

Old Colony Planning Council

Bicycle and Pedestrian Connectivity and Livability Study

Phase 1



Phase-One Summary



Organized
Extensive
Citizens and
Stakeholders



Created a Vision
for the Region



Obtained a
better
Understanding of
the Region's
Bicycle and
Pedestrian Needs



Made Bicycle
Parking Funding
Available



Community Benefits

- Communities, neighborhoods, and downtowns with high levels of pedestrian and bicycle activity are often seen as places that are livable, prosperous, and inviting



Community Benefits (cont.)

- This study provides guidance for policies, programs, and investments intended to maximize such results by expanding opportunities for greater walking and bicycling activities in the Old Colony Region now and in the future.
- By 2020, Massachusetts Department of Transportation has the goal to reduce greenhouse gas emissions by 7.3 percent below 1990 levels
- By 2035, OCPC has the goals to increase the use of non-motorized transportation modes by 20% compared to 1990 census

Community Benefits (cont.)

- Walking and bicycling can help residents stimulate their local economies by encouraging them to support retail merchants and restaurants near their home and workplace
- Walking and bicycling can directly replace short motor vehicle trips
- Pedestrian and bicycle accommodations promote greater use of transit

Community Benefits (cont.)

- Increased physical activity and active lifestyles
- Businesses that promote active transportation can see an increase in productivity, improved employee health, and better customer relations, as well as a decrease in absenteeism and employee turnover

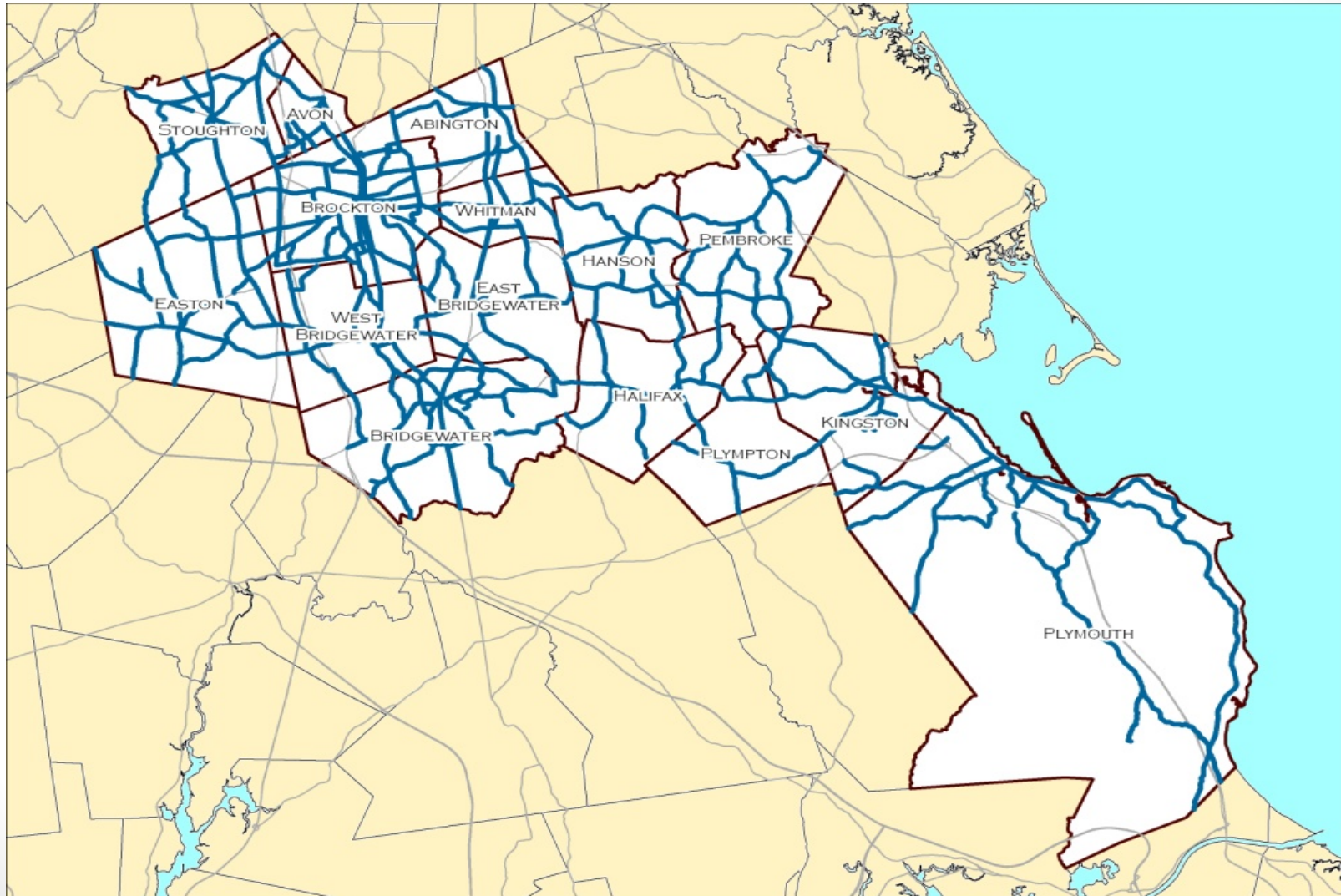


Community Benefits (cont.)

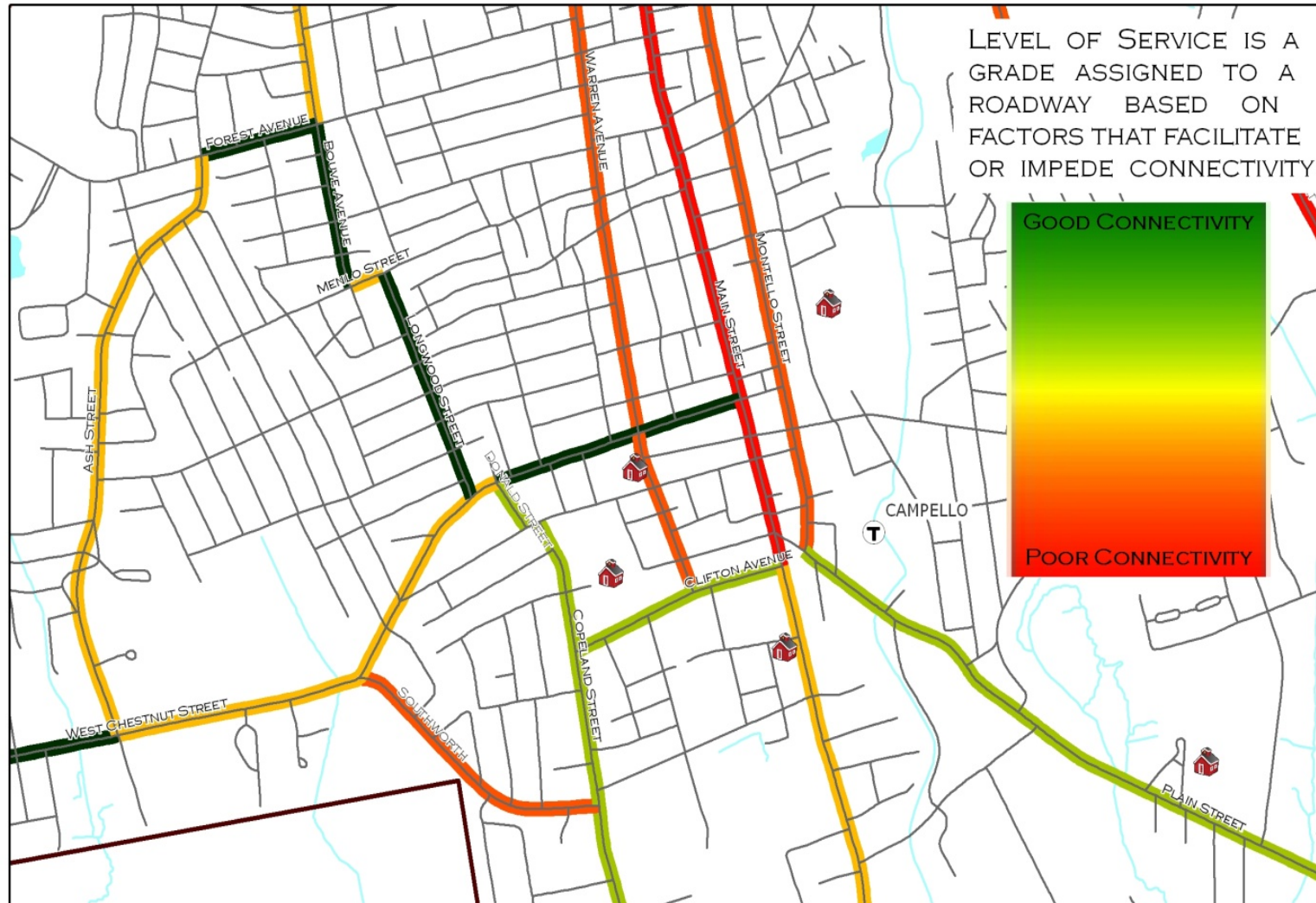
- Providing for pedestrians and bicyclists can be an excellent way to increase local tourism



Study Area



Local Example of Bicycle and Pedestrian LOS Findings



Preliminary Findings

- Lack of Pedestrian Connections



Massasoit Community college Main entrance



Algonquin Housing development

Preliminary Findings (cont.)

- Lack of Bicycle Infrastructure



South Main Street in Brockton

Preliminary Findings (cont.)

- Bicycle Infrastructure Opportunities
 - Bike lanes
 - Bicycle parking
 - Connections to open spaces



Route 138 in Easton

Pedestrian Infrastructure Index

Good Example

Total # of Lanes at the Intersection	12
Greatest # of Lanes Across Any Road	3
Left Turn Lanes	1
Right Turn Channel	2
Right on Red Prohibited	2
Signal Phasing	multiple
Crosswalks Present	4
Crosswalk Type	4
Crosswalk Condition	good
Pedestrian Buttons	4
Accessible Pedestrian Buttons	4
Pedestrian Signals	4
Sidewalks Present at intersection	8
Approach Grade	3
Blocked Views	0
ADA Compliant Curb Cuts	4
ADA Compliant Refuge Islands	0
Turn Radius	4
Skewed/Offset Intersection	no
Street Lighting	4
Special Features	8



Commercial and Centre Streets
Brockton, MA

Score = 52

Grade= A

Pedestrian Infrastructure Index Bad Example



Church and Oak Street Intersection in Pembroke

Inaccessible Sidewalks and Pedestrian Push Button



Intersection in Hanson



Turnpike Street in Stoughton

Next Steps: Phase Two

- Sidewalk Inventory
 - Location
 - Type
 - Width and Length
 - Conditions

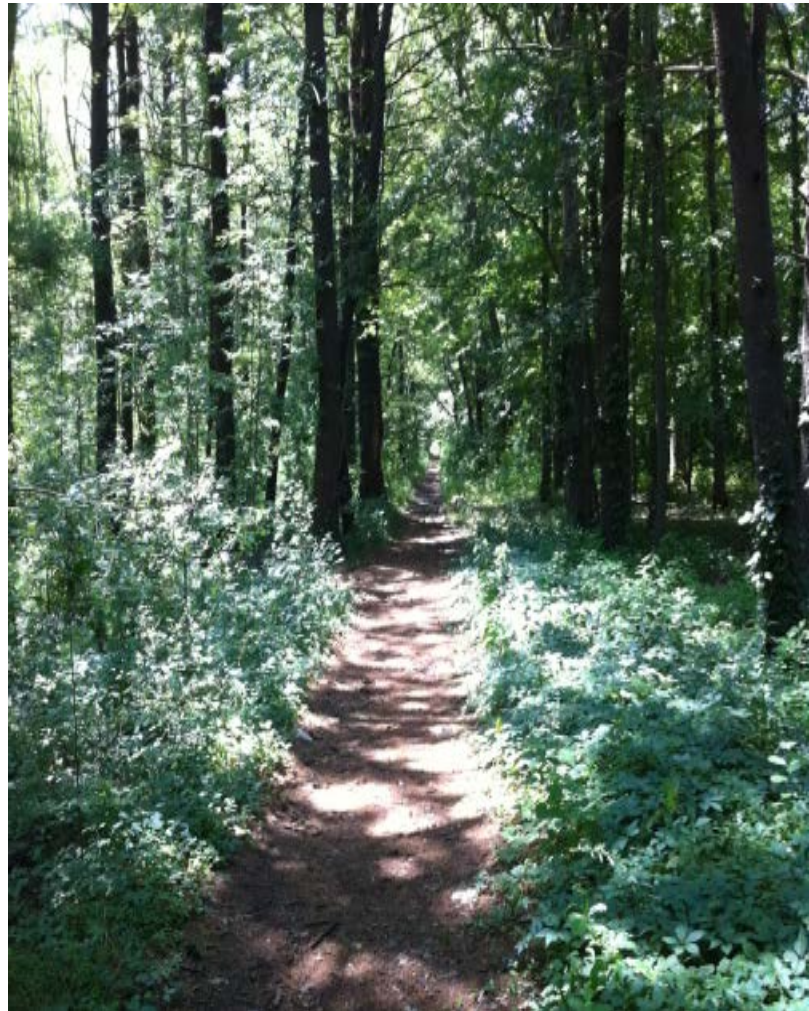


Crescent Street in
West Bridgewater

Next Steps: Phase Two

- Trail Inventory
 - Land Ownership
 - Conditions
 - Length and Width
 - Type of Terrain
 - Mapping & Signage

East Bridgewater
Unofficial Trail



Prioritization Process

- Identify Priorities:
 - Destinations Nearby
 - Number of Beneficiaries
 - Affected Population
 - Cost Benefit Analysis (cost vs need)
 - Community Vision
 - Potential Funding Opportunities

Multimodal LOS History

2000 HCM LOS "A"



2000 HCM LOS "D"



New Manual

- Our Facilities did not have capacity or speed problems, new manual addresses that
- More service-quality factors are considered beyond just capacity
- Level of Service is from a traveler's perspective
- Allows for trade offs between modes
- Good mix of perception of service quality and actual service quality

Limits

- Performance measure is an index
- Level of service is a model to predict the traveler's PERCEPTION of the service quality (user comfort)
- LOS thresholds are based on survey responses, and are objective
- We found no need to account for pedestrian or bicyclist density

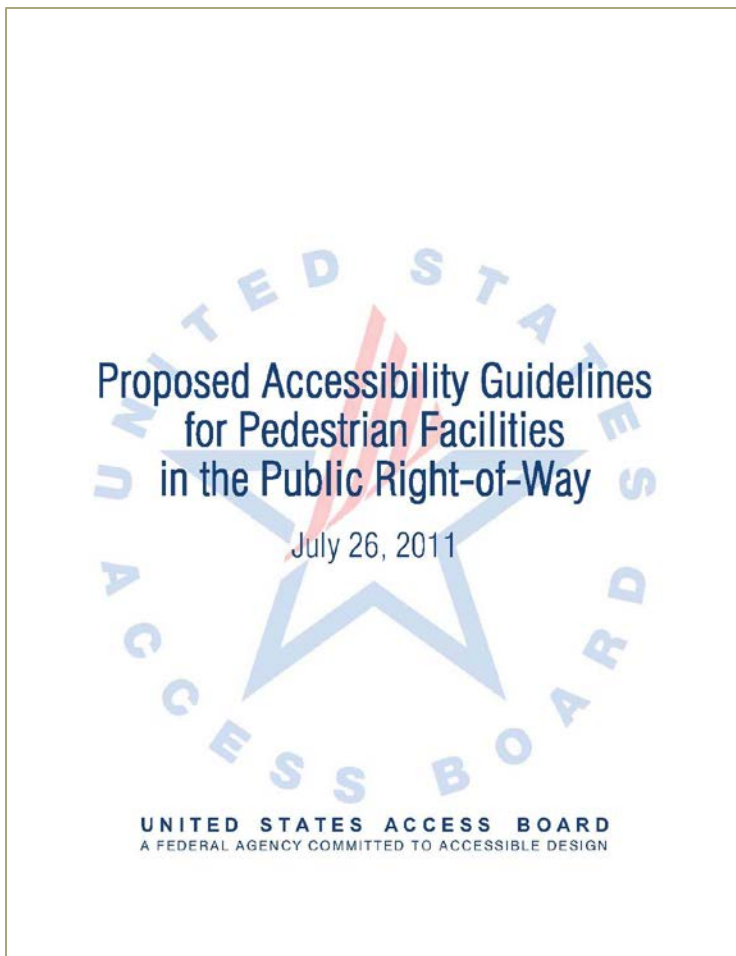
Data

- Number of Lanes
- Shoulder Width
- Bike Lane Width
- ADT, Peak Hour Volume
- Speed Limit, 85th
- Heavy Vehicle Percent
- Road Surface Condition
- Parking Percentage
- Sidewalk Data



Bicycle and Pedestrian Guidelines

Proposed Guidelines For Public Rights-of-Way



- Released for Public Review and Comment July 26, 2011
- For new, and altered existing rights-of-way
- Guidelines address:
 - Pedestrian Routes
 - Detectable Warning Surfaces
 - Pedestrian Signals
 - Roundabouts
 - On-Street Parking
 - Transit Stops and Shelters
 - Street Furniture & Other Elements
- Comment Period Ends November 23, 2011

Proposed Guidelines For Public Rights-of-Way

Why The New Guidelines?

Clarify Language From 2002 Guidance

Increase Accessibility and Reduce/Eliminate Discrimination
Towards Persons With Disabilities

Clarify That Guidelines Do Not Apply To Existing Facilities
Unless Altered

Increase Flexibility (Allowance for Typical Roadway
Geometry)

Design Standards for Bicycle Lanes

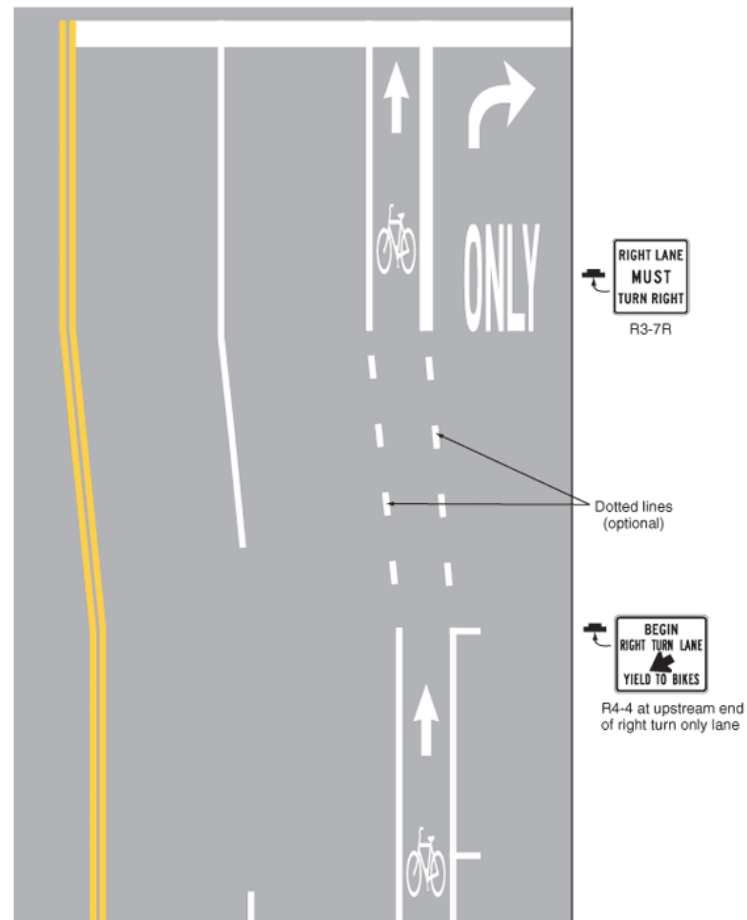
- On Roadways With Speeds Less Than 50 MPH and Fewer Than 30 Heavy Vehicles Per Hour
 - 4' Foot Minimum; 5 Feet Preferred
- On Roadways With Speeds > 50 MPH and > Than 30 Heavy Vehicles Per Hour
 - 5 Foot Minimum; 6 Feet Preferred
- Contraflow Lanes Allowed on One-Way Roads to Increase Connectivity



Source: MassDOT Project Development and Design Guide

Typical Roadway With Bicycle Lane Layout

Figure 9C-5. Example of Bicycle Lane Treatment at Parking Lane into a Right Turn Only Lane

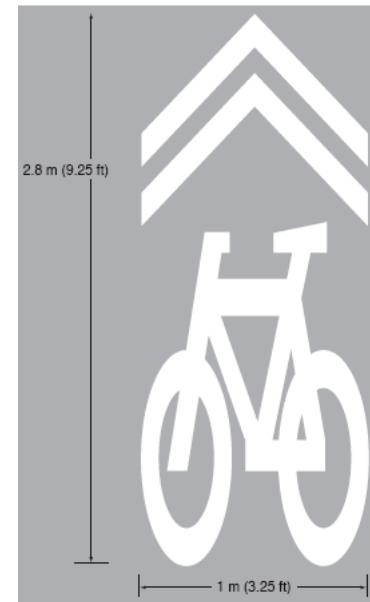


Source: Manual on Uniform Traffic Control Devices, 2009

Shared Lane Markings

- Used When Bike Lane / Adequate Shoulder Cannot Be Accommodated
- Benefits:
 - Assists Bicyclists With Lateral Positioning On Roadway
 - Alerts Motorists To Presence of Bicyclists
 - Reduce The Incidence of Wrong Way Bicycling

Figure 9C-9. Shared Lane Marking



Source: Manual on Uniform Traffic Control Devices, 2009

Signage

Official Bike Routes



- White on Green Background
- Plaque With Route Name or Number Should Be Included

Other Roadways



- Black on Yellow Advisory Signage
- “Share The Road” Plaque Often Included