



- Conceptual Streetscape Master Plan
- Community vision
- Cambridge Common to Porter Square

Cambridge Community Development

Massachusetts Avenue Streetscape Master Plan
Cambridge Common to Porter Square

March 10, 2011

3 Primary Areas of Focus

1. Neighborhood Identity and Culture
2. Streetscape and Landscape
3. Pedestrian Safety and Transportation

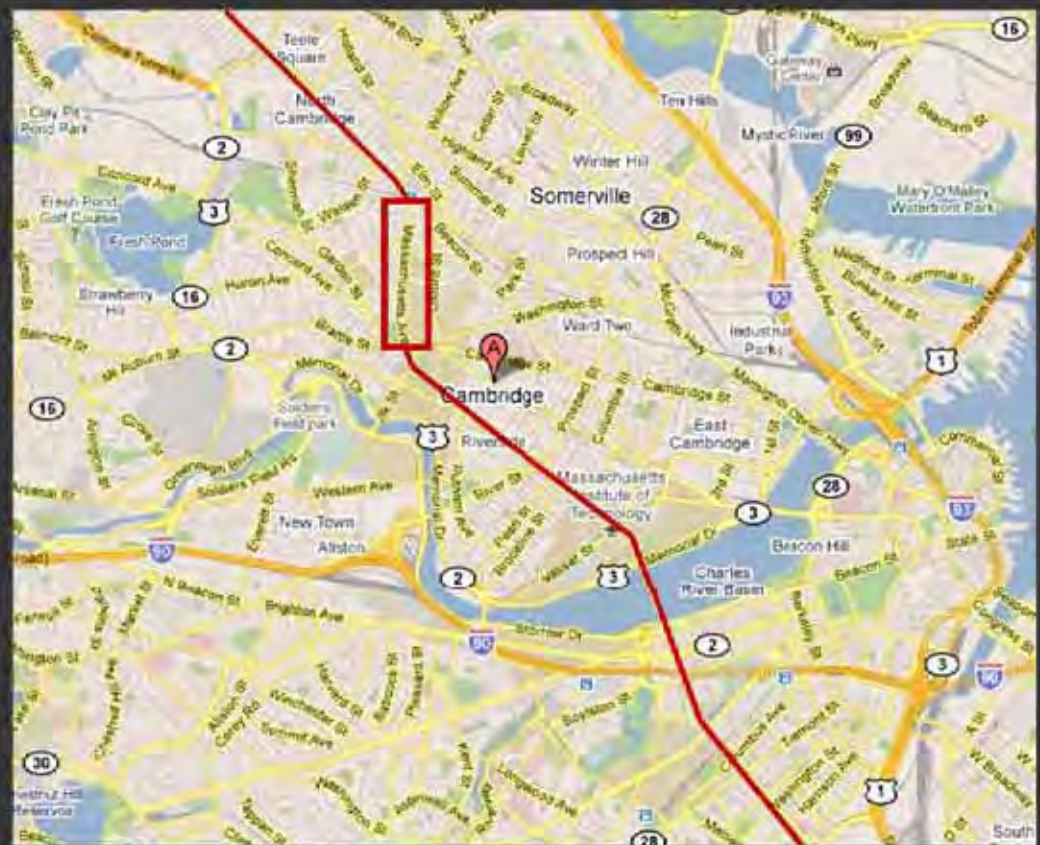
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- Lower Massachusetts Avenue is one piece of a larger whole
- State numbered Route 2A
- Boston-Cambridge orienting spine
- Project area is walkable (3/4 mile= 15 minutes)



1. Neighborhood Identity & Culture

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- Retail & Restaurant frontages
- Local Services
- Multi-cultural establishments
- Opportunities for additional uses



1. Neighborhood Identity & Culture – *Rich & Lively Shopping District*

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- Local residents/mixed-age groups
- University students & faculty
- Multi-cultural population

1. Neighborhood Identity & Culture – *People*

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- Project Anchor
- MBTA Red Line Station / Commuter Rail
- Lower plaza sub-spaces
- Opportunity for program uses
- Deferred maintenance/social issues



1. Neighborhood Identity & Culture – *Porter Square & Porter Square Station*

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- Project Anchor
- Iconic Historic Landscape
- Planned improvements (2012)
- Future program activities
- Passive & Active Recreational Space

1. Neighborhood Identity & Culture – *Cambridge Common*

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- Pedestrian connections between Mass. Ave. and Quad open spaces
- Harvard Law School Campus Improvements
- Significant Architecture



1. Neighborhood Identity & Culture – *Harvard University*

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1. Neighborhood Identity & Culture – *Lesley University*

- Pedestrian connections between Mass. Ave. and Campus
- Main Campus (Victorian Buildings)
- Porter Campus – University Hall & Art Institute expansion

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- Existing Public Art Installations
- Art Opportunities
- Expanded Arts Community
- Maud Morgan Visual Arts Center
- Art Institute of Boston at Lesley University (Prospect Hall site)



LESLEY
UNIVERSITY

AIB
The
Art
Institute of
Boston

1. Neighborhood Identity & Culture – *Celebration of the Arts*

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- Early Newtowne
- City of Cambridge
- Cambridge Common
- Harvard University & Lesley University



1. Neighborhood Identity & Culture – *Rich History*

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Sidewalk
Varies

Parking

Travel Lanes
+/- 34'

Median
+/- 5'

Travel Lanes
+/- 34'

Parking

Sidewalk
Varies

2. Streetscape & Landscape

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Cobrahead



LED



1907 Teardrop Replica



Acorn Post Top

2. Streetscape & Landscape *Lighting*

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- Regulatory Signage
- Interpretive/Educational
- Community Bulletin Boards
- Wayfinding

2. Streetscape & Landscape *Signage*

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- Sidewalk width varies
- 11-13' average
- Narrow at some locations (6-7')

2. Streetscape & Landscape

Sidewalks

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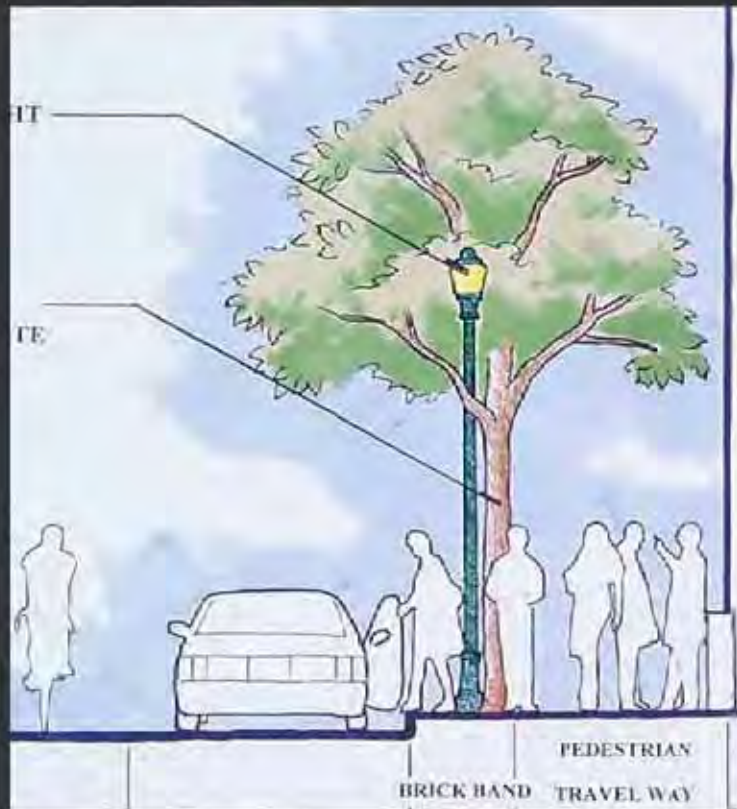


Building zone | Travel Zone | Curb Zone

2. Streetscape & Landscape

Sidewalk Zones

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Materials & Design

2. Streetscape & Landscape

Sidewalks

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2010 Tree Study – Massachusetts Ave

- 32 Large Canopy Trees (covers both sides of sidewalk)
- 63 Small/Medium Canopy Trees
- 26 Damaged/Highly Questionable



2. Streetscape & Landscape

Street Trees – Existing Conditions

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- Soil volume relationship to healthy trees
- Street tree average life span

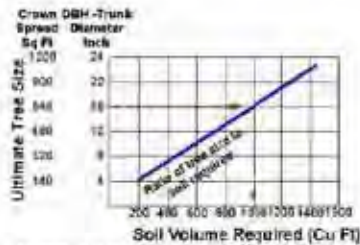
2. Streetscape & Landscape *Street Trees*

when we grade them with infrastructure support*

support	11.8 cu ft (loading)
strata	25% soil volume
pot	350 cu ft (tree root volume)
irrigate	1.5 in (roughly 2x supplement of)
nutrients	8 gal/1000 sq ft compost tea

LIFE / SUPPORT

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Example: A 16 inch diameter tree requires 1000 cu. ft. of soil.
Tree/Soil Volume Requirements
 Source: James Urban, Urban and Associates

estimated crown spread =
 10 feet diameter



Soil Volume = 120 cubic feet

estimated crown spread =
 21 feet diameter



Soil Volume = 500 cubic feet

estimated crown spread =
 30 feet diameter



Soil Volume = 1000 cubic feet

Source: Casey Trees – Tree Space Design: Growing the Tree Out of the Box, 2008

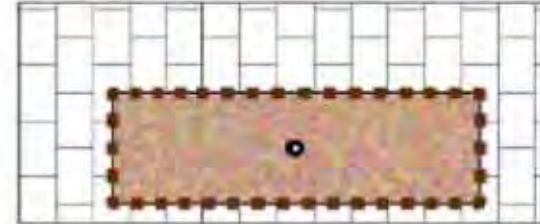
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Street Trees – Soil Volume

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Open Soil Area

An unpaved area of soil surrounding a tree, which contains existing, new or amended soil. An open soil area may be planted or covered with mulch. Open soil areas reduce impervious surface and stormwater runoff.



Open soil areas can be continuous or separated by pavement. Open soil areas can be planted with groundcover, ornamental plants or grass or covered with mulch as shown in the images above.

Source: Casey Trees – Tree Space Design: Growing the Tree Out of the Box, 2008

2. Streetscape & Landscape

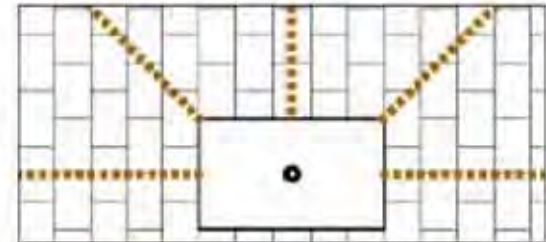
Street Trees

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Root Paths

Constructed paths that use aeration or drainage strips to give roots a way to grow out of the tree space and under pavement in order to access better planting soils. Root paths can connect tree spaces and adjacent green spaces.



Root paths under construction, shown in ground trench (above left) and extending out from a tree space (middle, photos courtesy of James Urban). Root paths run under the pavement to connect tree spaces to landscape areas (above right).

Source: Casey Trees – Tree Space Design: Growing the Tree Out of the Box, 2008

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Street Trees

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Covered Soil Area

An area of soil that is under pavement and specially designed to accommodate tree root growth. Design methods include structural soil, sidewalk support and soil cells.



A variety of **pavements**, both solid and permeable, can be used to create a covered tree space. Pavers, such as granite cobbles and permeable paver blocks (shown above left and middle), placed with gaps between the stones allow water to flow to the soil below. Grates can be used as a soil covering when they are not immediately adjacent to the tree.

Source: Casey Trees – Tree Space Design: Growing the Tree Out of the Box, 2008

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Street Trees

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Tree Pits



2. Streetscape & Landscape

Street Trees

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2. Streetscape & Landscape

Street Trees



- Species Selection
- Variety to avoid monoculture
- Opportunities to plant back of sidewalk

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- Catenary Wires
- Tree Pit Size
- Underground Utilities

2. Streetscape & Landscape

Street Trees – Potential Conflicts

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- Maximize Open Space Opportunities
- Create additional planting buffers



2. Streetscape & Landscape *Landscape Improvements*

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Potential viability for median plantings

2. Streetscape & Landscape

Landscape Improvements

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- Curb Cuts
- Rain Gardens
- Porous Pavements

2. Streetscape & Landscape

Green Streets & Stormwater Management

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- Planters
- Benches/conversational seating
- Litter Receptacles
- Bike Parking

2. Streetscape & Landscape

Street Furnishings

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2. Streetscape & Landscape

Specialty Improvements & Art Elements

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Multi-modal balance between cars, pedestrians, bikes & transit

3. Pedestrian Safety & Transportation

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- Bike Accommodations – planning underway
- Bike parking
- Potential Bike Share Program



3. Pedestrian Safety & Transportation

Bicycle Safety & Circulation

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- Bus Stops & Shelters
- Bus Lay By
- Porter Square T-Station & Commuter Rail Connections



3. Pedestrian Safety & Transportation

Mass Transit

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- Strengthen visibility of pedestrians on sidewalks
- Potential for curb extensions
- Potential for mid-block pedestrian crosswalks
- Comply with Federal, State and ADA regulations

3. Pedestrian Safety & Transportation

Pedestrian Safety

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Waterhouse St



3. Pedestrian Safety & Transportation *Planned Intersection Improvements*

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Chauncy & Everett St.



3. Pedestrian Safety & Transportation

Planned Intersection Improvements

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Shepard & Wendell St.



3. Pedestrian Safety & Transportation

Planned Intersection Improvements

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Garfield St.



3. Pedestrian Safety & Transportation

Planned Intersection Improvements

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Exeter Pk.
& Linnaean St.



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Planned Intersection Improvements

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Roseland St.



3. Pedestrian Safety & Transportation

Planned Intersection Improvements

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Putting It All Together

Coming soon!



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