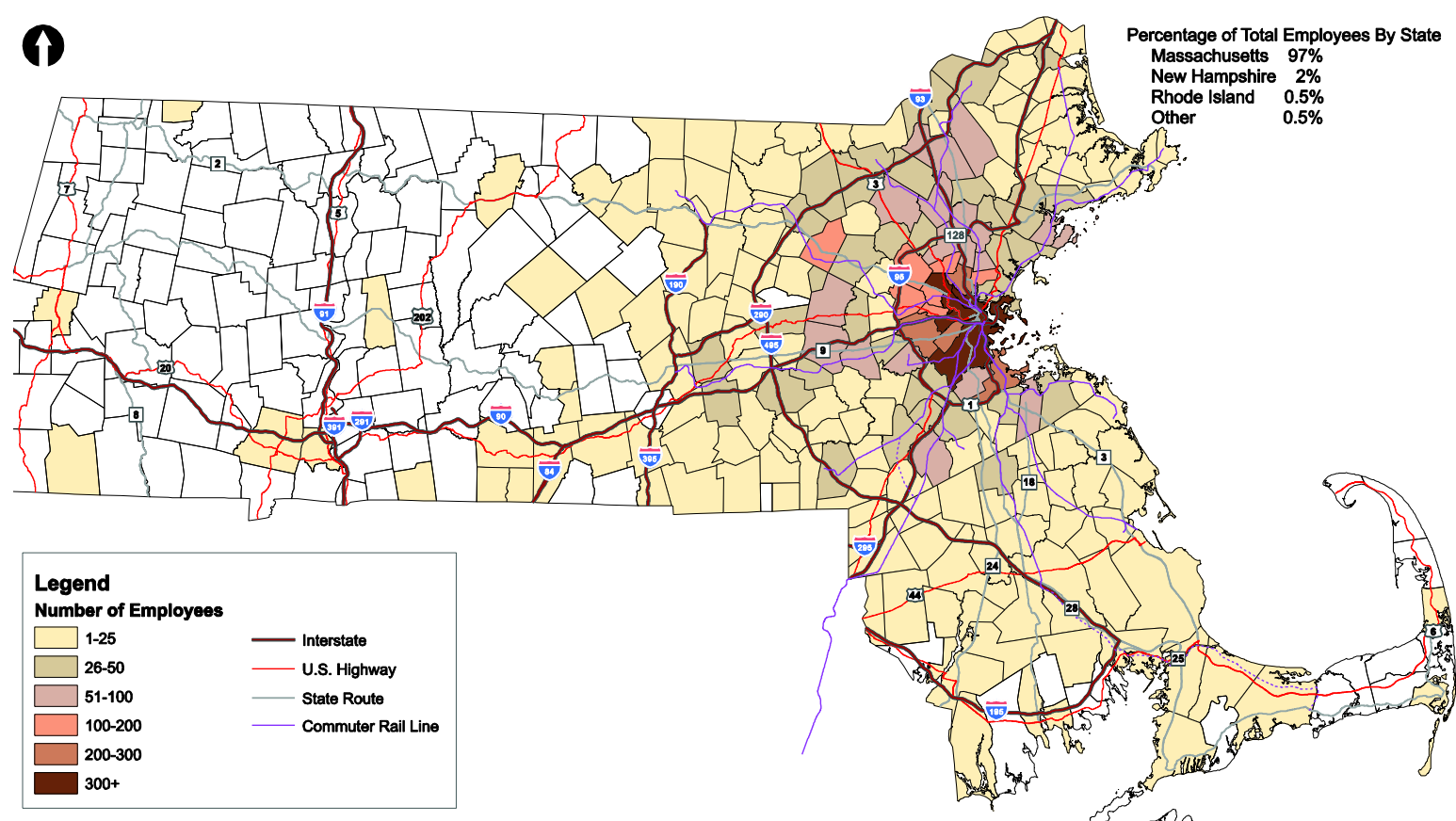


KENDALL SQUARE EMPLOYEE ORIGINS

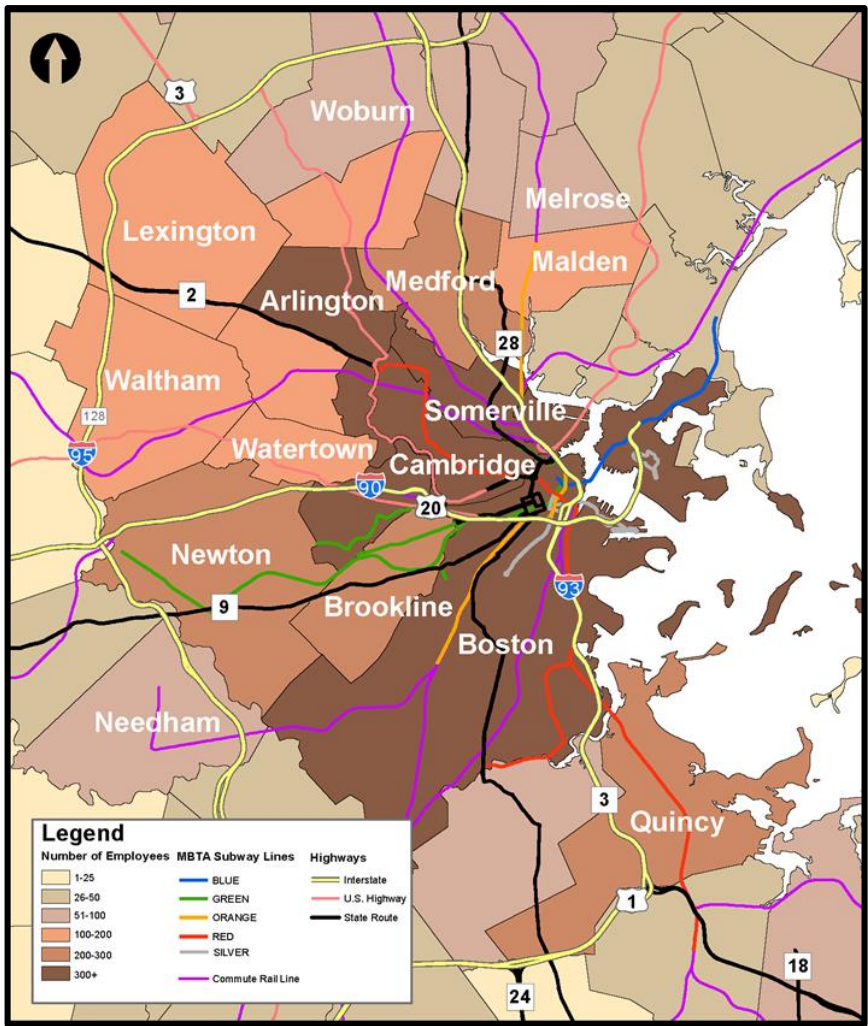
Kendall Square attracts employees from the greater Boston area and across Massachusetts.



Half of all Kendall Square employees originate in the following ten communities:

- Boston
- Cambridge
- Somerville
- Arlington
- Newton
- Medford
- Brookline
- Quincy
- Lexington
- Waltham

Where do you start your day?



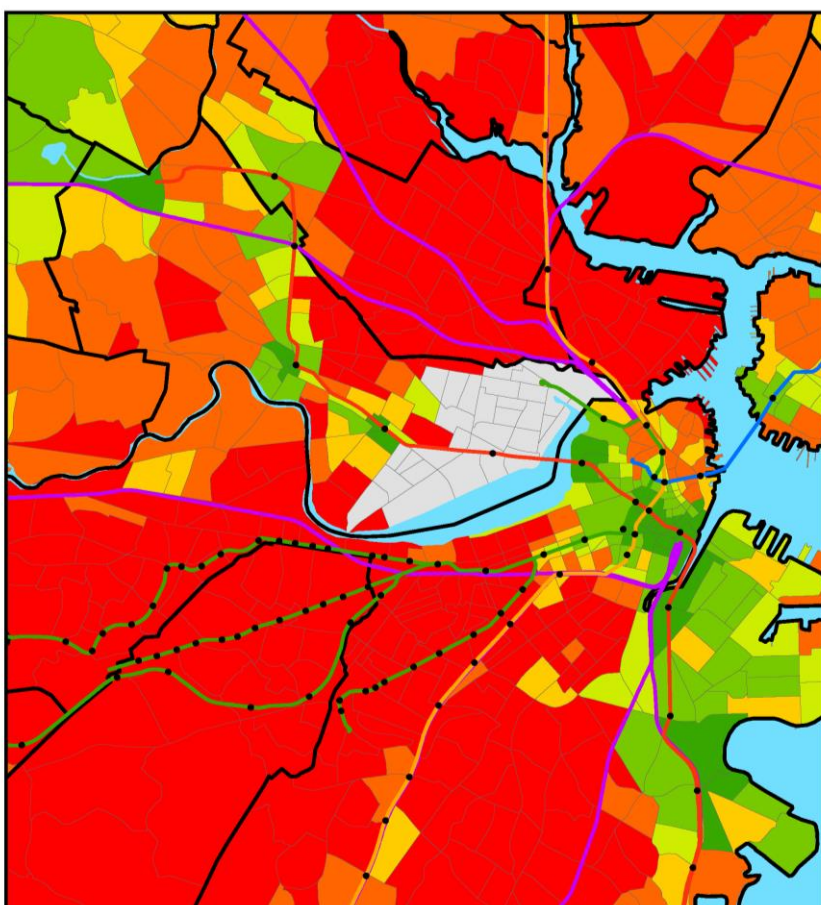
*City of Cambridge Parking and Transportation Demand Management (PTDM) Data, 2014



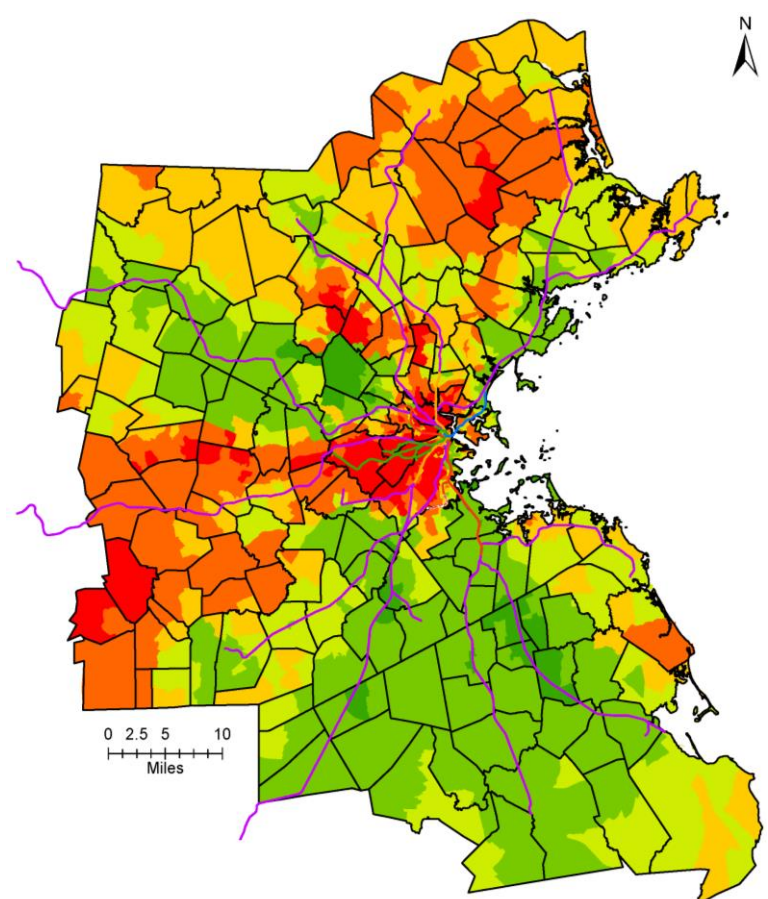
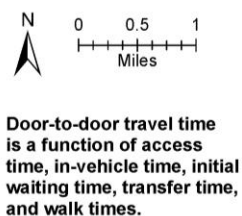
TRAVEL TIME BY TRANSIT TO KENDALL SQUARE

- Zones adjacent to Red Line stations have the best travel times.
- Local bus connections in Cambridge, Somerville, and much of Boston are affected by roadway congestion or don't provide direct service.
- Areas along the Green Line, although geographically close, have relatively long travel times due to the need for a transfer.
- Local bus connections from South Boston and Lexington with good access to the Red Line provide faster travel time to Kendall Square relative to distance.
- Commuter rail services with direct Red Line connections at South Station or Porter Square offer shorter transit travel times than trains serving North Station.

*How long does it take you to get to Kendall Square?
Where are you coming from?*



Transportation Analysis Zones



The benchmark value is a 'typical' or 'representative' value for the transit door-to-door travel time between Kendall Square and areas (zones) outside of Kendall Square, based on a given distance from Kendall Square, where '100% of the benchmark' means that the travel time for that zone is 'typical' for its distance from Kendall. Zones that have benchmark values greater than 100% have transit travel times that are worse than the typical, while values less than 100% have travel times that are *better*.



ROADWAY NETWORK AND BUS DELAY

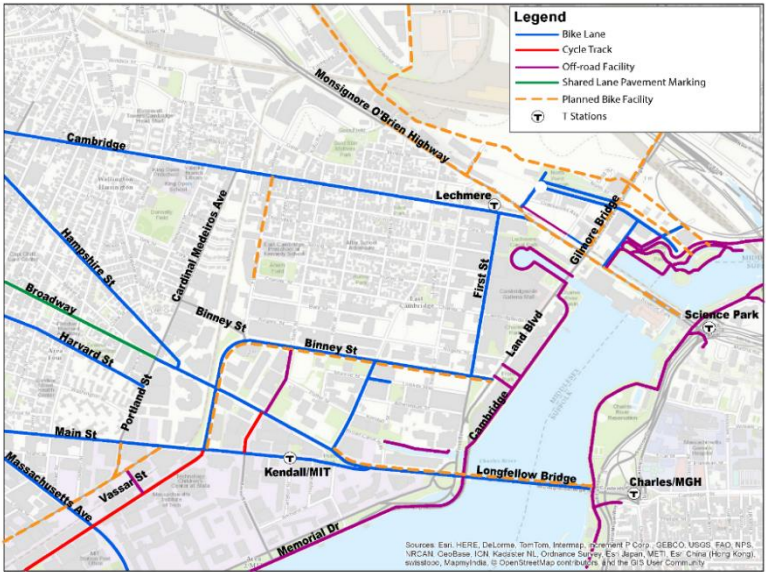
Cambridge is a leader in providing bicycle infrastructure and bike mode share.

In an urban setting, vehicular LOS D and lower is acceptable because it reflects an intersection design that balances the needs for all modes, including pedestrians and bicycles.

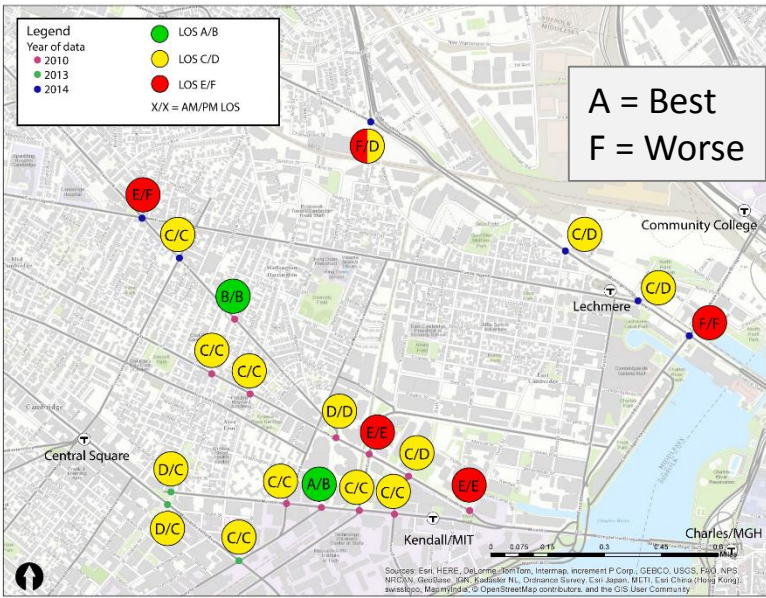
Bus operations are impacted by overall traffic congestion.

Where do you think congestion is a problem?

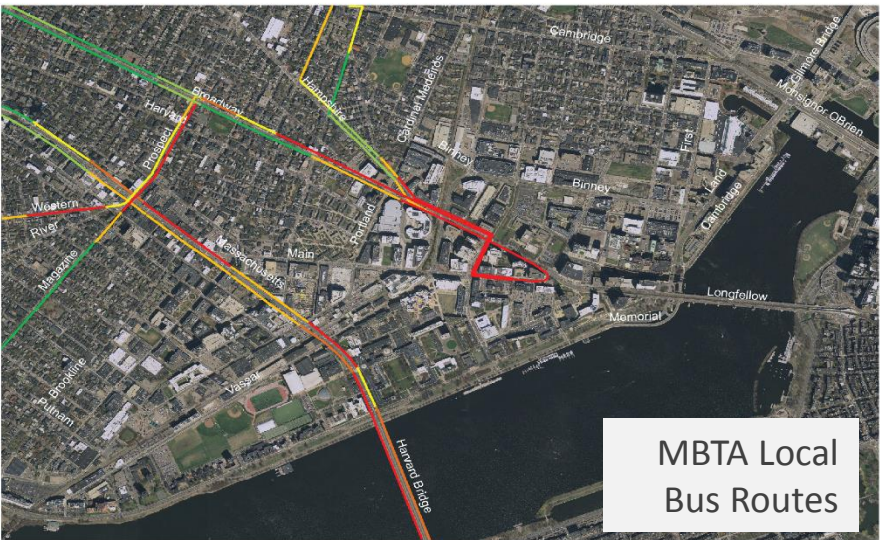
Multimodal corridors combine bus, bikes and automobiles



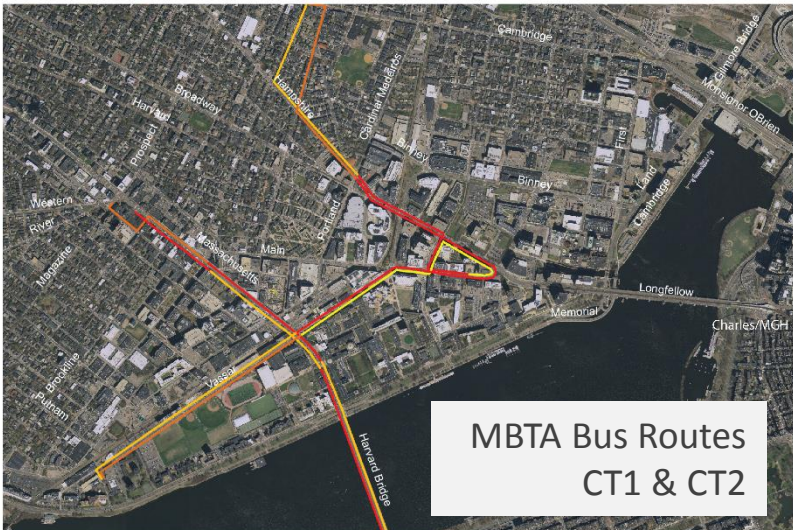
Vehicle Level of Service



PM Peak Bus Level of Service (LOS)



LOS A B C D E F



Route LOS A B C D E F

The Bus LOS represents a composite rating of the travel time, travel time reliability, and headway variability on route segments, measured between adjacent bus stops, with A being the best and F the worst.

KENDALL
SQUARE
MOBILITY
TASK FORCE



massDOT
Massachusetts Department of Transportation

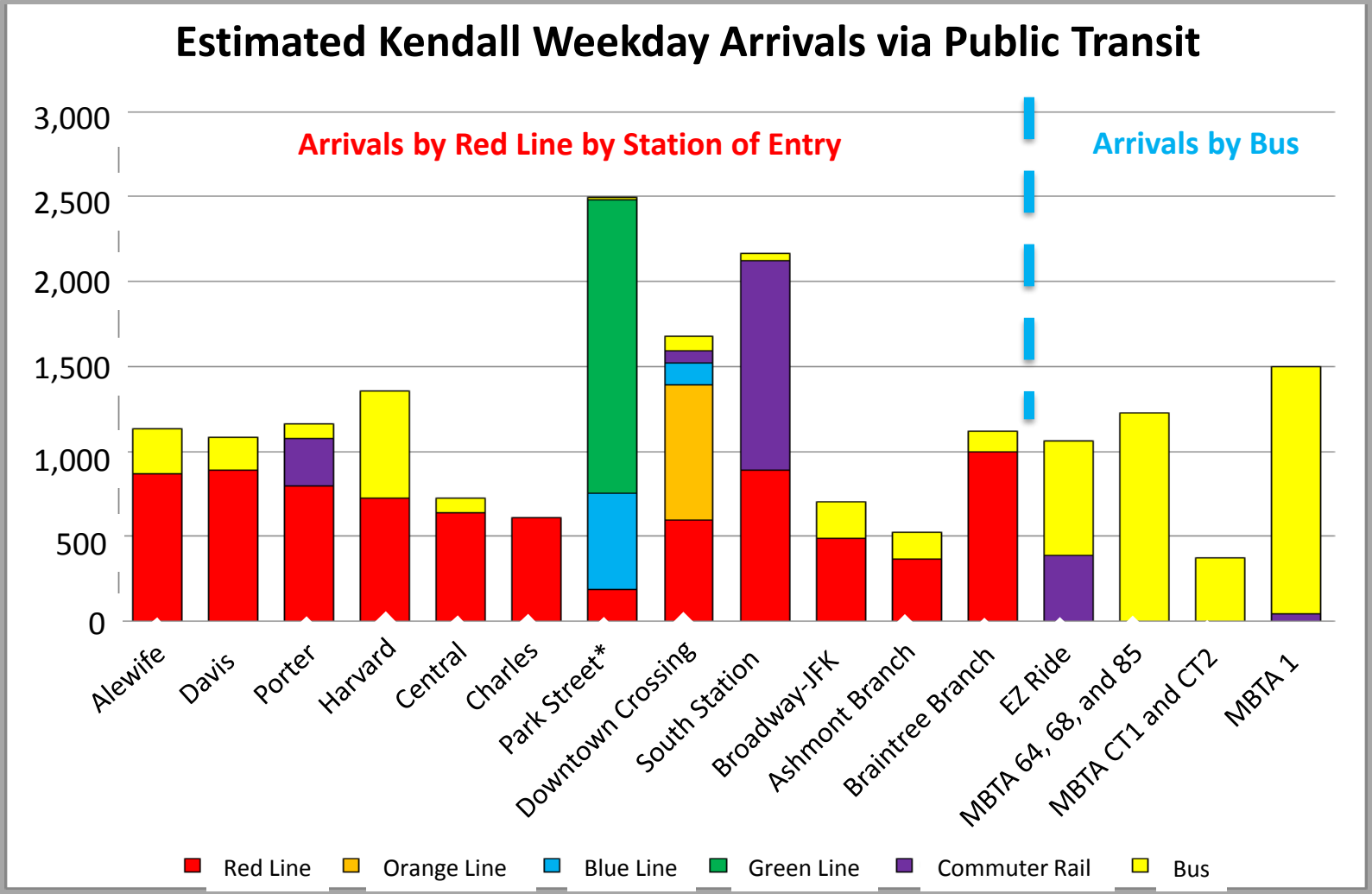
TRANSIT TRIPS

About 18,900 transit trips are made to Kendall Square area each weekday:

- 78% arrive on the Red Line.
Of those trips,
 - 10% also use a bus
 - 17% use other rapid transit lines
 - 8% use commuter rail
- 22% arrive directly by bus



What transit do you use to get to Kendall Square? Are there any that you want to use but don't? Why or why not?

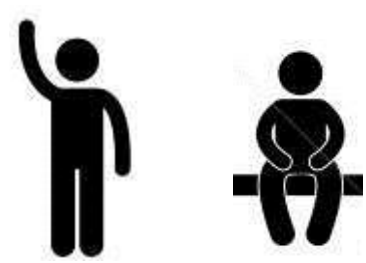


* with Government Center station open



RED LINE SYSTEM CAPACITY

Minimum Headway Factors	MBTA Red Line (PM southbound)
Safe train separation time (enforced by signals)	70 seconds
Longest dwell time at stations on the entire line	90 seconds
Operating margin to provide a “cushion” for random events	105 seconds
MBTA Red Line scheduled peak headway	4.5 minutes



CAPACITY

“The maximum number of people that can be carried past a given location during a given time period under specified operating conditions, without unacceptable delay, hazard, or restriction, and with reasonable certainty”

- Transit Capacity and Quality of Service Manual

Operational carrying capacity of a six-car Red Line train as established by the MBTA	1,000 passengers
Trains per hour at capacity per direction (2015)	13.8
Hourly carrying capacity in each direction	13,800 passengers

The following factors contribute to either lower capacity on the Red Line, or a poor experience for MBTA customers:

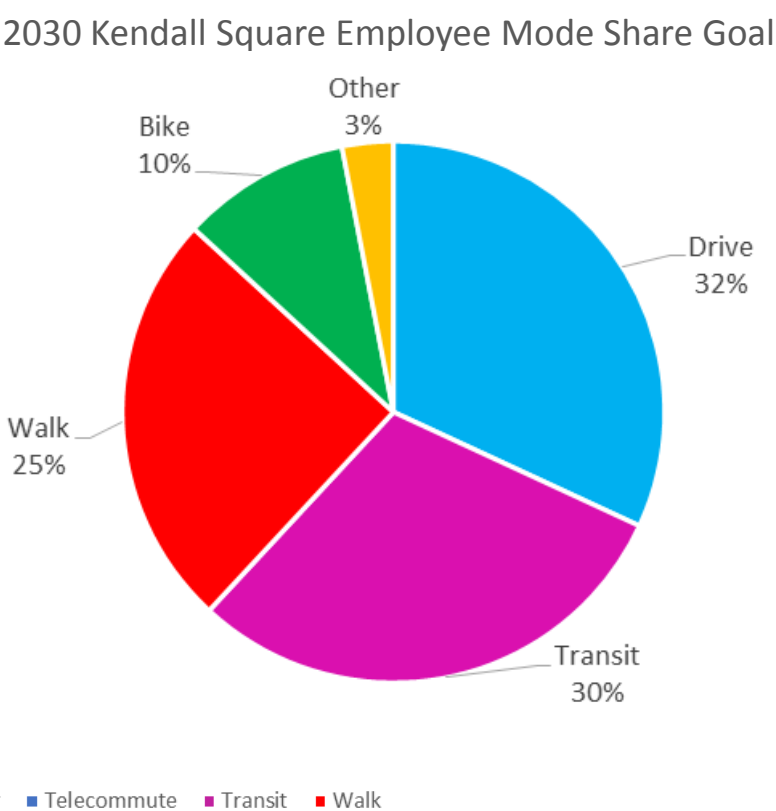
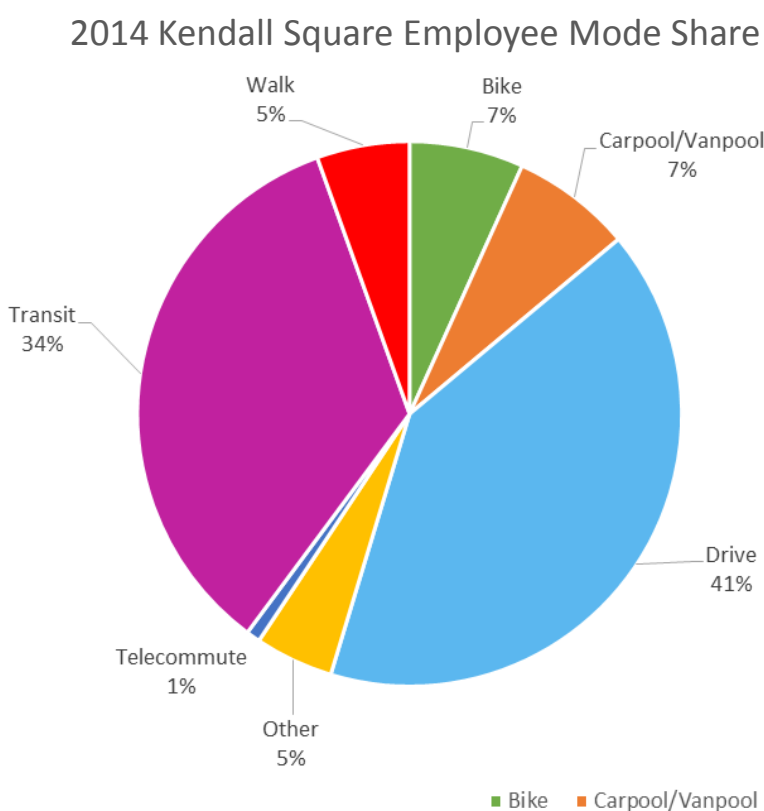
- Long dwell times at Park Street, Downtown Crossing and South Station – due to station design, passenger behavior, and spikes in boardings caused by arrivals from connecting services.
- Mechanical issues associated with the Red Line’s aging rolling stock.
- Insufficient margin to recover from routine and exceptional variations in running time and dwell times.
- An older signal system that may not be optimal for present demands.

What are your experiences on the Red Line?

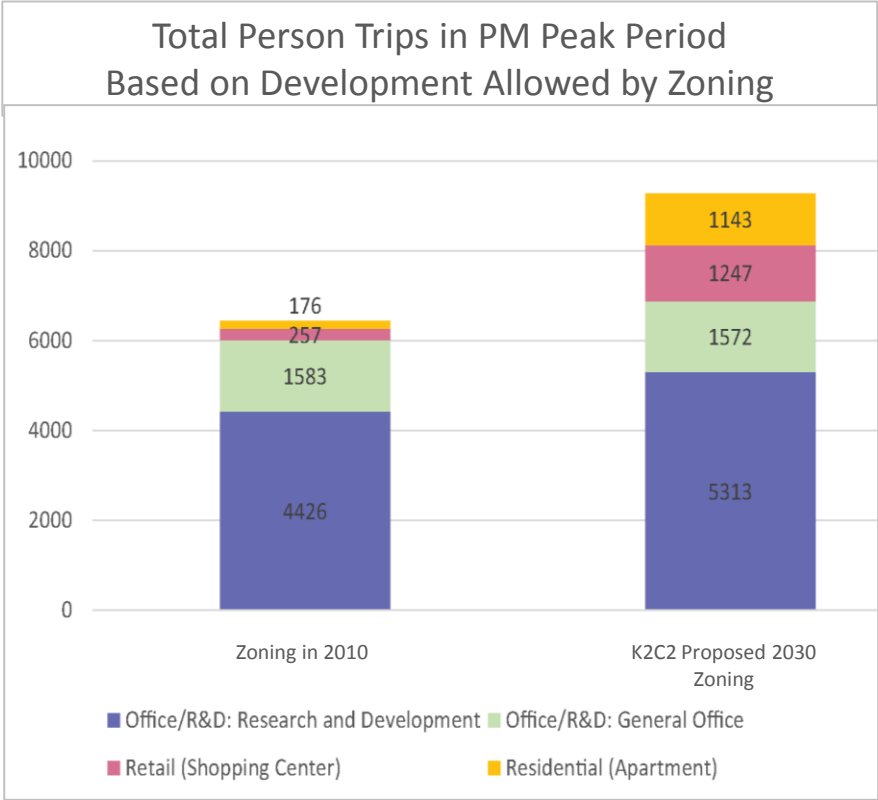


MODE SHARE AND FORECASTED TRIPS

Today, 41% of Kendall Square employees commute by driving alone. Future goals aim to reduce that to 32% by increasing walking and biking.



What mode do you use today? Might this change in the future?



A 44% increase in PM peak period person trips is projected for the Kendall Square area by 2030.*

With a projected increase in trips, transit ridership must also increase to maintain the transit mode share goal.

*Kendall Square Central Square (K2C2) Planning Study, Kendall Square Final Report, 2013.



HOW DO YOU USUALLY GET TO AND FROM KENDALL SQUARE?

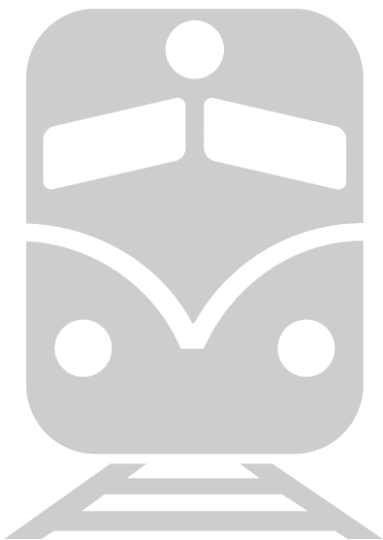
Walk



Bike



Red Line



Bus



Drive Alone



Shared Ride
(Bridj, UBER, carpool, etc.)

