

FAIRMOUNT LINE

Reasons to Significantly Improve Service



This Fact Book presents the findings of several lines of inquiry into the existing state of the
Fairmount Commuter Rail Line.

The analysis conducted seeks to explore the following questions:

1. Who does the Fairmount Line serve, is the line unique in its serving of these communities, and does the current level of service along the line contribute to the region's worsening state of social inequity?
2. Does the Fairmount Line host a level of residential density that warrants, and can support, increased levels of rail service?
3. Does the Fairmount Line host enough employment offerings to contribute to desirable mobility behavior, such as intra-line and reverse commuting?
4. Does the Fairmount Line community demonstrate an existing demand for frequent transit service?

This document is divided into the following sections:

- **Service Today**
- **Equity**
- **Residential Density**
- **Employment**
- **Demonstrated Demand**

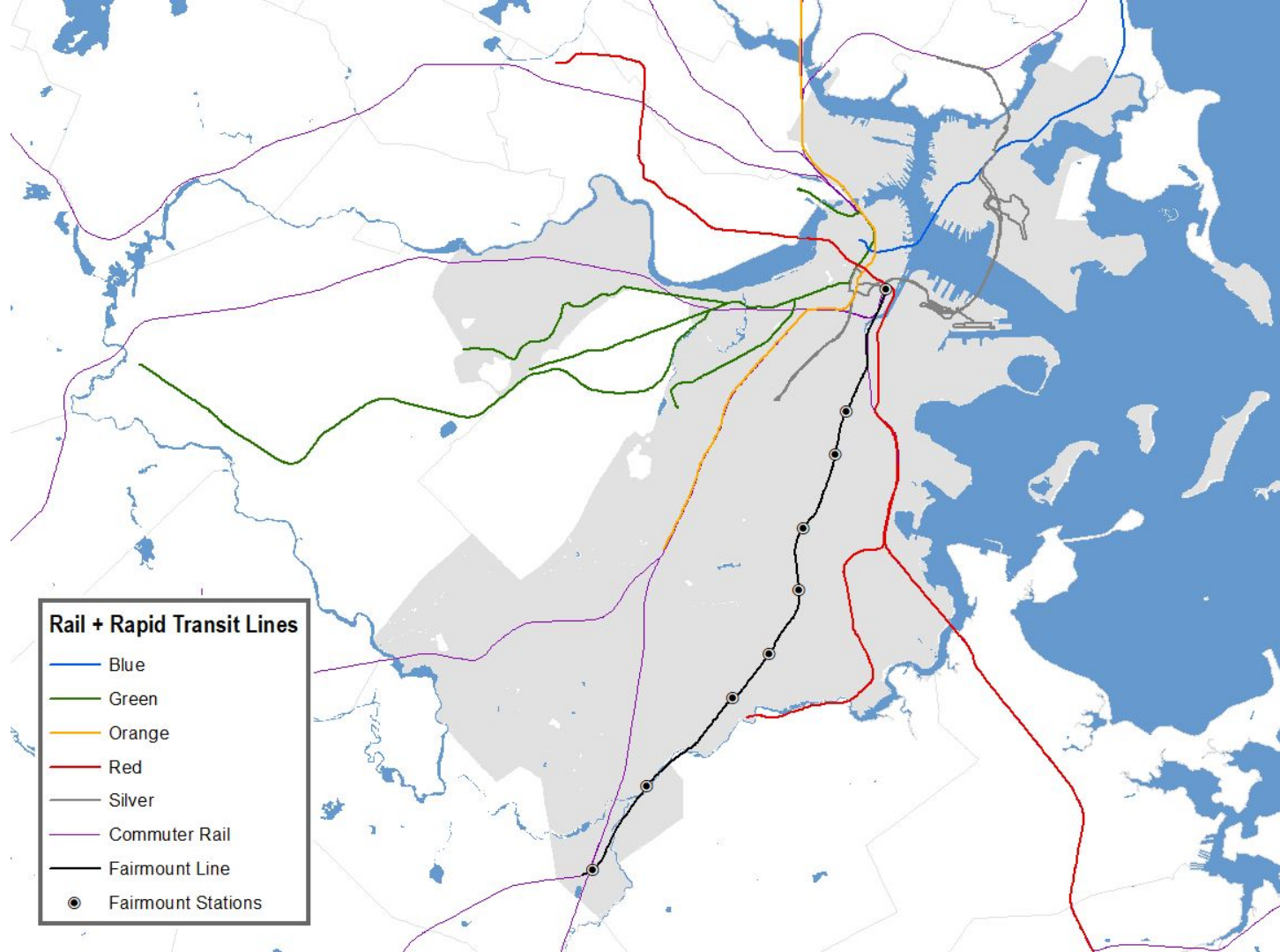
SERVICE TODAY

Data Sources: MBTA Schedules + 2018 Route Profiles

Today, the Fairmount Line operates with the **worst frequencies** in the entire MBTA rail system.

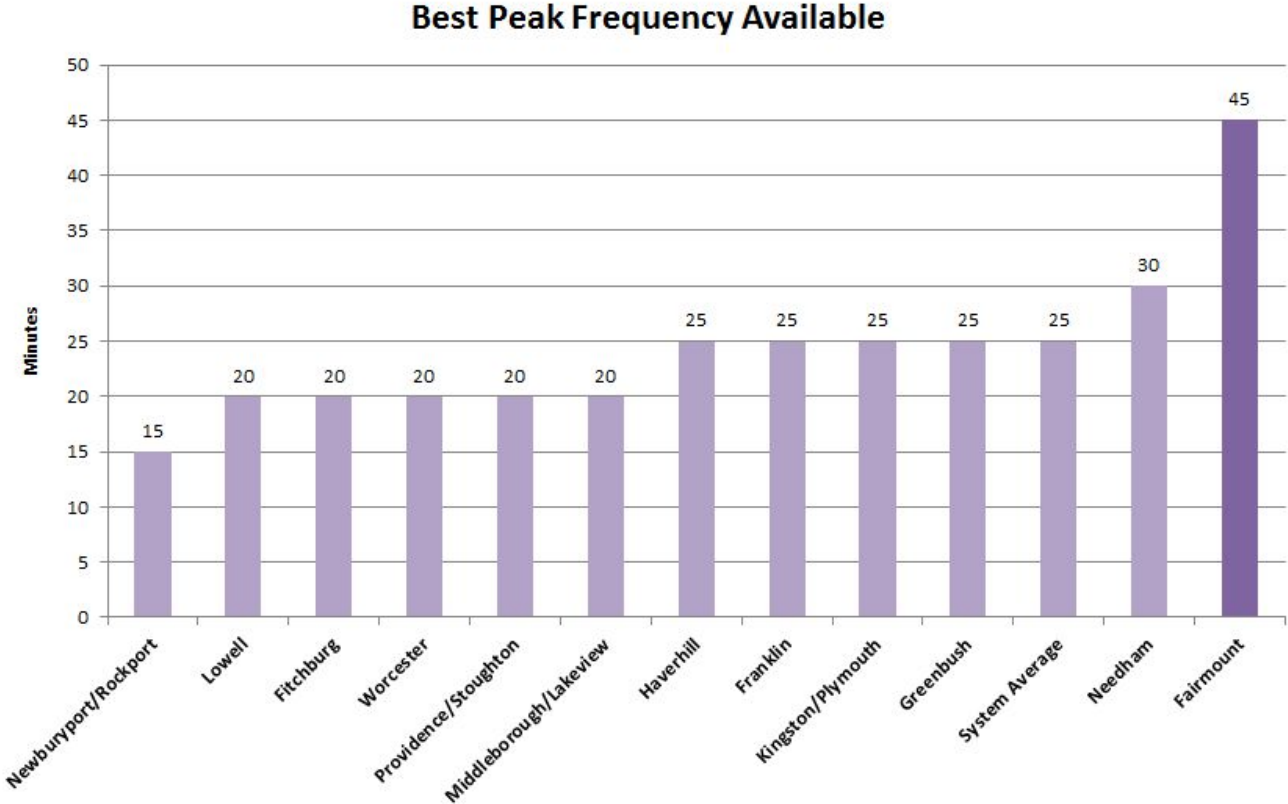
The Fairmount Line runs 20 trips inbound and 20 trips outbound per weekday: 4 morning peak inbound trips and 4 evening peak outbound trips.

Peak period headways are 45 minutes, while off-peak headways are 60 minutes. Weekend headways are 60 minutes all day.



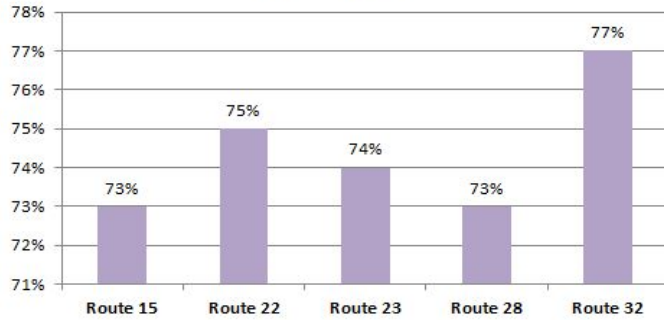
Even the shortest time span between trips does not allow Fairmount Line riders much flexibility.

At 45 minutes between peak trips, fear of missing one's train is likely inhibiting would-be riders from making the Fairmount Line a part of their regular commute.

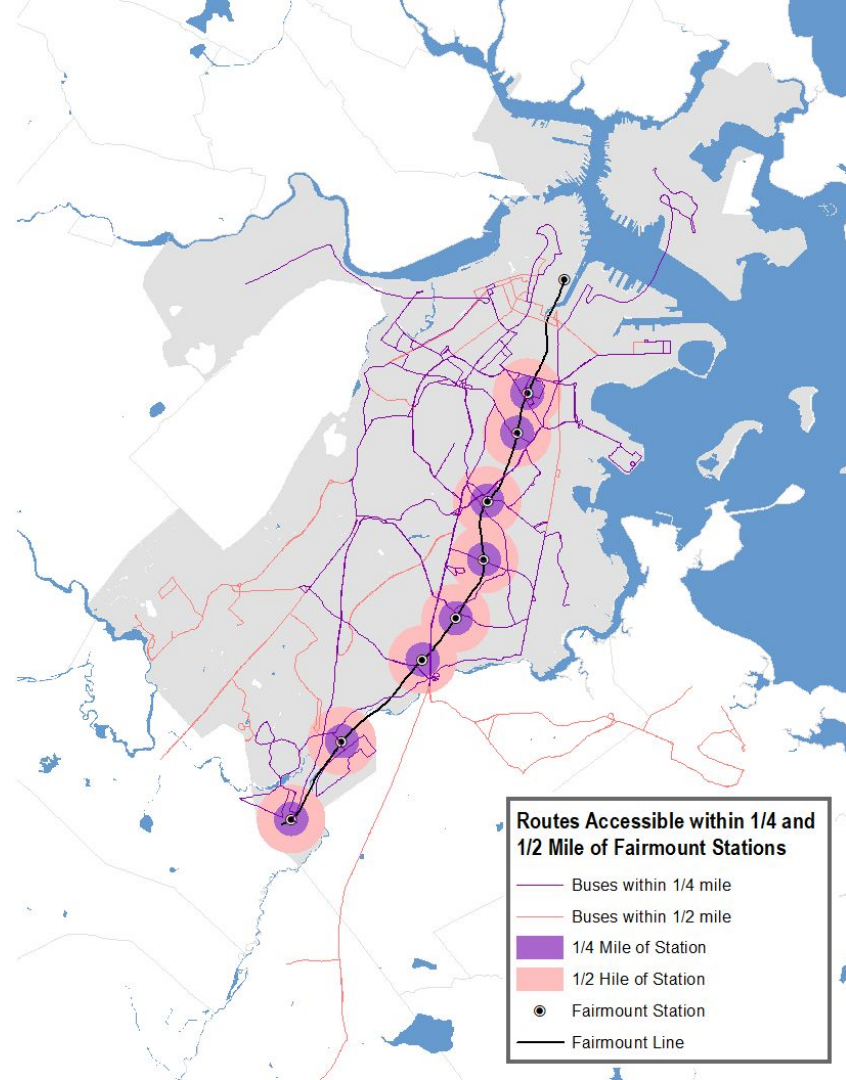
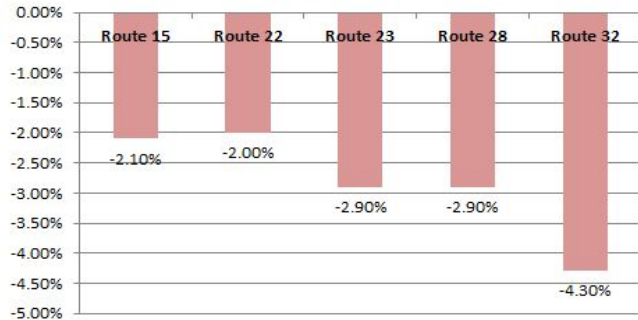


Buses are no substitute for rail. Though five Key Bus Routes pass through Fairmount Line Station catchment areas, they have terrible on time performance and suffer from a high amount of dropped trips.

Weekday OTP



Dropped Trips

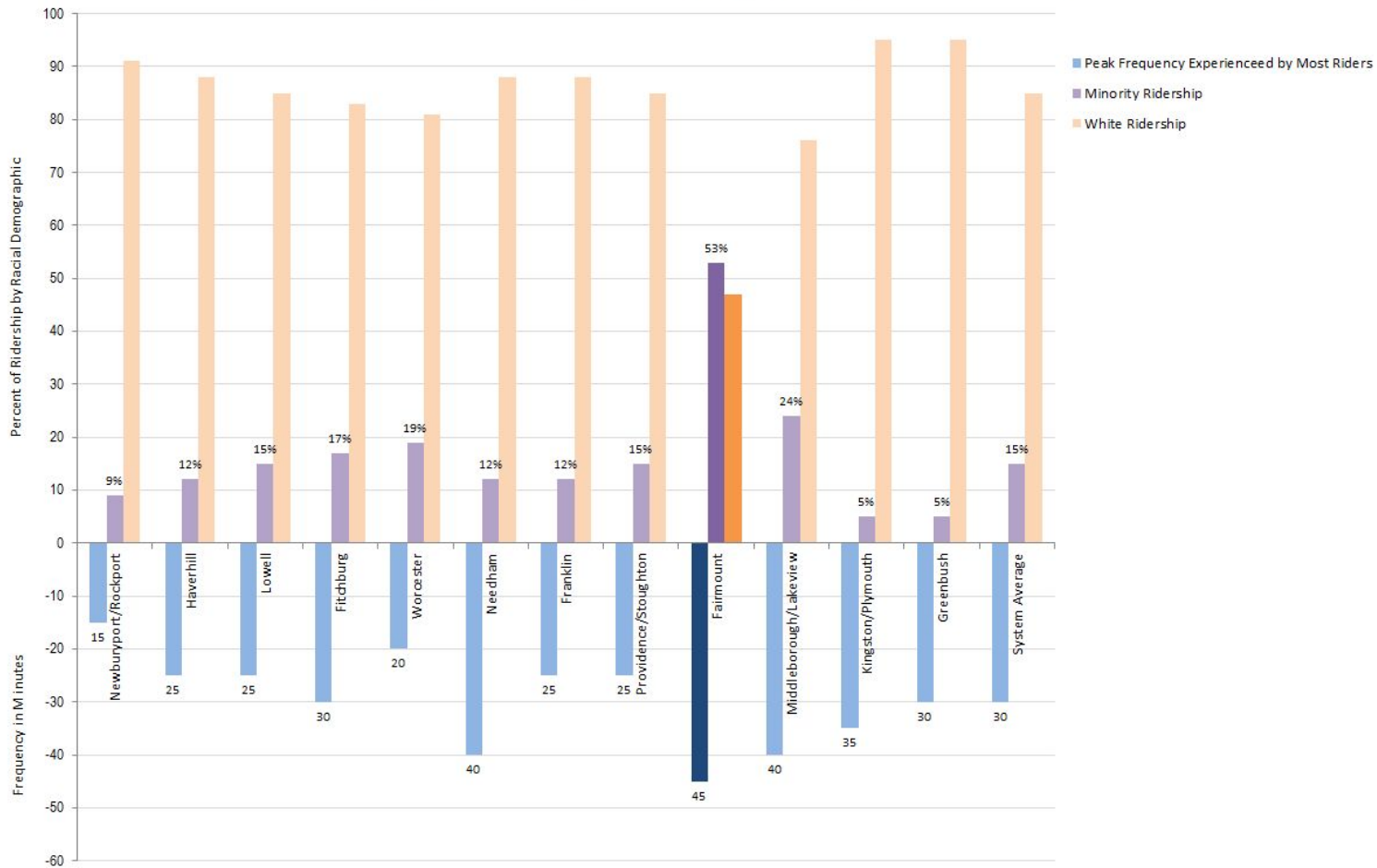


EQUITY LENS

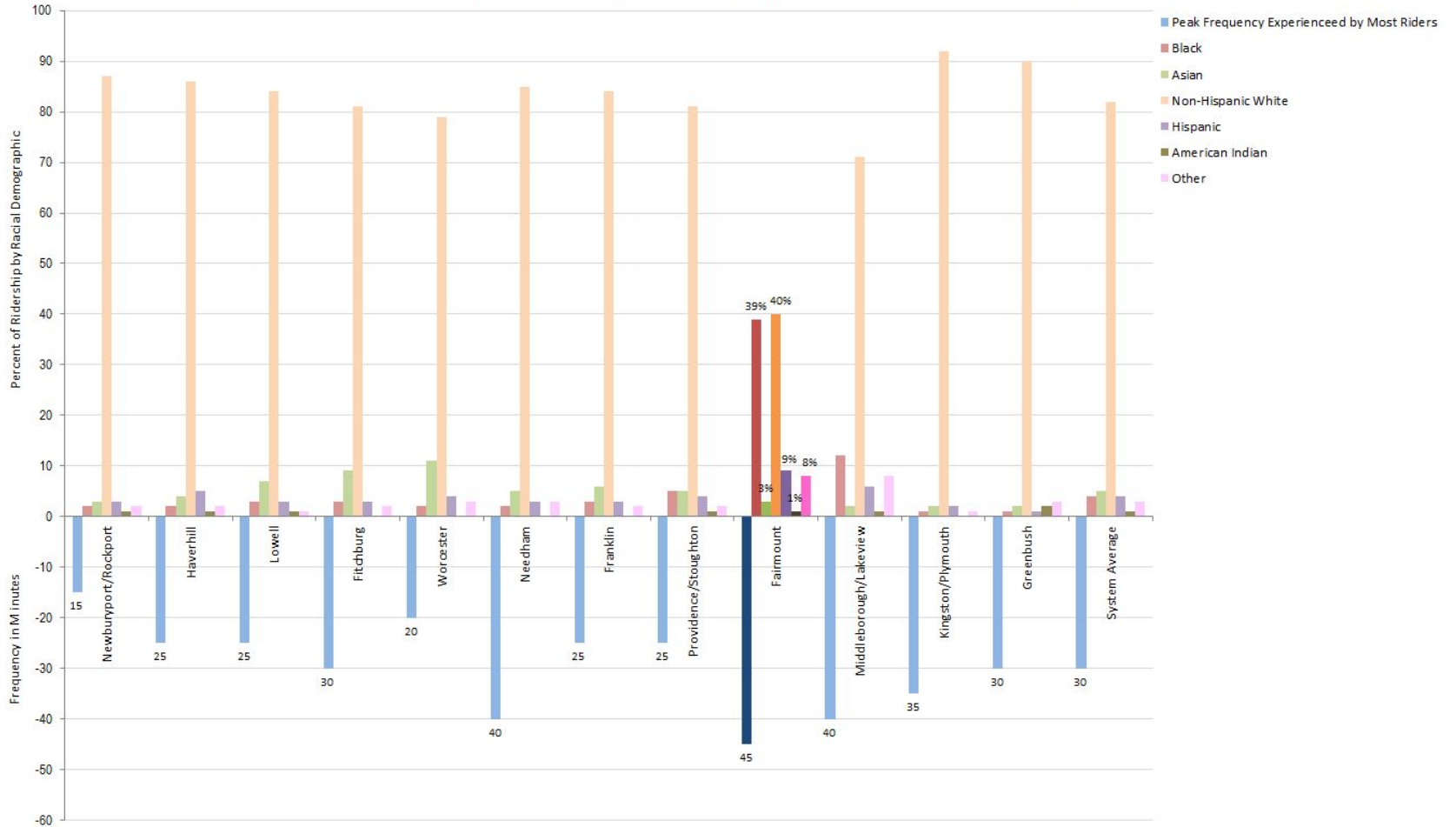
Data Sources: 2017 ACS 5-yr + 2015-2017 MBTA System-wide Passenger Survey

Of all commuter rail lines, the Fairmount Line has the **highest percentage of minority ridership** and the single worst peak frequency.

Peak Frequency vs Ridership Racial Demographics by Commuter Rail Line

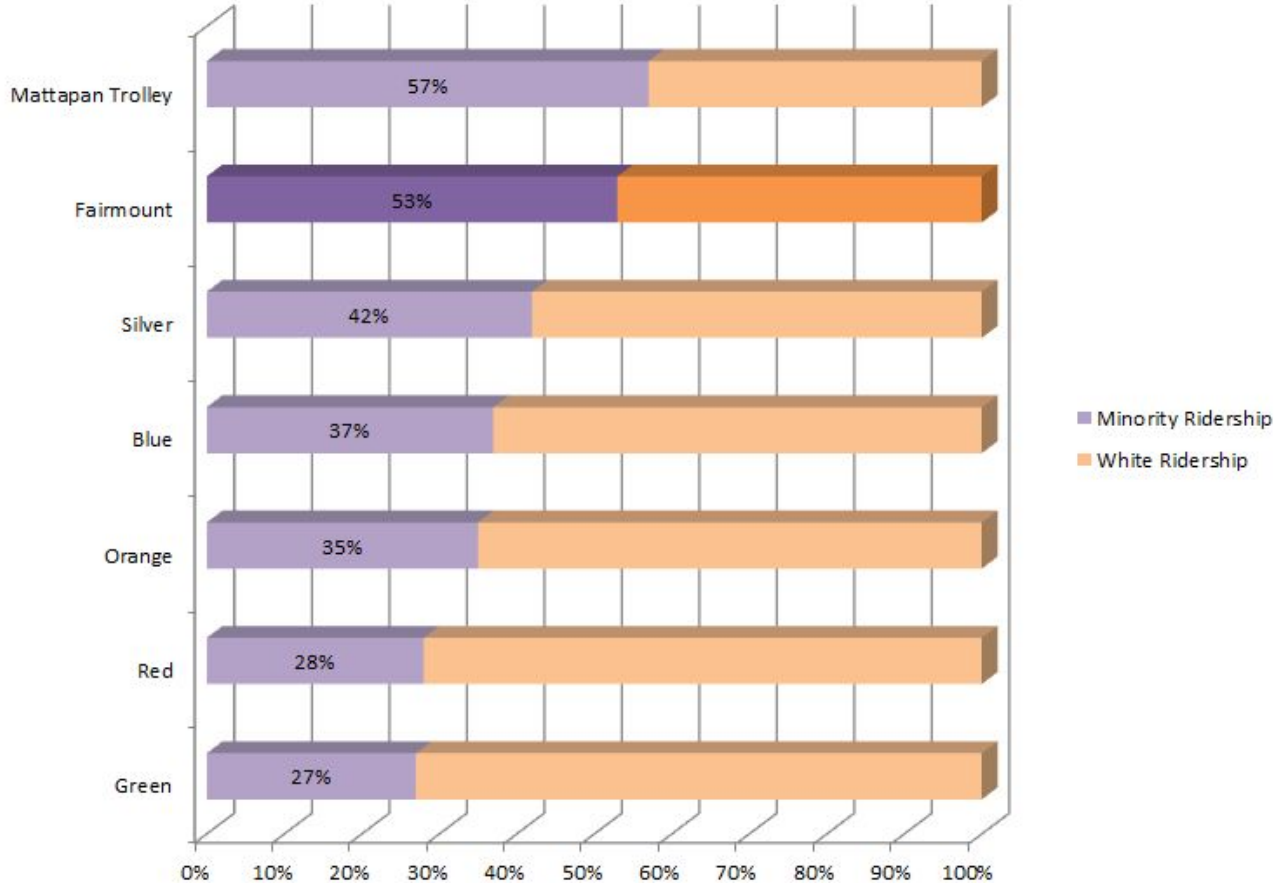


Peak Frequency vs Ridership Racial Demographics by Commuter Rail Line



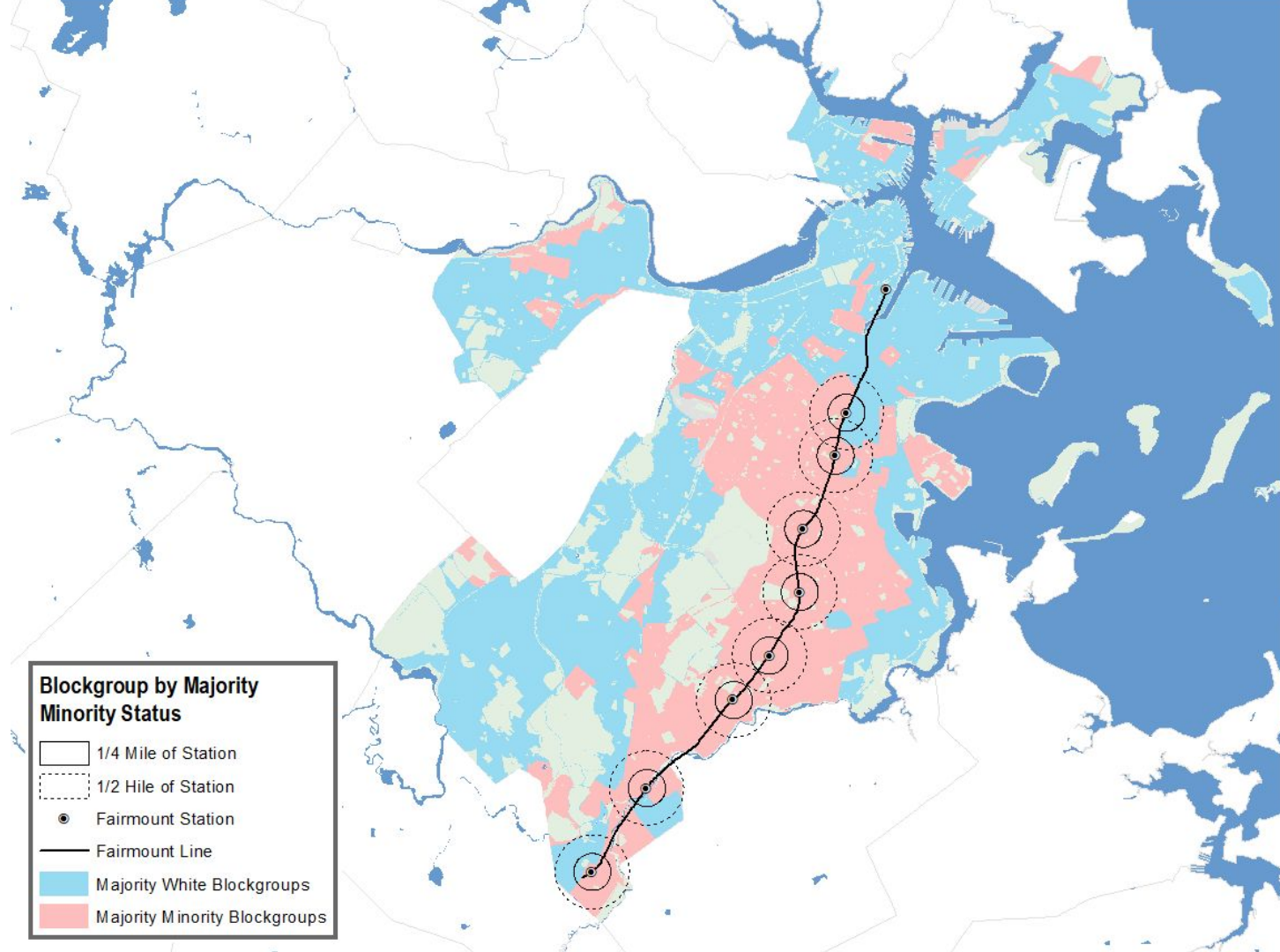
The Fairmount Line is one of the system's only two rail services with a majority minority ridership.

Minority Ridership by Rapid Transit Line



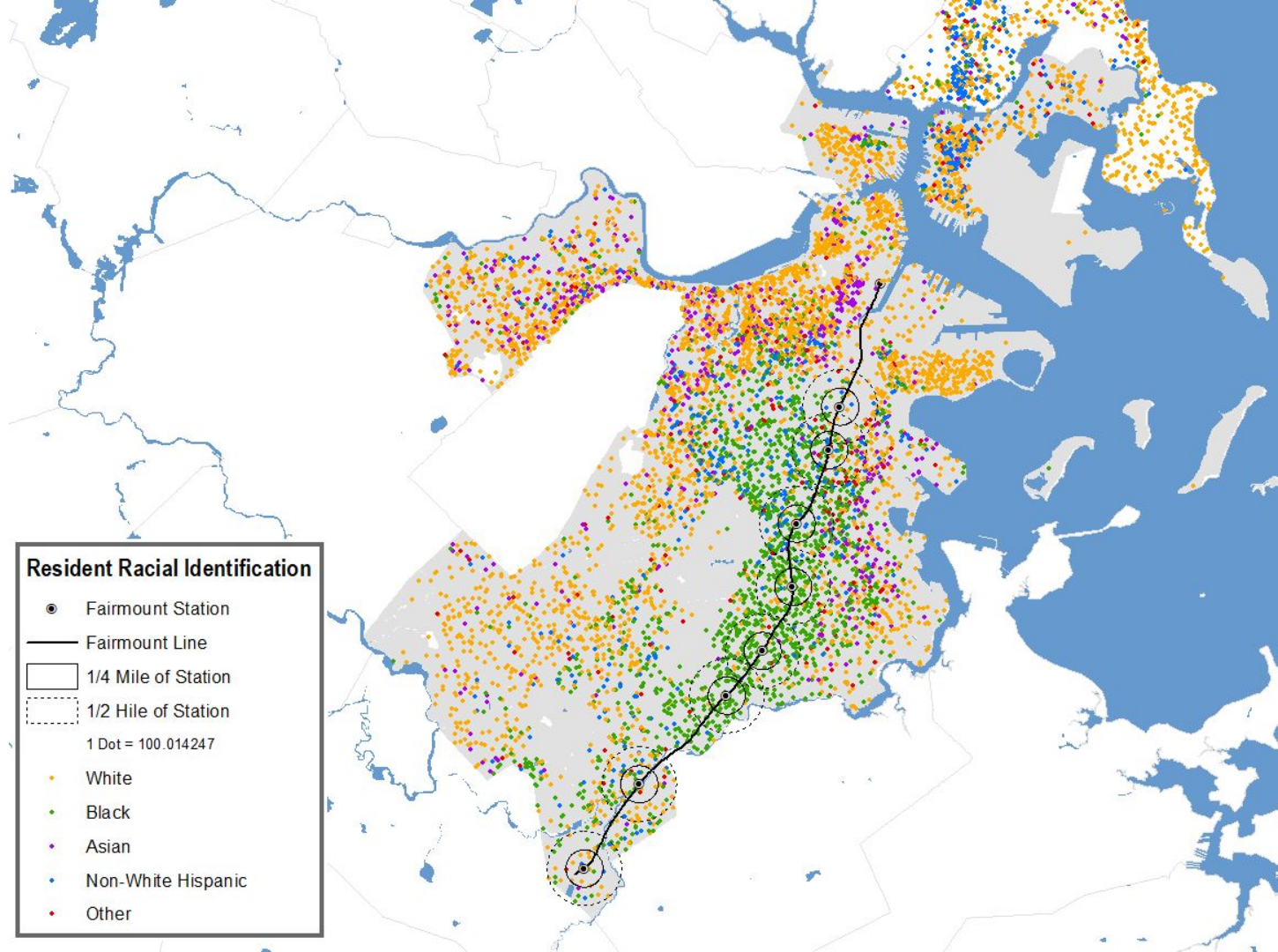
Given that the Mattapan Trolley is the only Rapid Transit service with a majority minority ridership, elevation of the Fairmount Line to frequent service would be a huge triumph for the T toward meeting their equity goals and shrinking the disparity in access to opportunity throughout the Greater Boston Area.

The Fairmount Line corridor is effectively Boston's minority corridor. Roxbury, surrounding Dudley Station, is the only sizable minority neighborhood outside of the corridor.

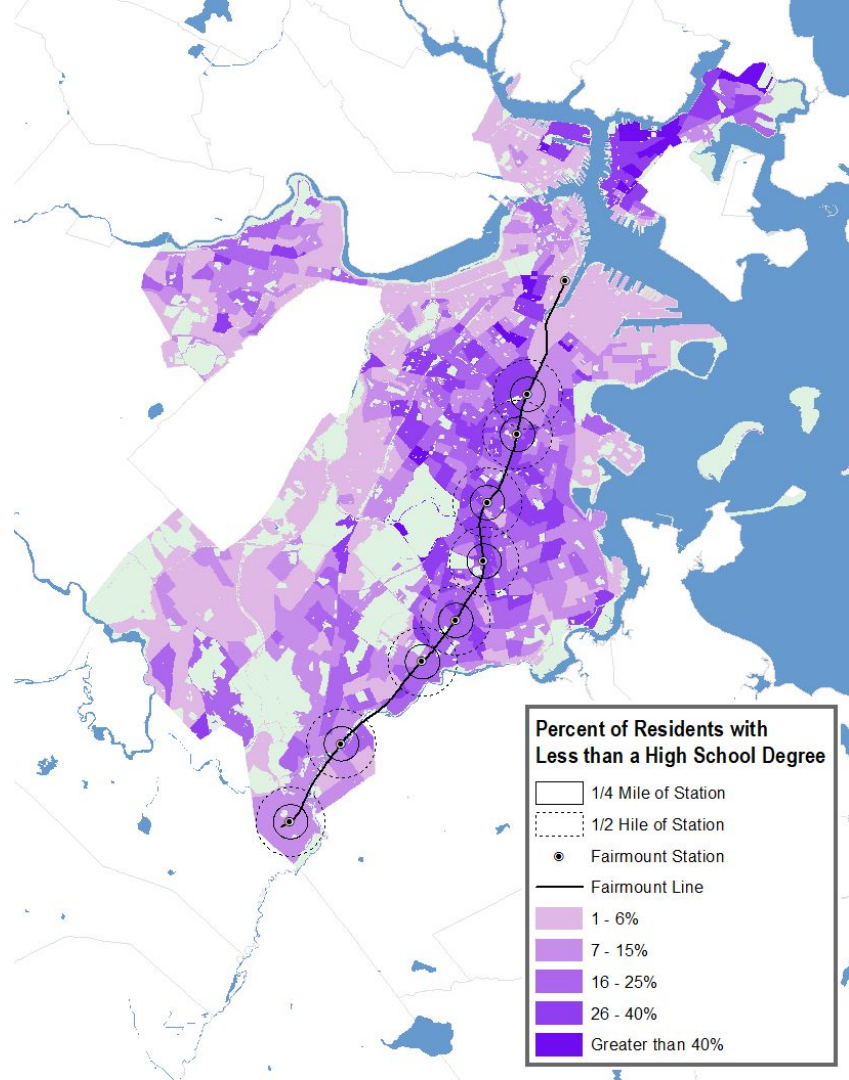
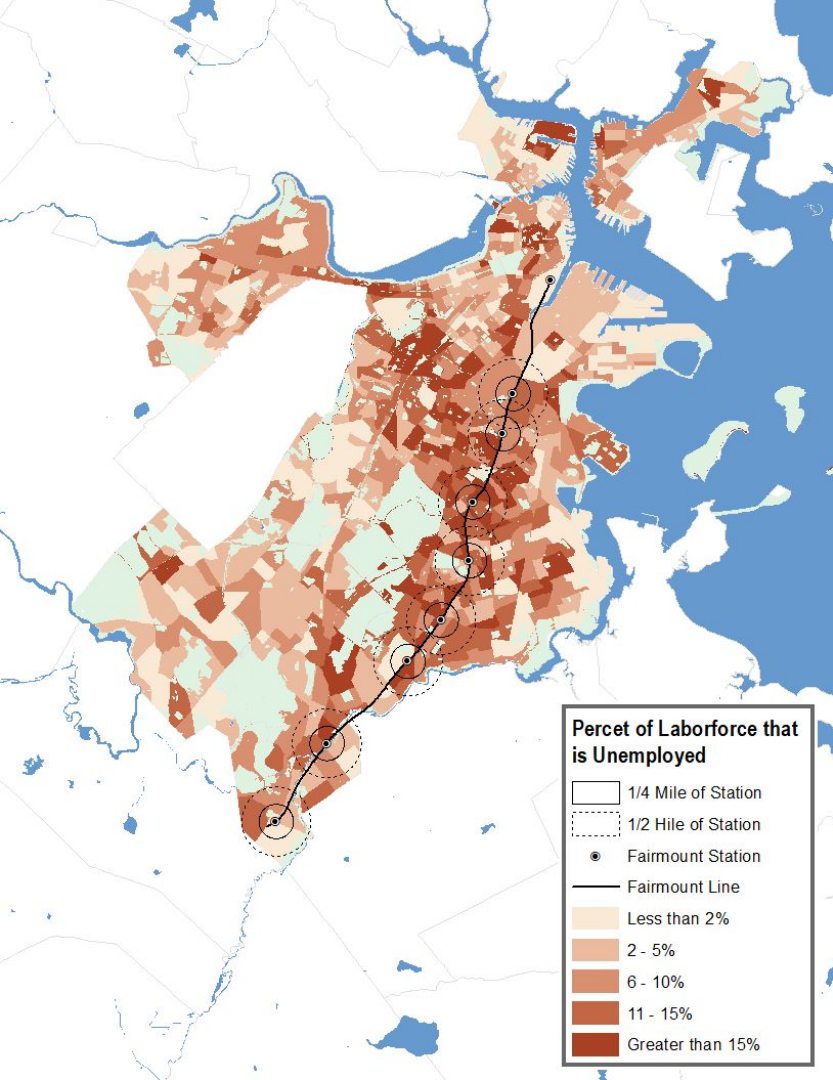


The Fairmount Line corridor is home to Boston's highest concentration of black residents.

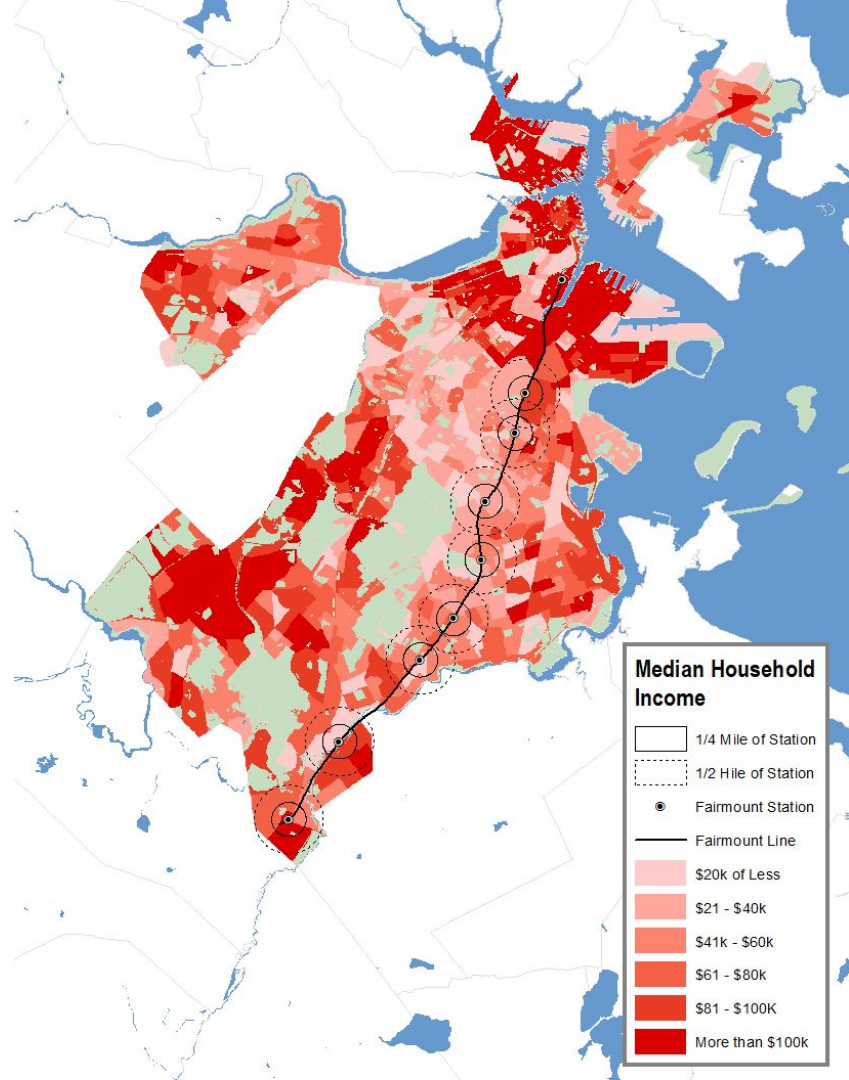
Over 60% of the city's black population live within a ½ mile of a Fairmount Line station.



Beyond minority status, the Fairmount Line also hosts high concentrations of residents who identify closely with the other **socially vulnerable indicators**.

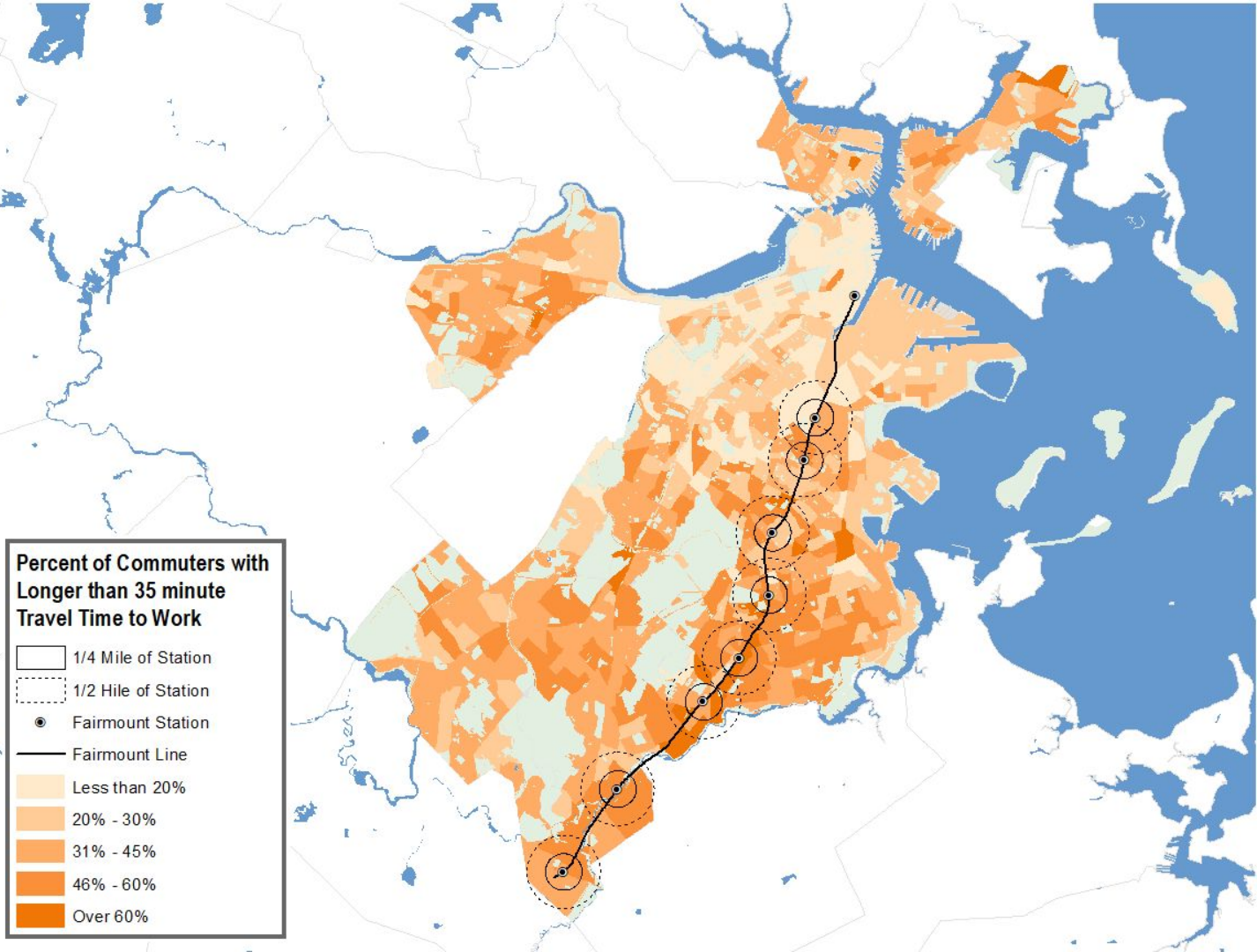


With low rates of vehicular ownership, comparatively low median household incomes, and a higher likelihood than average to work jobs that do not require college level education, Fairmount Line neighborhoods host the city's highest propensity for transit.

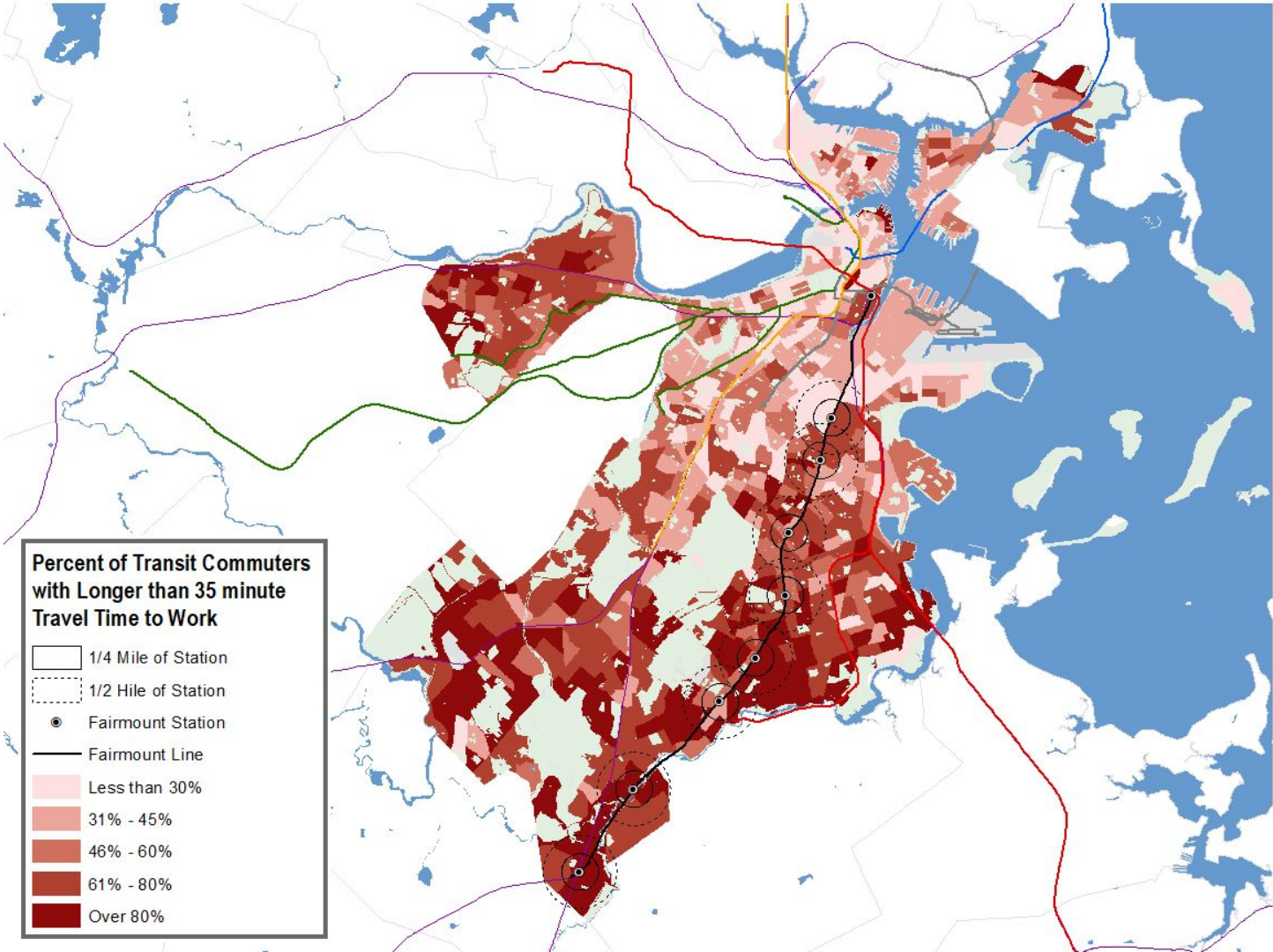


Commuters of all modes living along the
Fairmount Line currently experience
disproportionately long travel times.

The Fairmount Line corridor takes 30 minutes to run its entire length. Many residents within ¼ miles of Fairmount Line stations are seeing bus and car commutes over 35 minutes that would be shortened by use of the Fairmount line.

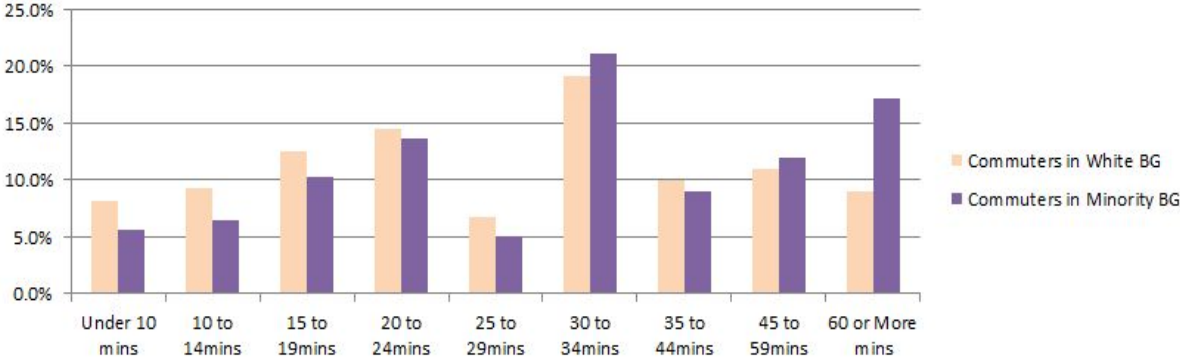


Existing transit users along the Fairmount Line corridor have the most to gain with respect to saved travel time by switching their current transit trips to Fairmount Line trips.

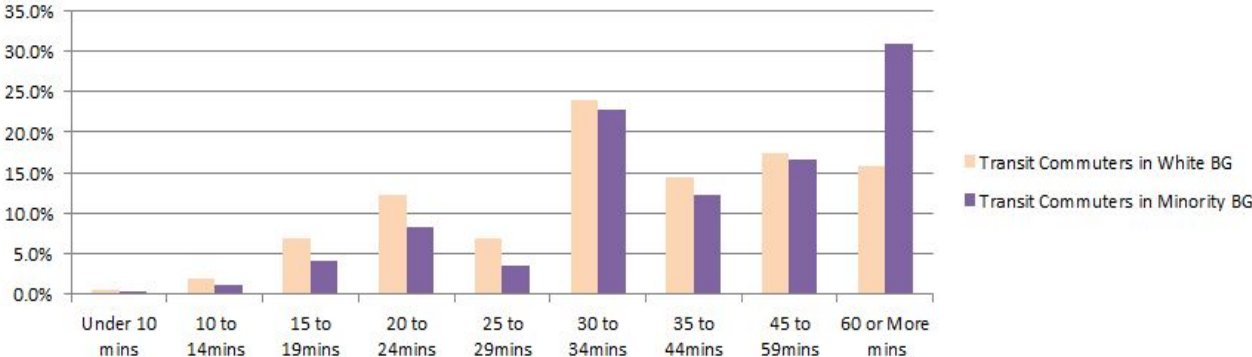


Black riders spend 64 hours a year longer* on MBTA buses than their white counterparts. Incentivizing mode switch for Fairmount Line residents from buses to rail would lessen this grave disparity.

Travel Times for Commuters by Blockgroup Minority Status

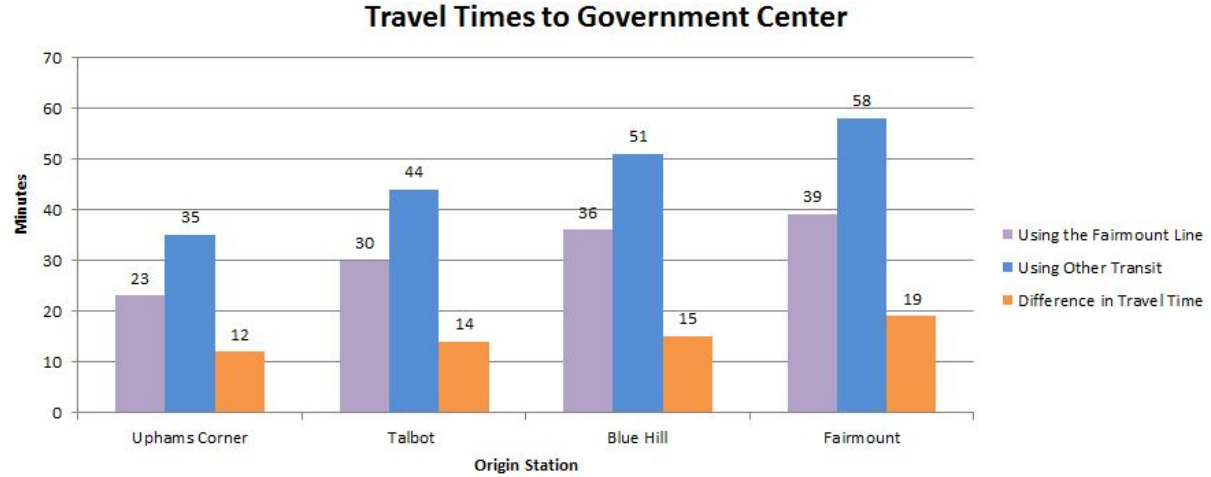


Travel Time for Transit Commuters by Blockgroup Minority Status



*State of Equity in Metro Boston - MAPC 2017

A set of example trips from Fairmount Line station catchment areas show that transit commuters all along the corridor would experience significantly shorter travel times to Boston's major employment centers by switching from other transit to use of the Fairmount Line.



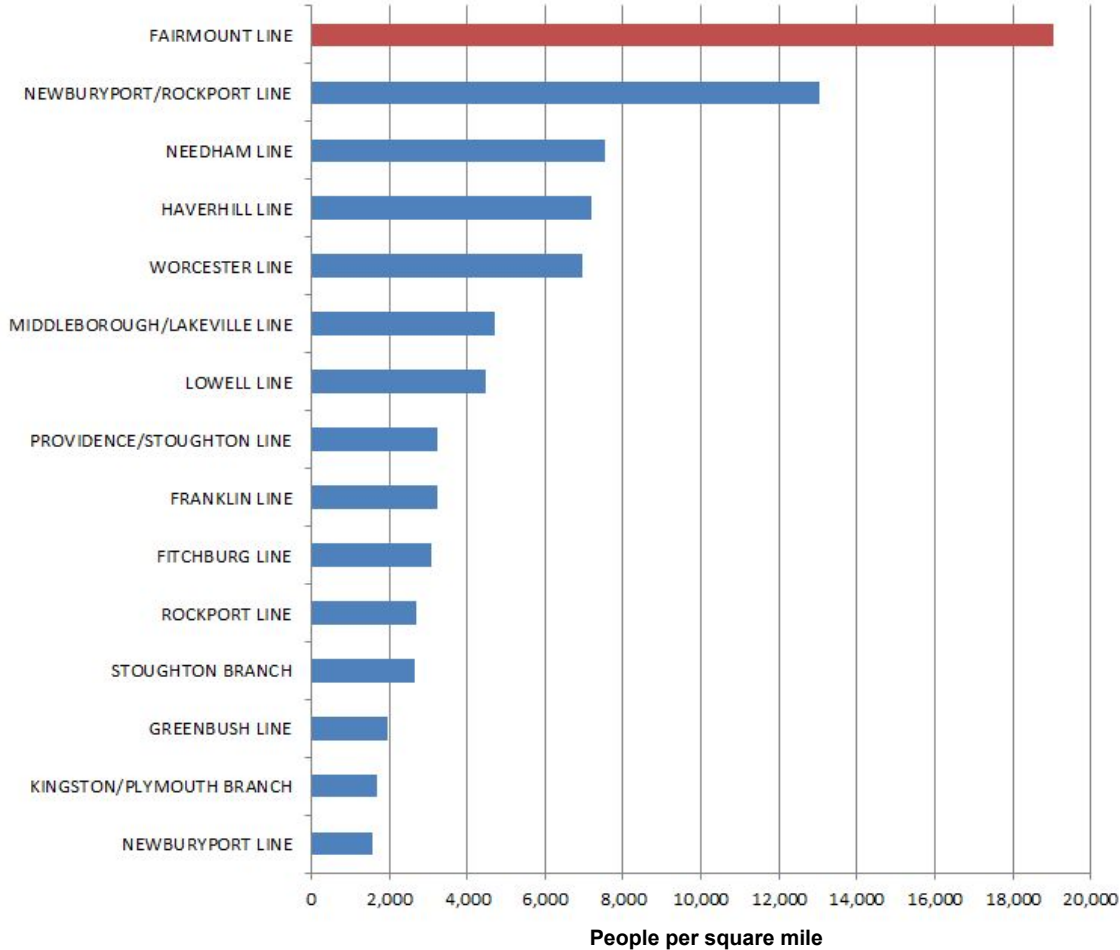
Station	Transit Mode	Journey to Government Center	Trip Length
Uphams Corner	Fairmount Line	Fairmount Line to South Station and walk to GC, or take the Red Line from South Station to Park Street and Green Line to GC.	23-28 minutes
	Other Transit	Route 17 to Andrew Station. Red Line to Downtown Crossing and walk to GC. Or, Red Line from Andrew to Park Street and Green Line to GC	35-40 minutes
Talbot	Fairmount Line	Fairmount Line to South Station and walk to GC, or take the Red Line from South Station to Park Street and Green Line to GC.	30-35 minutes
	Other Transit	Route 22 to Ashmont Station. Red Line to Downtown Crossing and walk to GC. Or Red Line from Ashmont to Park Street and Green Line to GC	44-50 minutes
Blue Hill	Fairmount Line	Fairmount Line to South Station and walk to GC, or take the Red Line from South Station to Park Street and Green Line to GC.	36-41 minutes
	Other Transit	Route 31 to Forest Hills Station or Route 29 to Jackson Square Station. Orange Line to Haymarket Station. Walk from Haymarket to GC.	51-57 minutes
Fairmount	Fairmount Line	Fairmount Line to South Station and walk to GC, or take the Red Line from South Station to Park Street and Green Line to GC.	39-44 minutes
	Other Transit	Route 32 to Forest Hills Station. Orange Line to Haymarket Station. Walk from Haymarket Station to GC.	58-65 minutes

RESIDENTIAL DENSITY LENS

Data Sources: 2017 ACS 5-yr

Population density in the $\frac{1}{4}$ mile around
Fairmount Line stops is **double the density** of
the next most dense commuter rail line, and
only **barely trails the density of Red Line stops**.

Average Station Area Population Density (0.5 mile)

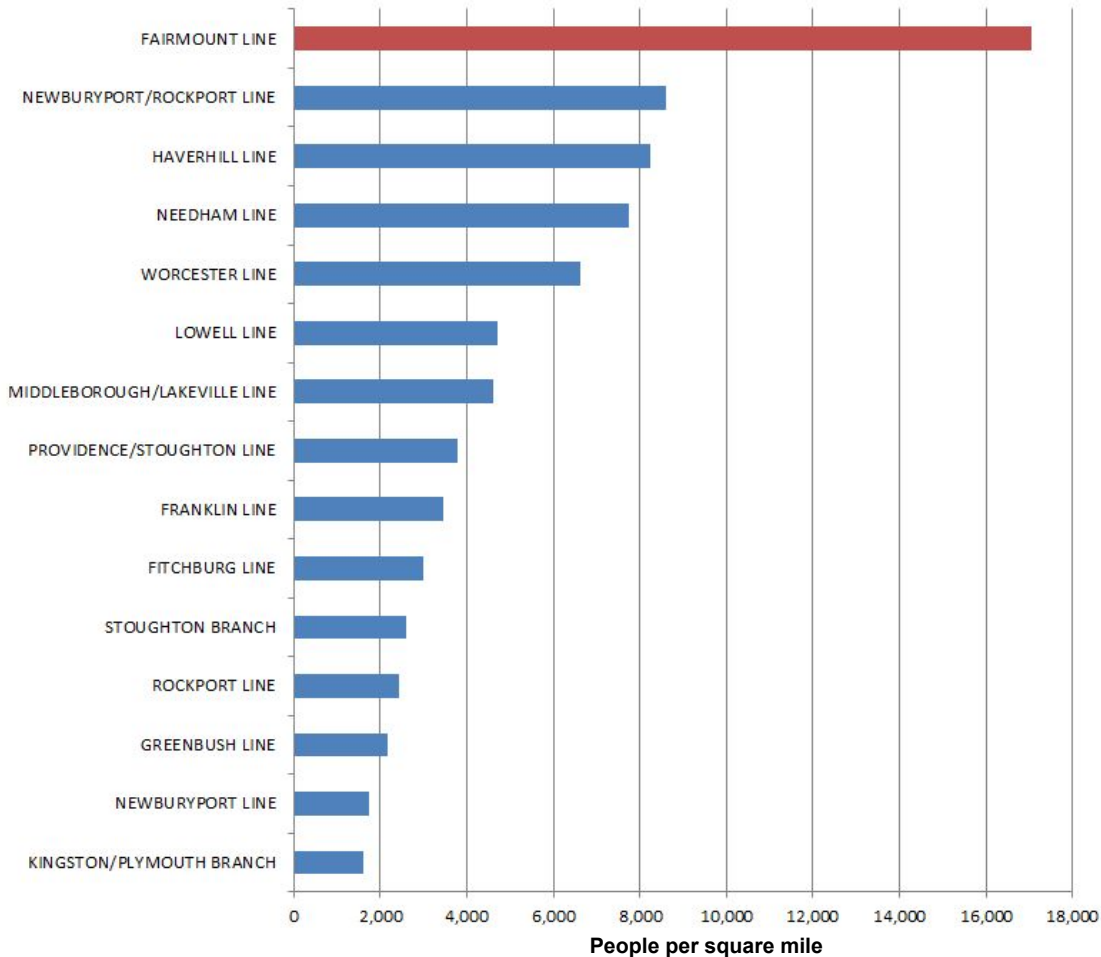


Average
Population
Density of
Fairmount
Stations = **19,000**
people per square mile

Average
Population
Density of
Boston = **13,840**
people per square mile

*Analysis excludes rapid transit stations

Average Station Area Population Density (0.25 mile)

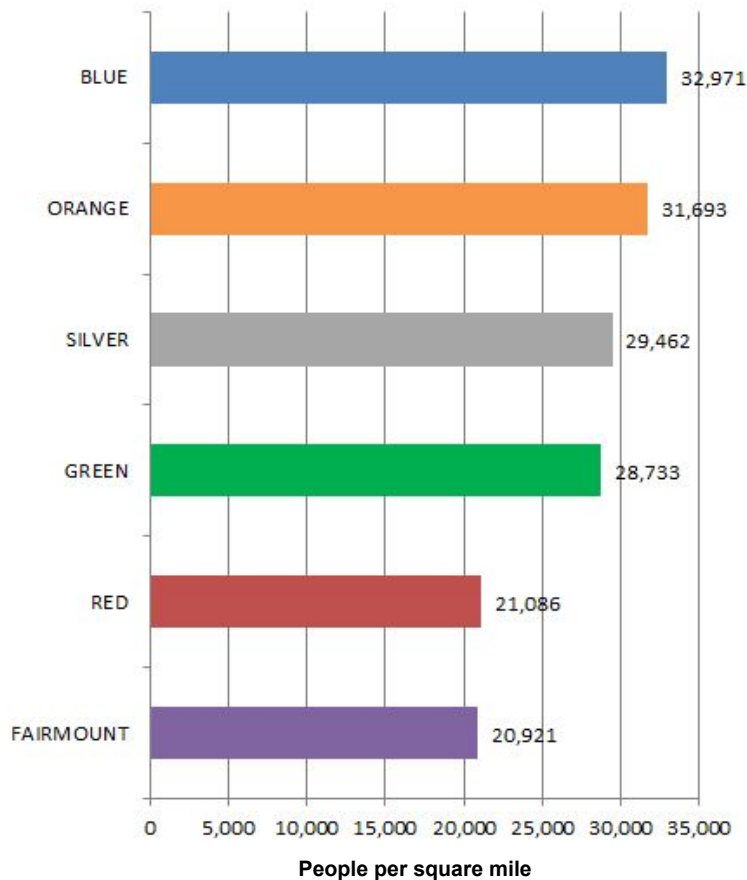


Average
Population
Density of
Fairmount
Stations = **17,000**
people per square mile

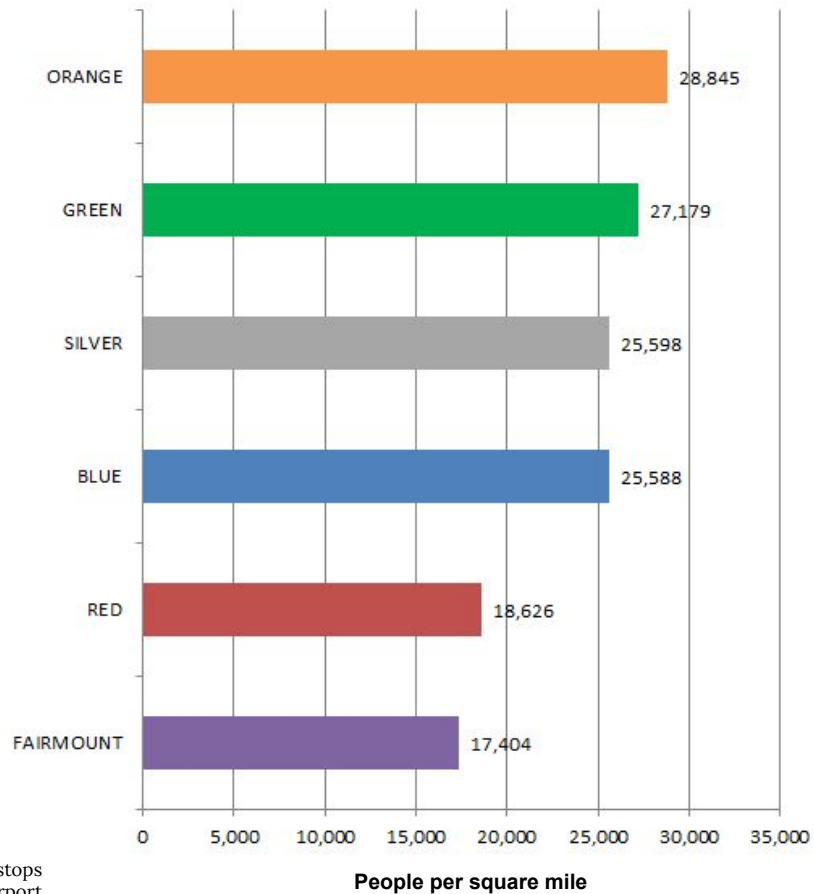
On average, Fairmount Line quarter mile station areas host double the residential density of the next most dense commuter line

*Analysis excludes rapid transit stations

Average Half Mile Station Area Population Density



Average Quarter Mile Station Area Population Density

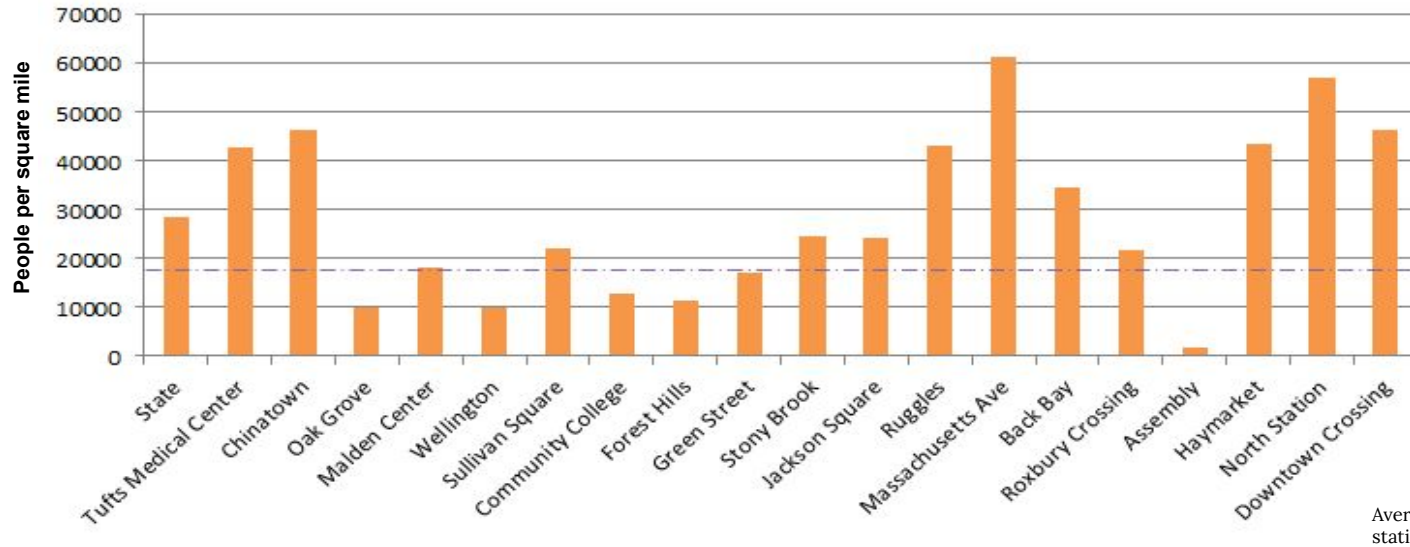


*Analysis excludes stops
at Logan Airport

Orange Line

Average Quarter Mile Station Area Population Density

On average, Fairmount Line quarter mile station areas are more residentially dense than all Orange Line stations outside of Boston, and most stations in JP.

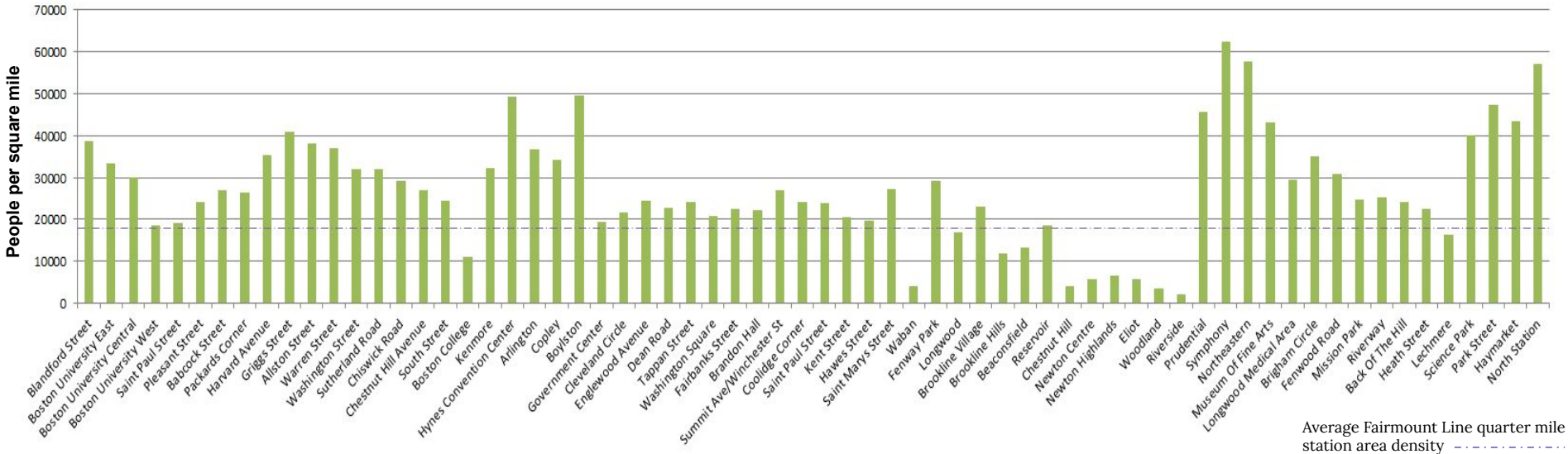


Average Fairmount Line quarter mile station area density

Green Line

Average Quarter Mile Station Area Population Density

On average, Fairmount Line quarter mile station areas are more residentially dense than 77% of D-branch stations west of Kenmore Station.

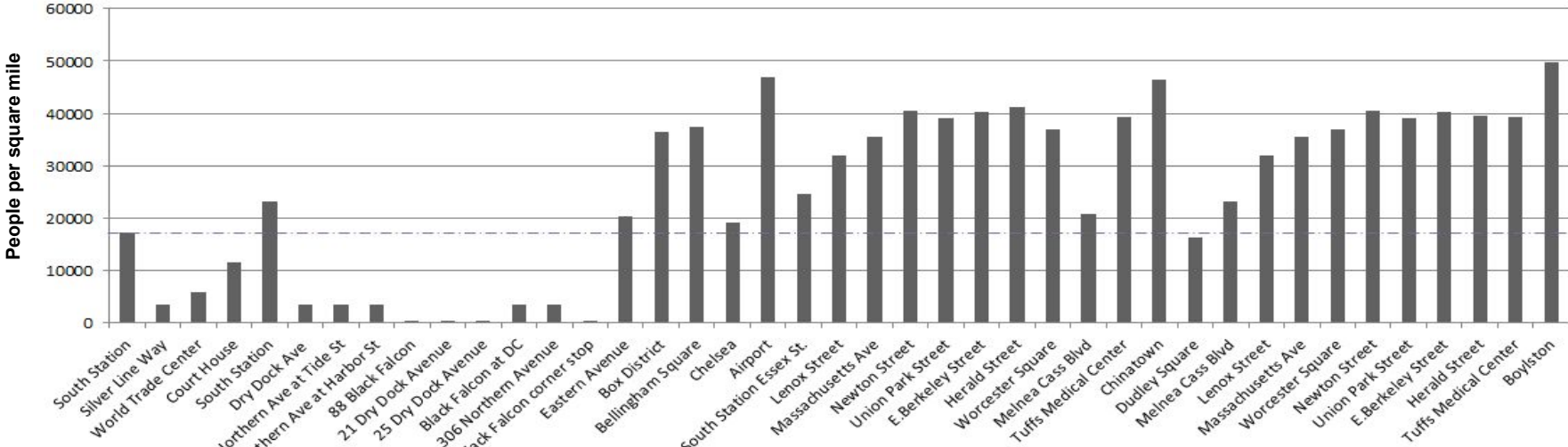


Average Fairmount Line quarter mile station area density - - - - -

Silver Line

Average Quarter Mile Station Area Population Density

On average, Fairmount Line quarter mile station areas are as residentially dense as South Station, and more dense than Dudley Station.

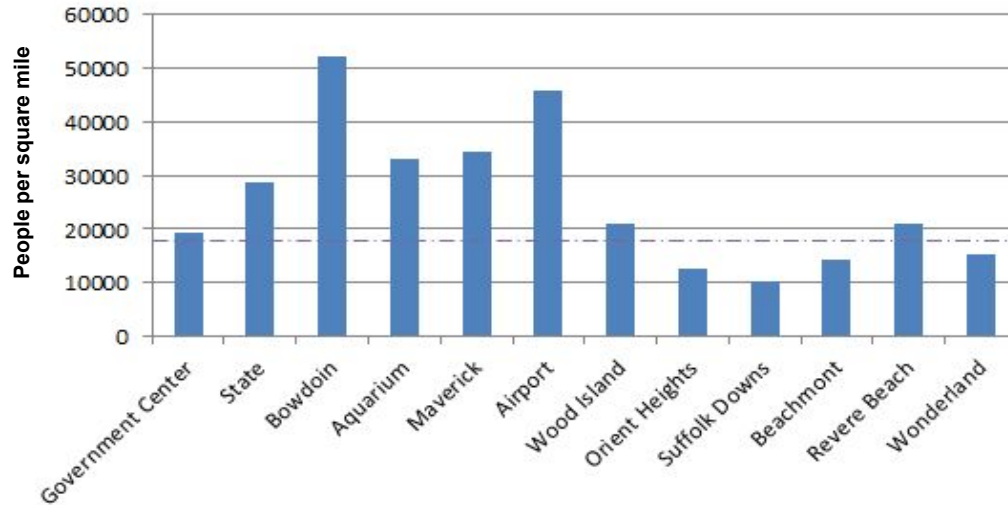


Average Fairmount Line quarter mile station area density - - - - -

Blue Line

Average Quarter Mile Station Area Population Density

On average, Fairmount Line quarter mile station areas are more residentially dense than half of the Blue Line stops in East Boston and Revere.

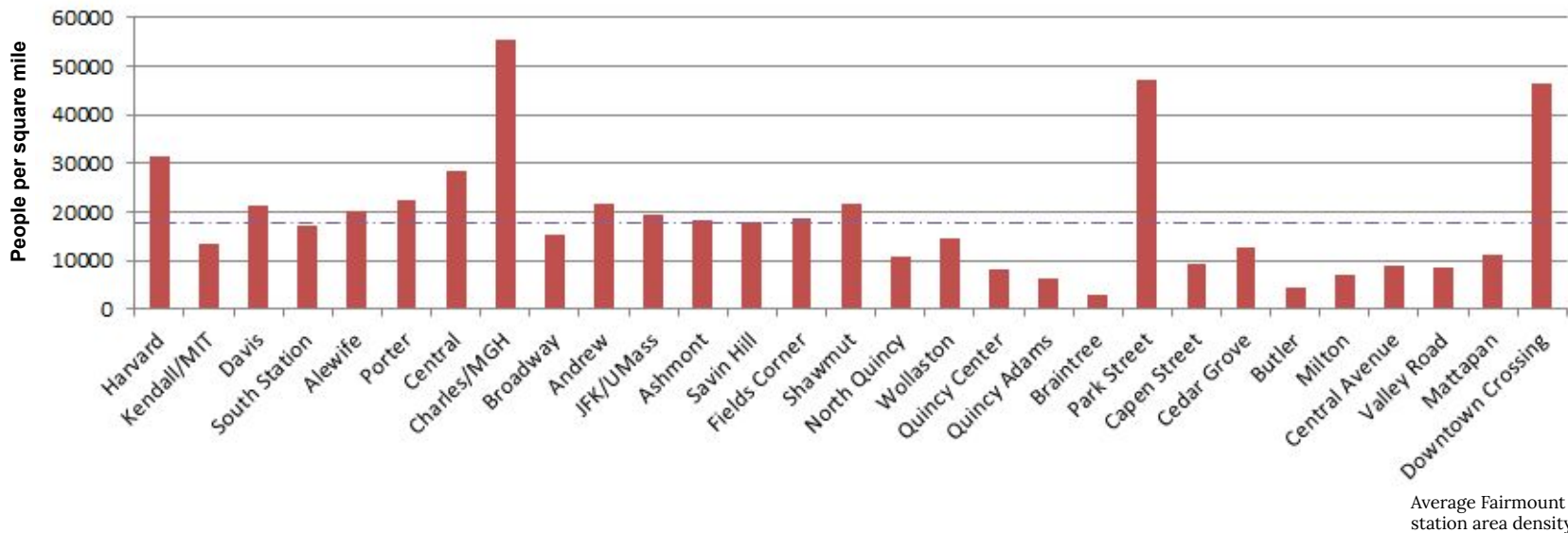


Average Fairmount Line quarter mile station area density

Red Line

Average Quarter Mile Station Area Population Density

On average, Fairmount Line quarter mile station areas host double the residential density of stops south of Boston and along the Mattapan Trolley.



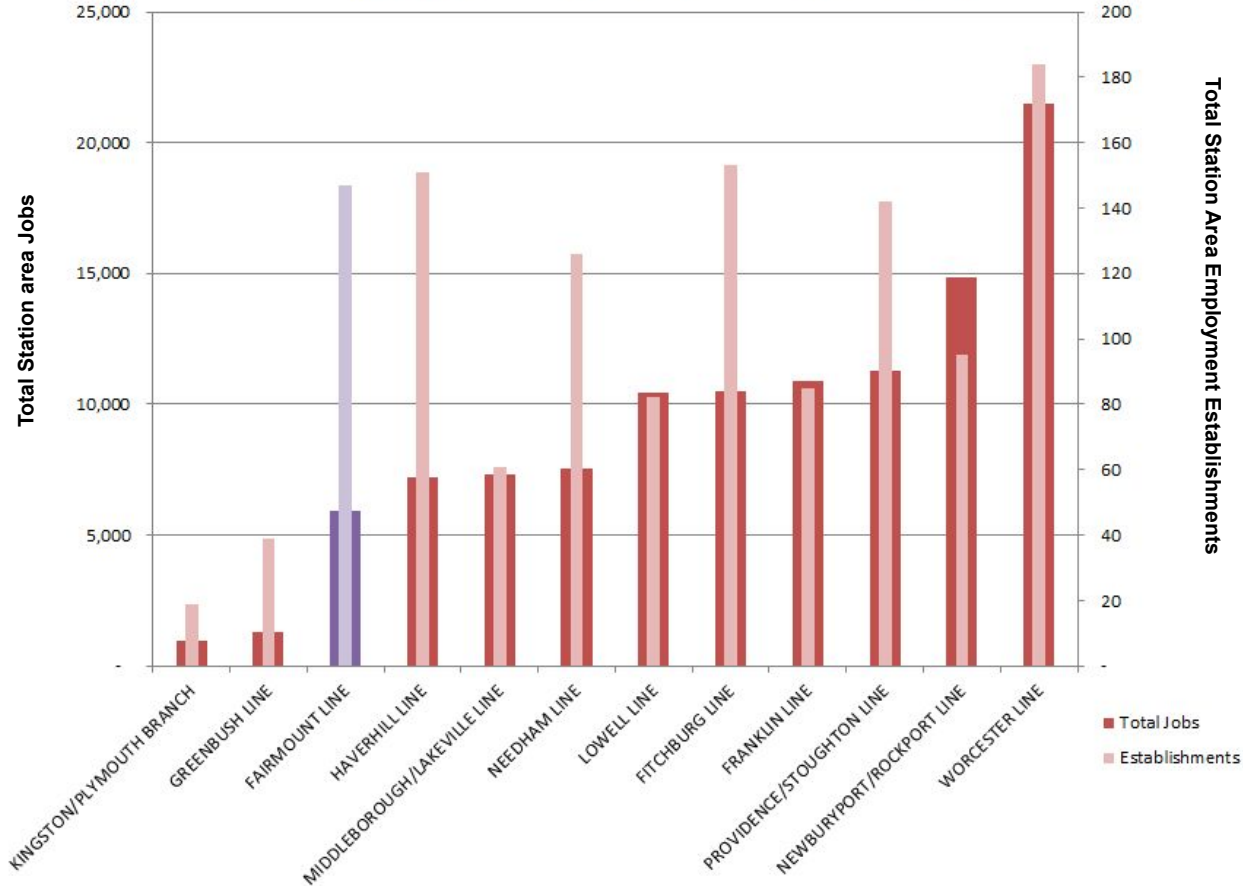
Average Fairmount Line quarter mile station area density

EMPLOYMENT LENS

Data Sources: 2015 LEHD

The Fairmount Line is not purely a residential corridor. It is home to many local businesses. Employment along the corridor facilitates reverse commuting and intra-corridor trips.

Employment within Quarter Mile Station Area



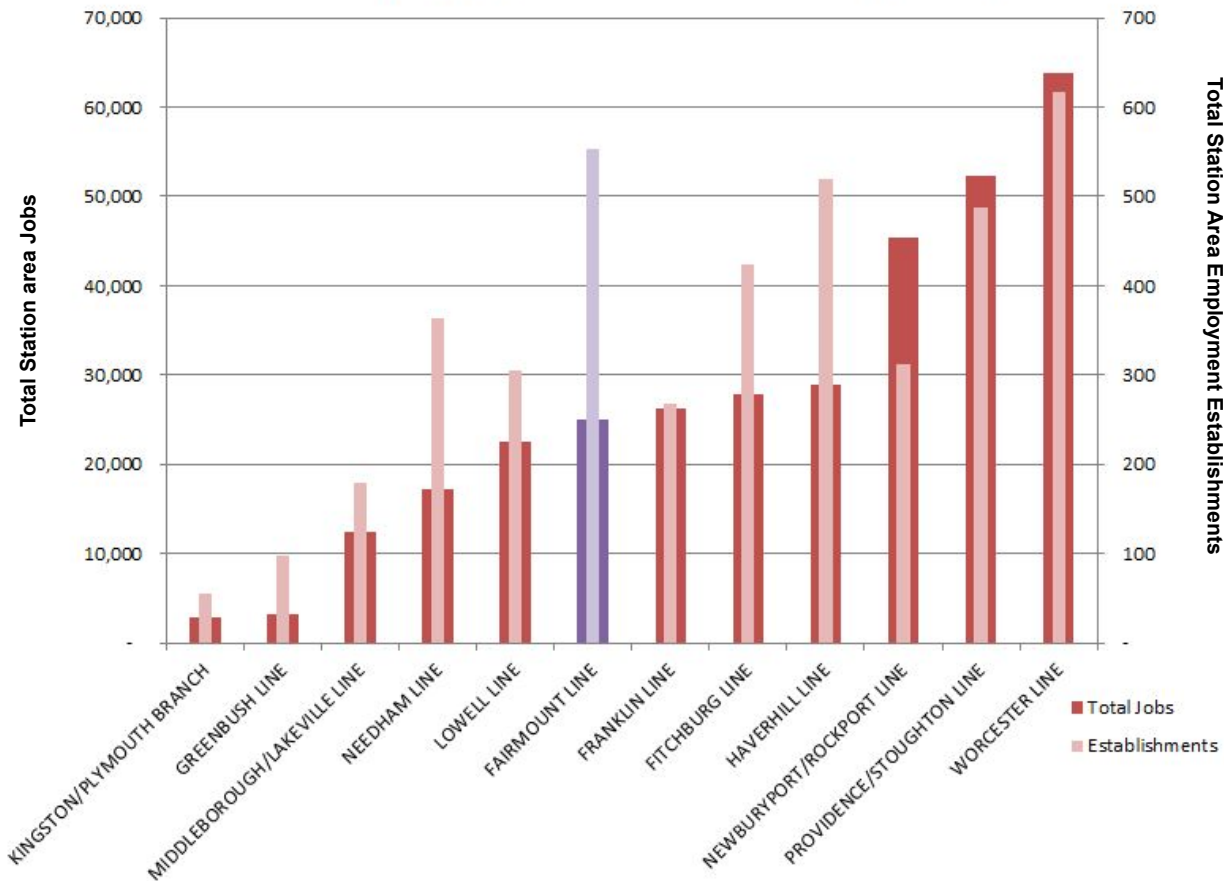
The Fairmount Line hosts more jobs within its quarter mile station areas than 2 other, higher frequency lines.

The Fairmount Line hosts the 4th highest number of employment establishments.

This high number of employment sites and comparatively low number of total jobs suggests that the Fairmount Line is home to small, local businesses.

*Analysis excludes rapid transit stations

Employment within Half Mile Station Area



The Fairmount Line falls in the middle of commuter lines with respect to number of jobs within half mile station area.

The Fairmount Line hosts the 2nd highest number of employment establishments after the Worcester Line.

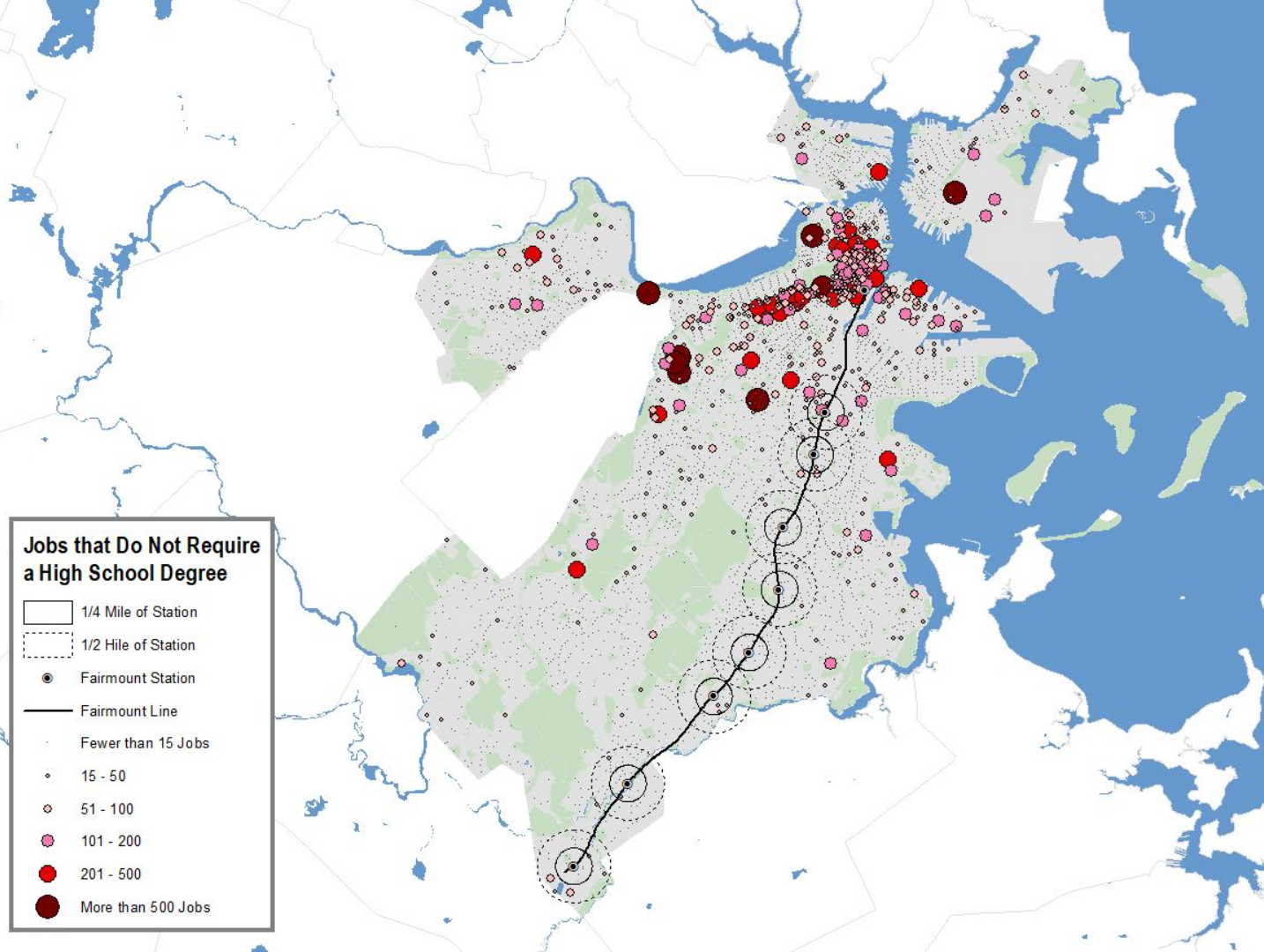
Note that the Fairmount Line host just 10% fewer employment sites than the Worcester Line despite having 50% as many stops.

*Analysis excludes rapid transit stations

The Fairmount Line Corridor hosts a high percentage of residents without high school degrees. The corridor's economic sustainability hinges upon connecting these residents to skill-appropriate jobs.

The Fairmount Line hosts concentrations of jobs that do not require a high school degree at Newmarket, Uphams Corner, and Readville.

The Fairmount Line offers connections for southern residents, via Uphams Corner, to buses that serve the job centers of Dudley, the LMA, and UMass.

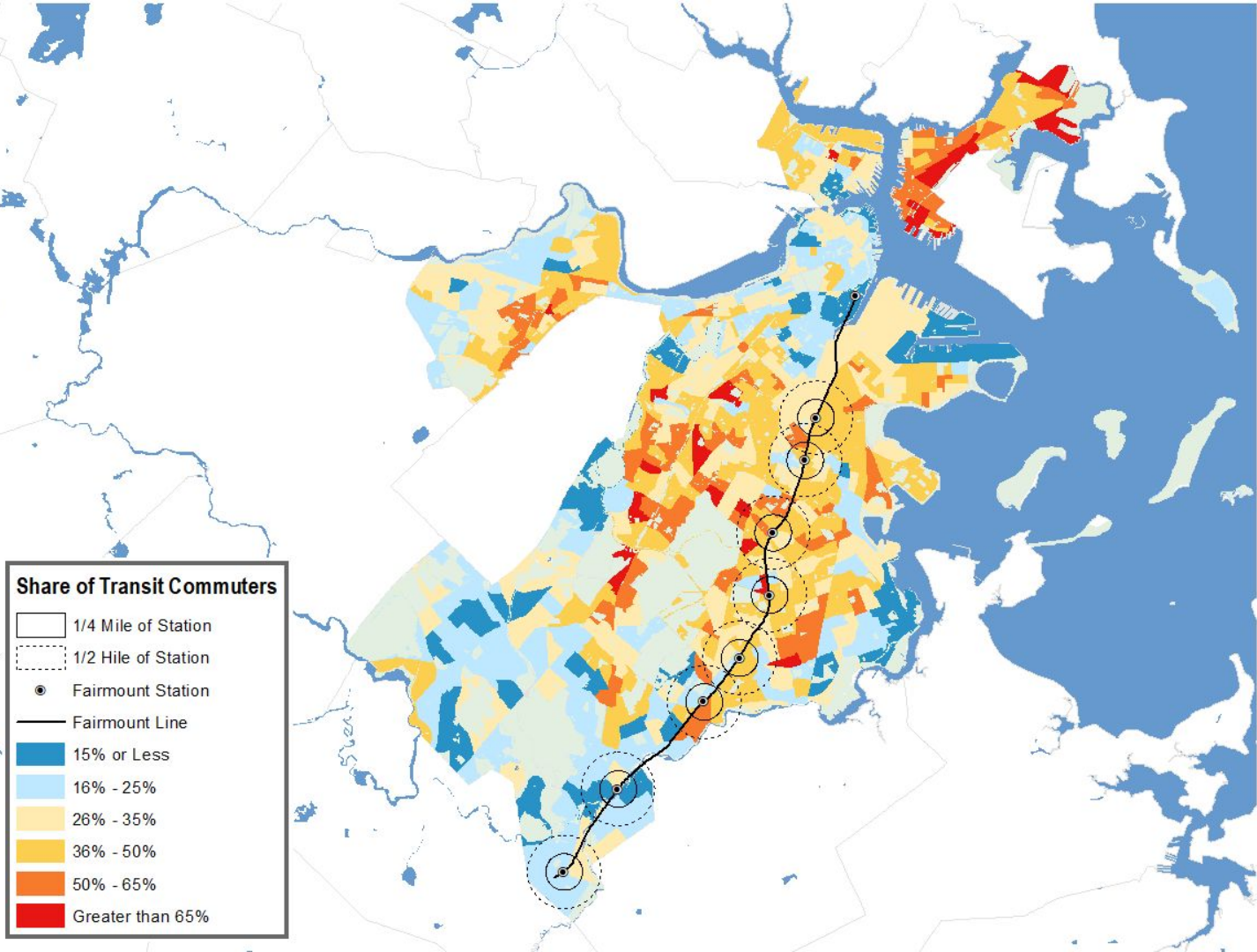


DEMONSTRATED DEMAND

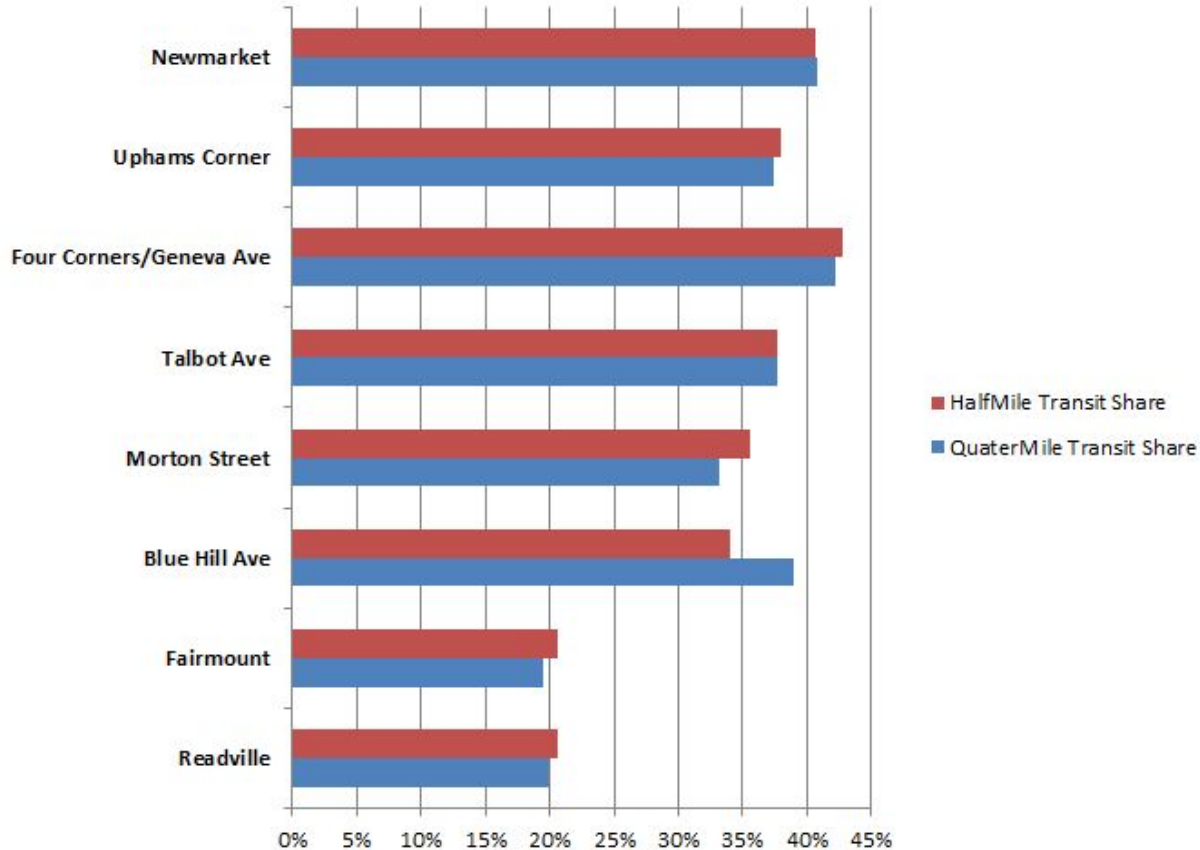
Data Sources: 2017 ACS 5-yr

Fairmount Line neighborhoods have a
demonstrated demand for high quality transit.

Commuters in the Fairmount Line corridor currently have a demonstrated preference, by choice or need, for transit above other travel modes.



Transit Share of Blockgroups within Fairmount Catchment Areas



Currently, there are 12,200 people within a ¼ mile and 39,700 people within ½ a mile of Fairmount Stations who commute via transit. The majority of these trips are made by bus. Converting many of these bus trips to Fairmount Line trips would generate revenue for the T, given the difference in fare.