Kendall Square Mobility Task Force

Meeting #10
Public Meeting #2
February 28, 2017
• Review Boards 30 min
• Presentation 35 min
  – Overview of Task Force
  – Background
  – Draft Recommendations
• Question and Answer, Review Boards and Provide Comments 55 min
Kendall Square Mobility Task Force

- Established in 2015 to take a comprehensive look at mobility issues in the Kendall Square area of Cambridge
- The process was focused on existing mobility issues and the need to address future growth
- Task Force goal was to develop a set of policy and project recommendations
## Kendall Square Mobility Task Force Members

### Co-chairs

| City of Cambridge, Environmental & Transportation Planning Division: Susanne Rasmussen | Kendall Square Association/Cambridge Innovation Center: Brian Dacey |

### Agencies

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<tr>
<td>City of Cambridge, Traffic, Parking, and Transportation: Joe Barr</td>
<td>Cambridge Redevelopment Authority: Tom Evans</td>
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### Businesses/Developers

| Biogen: Chris Barr | Boston Properties: Mike O'Hearn |

### Institutions/Associations/Advocates/Other

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<td>East Cambridge Planning Team: Peter Crawley</td>
<td>East Cambridge Business Association: Patrick Magee</td>
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http://www.cambridgema.gov/CDD/Projects/Transportation/kendallsquaremobilitytaskforce
Task Force Work

April 2015 – Sept 2016
4 Task Force (TF) Meetings

Goals and Opportunities

Existing Conditions

Technical analysis to develop bus routing and priority ideas

Oct – Dec 2016
1 Public Meeting
3 TF Meetings

Discussion of Transportation Priorities

Grand Junction Feasibility Analysis and Workshop

Transportation modeling and assessment of bus routing options

Jan – Mar 2017
1 Public Meeting
2 TF Meetings

Draft Recommendations (project and policy), Public Meeting, Final Recommendations
The Cambridge-Boston office market is the tightest in the country. Its practically zero-vacancy climate is causing the life science industry to elbow out technology and startup companies, leaving subleasing as the only option to find space.
MIT received approval for a zoning change to build significant additional square footage in 2013.

Boston Properties/Cambridge Redevelopment Authority were approved for an additional one million square feet in 2015.

The planned development could happen at a faster pace than was anticipated in a Kendall Square planning process (K2C2) carried out in 2012 to assess the potential transportation impacts.
**Background: Kendall Sq. Growth**

- Added more than 4.5 million square feet in Greater Kendall since 2000
- An additional almost 1 million square feet are currently under construction
- 93% growth in built square footage (including under construction)
- Daily Traffic Volumes remained consistent or have been reduced
Background: Kendall Sq. Growth

Increasing demand for Red Line, including at Kendall Sq.

MBTA Red Line Station Entries (weekday)

- Alewife
- Central Square
- Harvard
- Kendall Square
- Porter Square
Background: Kendall Sq. Growth

Estimated Growth in Red Line Station Entries
2012 to 2040 "No Build", AM Peak

- Kendall: 100% increase
- Charles: 58% increase
- Central: 38% increase
Background: Kendall Sq. Growth

Estimated Growth in Red Line Station Entries
2012 to 2040 "No Build", PM Peak

- Kendall: 32% increase
- Charles: 18% increase
- Central: 32% increase
Five major focus areas determined by the Task Force, and presented at the first public meeting include:

1. Increasing direct transit access (fewest transfers)
2. Improve MBTA service reliability and capacity
3. Decrease challenges on local street network (improve mobility for buses, pedestrians, cyclists, cars)
4. Policy and Outreach
5. Increased financing
Transportation Priorities

- Red Line capacity
- Bus
  - Bus priority corridor
  - Enhanced bus connections
- Grand Junction transportation options
- Shuttles and Transportation Network Companies (TNCs)/Ride-hailing services (Uber, Lyft, Bridj)
TRANSPORTATION PRIORITY: RED LINE
Challenge: Red Line Capacity

In theory, the Red Line has just enough capacity to meet demand.

BUT, in real-world conditions, people are getting left behind at stations during their commute.

![Graph showing the estimated 2012 Southbound AM Peak Average Train Load for various stations on the Red Line. The maximum capacity is shown as 1002 people. Additional Avg Load due to K2C2 Buildout is indicated.]

Source: MBTA data, modified

* K2C2 buildout determined from the 2013 Kendall Square Central Square Planning Study
** Average Train Load based on total station entries (from MBTA data) divided by number of total number of cars (6 per train) over all trains (13.333 per hour) during the time period. Uses Peak Factor = 1.5 (from MIT Kendall Square Initiative TIS, certified by TP&T on July 21, 2015)
The Red Line is both **slow** (9.4-11.6mph) and **unreliable** with excessive wait times.
The Fiscal and Management Control Board approved the purchase of all new Red Line cars (to be in place by 2024)

- The new cars reduce braking distance by 30%, so they run faster for longer
- **Theoretically**, this will allow for 20, instead of 13, trains per hour
- A Better City (ABC) received funding from the Barr Foundation to review the assumptions of MBTA capacity analysis
Effect of purchase of new Red Line cars (theoretical)
Current Red Line Improvements

Effect of purchase of new Red Line cars (theoretical)

Estimated 2012 Southbound AM Peak Average Train Load (Peak 15 minutes) with Capacity Increase

- Maximum Capacity for 1 Train (1002)
- Standing room available
- Seats available (378 per train)
- Additional Avg Load due to K2C2 Buildout assuming 20 trains per hour
- SB Avg Train Load (2012) assuming 20 trains per hour
Current Red Line Improvements

• Headhouses
  – MIT will reconstruct the south headhouse
  – Boston Properties will fund up to $400k towards repairs of the north headhouse

Source: MIT
Draft Recommendations: Red Line

• Review results of ABC analysis and advocate for continuing analysis of further capacity improvements, if needed

• Advocate for exploring additional station improvements that could accomplish:
  – Quicker boarding (e.g. marking platforms where to wait)
  – Increased capacity for passengers entering, existing, and waiting at Kendall Station as demand grows

• Advocate for repairs to the Red Line portal and including it in the MBTA’s vulnerability and resiliency assessment
TRANSPORTATION PRIORITY: BUS
Kendall Square Employee Origins

- Greatest concentration of employees from:
  - Cambridge
  - Boston
  - Somerville
  - Arlington

Source: PTDM data
- 22% of transit trips to the Kendall study area arrive via bus with the most on:
  - MBTA 1 (Boston) – 6% (1,250 trips)
  - EZRide – 6% (1,225 trips)
  - MBTA 64 – 4% (775 trips)
  - MBTA 85 – 3% (625 trips)
- Of those bus trips, about 19% of passengers entering the study area are transfers to the Red Line
Challenge: Bus Delay & Routing

- Service planning for buses has not occurred for over eight years.
- There are major gaps in transit connectivity to Kendall Square – particularly Allston/Brighton and Back Bay.
- Connectivity is inadequate (slow, indirect) to other areas: North Station, other parts of Cambridge, Somerville.
Challenge: Bus Delay

Connecting bus services are generally slow (8mph during peaks) and unreliable (level of service E and F)

PM Peak Bus Level of Service (LOS)
• Consider implementing bus priority corridor, for example:
  – Sections of exclusive bus lane
  – Queue jumpers
  – Transit signal priority

• Possible locations for consideration:
  – First Street
  – Binney between First and Third
  – Third or continue on Binney/Galileo Galilei Way
Draft Recommendations: Bus

- Example of bus priority treatment on First Street (concept only, NOT a final recommendation for design)
Draft Recommendations: Bus

Next steps for bus priority corridor include:

- Better understand implications for current curb uses
- Develop case for benefits and more detailed designs before implementing bus priority

Graphic: Current curb uses
Draft Recommendations: Bus

- Draft recommended routing and service changes are based on scenario modeling

Ridership Changes from Future No Build Scenario - AM Peak Period

- 2040 Constrained
- 2040 Unconstrained
Draft Recommendations: Bus

• Draft recommended routing and service changes (requires additional resources/buses)
  – Extend 64/70 into Kendall during peak If successful, extend 64/70 all day
  – Transit Signal Priority and stop consolidation on the 85 and CT2 routing
  – Increased EZ Ride service (8.5 to 15 trips per hour per direction)
  – New “CT4” service between Sullivan, Kendall, and beyond
Draft Recommendations: Bus

DAVIS SQ.  DAVIS SQ.
PORTER SQ.  PORTER SQ.
CENTRAL SQ.  CENTRAL SQ.
KENDALL SQ.  KENDALL SQ.
SULLIVAN SQ.  SULLIVAN SQ.
ASSEMBLY SQ.  ASSEMBLY SQ.
LECHMERE  LECHMERE
NORTH STATION  NORTH STATION
HARVARD SQ.  HARVARD SQ.
CAMBRIDGE  CAMBRIDGE
SOMERVILLE  SOMERVILLE
BOSTON  BOSTON
Draft Recommendations: Bus

To Allston/Brighton

DAVIS SQ.
PORTER SQ.

To Longwood

KENDALL SQ.
CENTRAL SQ.
UNION SQ.

Cambridge
Somerville

Boston

Assembly SQ.
SULLIVAN SQ.
LECHMERE
NORTH STATION

CT2/85
EZRide

Assembly SQ.
SULLIVAN SQ.

HARVARD SQ.

CT2/85
EZRide

To Allston/Brighton
To Longwood

64/70

Cambridge

Assembly SQ.
SULLIVAN SQ.

HARVARD SQ.

CT2/85
EZRide

To Allston/Brighton
To Longwood

64/70

Cambridge

Assembly SQ.
SULLIVAN SQ.

HARVARD SQ.

CT2/85
EZRide

To Allston/Brighton
To Longwood

64/70

Cambridge
Draft Recommendations: Bus

Extend 64/70 to Kendall Sq.
Draft Recommendations: Bus

- Extend 64/70 to Kendall Sq.
- Bus priority corridor

Locations:
- Davis Sq.
- Porter Sq.
- Central Sq.
- Kendall Sq.
- Sullivan Sq.
- Assembly Sq.
- Harvard Sq.
- Somerville
- North Station
- Boston
- Cambridge
- To Allston/Brighton
- To Longwood

Transit Services:
- CT2/85
- EZRide
Draft Recommendations: Bus

Extend 64/70 to Kendall Sq.

Bus priority corridor

Increase EZRide service

To Allston/Brighton

To Longwood

Somerville

Cambridge

Boston

Assembly SQ.

SULLIVAN SQ.

KENDALL SQ.

CENTRAL SQ.

LECHMERE

UNION SQ.

PORTER SQ.

DAVIS SQ.

HARVARD SQ.

Cambridge

Boston

Somerville

To Allston/Brighton

To Longwood
Draft Recommendations: Bus

- Extend 64/70 to Kendall Sq.
- Transit Priority for CT2/85
- Increase EZRide service
- Bus priority corridor
- CT2
- KENDALL SQ.
- UNION SQ.
- CENTRAL SQ.
- PORTER SQ.
- DAVIS SQ.
- SULLIVAN SQ.
- ASSEMBLY SQ.
- NORTH STATION
- Somerville
- Cambridge
- Boston
- To Allston/Brighton
- To Longwood
Draft Recommendations: Bus

- Extend 64/70 to Kendall Sq.
- Transit Priority for CT2/85
- Increase EZRide service
- Bus priority corridor
- New CT4

To Allston/Brighton
To Longwood

Cambridge
Somerville
Boston
North Station
TRANSPORTATION PRIORITY: GRAND JUNCTION PATH AND TRANSIT
Challenge: Grand Junction

Underutilized rail corridor (only a few equipment or freight movements per day) with the ability to serve important local and regional connections.

Within a ½ mile of the Grand Junction corridor are:
- 42% (49,000) of jobs in Cambridge
- 31% (33,000) of residents

Regional connections (Somerville, Sullivan, North Station)

Path funded by City for $10 million, MassDOT ROW

Path Constructed (2016, funded by MIT and CRA)

Path not funded (MIT ROW)

Regional connections (West Station and beyond)
Draft Recommendations:
Grand Junction

• Create a working group to collaborate on implementing the multi-use path
  – There is already wide-spread support for the path
  – City funded $10 million for the northern portion
  – Need to engage with MassDOT regarding planning for Rail with Trail

• Clearly define the goals for the design of the path related to transit:
  – Maximize flexibility for allowing for future transit
  – Accommodate 6-15 minute frequency (two-tracks)
  – Enable more regional connections (North Station, West Station, GLX, regional path network)
Draft Recommendations: Grand Junction

• Transit Recommendations:
  – Finish ROW survey and confirm space for two tracks and path for the entire length
  – Develop transit conceptual designs to not preclude rail options with at least one station
  – Work with MassDOT to produce new demand estimations
  – Continue to explore feasibility and advocate for regional connections
TRANSPORTATION PRIORITY: SHUTTLES AND RIDE-HAILING SERVICES
Challenge: Ride-hailing Services and Shuttles

• Need to understand the importance of TNC/ride-hailing trips to Kendall Square and the impact on the transportation network

• Need to better understand the individual shuttle services and opportunities for consolidation
Draft Recommendations: Ride-hailing Services and Shuttles

• Continue meeting with shuttle providers and ride-hailing companies to request information and determine challenges and opportunities
  – Met with Uber and Lyft and requested origin and destination information for trips into and out of Kendall Square

• Continue collaborating with other stakeholders to gather more information that is applicable to Cambridge and the region (e.g. City of Boston, MBTA, MAPC, CTPS)
PUBLIC QUESTIONS AND INPUT
• Recommendations
  – Draft Recommendations
  – Draft Items for Further Analysis

• Bus
  – Description of routing scenarios
  – Evaluation of routing scenarios

• Grand Junction
  – Grand Junction Multi-use Path
  – Possible cross sections
  – Right-of-way constraints
**General Information**

- Website: http://www.cambridgema.gov/CDD/Projects/Transportation/kendallsquaremobilitytaskforce

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- Final Task Force Meeting: tentatively Thursday, April 6, 2017