Healthy Transportation

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MassDOT's Healthy Transportation Policy

A robust policy that intends to expand bicycle and pedestrian facilities

Purpose:

- Improve safety
- Support mode shift
- Better serve customers who want to travel on foot/bike

Bike/Ped Fatalities & Injuries

		2008	2009	2010	2011	2012*
FATALITIES						
	Pedestrian	75	48	68	69	82
	Bicycle	10	6	7	5	16
INJURIES requiring hospitalization						
	Pedestrian	677	714	759	740	695
	Bicycle	158	185	185	147	170

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The ~~Road~~ Path to Mode Shift

- 2006 - Context Sensitive Design
- 2006 - Complete Streets
- 2010 - Green DOT
- 2012 - Mode shift goal
- September, 2013 - Healthy Transportation Policy
- February, 2014 - Healthy Transportation Interim Engineering Directive
- 2016 - Interstate shared use path along Whittier Bridge opens

Healthy Transportation is defined in the policy as

- Walking
- Bicycling
- Taking transit

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"All MassDOT funded and/or designed projects shall seek to increase and encourage more pedestrian, bicycle and transit trips."

The policy supports our statewide goal of tripling the distance traveled by walking, bicycling and transit by 2030.

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Interim Directive

- Clarifies healthy transportation-related design criteria for Highway projects
- Introduces new controlling criteria for bike/ped accommodations

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What it Requires for Pedestrians:

- Sidewalks on both sides of roadways on and below all bridges
- Sidewalks on both sides of all roadways in urbanized areas
- Sidewalks along roadways adjacent to commercial/residential developments with at least 5 units/acre

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What it Requires for Cyclists:

- Minimum 5-foot-wide paved outside shoulder or designated bicycle lane on all “freeways”, arterials & collectors

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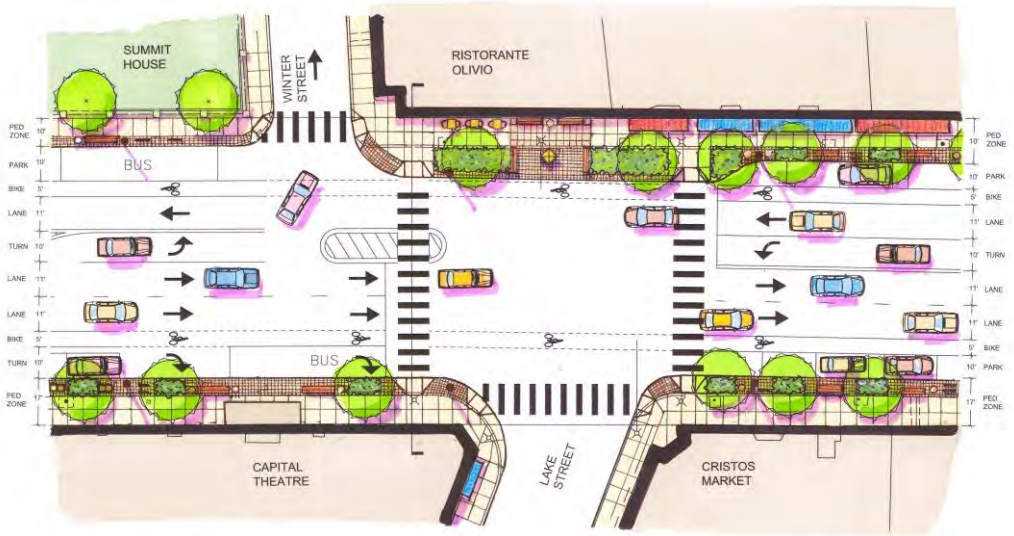
Case Study: Mass Ave., Arlington, MA

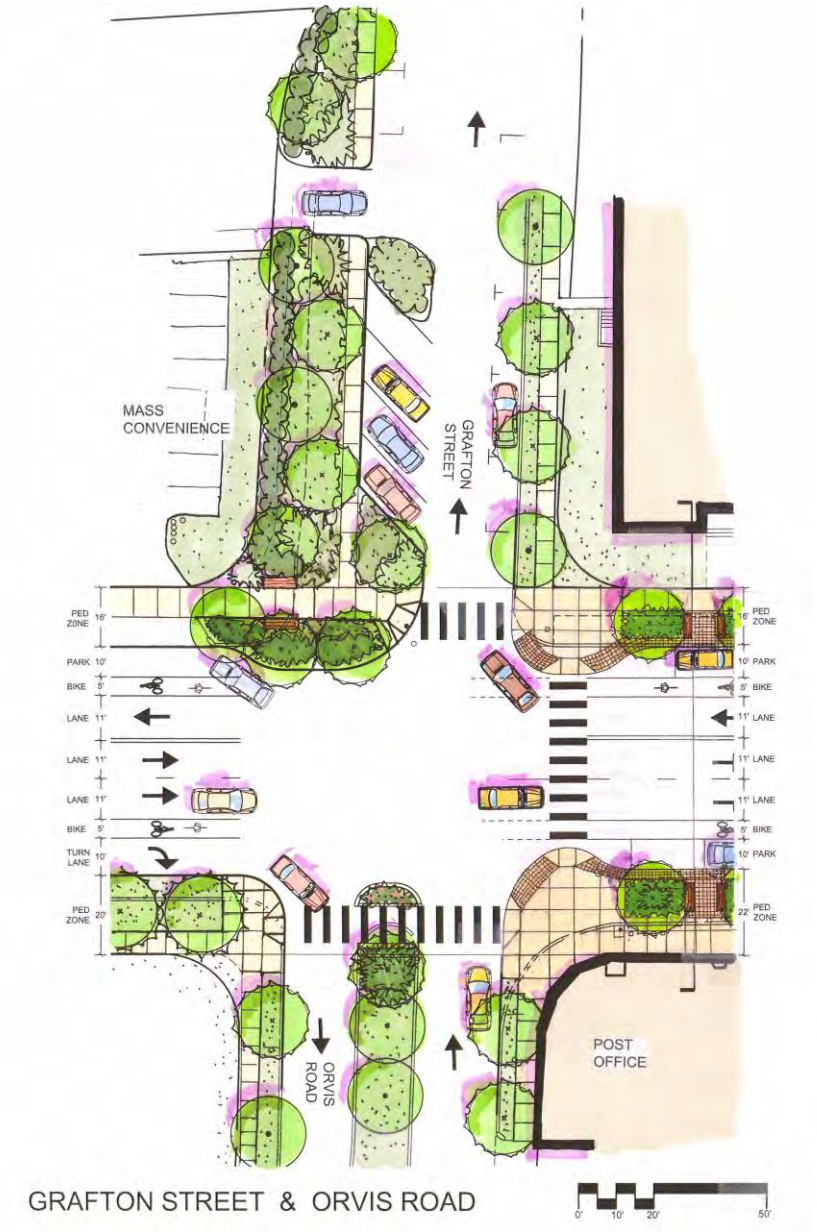
Mass Ave, looking north toward Business District

Mass Ave, looking north from Grafton Street

Case Study: Mass Ave., Arlington, MA



BUSINESS CENTER: LAKE & WINTER STREET



GRAFTON STREET & ORVIS ROAD

Air Quality Benefit

- Improved corridor operations resulted in net decrease of emissions
  - CO_2: -45 metric tons/yr
  - VOC: -134 kg/yr
  - NO_x: -60 kg/yr
  - CO: -1,582 kg/yr

- Multi-modal improvements promote mode shift and represent an overall qualitative benefit

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Case Study: Casey Overpass/Arborway

Existing Conditions

Proposed Corridor Plan

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Air Quality Benefit

- Regional Air Quality Analysis indicated minimal change for build vs. no build conditions

- Multi-modal improvements promote mode shift and represent an overall qualitative benefit
  - New dedicated bicycle paths, sidewalks and significantly improved connectivity
  - New access to rapid transit, direct line to downtown Boston

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Case Studies - Summary

- Both projects resulted in an overall air quality **benefit**
- Both projects **maintained capacity** and didn't negatively impact operations or regional traffic movements
- Both projects **balanced** the livability and mobility needs of the community and region at large.

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Additional Considerations

- Multi-modal accommodations require more space
  - Limited ROW in urban context
  - Road Diet alternatives
    - Induced diversion, increased congestion?
  - Other environmental impact considerations

- Need to quantify "mode shift" air quality benefits
  - Traditional air quality analysis focused on traffic operations
  - Qualitative vs. quantitative benefits; how should multimodal benefits quantified?

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Discussion

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