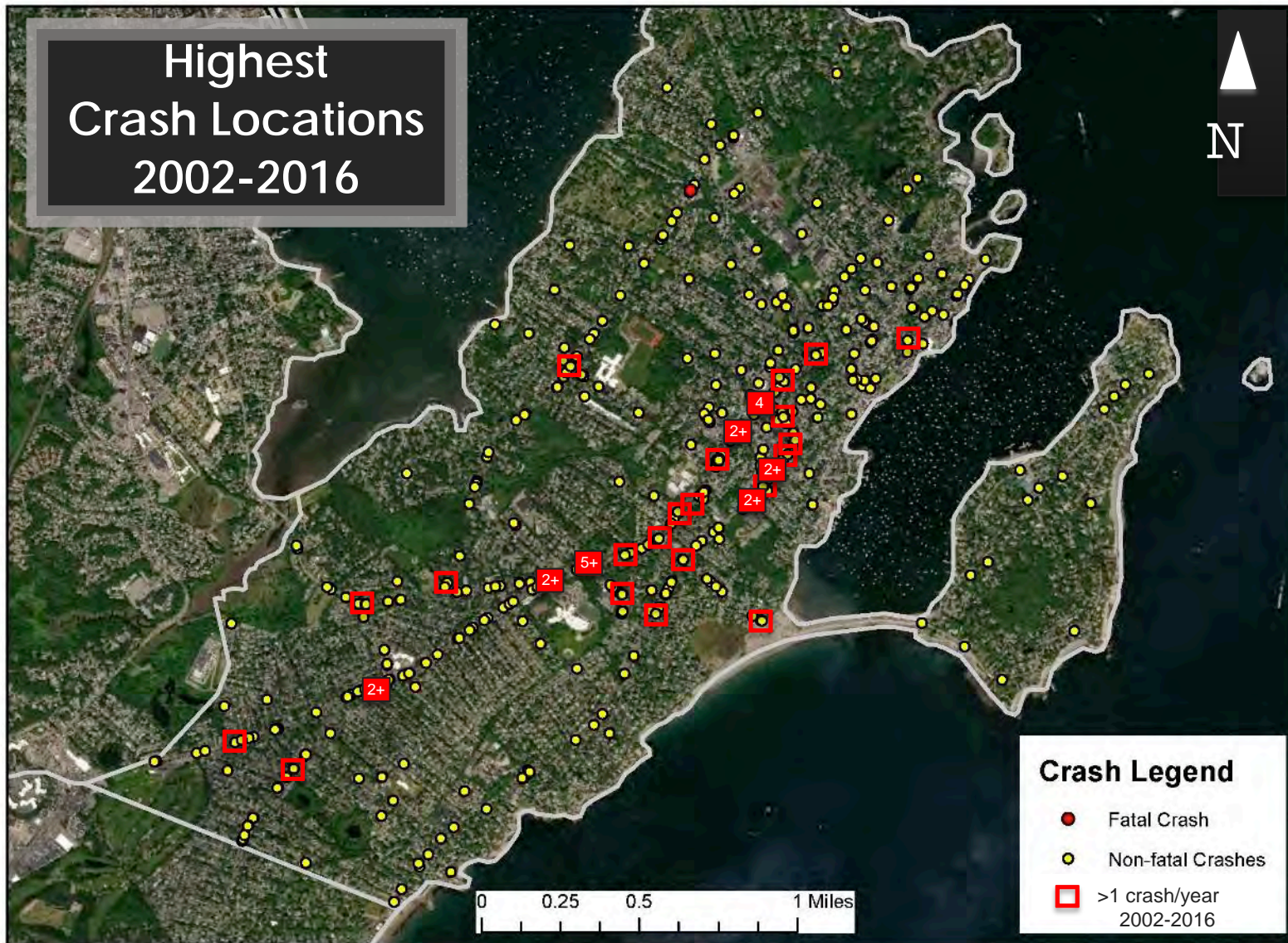
Less Biking – More Biking



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# Highest Crash Locations 2002-2016

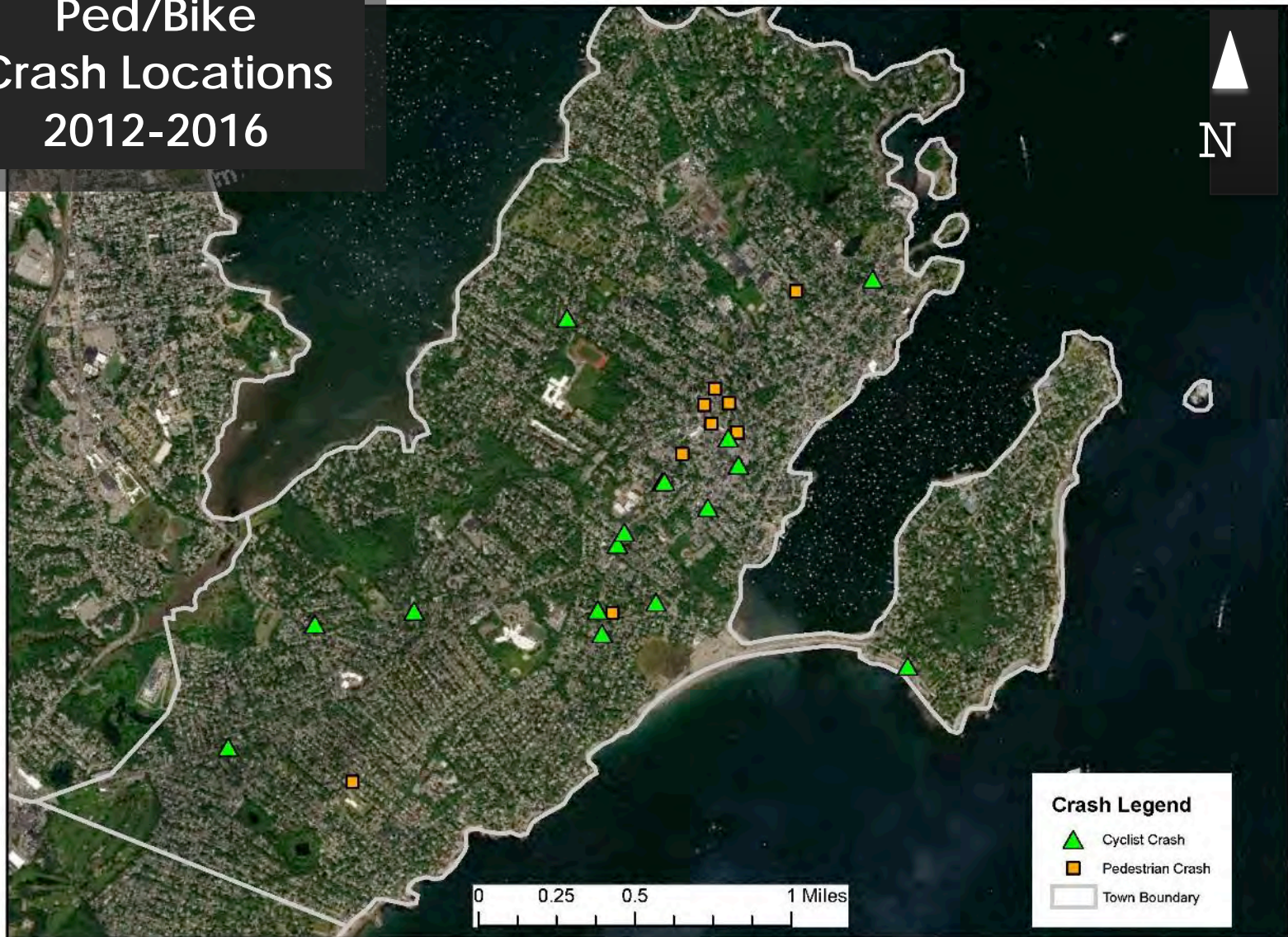


## Crash Legend

- Fatal Crash
- Non-fatal Crashes
- >1 crash/year  
2002-2016



# Ped/Bike Crash Locations 2012-2016











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# Tentative Marblehead Complete Streets High Priority Projects



# Project 1 - Path Upgrades to Marblehead Rail Trail

- Stabilize erosion
- Minimize trail hazards
  - mud holes
  - rock protrusions
  - encroaching vegetation
- Rockaway Street crossing
- Town \$50K grant application accepted
- Underway 2019





# Project 2 – Enhance safety of MHRT public road crossings

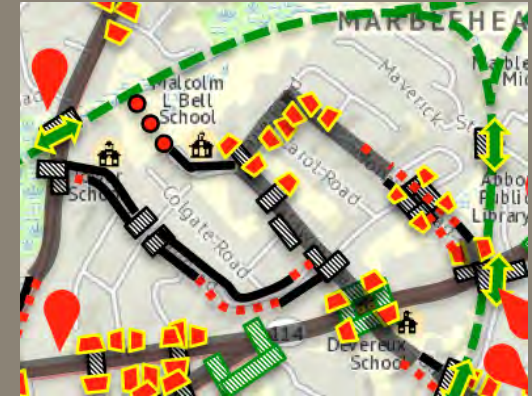
- Town awarded \$50K design grant
- Provide consistent crossing approaches and signs
- Rectangular Rapid Flashing Beacon (RRFB's) at West Shore Drive, Pleasant Street, Smith Street and Clifton Avenue
- RRFBs:
  - Motorist yielding rates of 87.8% for 4 beacons (TRB)
  - Pedestrian activated (pushbutton or passive)
  - Warning device
  - Can be solar powered or hard wired
  - Nearest in Salem at extension of Marblehead Rail Trail Crossing





# Project 3 – Enhance Bell School Area Pedestrian and Bike Access

- Address priority *unfunded* ADA pedestrian and bike access from public streets and Marblehead Rail Trail



- E.g., Smith St - Baldwin Rd intersection, missing Cornell Rd sidewalks, missing ADA ramps on Jane Rd and Mohawk Rd



# Project 4 – Atlantic Avenue curb ramps & possible extensions where feasible

**Add or repair curb cut ramps to comply with ADA/AAB; relocate cross walks with potential curb extensions at Chestnut, Central, Commercial, Barnard & Hawkes Streets**





# Project 5 – Town-wide ‘tree root lifting’ sidewalk repairs

**Repair sidewalks due to tree root lifting at approximately 40 locations Town-wide (e.g., Pleasant St, Heritage Way, etc.)**



# Project 6 – Town-wide community activity center bike racks (U-type)

**Install bike racks at various schools, parks, conservation area entrances, downtown, beaches, Near Town Hall, etc.**





# Project 7 – Smith Street pedestrian & access accommodations

**Provide ADA/AAB curb ramps at Devereux Street and inlaid missing sidewalk on south side behind head in parking spaces.**



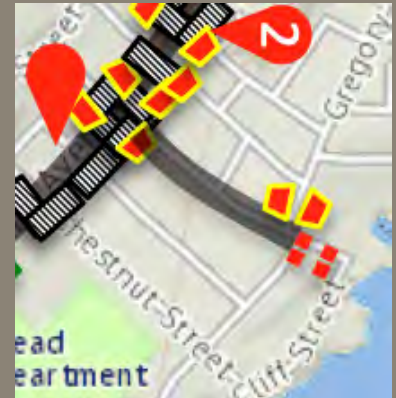
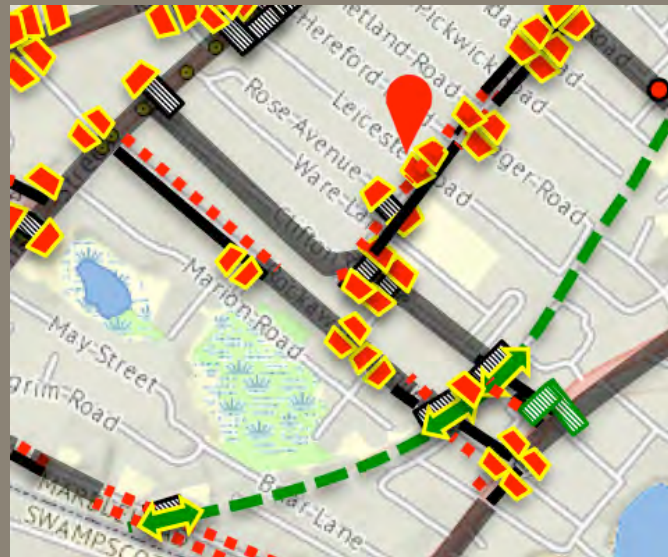
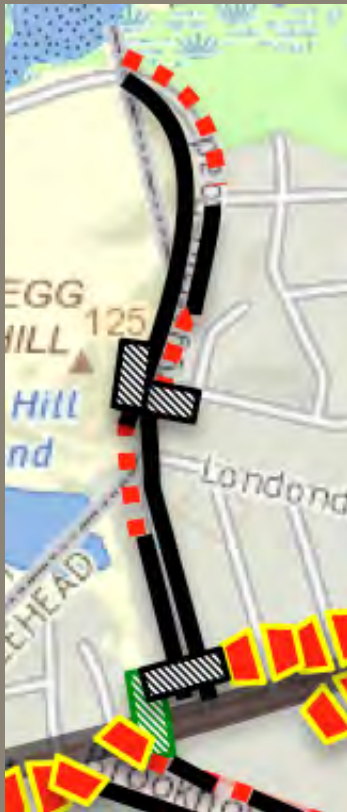
# Project 8 – Install missing Lafayette Street sidewalk and ADA curb ramps

**Add or modify curb cut ramps to comply with ADA/AAB and south side missing sidewalk**



# Project 9 – Provide missing sidewalks on Rockaway Avenue, Leggs Hill Road, and Commercial Street

**Install missing sidewalks environmentally sensibly, without loss of trees & only with strong abutter support...**





# Project 10 – Mugford, Green & Elm Streets Enhancements



Complete Streets Concept Only – Not to Scale

# Project 11 – Pilot bike route on Beach Street/Ocean Avenue – Atlantic Avenue to Harbor Avenue

**Could be as simple as paint and signs only with, perhaps, some optional physical modifications as shown on the next few slides...**







Ocean Avenue at Beach Street  
Complete Streets Concept Only – Not to Scale



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Ocean Avenue at Devereux Beach Entrance  
Complete Streets Concept Only – Not to Scale





Ocean Avenue at Marblehead Causeway  
Optional Complete Streets Concept





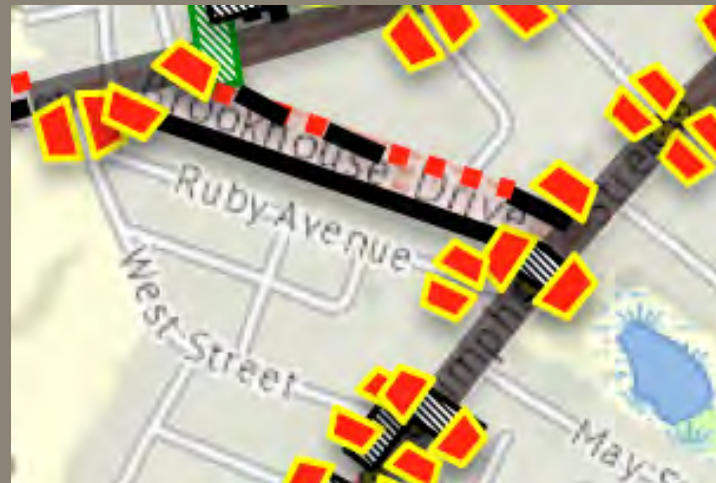
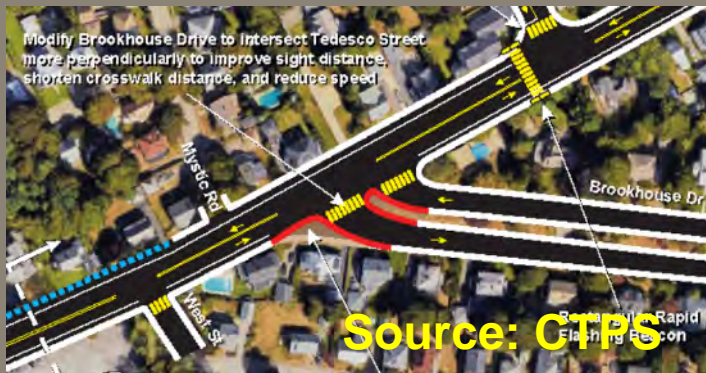
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Ocean Avenue at Harbor Avenue  
Complete Streets Concept Not to Scale





# Project 12 – Install missing sidewalks on Brookhouse Drive & improve Tedesco Street crossing



# Projects 13 to 15 – Install missing ADA ramps on Tedesco, Humphrey, and Pleasant Streets

Install ADA ramps on Marblehead's primary travel corridors to close gaps in ADA sidewalk travel.





# Projects 16 to 19 – Install *reasonable* on-street bike accommodations on Atlantic Avenue, Lafayette Street, West Shore Drive, and Pleasant Streets

- **Must be applied creatively. Consider town-wide study prior to implementation**
- **Many Committee members expressed concern about the installation of on-road bike lanes.**
- **Bikes are permitted on all Marblehead roads. Separate bike facilities are preferred, but on road use should be addressed.**
- **Optional shared lane markings, or “sharrows” may be used for route guidance where insufficient width for shoulders or bike lanes.**

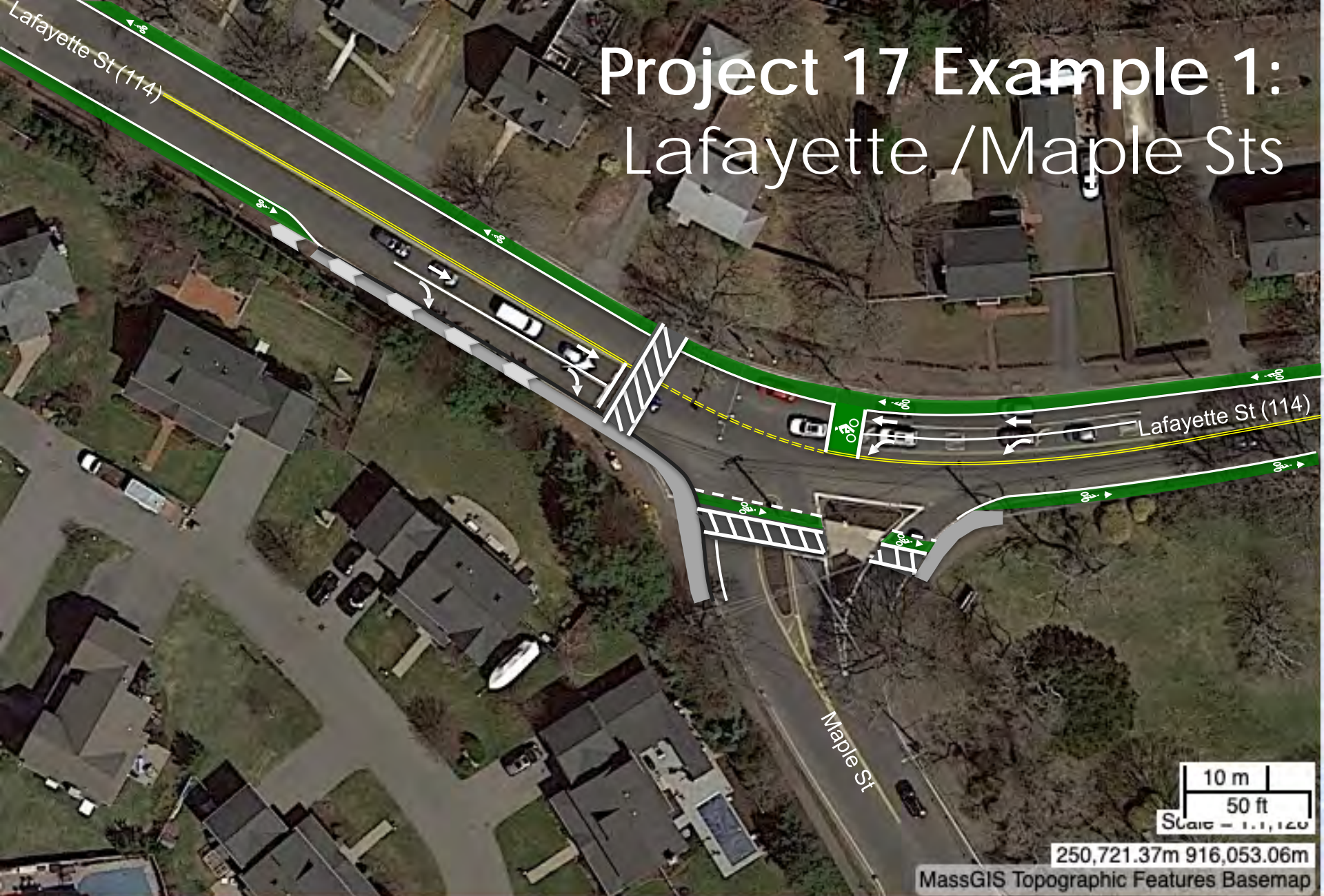
# Projects 16 & 18 – Potential on- road Bicycling enhancements Atlantic Ave/Humphrey St

**Atlantic Avenue and Humphrey Streets generally have wide shoulders, occasional parking observed. Could be candidates for bikeable shoulders or bike lanes.**





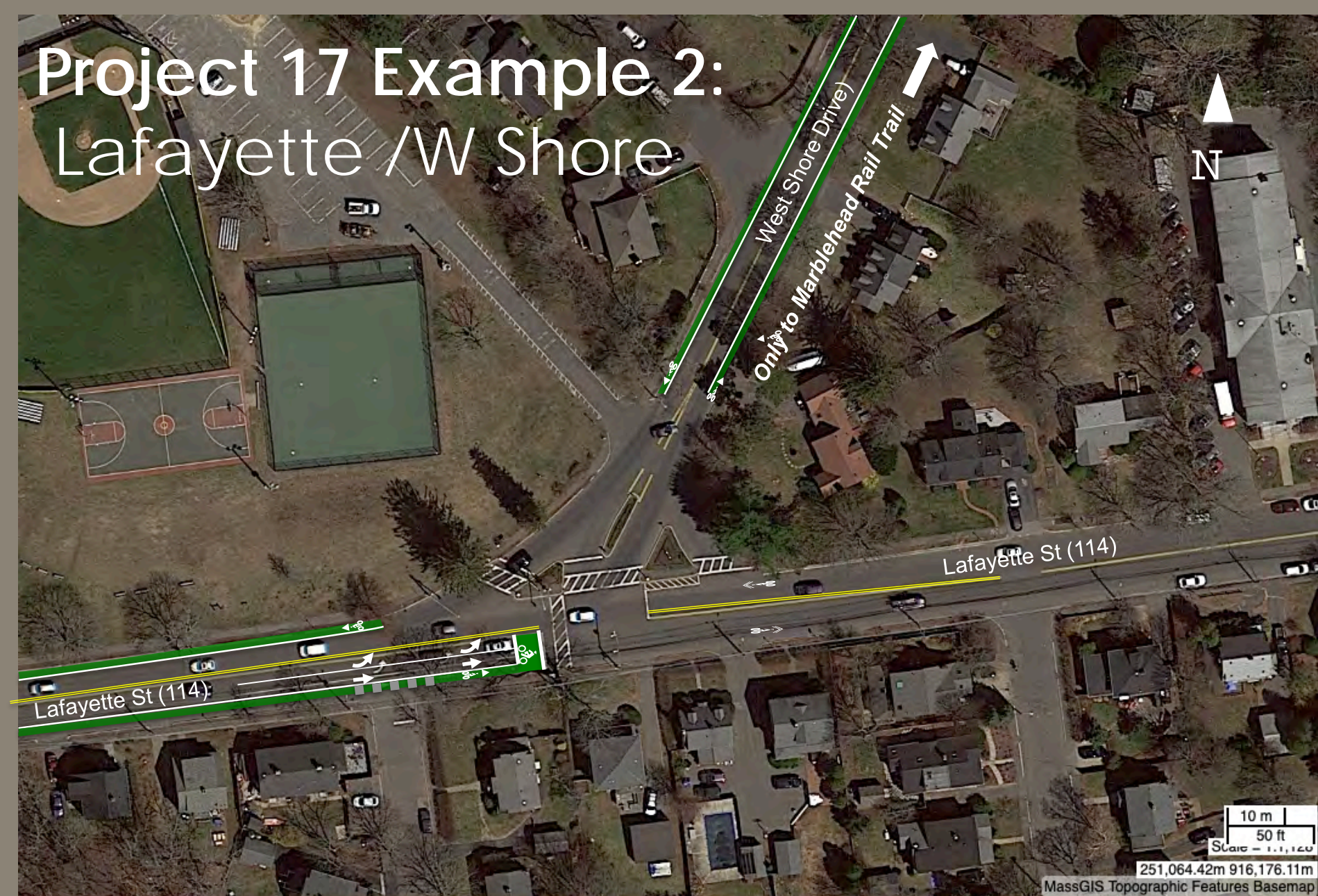
# Project 17 Example 1: Lafayette /Maple Sts



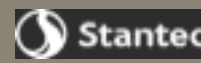
**Lafayette Street at Maple Street**  
**Complete Streets Concept Only – Not to Scale**



# Project 17 Example 2: Lafayette /W Shore



**Lafayette Street at West Shore Drive**  
**Complete Streets Concept Only – Not to Scale**





# Project 17 Example 3: West Shore Drive

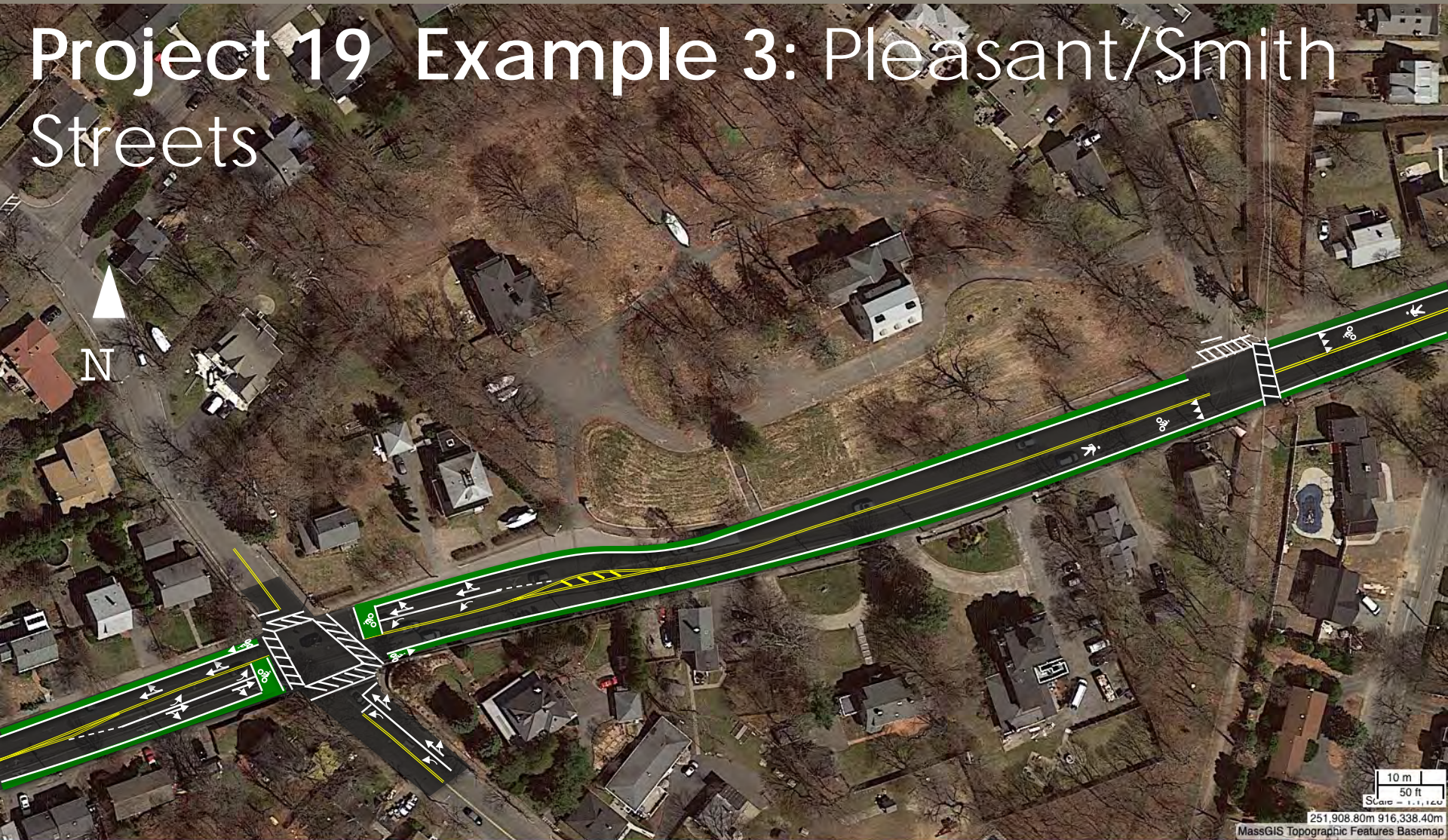
## Reduce Travel Lane Width

- Slow Speeding
- Creates room to separate bikes





# Project 19 Example 3: Pleasant/Smith Streets



Pleasant Street at Baldwin Road/Smith Street East  
Complete Streets Concept Only – Not to Scale



# Projects 20 -21 - Harbor Avenue and Ocean Avenue Pedestrian/Bike Enhancements

**Intermittent accommodations, but low traffic  
volumes and crash rates.**



# Projects 22- Village Street Pedestrian Enhancements and MRT Access

**Rail trail is grade separated, a connection is desired, as both Village Street and Veterans Middle Schools are served.**





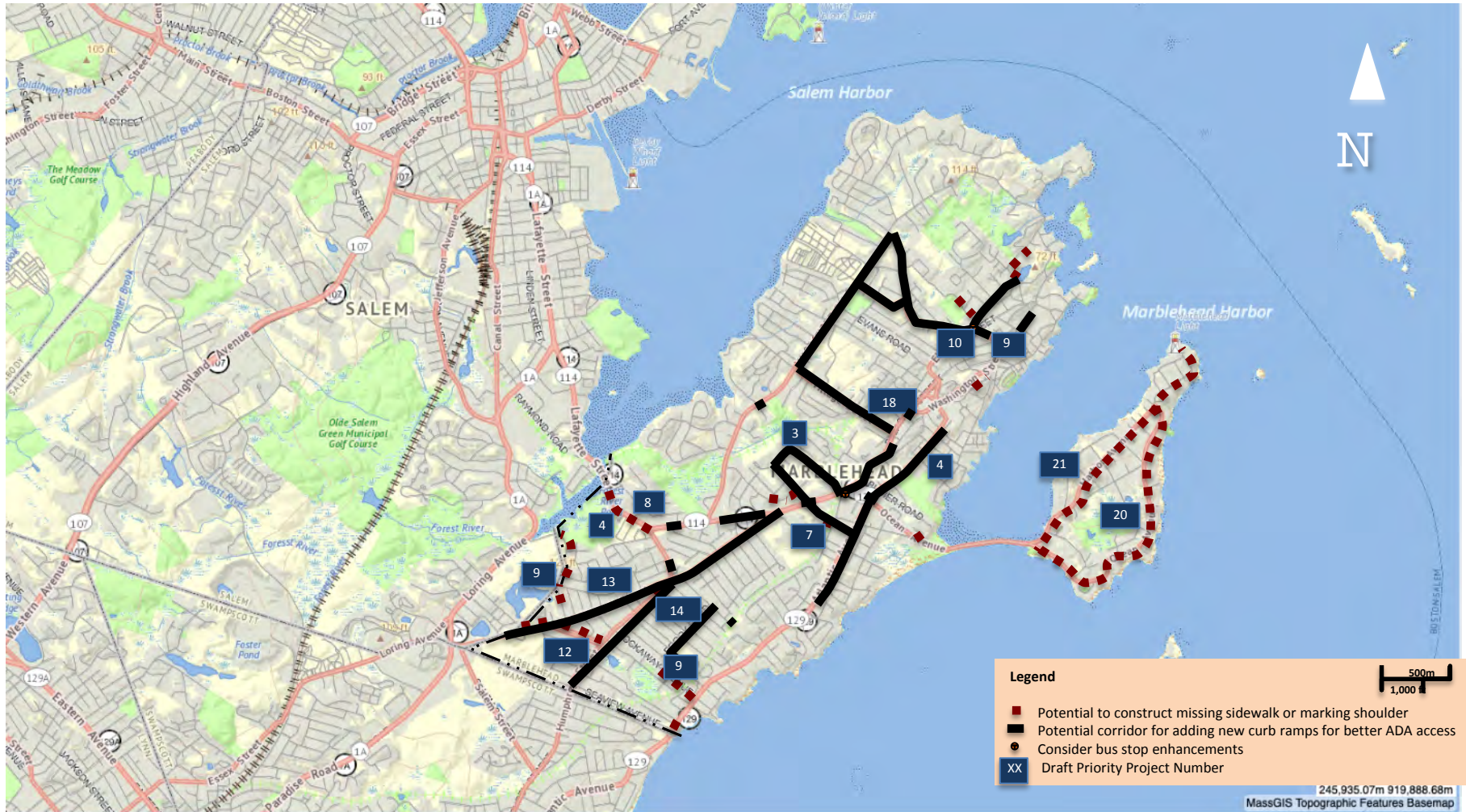


## DRAFT Complete Streets Projects Overview

### – Marblehead Rail Trail Enhancements & Regional Context



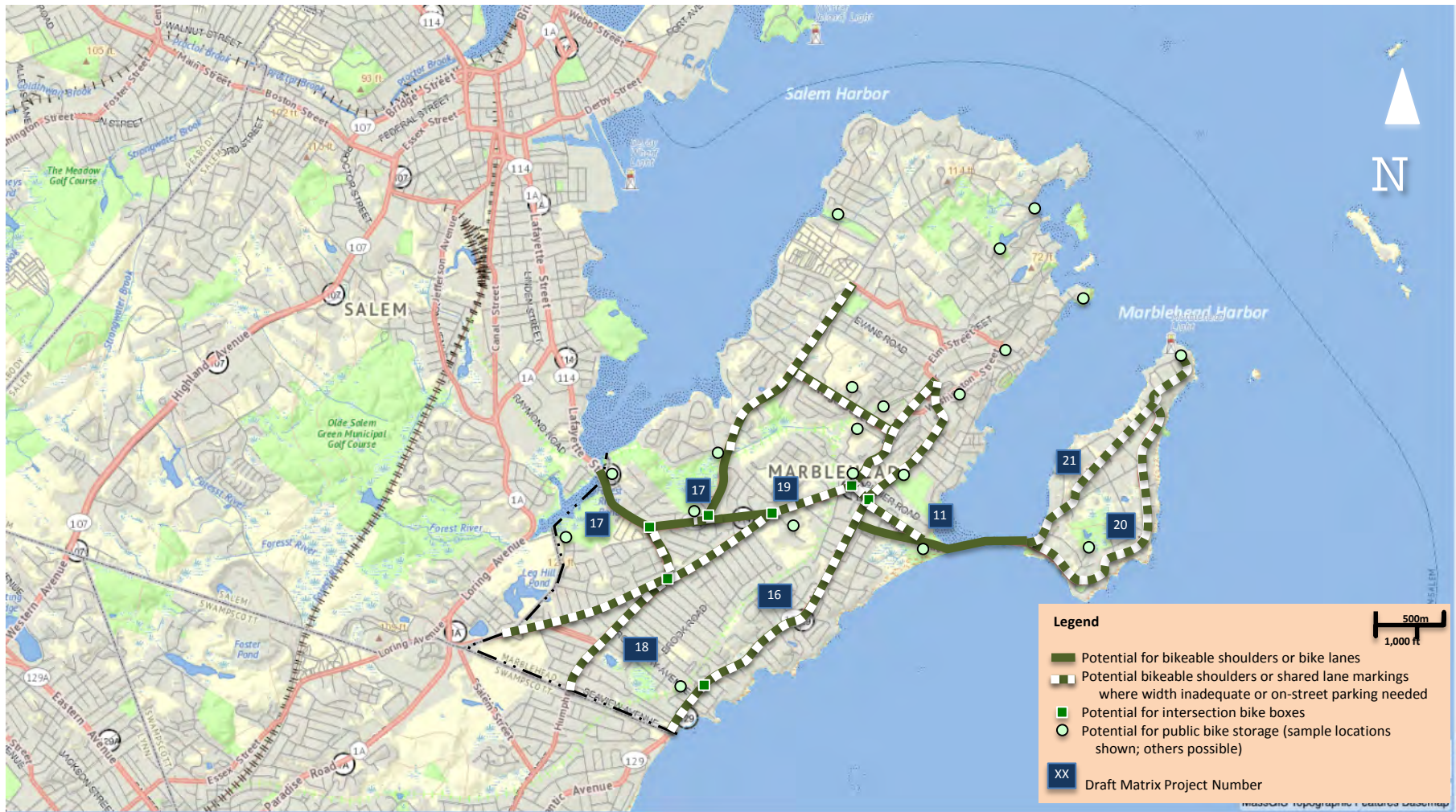




## DRAFT Complete Streets Projects Overview

– Key Road Sidewalk and ADA Crossing Enhancement Areas





## DRAFT Complete Streets Projects Overview

### *Potential Key Road On-street Bike Enhancements*



# Questions?





# Tentative Project Listing

massDOT		DRAFT Complete Streets Funding Program Project Prioritization Plan	
Municipality		Marblehead	2/28/19
MassDOT District		4	
Project Details			Complete Streets Location
Tentative Rank	Project Name	Project Description	Project Limits
1	Path upgrades to Marblehead Rail Trail	Enhance Rail-trail to provide a more uniform cross section. Minimize mudholes, rock protrusion, vegetation encroachments, and erosion characteristics. Regularly conduct volunteer maintenance work. While generally retaining an unpaved surface, stabilize the steep rutted trail just west of Bessom Street with a hard surface, if necessary.	Marblehead Rail Trails between Bessom Street and Lafayette Street at Salem line and the Swampscott line approximately 200 feet southwest of Seaview Avenue.
2	Enhance safety of Marblehead Rail Trail crossings of public roadways	Provide ADA-compliant curb ramps, consistent approach and crossing treatments, new crosswalks, new signs, enhanced lighting as needed, and new pavement markings at eight (8) Marblehead Rail Trail crossings. Provide actuated rectangular Rapid Flashing Beacons (RRFB's) at the four busiest of the eight crossings -- i.e., West Shore Drive, Pleasant Street, Smith Street, and Clifton Avenue. Provide curb extensions at the Pleasant Street crossing to reduce exposure of persons crossing and calm approaching traffic.	Marblehead Rail Trail Crossings of West Shore Drive, Bessom Street, Maverick Street, Pleasant Street, Smith Street, Clifton Avenue, Rockaway Street, and Seaview Drive.
3	Bell School pedestrian and bike access enhancements	Pending full Town approvals, enhance pedestrian and bike access to the Bell School via West Shore Drive, as well as Baldwin, Mohawk, and Cornell Roads, providing missing sidewalks and ADA/AAB crossings where deficient as well as ADA and signal upgrades to the Smith/Baldwin/Pleasant Streets intersection. Install a new controlled access to the Bell School via Marblehead Rail Trail. Fill in missing sidewalks on access roads. This will enhance pedestrian and bicycle connections to Bell School which, pending Town approvals, will be reconstructed to increase its elementary student campus population from approximately 365 students to a total of approximately 450 students.	Pleasant Street intersections with Smith Street and Mohawk Road to Cornell Road intersections with West Shore Drive and Marblehead Rail Trail near Bell and Tower Schools.
4	Provide ADA Atlantic Avenue curb ramps & extensions, where feasible/warranted.	Install approximately 44 ADA/AAB compliant ramps and relocated crosswalks as necessary. Consider limited Atlantic Avenue corner curb extensions at Chestnut, Commercial, Central, Barnard, and Hawkes Streets and create a few on street bike U racks at the corner extensions, if feasible and improve sight lines close to buildings. Drainage impacts must be addressed with any curb extensions.	Greystone Road to Hawkes Street
5	Townwide sidewalk tree-root lifting repairs	Using a priority list to be created by Marblehead DPW, correct sidewalk alignments where tree roots have lifted existing sidewalks (e.g., Pleasant Street, Heritage Way) at locations throughout the Town. Repairs to include environmentally-sensitive installation of ADA compliant sidewalk transitions over critical locations to enhance the walking & ADA/AAB environment. Any proposed root grinding must be done in coordination with the Marblehead tree warden supervision.	Various 'hot spot' sidewalks throughout Town in coordination with Marblehead DPW /Tree warden
6	Communitywide activity center bike racks (inverted U types)	Create new opportunities for bike user patrons at various parks, schools, conservation areas, Devereux Beach, Grace Oliver's Beach, downtown, Old Town near Town Hall, etc.	Up to 25 locations throughout Town in coordination with Marblehead biking community




# Tentative Project Listing

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Project Details			Complete Streets Location
Tentative Rank	Project Name	Project Description	Project Limits
7	Smith Street Pedestrian Access Accommodations	Add missing ADA ramps and a missing in-laid sidewalk behind parked vehicles to enhance pedestrian access to US Post Office, Marblehead High School, and Marblehead Rail Trail, specifically addressed under Project 2 above. Work with owner to trim hedge to no more than 3' feet in height on northwest corner of Atlantic Avenue to enhance sight line, which may have contributed to crashes at Smith/Atlantic intersection.	Smith Street between Pleasant Street (Route 114) and Atlantic Avenue (Route 129)
8	Install missing Lafayette Street sidewalk and ADA curb Ramps.	Install missing sidewalk on south side between Salem Line and Maple Street; make ADA enhancements of 14 ramps at various intersections.	Salem Line to West Shore Drive
9	Add missing sidewalks on Rockaway Avenue, Leggs Hill Road and Commercial Street	Fill in missing sidewalk links along important collector streets.	Various Sections of Rockaway Avenue, Leggs Hill Road, and Commercial Street.
10	Mugford at Green and Elm Streets traffic calming, sight line and ADA crossing enhancements.	Add new ADA curb ramps curb extensions to enhance bus stop, and sight lines for all intersection users.	within 150 feet of the intersection
11	Pilot Bike Route - Provide bicycle accommodations on Beach Street and Ocean Avenue.	In the absence of a Townwide Bicycling Master Plan, with a minimum typical paved width of approximately 32 feet, it is possible to stripe and sign 5' bikeable shoulders on both sides of Ocean Avenue between Beach Street and Harbor Avenue and retain 22' for two 11' wide travel lanes in both directions where on street parking is not permitted. While bike lanes would fit, at minimum, provide bikeable shoulders on Ocean Avenue between Atlantic Avenue and Beach Street, retaining 11' wide travel lanes in both directions. Optionally, consider revising a few of the Beach Street, Gilbert Heights, Devereux Beach access, and Harbor Streets intersections with Ocean Avenue to decrease the turning radii and pedestrian crossing distances. Since Beach Street is one-way, it is possible to simply stripe 5' shoulders on both sides to permit cyclists and walkers to use them. Alternatively, on the south side, a one-way 5' bike lane lined up to permit on-street parking could be striped. This would shorten pedestrian and bicyclist exposure at crossings and tend to reduce speeds on Ocean Avenue. Concurrently, consider revising the Ocean Avenue speed limit between Pleasant Street and Devereux Beach entrance to a 20 or 25 MPH speed limit, assuming speed measurements show this to be reasonable. MassDOT must be notified in writing of any speed limit changes.	Atlantic Avenue to Harbor Avenue
12	Add missing sidewalks on Brookhouse Drive and enhance Tedesco Street crossing	Add missing sidewalks on north side and realign Brookhouse at Tedesco Street as recommended by the Metropolitan Planning Organization. Consider striping 6' bikeable shoulders on Brookhouse Drive.	Brookhouse Drive between Tedesco and Humphrey Streets
13	Add Tedesco Street ADA curb ramps.	Install missing sidewalk in vicinity of Salem and 24 ADA curb ramps where needed to comply with ADA/AAAB requirements.	Salem Line (Vinnin Street) to Maple Street






# Tentative Project Listing

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Municipality		Marblehead	2/28/19
MassDOT District		4	
Project Details			Complete Streets Location
Tentative Rank	Project Name	Project Description	Project Limits
14	Add Humphrey Street ADA curb ramps	Install ADA compliant curb ramps at 24 locations.	Swampscott Line to Tedesco Street
15	Add missing ADA ramps on Pleasant Street between Village and Washington Streets.	Provide at least 4 sidewalk ADA ramps at Pleasant Street crosswalks near Bessom Street and MBTA stops.	Pleasant Street east of Village Street MassDOT project limit to recent Pleasant Street Warwick area project limits west of Washington Street.
16	Provide on-road Atlantic Avenue bicycle accommodations	With a typical paved width of approximately 34' to 36', stripe and sign 5' bikeable shoulders where no on-street parking occurs on Atlantic Avenue (Route 129). Where on-street parking is permitted transition to 6' bikeable shoulders but alert motorists to share the road at on-street parking locations. On-street travel lanes should be 11' in width, allowing the rest of each approach to have a shoulder. Bikeable shoulders are helpful, because when on-street parking is not occurring—as at many areas along Atlantic Avenue — bicyclists may continue to ride in the shoulders, as motorists will shy toward the center of the roadway. Optionally, consider providing bike boxes at the Ocean Avenue traffic signal to assist bicyclists in maneuvers through signalized intersections, particularly left turns.	Swampscott Line to Pleasant Street
17	Provide on-road bikeable shoulders or bike lane connections on Lafayette Street (Route 114) and West Shore Drive.	Through re-striping and signage, provide buffered bikeable shoulders on Lafayette Street between the Salem line just west the two-lane approaches to Maple Street and West Shore Drive. Between Maple Street and West Shore Drive, restripe to provide new 5' bikeable shoulders on Lafayette Street or bike lanes, should the Town desire them. On West Shore Drive, generally provide 5' bikeable shoulders, should the Town desire, on the eastbound side between Lafayette Street and the Marblehead Rail Trail where the paved road is more than 34 feet in width. In the vicinity of Bell and Tower Schools, the westbound side of West Shore Drive is used for queuing, especially during the morning school peaks. Therefore the westbound bike lane would need to start just west of Cornell Road. Between the Marblehead Rail Trail and Cornell Road the westbound portion of West Shore Drive could be striped to include a 6' shoulder transitioning to a 5' bike lane west of Cornell Road. Consider a 25 miles per hour speed limit reduction on West Shore Drive between the Marblehead Rail Trail and Lafayette Street, should Marblehead Police Department speed measurements indicate such a reduction is warranted. Lafayette Street bike lanes would join bike lanes in the City of Salem. MassDOT must be notified in writing of any speed limit changes.	Lafayette Street at Salem Line to Pleasant Street and West Shore Drive from Lafayette Street to Pitman Road.



# Tentative Project Listing

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Project Details			Complete Streets Location
Tentative Rank	Project Name	Project Description	Project Limits
18	Provide bikeable shoulders on Humphrey Street.	With a typical 32-34-foot paved cross-section, typical 6' bikeable shoulders are possible on both sides. While used for parking in several areas, these shoulders would be available for bicycle usage for the most part. Would join bike lanes in the Town of Swampscott.	Swampscott Line to Tedesco and Maple Streets
19	Improve Lafayette Street/ Pleasant Street's bike travel environment between West Shore Drive and Spring Streets.	Both Lafayette Street and Pleasant Streets have on-street parking areas along much of this corridor which must be retained. A creative approach will be required to improve the corridor's on-street biking environment. It has a variable cross section between Lafayette Street and Spring Street. In those parts of the corridor where restriping could create either bikeable shoulders or bike lanes <i>should be tested prior to full implementation</i> . For example, through restriping, bikeable shoulders could be provided between Smith Street and Ocean Avenue via conversion of existing 4-lane sections near the high school to 3-lane sections, while dedicating 5-foot bikeable/no parking shoulders. The 'pinch point' 3-lane section near the High School east of Humphrey Street would become a 2-lane section transitioning back to 3-lane section toward Smith Street and Tent's Corner. At its signalized intersections with Lafayette Street, Smith Street, and Ocean Avenue, if necessary, bike boxes could be created on Pleasant Street 2-lane approaches. Where traffic lanes and on-street parking are needed, sharrows should be incorporated in the travel lanes that must be shared by bicyclists. Traffic and bus operations impacts would need to be evaluated for any travel lane modifications. Bus stop enhancements would be included. Consider setting Pleasant Street's speed limit between Smith Street/Baldwin Road and Washington Streets to a consistent posted 20 MPH, assuming Marblehead police studies confirm this change. MassDOT must be notified in writing of any speed limit changes. This would provide a more amenable environment for share the road bicycling, even if shared lane markings are not installed.	Tedesco/Humphrey Streets to Spring Street
20	Provide Ocean Avenue ADA compliant pedestrian accommodations and bike sharing on Marblehead Neck.	On the east side of Ocean Avenue, provide new sidewalks where missing <i>and feasible</i> within public layouts. Existing trees and walls shall be avoided. Provide a continuous path by including a minimum four-foot shoulder on east side of Ocean Avenue where construction of a sidewalk is not feasible without significant environmental damage. Provide intermittent shared lane bike use markings on Ocean Avenue. Modify Harbor Avenue at Ocean Avenue to improve pedestrian and bike safety.	Ocean Avenue between Harbor Avenue and Chandler Hovey Park with connections to the Audubon Wildlife Sanctuary and Castle Rock Preserve.
21	Provide ADA compliant Harbor Avenue walking environment on Marblehead Neck.	On the west side of Harbor Avenue, provide new sidewalks where missing <i>and feasible</i> within public layouts. Existing trees and walls shall be avoided. Provide a continuous path by including a minimum four-foot shoulder on the west side of Harbor Avenue where construction of a sidewalk is not feasible without significant environmental damage. Provide intermittent shared lane bike use markings on Harbor Avenue. As noted above, modify Harbor Avenue at Ocean Avenue to improve pedestrian and bike safety. Add a new cross-walk on the south end of Harbor Avenue at Ocean Avenue.	Ocean Avenue south; Ocean Avenue north
NA (Approved MassDOT Project)	Pleasant/Village/Cross/Vine Streets Complete Streets Enhancements	Realign Vine Street to from a "T" intersection, narrow and realign Pleasant Street to minimize crosswalk length, install new sidewalk, signs, enhanced lighting, modest drainage modifications and ADA/AAB crossing enhancements and bicycle sharing accommodations over a total of 800 linear feet	Within 100-200 feet of the intersection

