

# Agenda – Central Square Transportation Part 1

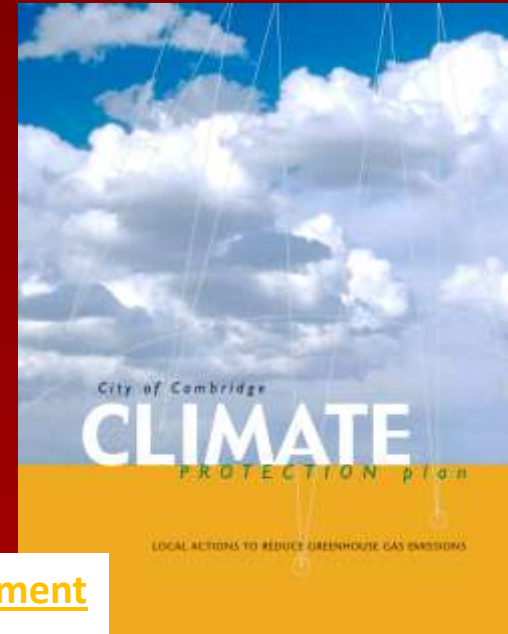
## July 11, 2012

- Transportation/Land Use Policy & Practice
- Planning for Growth – Transportation
- Public Transportation
- Transportation Demand Management
- Build-Out/Critical Sums Analysis
  
- Next meeting (Transportation Part 2):
  - Parking
  - Pedestrian, bicycle and roadway improvements



# Transportation/Land Use Policy & Practice

- Responsible growth
  - Vehicle Trip Reduction Ordinance, Growth Policy
  - PTDM Program
  - Climate Action Plan
- Multi-modal approach
  - Ped/Bike Plan
  - Public Transportation/EZ Ride



## Policy # 22, Growth Policy Document

Undertake reasonable measures to improve the functioning of the city's street network, without increasing through capacity, to reduce congestion and noise and facilitate bus and other non-automobile circulation.

## Policy # 23, Growth Policy Document

Encourage all reasonable forms of nonautomotive travel including, for example, making improvements to the city's infrastructure to support bicycling and walking.

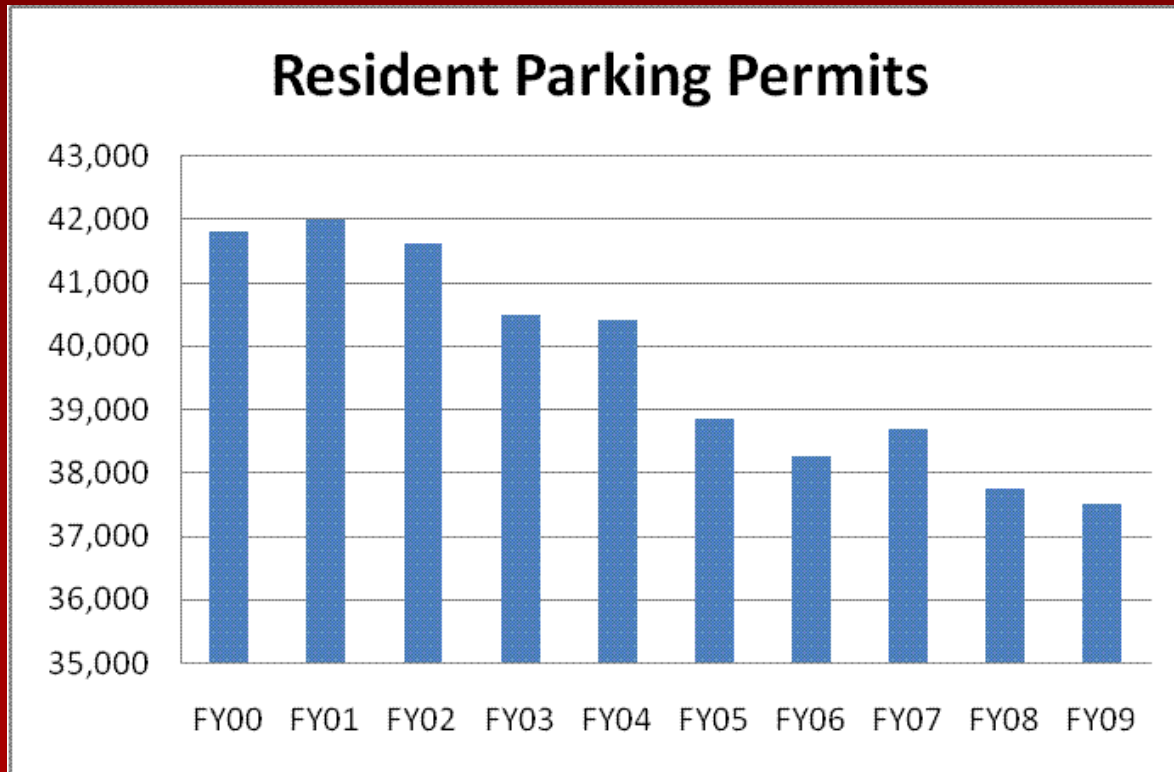


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# Auto Ownership is declining

Cambridge households without a vehicle increased from 28% to 32% from 2000 -2008

Source, American Community Survey



50% of Cambridge households within ¼ mile of an MBTA station have no car

Source, City of Cambridge CDD and TPT Departments,

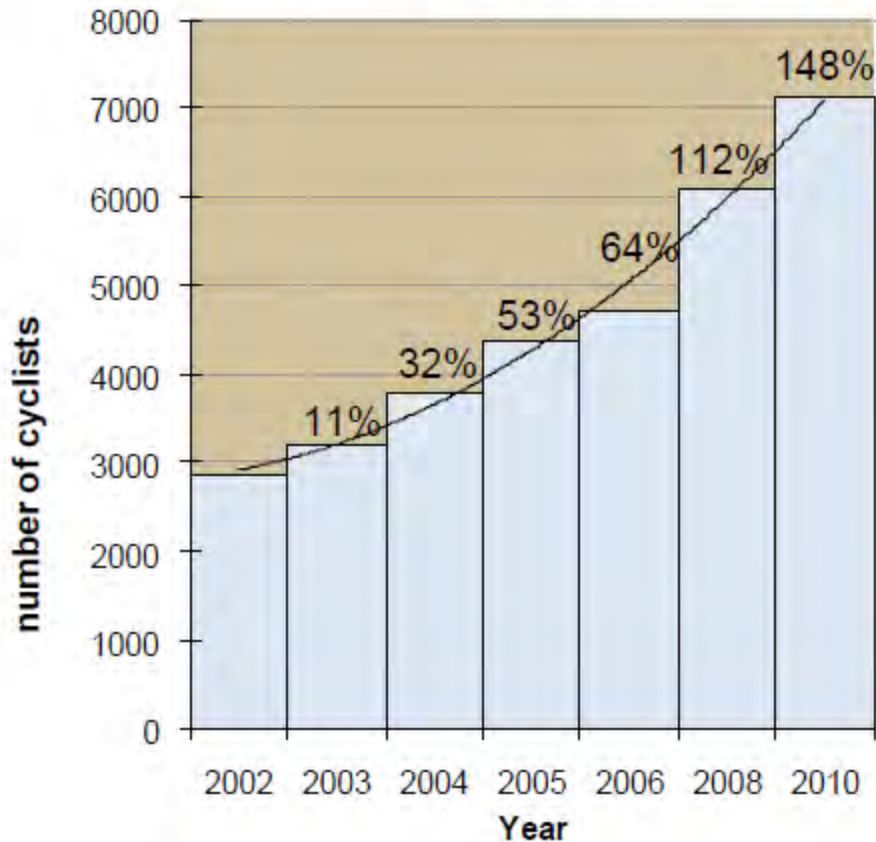
**10% decrease in permits issued between 2000 and 2009.**



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# Bicycle growth is strong

## Cambridge Bicycle Counts 2002-2010



Numbers represent combined AM and PM peak hour cyclist counts at 15 locations on a fall weekday under similar weather conditions.

Percent values represent the percent increase in cyclists compared to 2002



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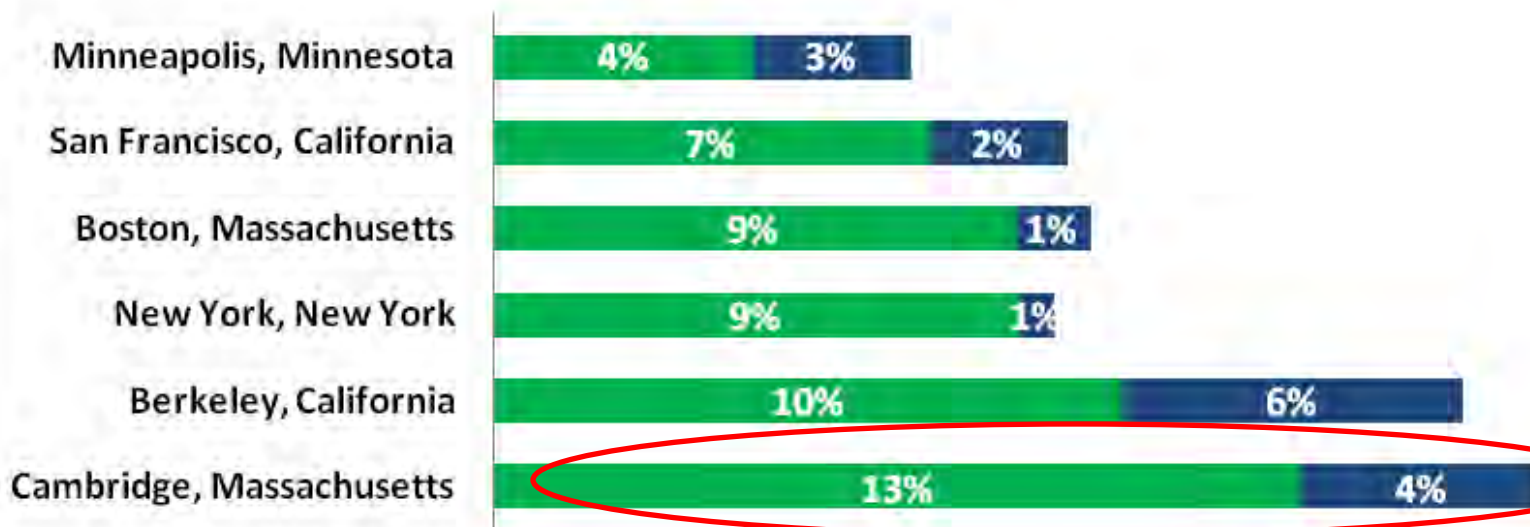
# Cambridge Rates Highly

## America's Most Walkable City

Source: *Prevention Magazine*, 2008

Percentages of Workers who Walk and Bike to Work  
in Select US Cities

■ Walk ■ Bike

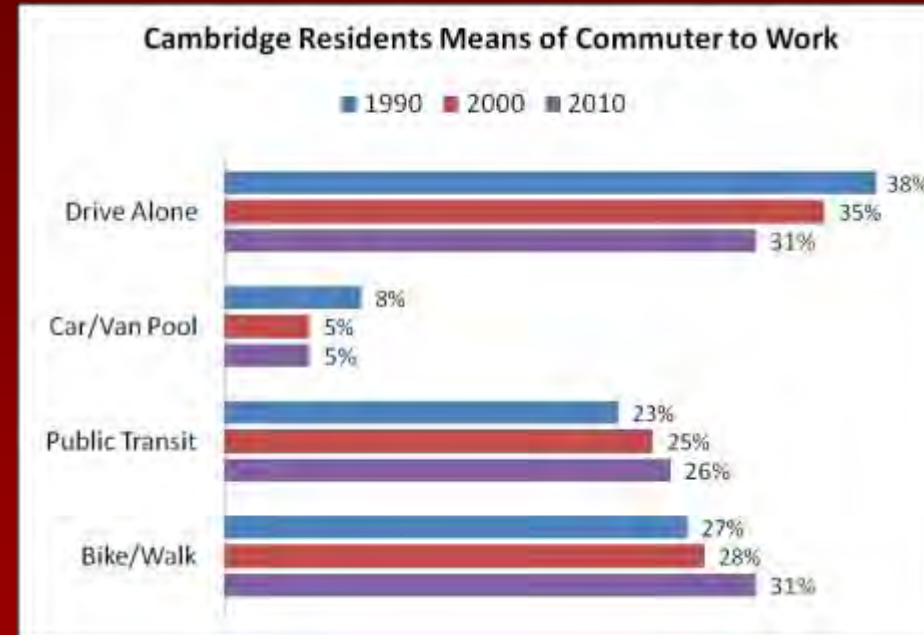
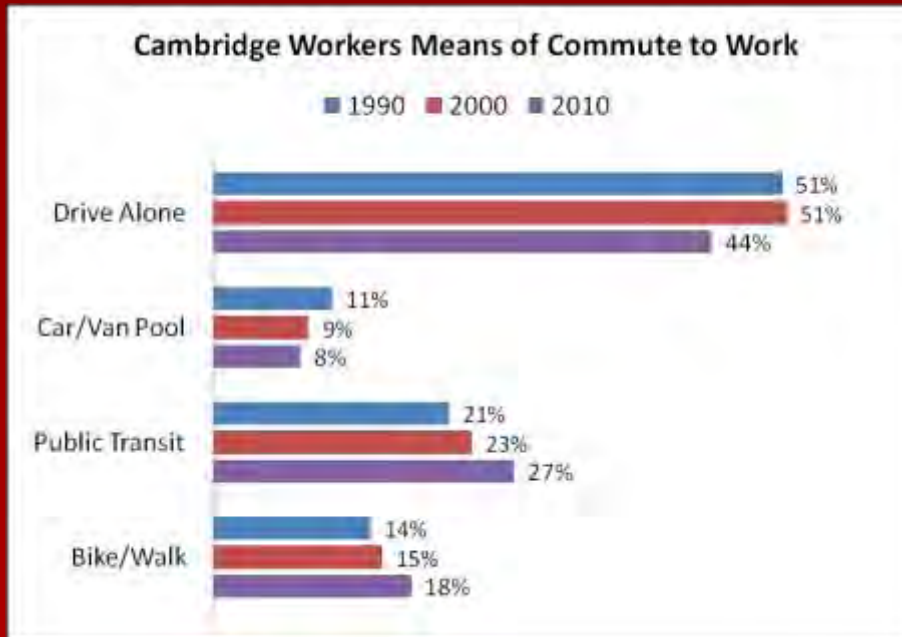


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# Mode Shifts from Single Occupancy Vehicles Continues

1990 - 2010

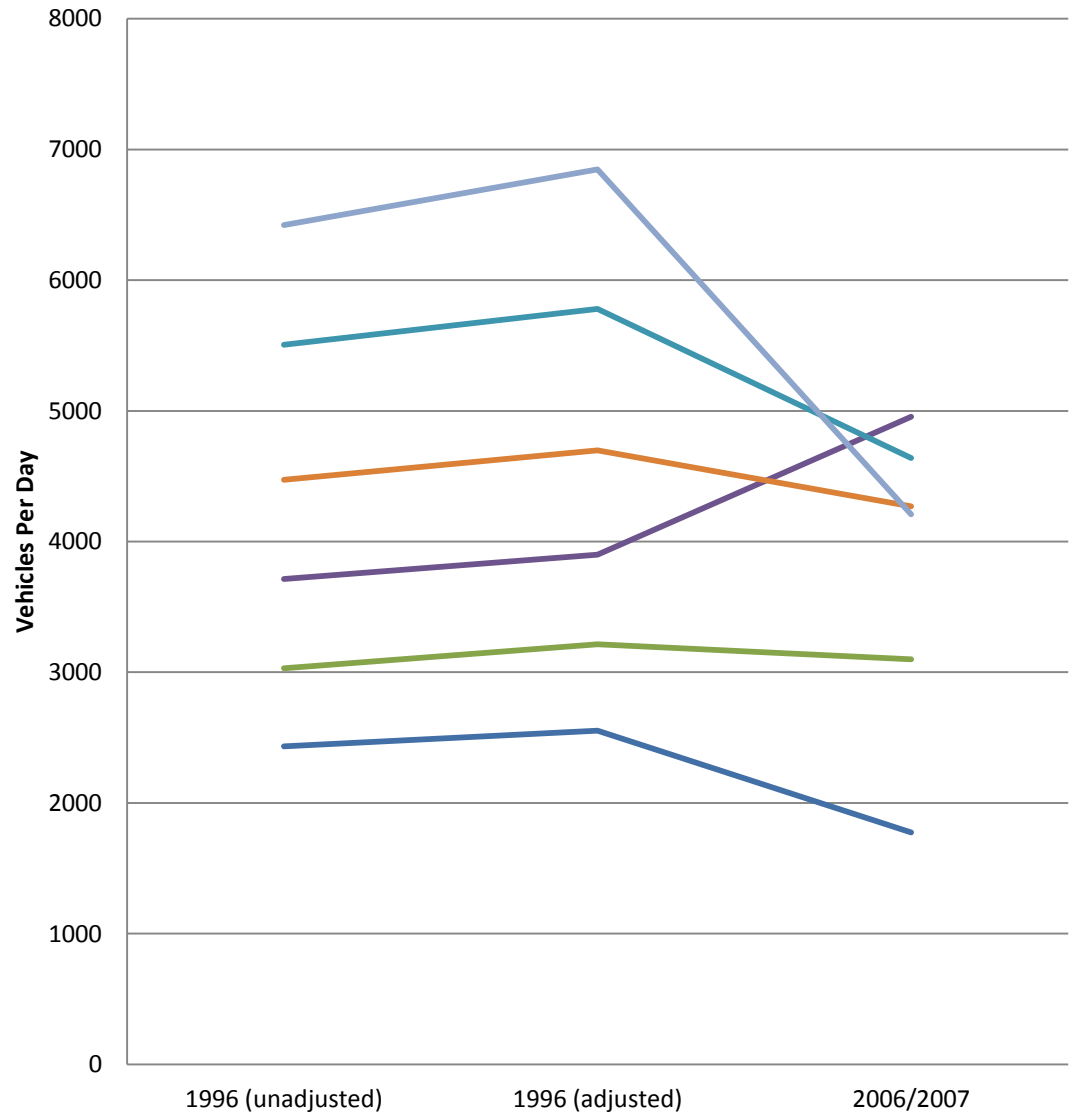
- Driving rates continue to decrease
- Bike/Walk share continues to increase
- Public transit use for Cambridge workers continues to increase



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# Average Daily Traffic Volumes / Cambridgeport

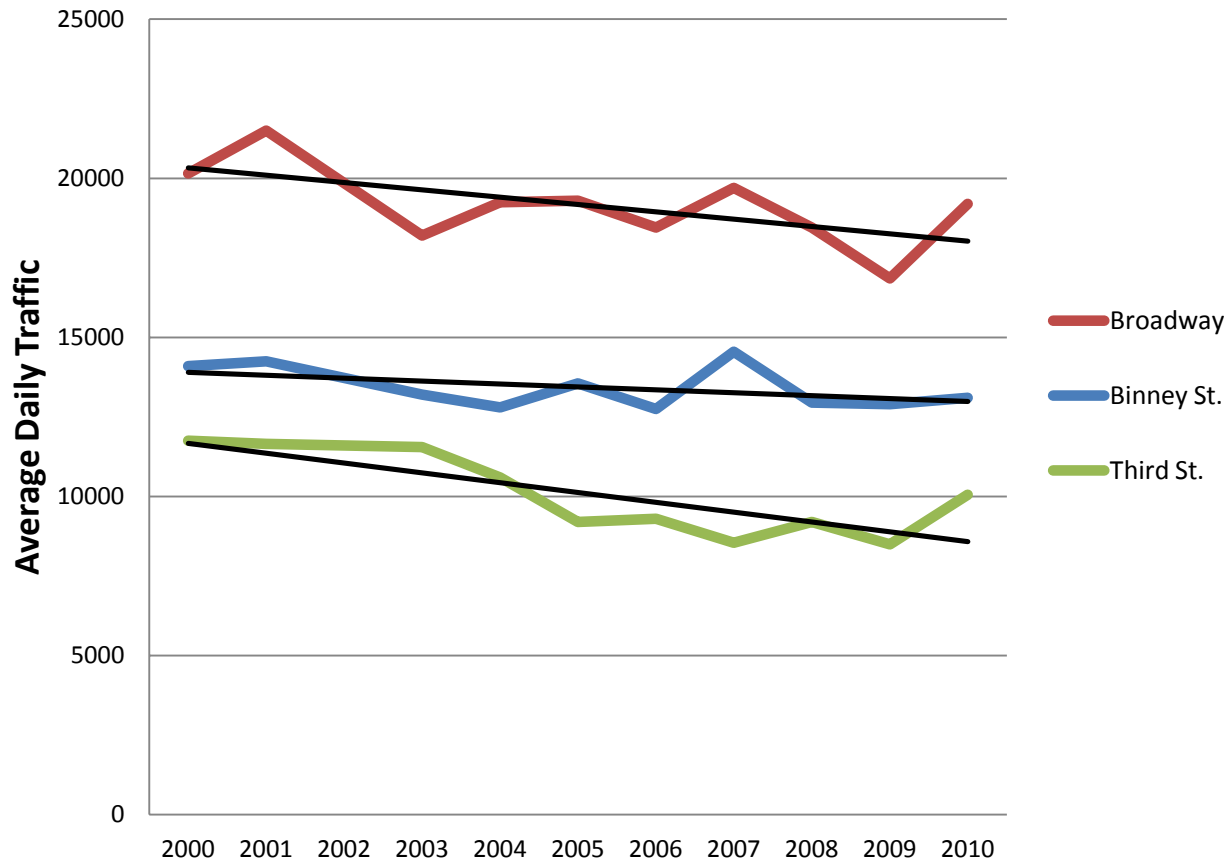
- Putnam Ave, west of Sidney Street
- Waverly Street, south of Erie Street
- Albany Street, south of Pacific Street
- Sidney Street north of Putnam Ave
- Granite Street west of Brookline Street
- Brookline street, south of Putnam Avenue



Source: City of Cambridge traffic counts

# Development vs. Traffic Growth

Kendall Square Average Daily Traffic  
with Trend Lines



- Added almost 4 million square feet in Greater Kendall from 2000-2010
- 37.6% growth in built square footage
- Daily Traffic Volumes remained consistent or been reduced





# Planning for Growth - Transportation

- Continued application of Cambridge's sustainable, multi-modal, and vehicle reduction policies
- Review connectivity gaps
- Integrate activities through complimentary land uses
- Prioritize regional investments

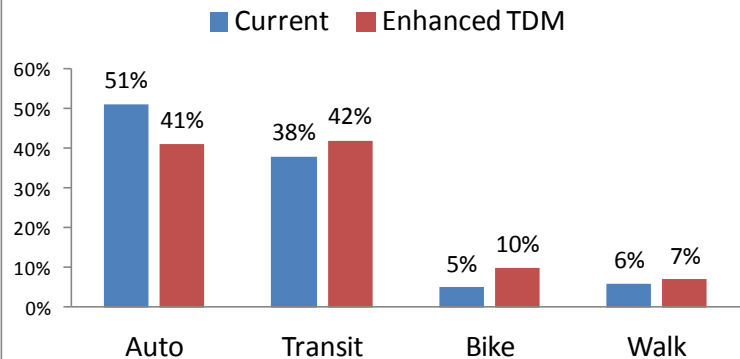
## Plan Framework: four perspectives

- Celebrate and maintain the mix of old and new, venerable and funky businesses    maintain affordability for small, local businesses and non profits
- Generate added diversity through varied housing choices    maintain and create middle income, family housing
- Enrich the Square's public realm as a place that invites community interaction
- Enrich Neighborhood walkability and livability

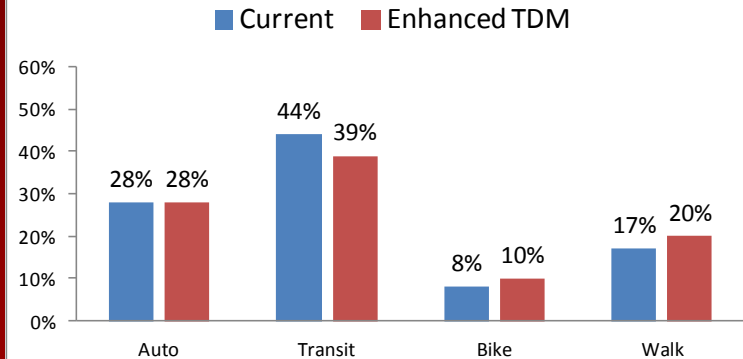


# Central Square Mode Share(s) by Land Use

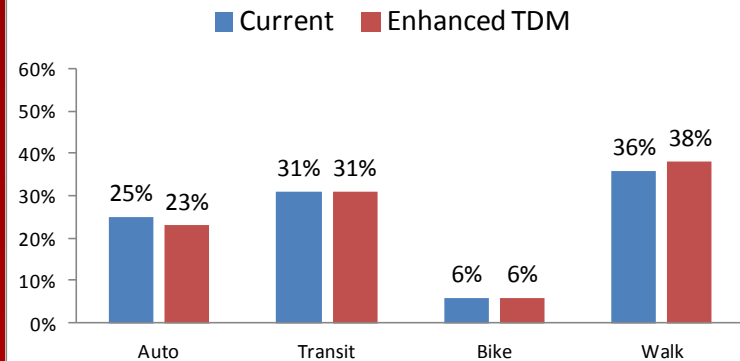
## Office and R&D



## Residential

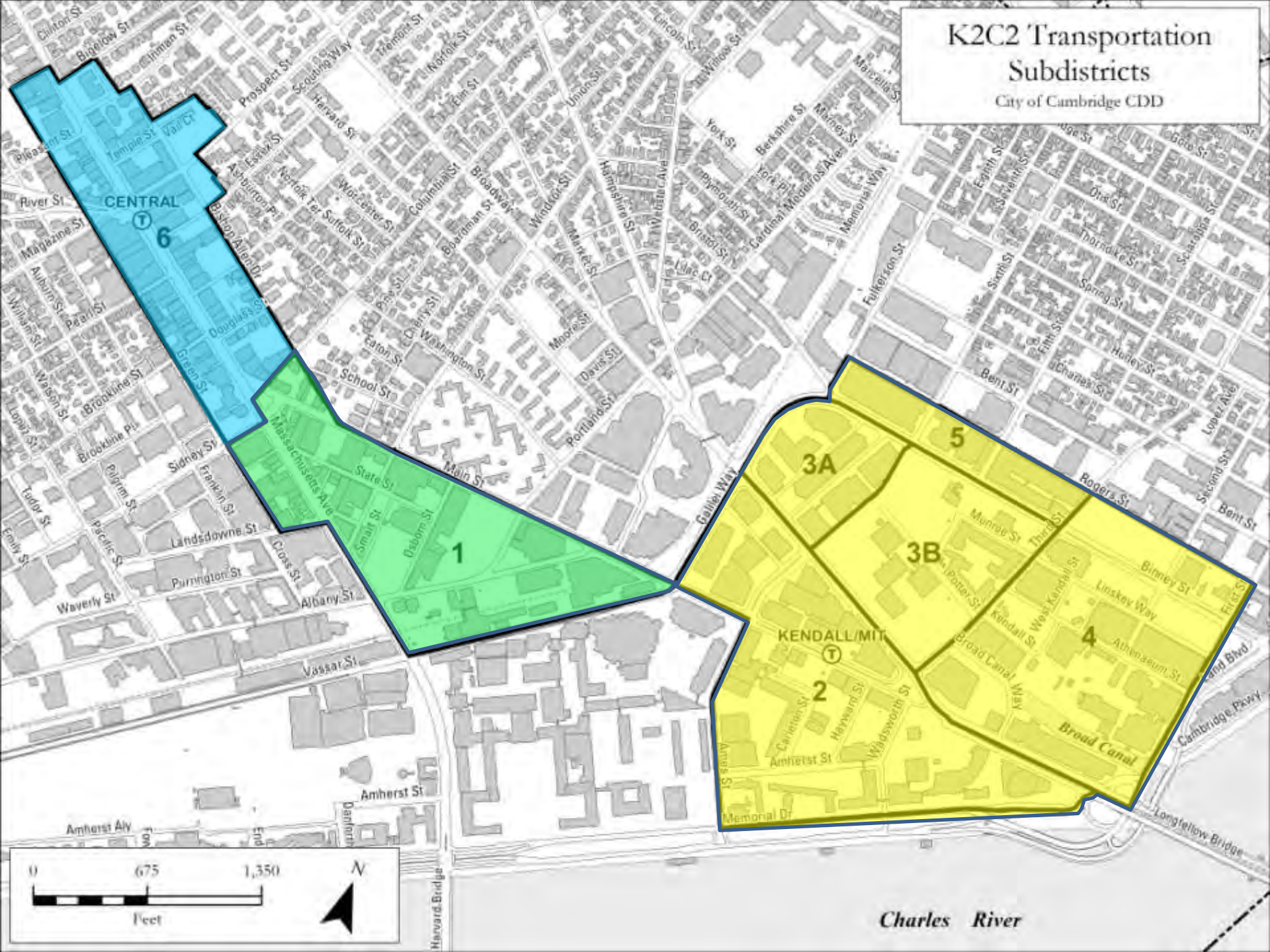


## Retail



# K2C2 Transportation Subdistricts

City of Cambridge CDD



# Overall Growth: Land Use (K2C2 Scenario)

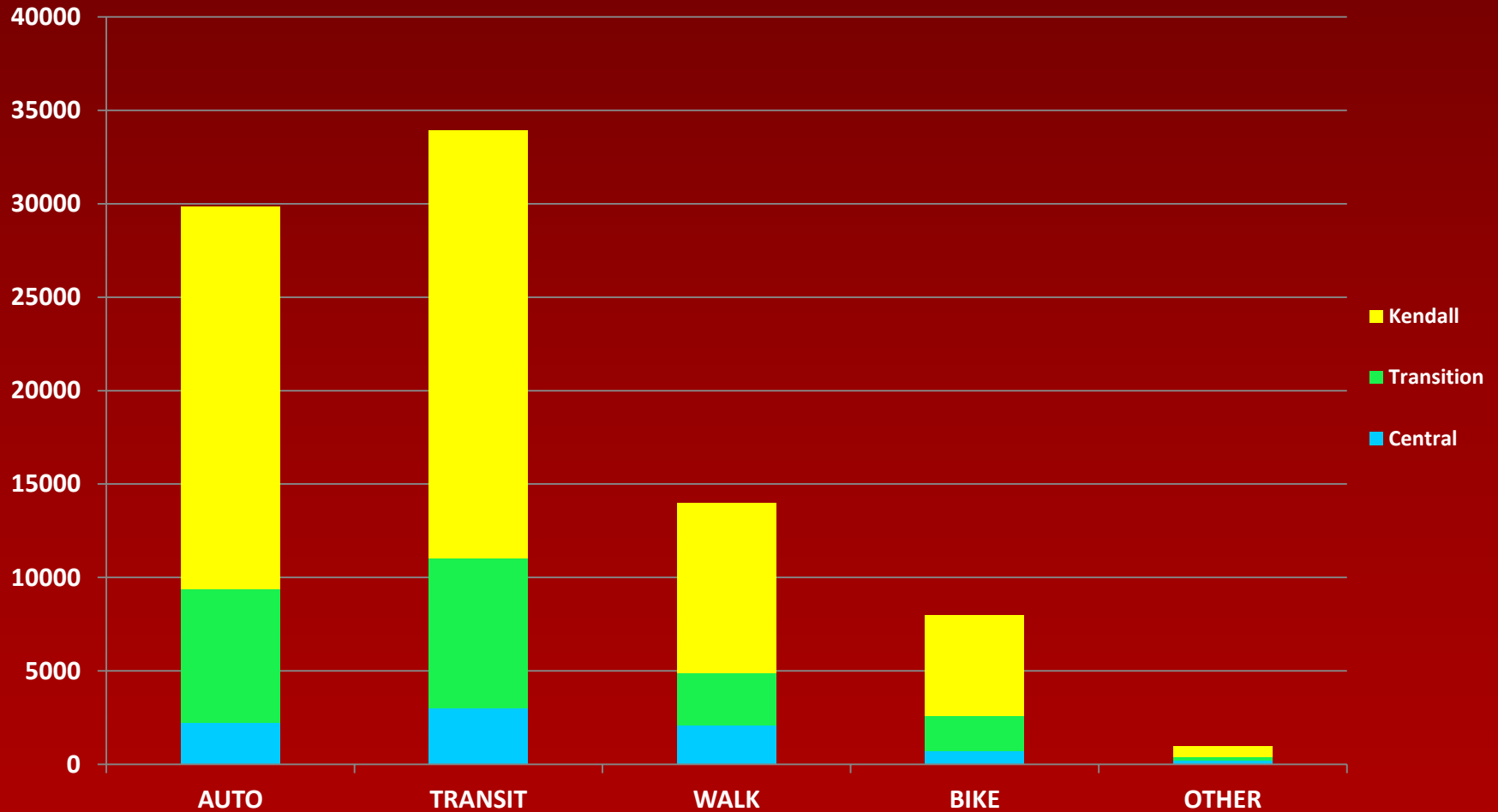
## Land Use Growth (2030 buildout)

	Central <i>Area 6</i>	Transition/ South of Main <i>Area 1</i>	Kendall <i>Area 2-5</i>	Total
Residential	664,800	687,200	1,464,700	2,816,700
R&D/Office	75,000	1,455,300	4,169,500	5,699,800
Retail	61,400	55,600	247,000	364,000
<b>Total</b>	<b>801,200</b>	<b>2,197,900</b>	<b>5,881,200</b>	<b>8,880,500</b>



# New Development in 2030 – Daily Trips

## Enhanced TDM



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# Existing Conditions: Public Transportation



## Red Line

## 8 MBTA Bus Routes Direct Connections to

- Harvard
- Back Bay
- Sullivan Square
- Kenmore
- Longwood
- Boston Medical Center
- Union Square
- Allston
- Brookline
- Watertown/Waltham

## Shuttles

- MASCO – Harvard Sq - LMA
- EZ Ride – North Station - Cambridgeport

# Existing Conditions: Red Line

Overall Red Line Ridership: 192,513 daily

Daily Boardings at Central: 14,531 (7.5% of Red Line total)

*Source: MBTA Ridership Statistics, 2010*

Central is the 3<sup>rd</sup> busiest Red Line station (boardings)

*(1<sup>st</sup> South Station, 2<sup>nd</sup> Harvard)*

Frequency: 4.5 minutes Peak  
6.5 minutes Mid-Day



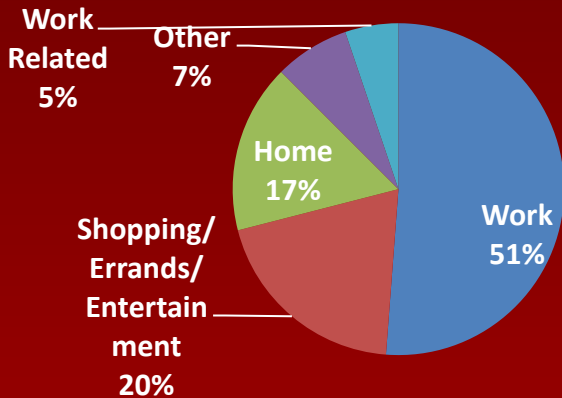
Source: CTPS MBTA Blue Book 2010 ed13



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# Central - Rider Profile

## Why are riders coming to Central?

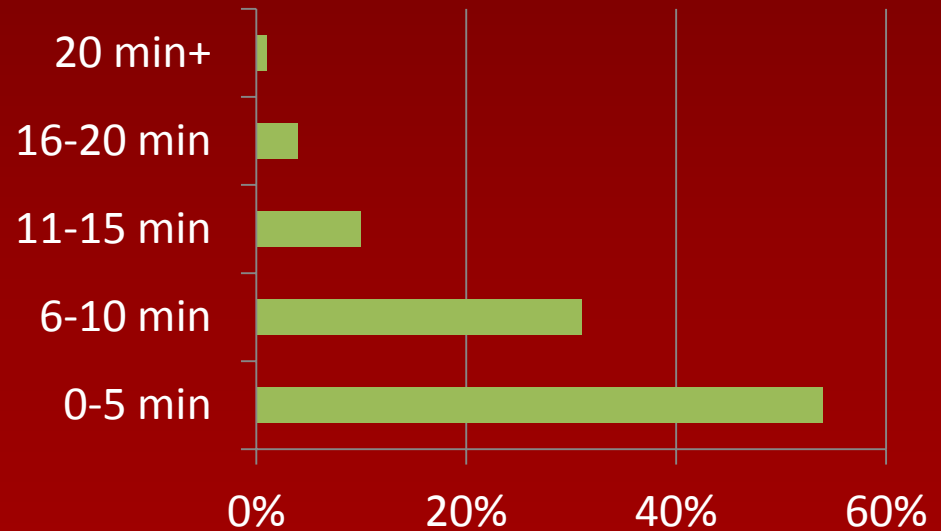


## What do riders do when they exit at Central?

- 82.2% of people walk
- 14.2% get on an MBTA bus
- 1.5% take a shuttle or a bus
- 2.1% other

## How far will people walk to Central?

Avg. walking time: 7.1 min



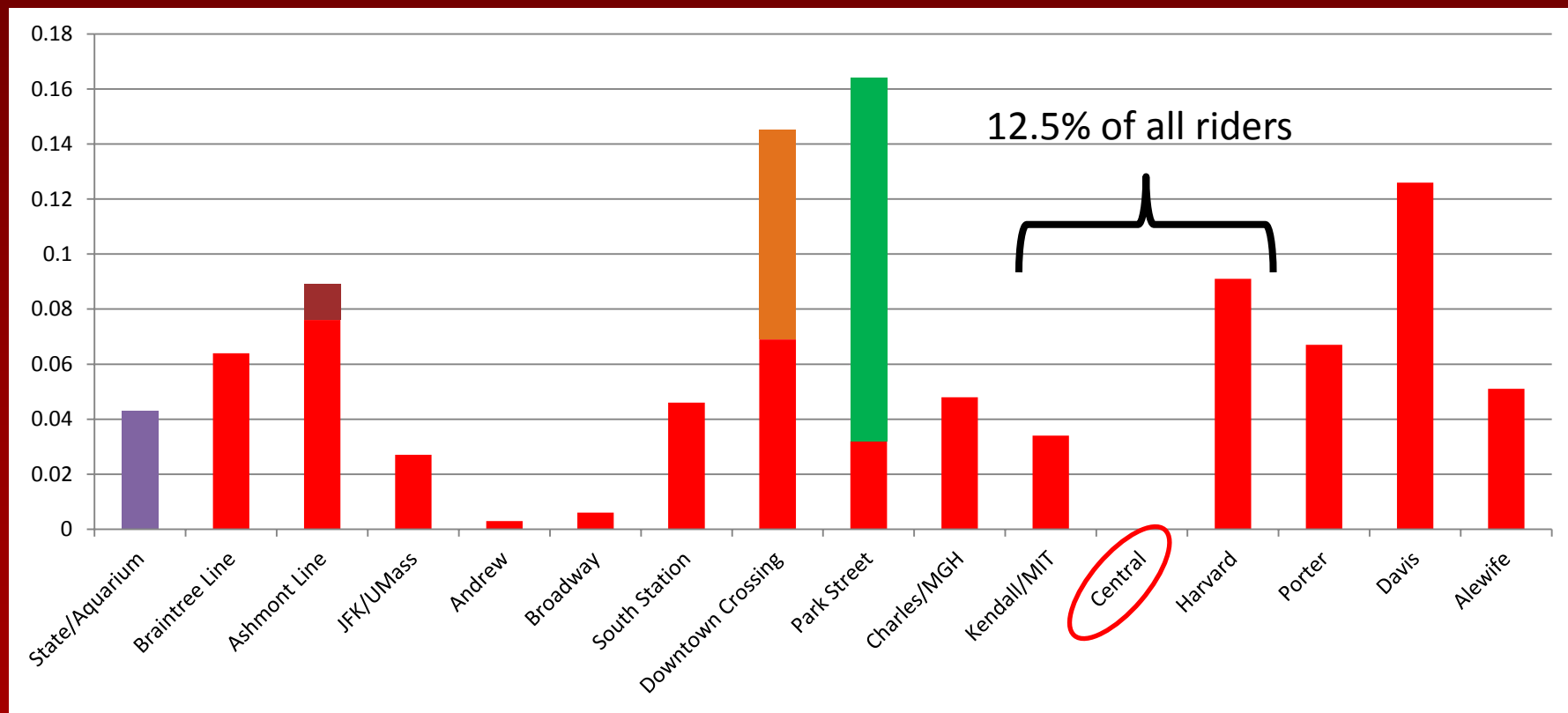
Source: MBTA Systemwide Passenger Survey,  
Rapid Transit 2008 2009, Red Line



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# Where are Central Riders Boarding the System?



- 74% taking the T to Central start their subway trip on the Red Line
- 1/3 of all Central riders board from Alewife direction

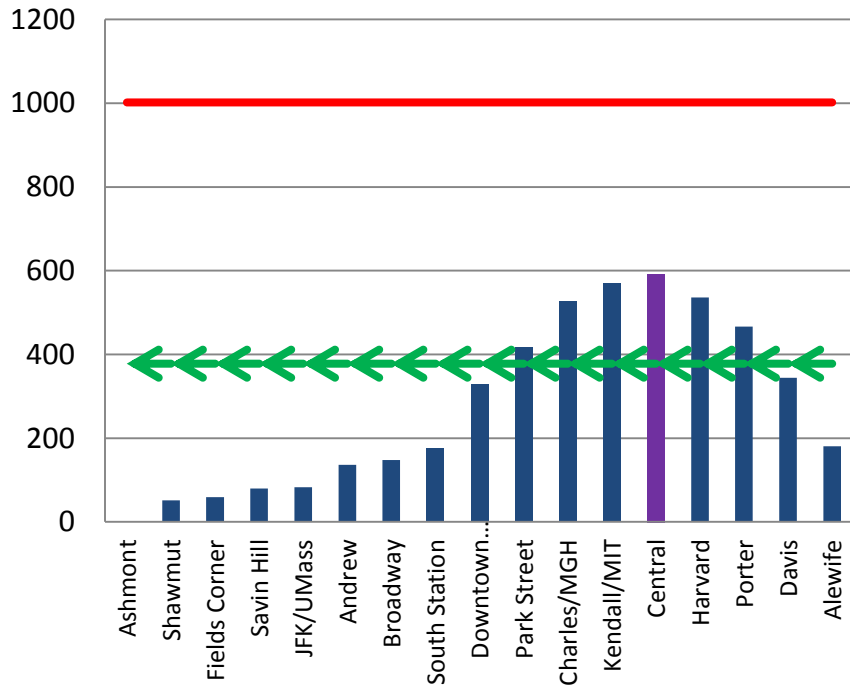
Source: CTPS 2008 2009 Red Line and Mattapan Trolley Passenger Survey



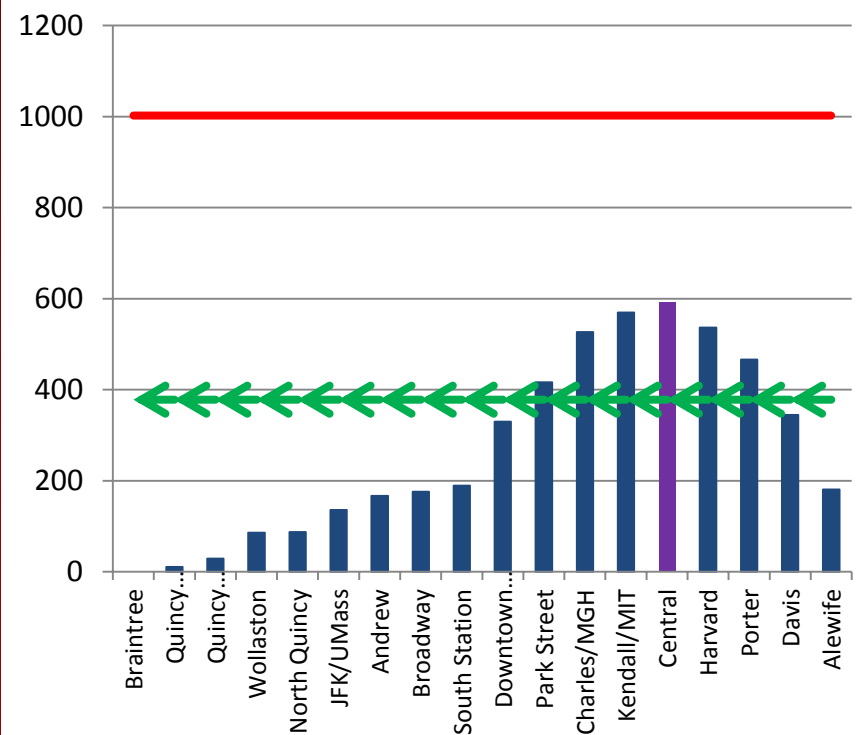
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# Average Train Load - AM peak to Ashmont/Braintree

## Ashmont



## Braintree



### Legend

- █ Ridership by Stop
- █ Seated + Standing Capacity
- ← Seated Capacity

**Note:** The inclusion of "Big Red" standing only cars would increase total capacity (seated + standing) by up to 10% per car.

*Source: Boston Globe, 2008 "MBTA to experiment with nearly seatless subway cars"*



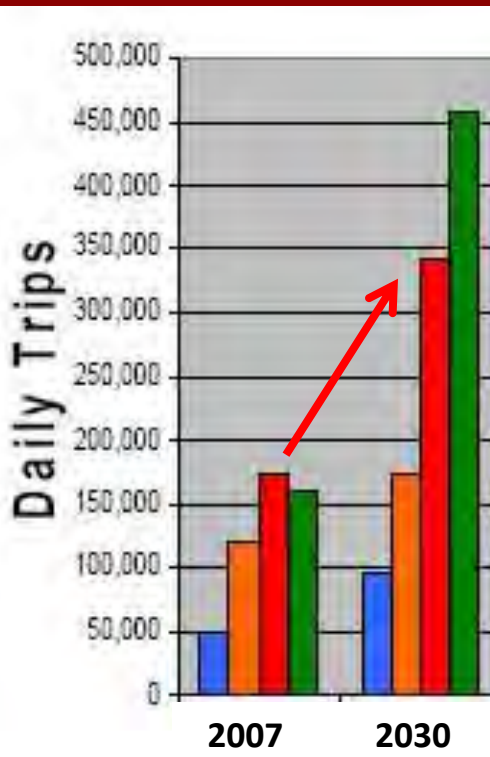
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# Transit Growth – Issues

MBTA Ridership hitting Record Highs

Red Line Ridership forecasted to almost double by 2030

Source: Urban Ring RDEIR, 2008



## MBTA ridership up for 16th straight month

June 28, 2012

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The MBTA has seen its number of riders increase for the 16th straight month, continuing the longest streak of growth in the agency's history.

The MBTA announced on Thursday that the average number of weekday passenger trips increased by about 40,000, or 2.9 percent over the same month a year ago.

Ridership did drop slightly from April, however.

MBTA general manager Jonathan Davis said the year-to-year growth was a credit to employees who've worked hard to deliver reliable and safe service.

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The Boston Globe

## T ridership hits record high

More employment, high gas prices fuel a busy September

Red Line limited by vehicle availability

- Replacements needed for 74 cars (1/3 of fleet)
- Breakdowns expected if new car procurement is delayed

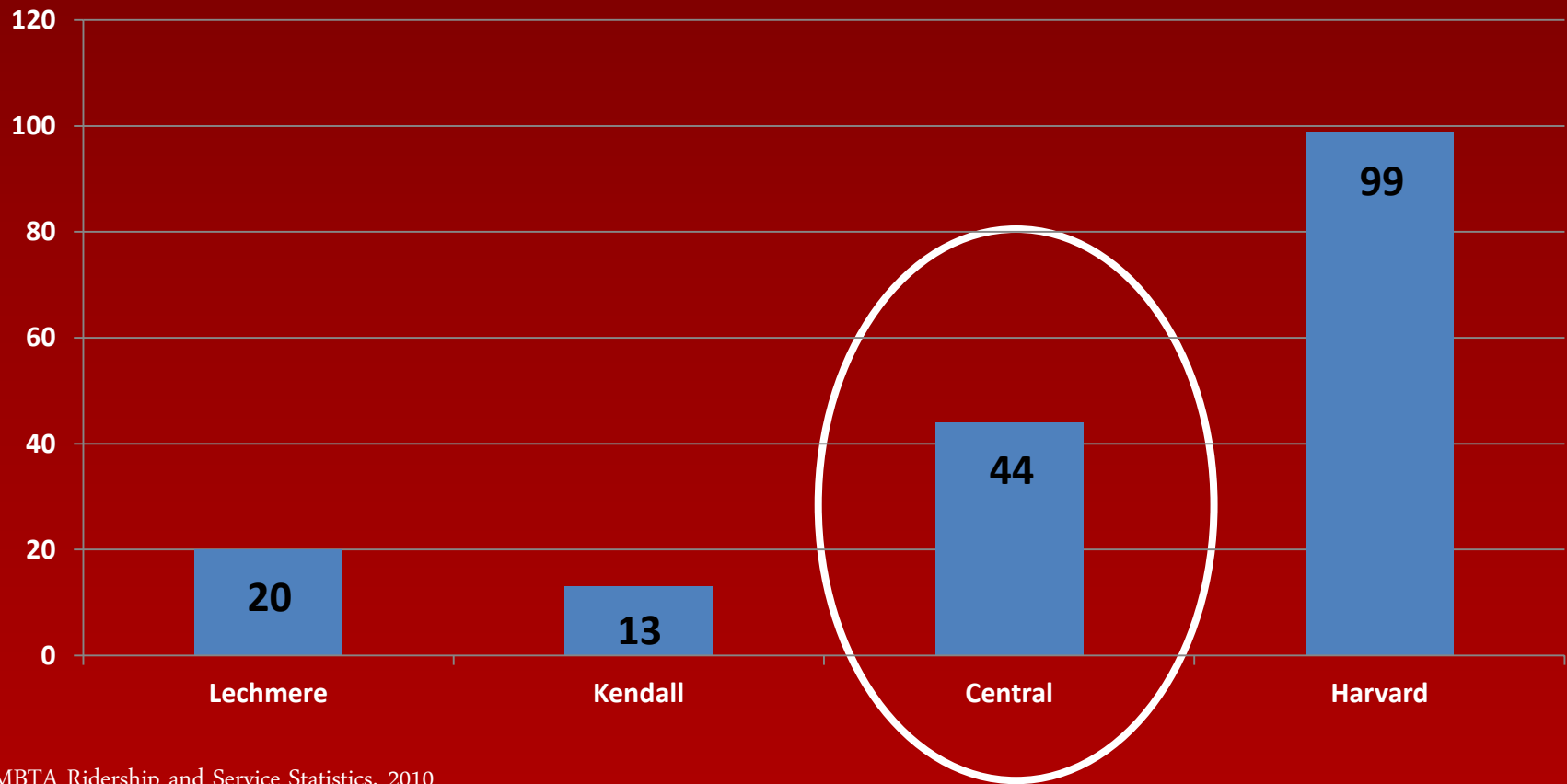
*(Hub and Spoke, Stephanie Pollack, Northeastern University)*



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# Existing Conditions: Bus

*Number of Buses Servicing Station - Weekday AM Peak*



Source: MBTA Ridership and Service Statistics, 2010



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# Cambridge TDM Measures & Participation\*

Measure	%
Rideshare matching	100%
Secure bike storage	100%
Transit Subsidy	100%
Free Shuttle	100%
Emergency Ride Home	100%
Lockers	100%
Charles River TMA Membership	100%
Showers	100%
MBTA passes sold on-site	100%
Trans info new employee packet/training	100%

Measure	%
HOV Parking Spaces	100%
Info on Website	100%
Newsletter	75%
Annual Trans Fair	75%
EZRIDE contribution	75%
Flexible Work Hours	75%
Employees Charged for Parking(#)	25%
Carpool incentive	25%
Allow telecommuting	25%
Bike incentives	25%

Measure	%
Parking Cash-out (#)	0%
Vanpool incentives	0%
Transit accessibility advertised in materials	0%
On-Site amenities	0%
Car-Share Vehicle	0%
Toll Free # for shuttle	0%
Commuter Check	0%

\*Among Businesses/Office Building Owners with PTDM Plans or Special Permits

- ✓ Cambridge's PTDM program is a national best practice
- ✓ Cambridge businesses & residences participate in many TDM measures
- ✓ High participation rates in nearly half of all available programs
- ✗ Low participation rates in some of the most effective TDM measures (cost more to support)



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