
Orange Line Opportunity Corridor Report

Final Report, March 2013

Prepared for:

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Development Corporations (MACDC)

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- City of Somerville

Project Team

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Table of Contents

| | |
|--|----|
| ACKNOWLEDGMENTS | 1 |
| PROJECT TEAM..... | 1 |
| FUNDING | 1 |
| COVER CREDITS | 2 |
| EXECUTIVE SUMMARY | 7 |
| INTRODUCTION..... | 10 |
| HISTORY | 12 |
| ADVANCING A CORRIDOR VISION..... | 13 |
| CORRIDOR SNAPSHOT: BASELINE CONDITIONS..... | 14 |
| POPULATION AND HOUSEHOLD CHARACTERISTICS | 15 |
| <i>Population</i> | 15 |
| <i>Households</i> | 15 |
| <i>Transportation Characteristics</i> | 19 |
| <i>Commuting Patterns of Households</i> | 19 |
| <i>Ridership and Station Boardings</i> | 20 |
| <i>Walkability Around Station Areas</i> | 21 |
| <i>Bicycle and Pedestrian Connections in the Corridor</i> | 22 |
| <i>Commuting Patterns of Workers</i> | 23 |
| <i>Vehicle Miles Traveled (VMT)</i> | 23 |
| ECONOMIC CHARACTERISTICS..... | 24 |
| LAND USE CHARACTERISTICS | 25 |
| PLANNED DEVELOPMENT ACTIVITY..... | 27 |
| INSTITUTIONAL DEVELOPMENT ACTIVITY..... | 28 |
| DEVELOPMENT ACTIVITY BY STATION AREA | 29 |
| IMPACT OF DEVELOPMENT PROJECTS: PROJECTED CORRIDOR CHANGE | 31 |
| <i>Planned Housing Units</i> | 31 |
| <i>Planned Commercial Development/ Jobs</i> | 32 |
| <i>Future Ridership</i> | 32 |
| PROFILES OF ORANGE LINE CORRIDOR TOD PROJECTS | 34 |
| STATION AREA: MALDEN CENTER / TOD PROJECT: 100 AND 150 EXCHANGE STREET | 35 |
| STATION AREA: WELLINGTON / TOD PROJECT: STATION LANDING | 36 |
| STATION AREA: WELLINGTON / TOD PROJECT: RIVER'S EDGE | 37 |
| STATION AREA: ASSEMBLY SQUARE / TOD PROJECT: ASSEMBLY SQUARE..... | 38 |
| STATION AREA: NORTH STATION / TOD PROJECT: AVENIR | 39 |
| STATION AREA: TUFTS MEDICAL CENTER / TOD PROJECT: PARCEL 24..... | 40 |
| STATION AREA: MASSACHUSETTS AVENUE / TOD PROJECT: PARCEL 6 – SUSAN BAILIS ASSISTED LIVING FACILITY | 41 |
| STATION AREA: ROXBURY CROSSING / TOD PROJECT: PARCEL 25 | 42 |
| STATION AREA: JACKSON SQUARE / TOD PROJECT: 225 CENTRE STREET..... | 43 |
| RECOMMENDATIONS | 44 |
| ADVOCATING FOR INVESTMENTS IN THE ORANGE LINE CORRIDOR INFRASTRUCTURE | 44 |
| MAXIMIZING LARGE-SCALE LAND ACQUISITION OPPORTUNITIES | 45 |



OPTIMIZING TRANSIT-ORIENTED DEVELOPMENT SCENARIOS ALONG THE CORRIDOR THROUGH ZONING POLICIES AND FINANCIAL RESOURCES..... 46

MITIGATING THE RISK OF DISPLACEMENT..... 47

ENHANCING CORRIDOR IDENTITY THROUGH INCREASED MULTI-MODAL CONNECTIONS..... 48

ESTABLISHING A COALITION OF PUBLIC AND PRIVATE SECTOR ADVOCATES TO ENSURE CORRIDOR INVESTMENT..... 49

PROJECT PARTNERS..... 50

 METROPOLITAN AREA PLANNING COUNCIL (MAPC)..... 50

 MASSACHUSETTS ASSOCIATION OF COMMUNITY DEVELOPMENT CORPORATIONS (MACDC)..... 50

CDCS AND NON-PROFIT HOUSING DEVELOPERS IN THE ORANGE LINE CORRIDOR..... 51

NONPROFIT ORGANIZATIONS AFFILIATED WITH THE BICYCLE AND PEDESTRIAN ASSETS IN THE CORRIDOR..... 53

Appendices

| | |
|--|----|
| APPENDIX A: BASELINE CONDITIONS SUPPLEMENTAL CHARTS, MAPS, AND TABLES..... | 54 |
| REFERENCES..... | 58 |

Tables and Figures

| | |
|---|----|
| Figure 1: Orange Line Station Areas – Present Mix and Intensity of Resident and Workers | 14 |
| Figure 2: Percent of Households in Poverty by Station Area | 16 |
| Figure 3: Percent of Cost Burdened Renters by Station Area..... | 17 |
| Figure 4: Housing Cost Burden for Renters - Orange Line Corridor, by Segment | 17 |
| Figure 5: Housing Cost Burden for Owners – Orange Line Corridor, by Segment..... | 18 |
| Figure 6: Household Income and Vehicle Miles Traveled..... | 19 |
| Figure 7: Percent of Commuters Using Transit – by Boarding Station..... | 20 |
| Figure 8: Average Hourly Boarding – by Corridor Segment..... | 21 |
| Figure 9: Walkscore by Station Area | 21 |
| Figure 10: Bicycle and Pedestrian Connections in the Corridor | 22 |
| Figure 11: Daily VMT for households, commuters to jobs..... | 23 |
| Figure 12: Employment Industries by Sector | 24 |
| Figure 13: Corridor Segment Land Use Mix by Percent | 25 |
| Figure 14: Corridor Land Use Mix by Segment..... | 26 |
| Figure 15: Corridor Development Activity by Status | 27 |
| Table 1: Corridor Development Activity by Status and Development Timeframe..... | 28 |
| Figure 16: Corridor Development Projects by Completion Year..... | 28 |
| Figure 17: Orange Line Corridor – Major Institutions’ Development Activity | 29 |
| Figure 18: Development Pipeline 2012-35: Intensity and Mix..... | 30 |
| Figure 19: Housing Development by Station Area – Units by Completion Year..... | 31 |
| Figure 20: Employment (Jobs) by Station Area – by Completion Year | 32 |
| Table 2: Estimated New Commuters, 2012-2020 and 2020-2035..... | 33 |
| Figure 21: MBTA Properties along the Orange Line Corridor, November 2012 | 45 |
| Table 3: MBTA Properties in the Orange Line Corridor by Ownership Type..... | 46 |
| Percent Minority Population by Station Area | 54 |
| Average Median Household Income by Station Area | 54 |
| Walkscore by Station Area..... | 55 |
| Corridor Development Activity–Project Count by Status..... | 55 |
| Orange Line Corridor Development Projects – Housing Units by Project Status | 57 |
| Orange Line Corridor Development Projects – Estimated Jobs..... | 58 |

Executive Summary

The Orange Line Opportunity Corridor Report is the first phase in a campaign to realize the full physical and functional potential of one of Boston's busiest transit lines. This first-ever compilation of corridor characteristics and planned development activity will help municipalities, public and private developers, and community groups advocate for corridor investments and plan for the potential and impacts of transit-oriented development.



Image credit: Andrew Tucker

The infrastructure needs of the Orange Line transit system are well-documented. But who lives and works in the corridor, and how is the current mix of land uses projected to change? This report provides a baseline understanding of the demographic, economic, transportation, and land use characteristics of the corridor; a schedule of planned and projected corridor development activity over two time horizons: 8 years and 8-15 years; highlights quality TOD projects already completed or underway in the corridor; and recommends six action items to ensure that the corridor receives the continued attention and investment that it deserves as one of the region's most heavily used and diverse transit corridors.

What are the characteristics of the corridor in the context of the region?

One quarter of the region's households live near the Orange Line. Approximately 709,900 residents reside within a half mile of an Orange Line station, representing 23 percent of the region's population and 28 percent of its households. The Corridor is also racially diverse; 42 percent of those who live within a half-mile of the stations along the corridor are persons of color. Approximately 20 percent of households in the corridor are in poverty—twice the MAPC regional average—and five station areas have very high populations of color and households in poverty. Unfortunately, these residents are also at risk of residential displacement as the corridor is revitalized, due to rising rents or expiration of affordability restrictions.

The Orange Line Corridor includes many of the region's most important job centers. There are nearly 300,000 jobs near Orange Line Stations— 16 percent of total jobs in the MAPC region. The Orange Line serves major employment centers including Downtown Boston, Back Bay, and the Longwood Medical Area. Educational institutions alone employ over 4,000 individuals in the campuses along the Orange Line.

Corridor residents and workers benefit from the corridor's transit service, pedestrian connections, and bike paths. Nearly one third of workers living in the Corridor commute by public transit, rising to nearly 50 percent at the north and south ends of the corridor. Most Orange Line stations are also surrounded by a variety of destinations—all but three are rated by Walk Score as "Very Walkable" or "Walker's Paradise" (the highest rating). As a result, households in the corridor drive substantially less than their counterparts elsewhere in the region—27 miles per household per day in the corridor versus 49 miles per household per day regionwide.

The Corridor is poised to experience a major wave of development over the next two decades. Based on information about specific development proposals and municipal planning initiatives, MAPC estimates that the corridor is likely to see 7,300 new housing units and 21,000 new jobs by 2020. Between 2020 and 2035, projected development might create more than 15,000 new housing units and 53,000 new jobs. Development opportunities range from large-scale "transformative" redevelopment of underutilized station areas (e.g.,

Sullivan Square, Forest Hills) to downtown high-rises and parcel-level infill development in neighborhoods all along the corridor. This new development will create important housing and employment opportunities for residents and will generate millions of dollars of tax revenue.

New investments are needed to support the corridor's vitality and enable future development. Not only are all of the Orange Line trains past their useful life and in need of replacement, but additional capacity is needed to support the ridership likely to result from future development. MAPC estimates that new development could add 2,900 new Orange Line Commuters by 2020, and as many as 8,000 new commuters in the following 15 years. This new ridership is almost guaranteed to push ridership past the "service standard capacity," especially if increasing numbers of out-of-service vehicles reduce the capacity of the line. Investments of at least \$1 billion are needed to replace the rolling stock and increase capacity. Furthermore, improvements to pedestrian and bicycle connections are needed, especially at the northern end of the corridor, to provide more continuity along the transit line.

Recommendations for Maximizing Opportunity along the Corridor

The corridor presents a host of opportunities for sustainable, equitable, and economically vibrant growth. However, the corridor also faces substantial challenges. Coordinated planning for TOD and advocacy for corridor investments is needed in order to mitigate risk of displacement and ensure that the people who live in the Corridor benefit fully from the planned jobs, housing, and other opportunities that may come. Attention is also needed to ensure that the corridor's multimodal infrastructure gets the attention it needs so that people have options to take public transit, walk, or bike to destinations anywhere in the five municipalities directly served by the line and to the many destinations that the line provides connections to. A coalition of public and private stakeholders is needed in order to advocate for corridor investment in several areas:


Advocating for investments in the Orange Line infrastructure. One of the most urgent transportation infrastructure needs in the region is replacing 120 cars on the Orange Line that were built between 1979-1981, which is expected to cost approximately \$1 billion. Advocacy is needed to ensure that the infrastructure keeps pace with projected ridership. Improvements to system reliability and quality of service will, in turn, encourage more people to use the Orange Line.

Maximizing large-scale land acquisition opportunities. There are large areas of underutilized land in many station areas along the corridor, which are currently under the ownership of the Massachusetts Bay Transportation Authority (MBTA), municipalities, and private landowners. Public and private developers can collaborate with the MBTA, municipalities, and the state to strategically identify and acquire optimal sites for TOD.

Optimizing TOD scenarios along the corridor through zoning policies and financial resources. Some station areas have strong markets with a mix of uses whereas others are predominantly residential. A combination of zoning changes and financial resources are needed to support private and nonprofit developers in seizing these TOD opportunities. There is a need for advocacy to 1) support the adoption of zoning policies at the municipal level and 2) secure state, federal, and private financial resources that will enhance the potential for equitable TOD around all station areas. This is particularly important in the North segment where some station areas have weaker markets and a land use mix that is not as diverse as those in the Central and South segments.

Mitigating the risk of displacement. Despite the fact that the Orange Line provides direct transit access to the educational and employment resources of the urban core in areas like Back Bay, State, and Downtown Crossing, the overall poverty rate for households along the corridor is still twice the MAPC regional average. The Stony Brook, Green Street, Back Bay, and Roxbury Crossing station areas each have over 100 affordable units at risk of expiring by the end of 2015. At Ruggles and Roxbury Crossing, there is a high concentration of low-income households combined with major planned institutional development activity over the next two decades; these factors indicating a high risk of gentrification and displacement in these station areas.

Enhancing corridor identity through increased multimodal connections. Promoting multimodal connections along the entire corridor has a number of benefits: it enhances public health by providing people with options to walk, bike, or run to other destinations in the corridor, and it can reduce vehicle miles traveled by providing



those who wish to avoid potential Orange Line congestion with another mode of getting to where they need to go – without driving. Advocacy is needed to increase connections between bike and pedestrian paths and open space particularly between the Community College, Sullivan Square, Wellington, Malden Center, and Oak Grove station areas and to secure the placement of Hubway bikeshare stations at every station in the corridor.

Establishing a coalition of public and private stakeholders. An organized coalition of stakeholders along the corridor is needed to ensure that the corridor grows and manages projected changes equitably and sustainably through advancement of these recommendations. A primary task of the coalition is to continue to brand the corridor and elevate the need for investment to maximize its potential. This coalition can also advocate for continued corridor level planning that may be multi-municipal in nature.

This report can also be downloaded from www.mapc.org/orange-line-corridor.

Learn more about development activity along the Orange Line corridor by visiting the MAPC Development Database: <http://dd.mapc.org>.

Introduction

The Orange Line links hundreds of thousands of riders, including many low- and moderate-income residents, to destinations in five municipalities and provides access to a broad array of jobs in Downtown Boston, Back Bay and, via shuttle bus, the Longwood Medical Area. It is a multi-modal corridor that provides connections to other subway lines and forms of transit, including the commuter rail, bus service, and bike facilities. The line also links residents to two community colleges and several private colleges and universities. Southwest Corridor Park, a major asset in the Corridor, also provides recreational opportunities for communities along the line in Boston. The mix of uses and opportunities along the Corridor is no accident. It is the result of three decades of effort by local residents, nonprofit organizations, public agencies and the private sector to build out the corridor by replacing potentially destructive highway expansion with positive transit oriented community development (TOD).

There are now TOD planning efforts underway around at least ten stops along the Orange Line. Understanding the outcome and benefits of this new development and initiating a coalition to support Orange Line TOD will be critical for ensuring that both the transit line and station areas get the public and private attention they need to be successful. This report outlines baseline conditions in the corridor and projects future TOD impacts on populations, jobs, housing, and ridership based on an analysis of developments planned, in construction, and complete that are located within a ½ mile of each transit stop. The analysis lays the framework for future advocacy, marketing, and fund-raising along this transit line, supports CDC pre-development planning, and demonstrates the value of supporting a network of TODs through nonprofit and municipal planning.

Project partners hope that that the data in this report fuels the emergence of a robust, active Orange Line coalition of municipal and nonprofit partners committed to undertaking various TOD promotional efforts, not only in the specific communities and neighborhoods in which Orange Line stations exist, but for the Corridor overall.

What is transit-oriented development (TOD)?

TOD is the creation of walkable communities with a mix of housing, commercial, and retail uses that are oriented within walking distance around train stations. The goals and benefits of TOD include promoting equity in terms of housing and jobs and increasing transit ridership while also advancing sustainability by reducing vehicle miles travelled (VMT) which generates benefits to residents, workers, and our climate. An MAPC analysis of TOD in the 101-community region, i.e., development activity within a half-mile radius of train stations confirms that we live in a transit-oriented region. While half-mile station areas constitute only 5 percent of the region's total land area, TOD accounts for 25 percent of the region's housing units (470,000) and 37 percent of the total jobs (880,000).

The Data Presented in this Report

This report synthesizes data on existing conditions and projected changes in the Orange Line Corridor to provide the background data needed to inform the development of a corridor-wide transit-oriented development planning strategy. Using development data provided by municipalities, community development corporations, and major institutions in the corridor, the study also projects the impact of planned development over two time horizons: from 2012 to 2020 and 2020 to 2035.

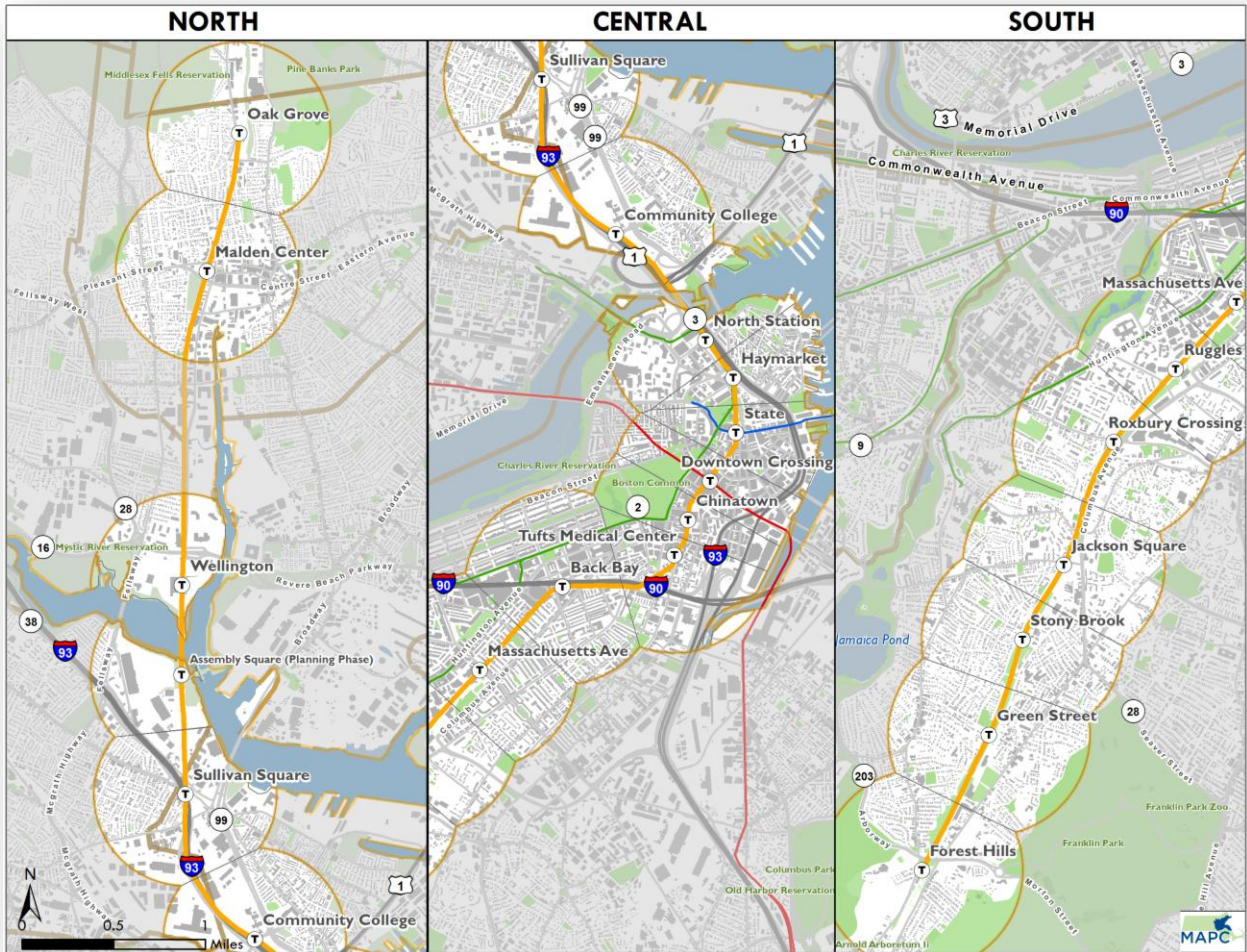
This report consists of three sets of data:

- a snapshot of the corridor today using available data from the Census, American Community Survey, the MBTA, and InfoGroup Business Data;
- a schedule of planned development activity by station area using available data from municipalities and community development corporations; and
- projections of corridor change based on known, planned development activity reported to MAPC between March and September 2012 using MAPC methodologies for projecting planned changes in population, housing, jobs, and ridership.

Data is presented at three levels: corridor-wide, by corridor segment, and by station area.

The corridor segments are defined as follows:

- North segment stretches from Oak Grove in Malden to Community College in Somerville;
- Central segment includes downtown Boston stations between North Station and Massachusetts Avenue; and
- Southern segment stretches from Ruggles to Forest Hills.



Source: MAPC, MassGIS land use data and municipal parcel data

History

The Orange Line is one of the busiest transit lines in the MBTA system. It traverses diverse neighborhoods in Boston, Malden, Medford, Melrose, and Somerville. The line provides hundreds of thousands of residents – including many low and moderate-income people – access to a broad array of jobs in Downtown Boston, Back Bay, and via shuttle bus, the Longwood Medical Area. The line also provides multiple subway, commuter rail, and bus connections linking commuters to other destinations in the region. Resources in the Orange Line corridor include access to major cultural and educational institutions and the Southwest Corridor Park, which provides recreational opportunities and a separated walk/bike path for communities along the line in Boston. This section describes the development of the Orange Line and the legacy of corridor planning and advocacy that has shaped its current form.

Origins of the Orange Line

The Massachusetts Bay Transportation Authority (MBTA) Orange Line network has its origins in the streetcar tracks of the Boston Elevated Railroad Company's system. The current line builds on two tracks: one that ran from Dudley Street in Roxbury into Boston via Washington Street (laid out as early as 1873 for horse cars), and a railroad line that transported Boston residents from Roxbury's center to Forest Hills in Jamaica Plain. Elevated trains were introduced in 1899, and this system, known as the El, replaced the old tracks and consisted of six train stations.ⁱ

Legacy of Corridor Planning

There is a legacy of corridor planning along the Orange Line that is rooted in the historic development of the Southwest Corridor, the section of the line that stretches from Boston's Back Bay to Forest Hills. The mix of uses and opportunities along the Southwest Corridor is no accident and is the result of three decades of effort by local residents, nonprofit organizations, public agencies and the private sector to build out the corridor following the cancellation of the I-95 Highway project. The development of the four-mile Southwest Corridor is a historic example of how community organizing with the support of city officials transformed what would have been a single-purpose transportation plan to expand a major highway to a project embracing mass transit and transit-oriented community development (TOD).ⁱⁱ

In the 1950s and 1960s, the Southwest Corridor was identified as land needed for the completion of Interstate 95, also known as the Southwest Expressway. The Commonwealth acquired more than 100 acres in the Corridor to accommodate a planned expressway and interchanges. I-95 was a part of what was known as the "Inner Belt", which was a proposed urban expressway system that would have provided Boston's suburban communities with an inner city circumferential and connection to I-95. The planned highway development would have cut through the city's inner neighborhoods. Residents and businesses were evicted during the years the Commonwealth acquired the land, and they formed the Greater Boston Committee on the Transportation Crisis, which mobilized a grassroots effort that resulted in the abandonment of the expressway program in 1972. The result was a moratorium on construction as well as a portion of highway funds reallocated to building mass transit. Massachusetts became the first state in the nation to receive highway funds to build public transportation. Through a combination of federal and state transportation funds, the Orange Line was relocated from the "El" elevated railway system on Washington Street to the Northeast Corridor's right-of-way.ⁱⁱⁱ Through the support of politicians and activists including Barney Frank, Ann Hershfang, Mel King, Byron Rushing, and Fred Salvucci, who served as City of Boston transportation planner and later as

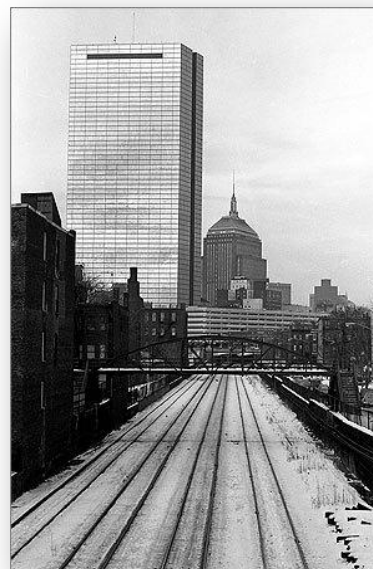


Image credit: SWCPC, 2012

The land use mix and the multi-model nature of the Orange Line corridor is no accident: it is the result of decades of advocacy by residents, organizations, public agencies, and the private sector.

Massachusetts Secretary of Transportation, the Southwest Corridor Project commenced with the creation of a Southwest Corridor Coalition (SCC) which enabled substantive community input into the planning and design of the Southwest Corridor.

Coalition Advocacy for Mass Transit and Public Benefits

The project generated transit and rail improvements, combined with improvements to arterial and local streets. A 1975 feasibility study and 1977 park master plan also resulted in the creation of the Southwest Corridor Park, which includes footpaths, bikeways, parks, playgrounds, and community gardens. Coalition advocacy among neighborhoods along the corridor created this community arterial that now serves multiple communities. The Southwest Corridor Park also provides access through short street distances to the Boston Common, the Public Gardens, and the Charles River Basin. Extension of the Orange Line through the Southwest Corridor followed, guided by the input of eight station area task forces. Advocacy also resulted in the allocation of some design and planning contracts and construction jobs for local populations. In April 1987 the new, re-located Orange Line that included eight stations from Back Bay through Forest Hills resumed operation, relocated from the El. Major construction ended in 1989 and the Southwest Corridor Park was officially opened in May 1990.

Today, six organizations participate in maintaining the resources of the Park, including the Parkland Management Advisory Board (PMAC), Southwest Corridor Park Conservancy (SWCPC), Carleton Court Dog Park, The Community Garden Council, The Mission Hill Basketball and Tennis Courts Project, and the Bike and Pedestrian Paths group.

The Orange Line extension, particularly between Back Bay and Massachusetts Avenue, provides easy access to many cultural and educational institutions. While this extension has created equity in access, as the South End contained significant economic, ethnic, and social diversity, it also instigated gentrification. The neighborhood at the time was primarily poor and working-class households and immigrants; younger and upper class people became increasingly attracted to the neighborhood's housing stock and accessibility to transit, raising the cost of housing and displacing households who could no longer afford to remain in the neighborhood.^{iv}

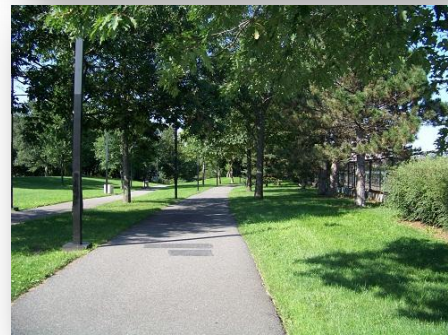


Image credits: SWCPC, 2012 and MAPC

Advancing a Corridor Vision

The benefits and challenges associated with the development of the Orange Line underscore the need for continued corridor planning to promote TOD. Coordinated planning will help ensure that the corridor retains the diversity that makes it such an asset to the Greater Boston region. Nonprofit and municipal support for a network of TODs could promote a corridor housing stock that is diverse, accessible, and affordable to a range of household types and incomes and create opportunities for residents to tap into employment opportunities associated with development activities. Data in the following sections highlight the assets and collective impact of corridor development activities initiated by public and private developers and businesses and lays the framework for future advocacy, marketing, and fundraising to support equity and access to opportunity along the corridor.

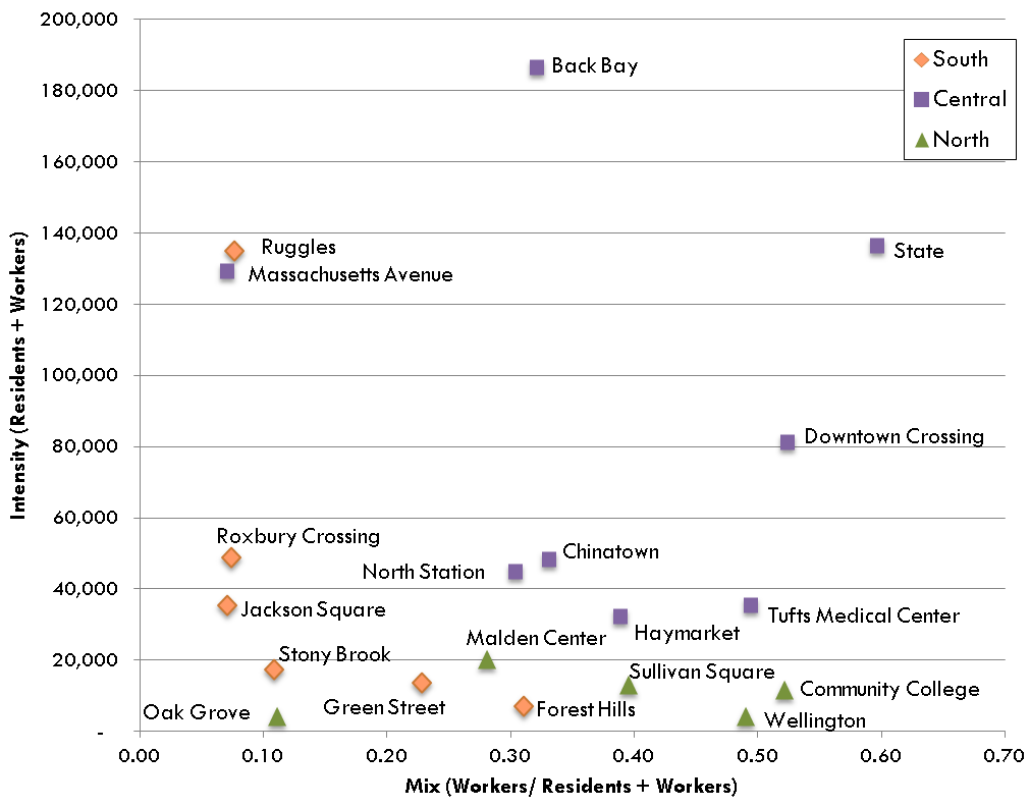
Corridor Snapshot: Baseline Conditions

An integral part of the transit network of the Greater Boston region, the Orange Line is one of the busiest lines in the system. It connects 345,000 households within half a mile of its 20 existing and proposed stations to almost 300,000 jobs. In addition, it is well connected to other subway and commuter rail lines, expanding its service area beyond the half-mile buffer. With an estimated 300 trains commuting over 200,000 riders every weekday, most stations have bus service connecting the surrounding neighborhoods, and the bike facilities complete the multi-modal nature of most station areas¹.

The nature of each of the Orange Line stations varies in terms of existing development intensity and mix,² land use, demographics, pedestrian infrastructure, household characteristics and, as a result, transportation characteristics. In addition to existing development, the nature of planned development along the corridor varies from parcel-by-parcel infill development to the potential for transformative development such as around the Oak Grove, Wellington, Assembly Square, Sullivan Square, and Forest Hills stations³. These station areas have the capacity for significant change through district-scale TOD that involves the redevelopment of large land parcels, the creation of new street networks, and substantial improvements to the urban realm – with the potential for increasing the total intensity of development by 15 percent or more.

At present (2012), the distribution of the total 709,900 residents and 300,000 workers located within a half-mile of the Orange Line stations varies from a total intensity of 4,000 in Oak Grove and Wellington to over 185,000 people living or working around Back Bay. The mix of development also varies with the stations south of Massachusetts Avenue being primarily residential, and the downtown Boston stations being employment oriented. Figure 1 shows the intensity and mix of the station areas in the corridor.

Figure 1: Orange Line Station Areas – Present Mix and Intensity of Resident and Workers



Source: Census 2010, InfoGroup Employment Data

¹ Station area identified as area within half-mile of station.

² Intensity is the sum of residents and workers in station area; Mix is the ratio of workers to the total station area intensity.

The scatter plot shows the following patterns by segment:

- The central segment of the corridor has the highest intensity of development, and is more employment oriented. This section has over 60 percent of the residents of the entire Corridor, and 85% of the jobs.
- The south segment, being primarily residential with moderate intensity, accounts for a third of the residents along the Corridor.
- The low intensity of the north segment totals to 5 percent of the residents and 7 percent of the jobs in the Corridor.

The following sections offer a snapshot of population, household, economic, transportation, and land use and current development characteristics which, taken as a whole, inform the transportation patterns we see in the three segments of the Orange Line. Please see Appendix A for additional data and charts from which the narrative content is derived.

Population and Household Characteristics

The Orange Line corridor is home to 23 percent of the region's population and 28 percent of the total households in the region; almost all of the housing units in the corridor are high-density, which include duplexes, apartment buildings, condominium complexes, and housing on lots smaller than ¼ acre. This section summarizes the demographic diversity of the corridor and also examines household income and cost burden.

Population

Population highlights:

- 709,900 residents reside in the corridor – 23 percent of the population in the MAPC region³
- The corridor is racially diverse; 42 percent of those who live within a half-mile of the stations are persons of color. The station areas with the greatest percentage of populations of color are Jackson Square (81 percent), New England Medical Center (69 percent), Roxbury Crossing (58 percent), Stony Brook (53 percent), Malden Center (53 percent), and Forest Hills (45 percent).
- 345,000 households exist within a half a mile of the 20 existing and proposed Orange Line stations – 28 percent of the total households in the MAPC region.⁴ Almost all of the 345,000 housing units along the corridor are high-density residential units⁵ housing 709,900 residents.

Households

Household highlights:

- Approximately 20 percent of households in the corridor are in poverty; when compared with the poverty rate along the corridor with that of the MAPC region, it is almost twice the regional average⁶. Station areas with the highest percentage of households in poverty include New England Medical Center, Massachusetts Avenue, Ruggles, Roxbury Crossing, Jackson Square, and Stony Brook.
- The median household income in the corridor is \$56,181,⁷ which is lower than the regional median household income of \$69,983⁸. The station areas with the lowest average median income are Ruggles, Roxbury Crossing, Jackson Square, and Massachusetts Avenue. The station areas with the highest average median income are Wellington, Community College, North Station, Back Bay, and Green Street.
- The socio-economic characteristics of households vary along different sections of the corridor. Several stations – New England Medical Center, Roxbury Crossing, Jackson Square, Stony Brook, and Forest Hills – have both a high percentage of households in poverty and a high percentage of populations of color. Many of these areas are also categorized as very walkable.

³ Census 2010. Total population in the MAPC region: 3.16 million.

⁴ Census 2010. Total households in the MAPC region: 1,243,189.

⁵ Duplexes, apartment buildings, condominium complexes, and housing on smaller than 1/4 acre lots

⁶ American Community Survey 2006-2010 estimates. Households in poverty in MAPC region: 10.9 percent.

⁷ ACS 2006-2010 estimates. Please see Appendix A for charts and tables pertaining to existing conditions in the corridor.

⁸ Boston-Cambridge-Quincy, MA-NH Metro Area

- Eight station areas in the corridor- Chinatown, Tufts Medical Center, Massachusetts Avenue, Ruggles, Roxbury Crossing, Jackson Square, , Stony Brook, Forest Hills- have significant populations of cost-burdened households, i.e., households in which 30 percent or more of household income is spent on housing costs. More than 20 percent of the households in these eight station areas are cost-burdened. As TOD developments get underway in these station areas, proactive measures should be taken to ensure that affordable housing and job opportunities are included in these projects in order to mitigate the risk of displacement.
- As seen in Figures 3 and 4, renters in the Orange Line corridor are particularly cost-burdened with more than 30 percent of renters in all station areas paying 30 percent or more of their income for housing. In the Central segment, 27 percent of renters have a severe housing cost burden- i.e, are paying 50 percent or more of their household income on housing costs. Individual stations with more than 50 percent of renters with a severe housing cost burden include Sullivan Square, Massachusetts Ave, Ruggles, Roxbury Crossing, and Jackson Square.
- Compared to renters, owners are less cost-burdened, but there are still a significant amount of owners in the Orange Line corridor who are paying 30 percent or more of their household income for housing costs. In the central segment, 37 percent of owners are cost burdened. In both the north and south segment, 38 percent of owners are cost burdened.

Figure 2: Percent of Households in Poverty by Station Area

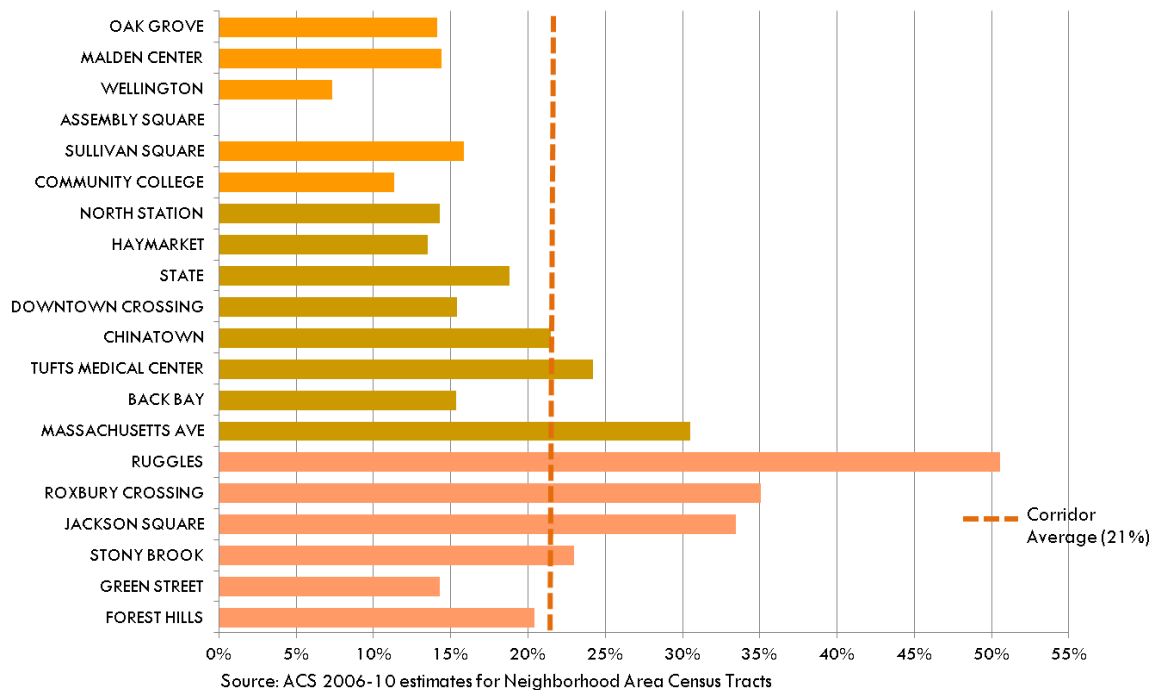
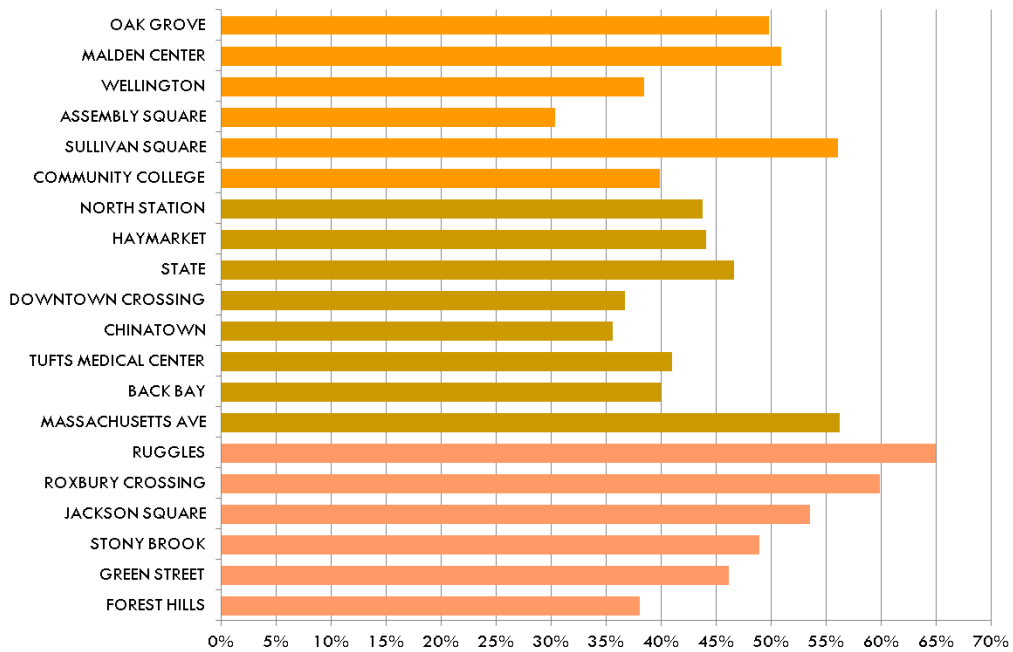


Figure 3: Percent of Cost Burdened Renters by Station Area



Cost Burden defined as renters paying more than 30% of gross income for rent.
 Source: ACS 2006-10 estimates for Neighborhood Area Census Tracts

Figure 4: Housing Cost Burden for Renters - Orange Line Corridor, by Segment

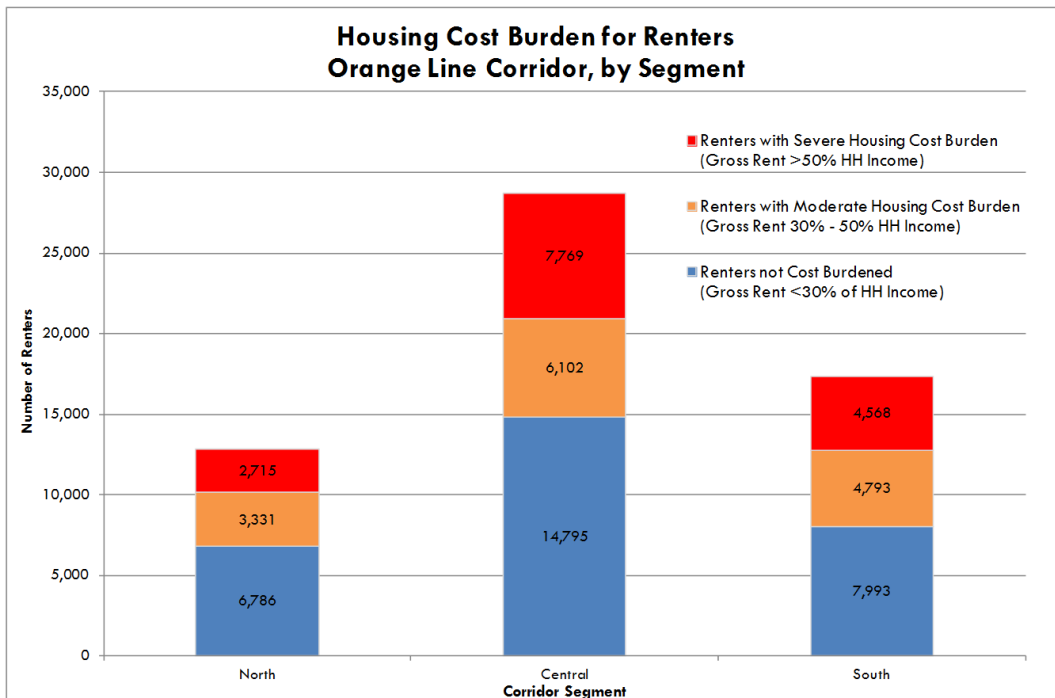
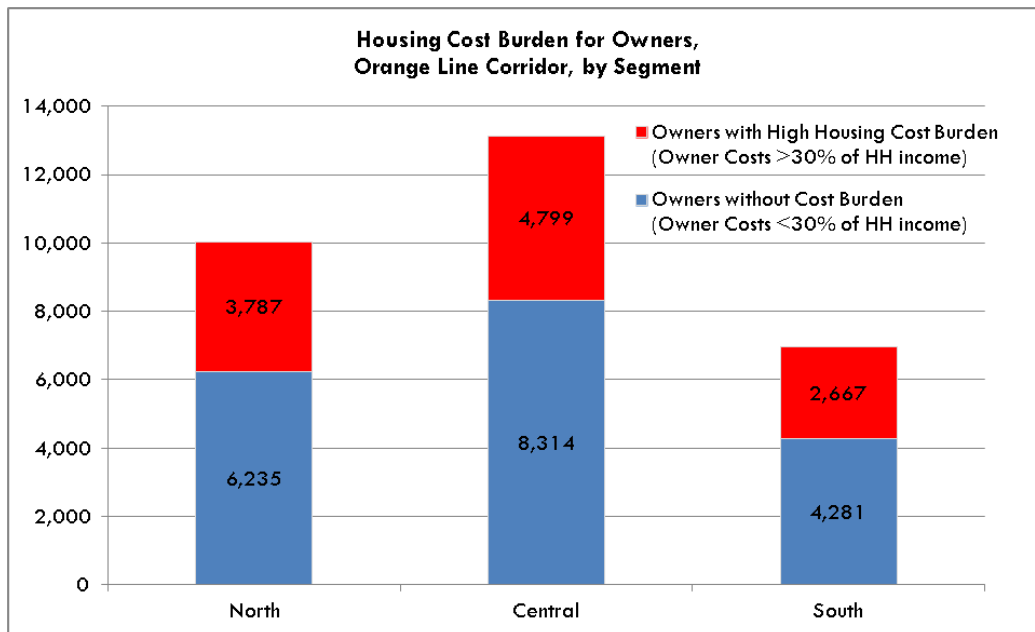


Figure 5: Housing Cost Burden for Owners – Orange Line Corridor, by Segment



Transportation Characteristics

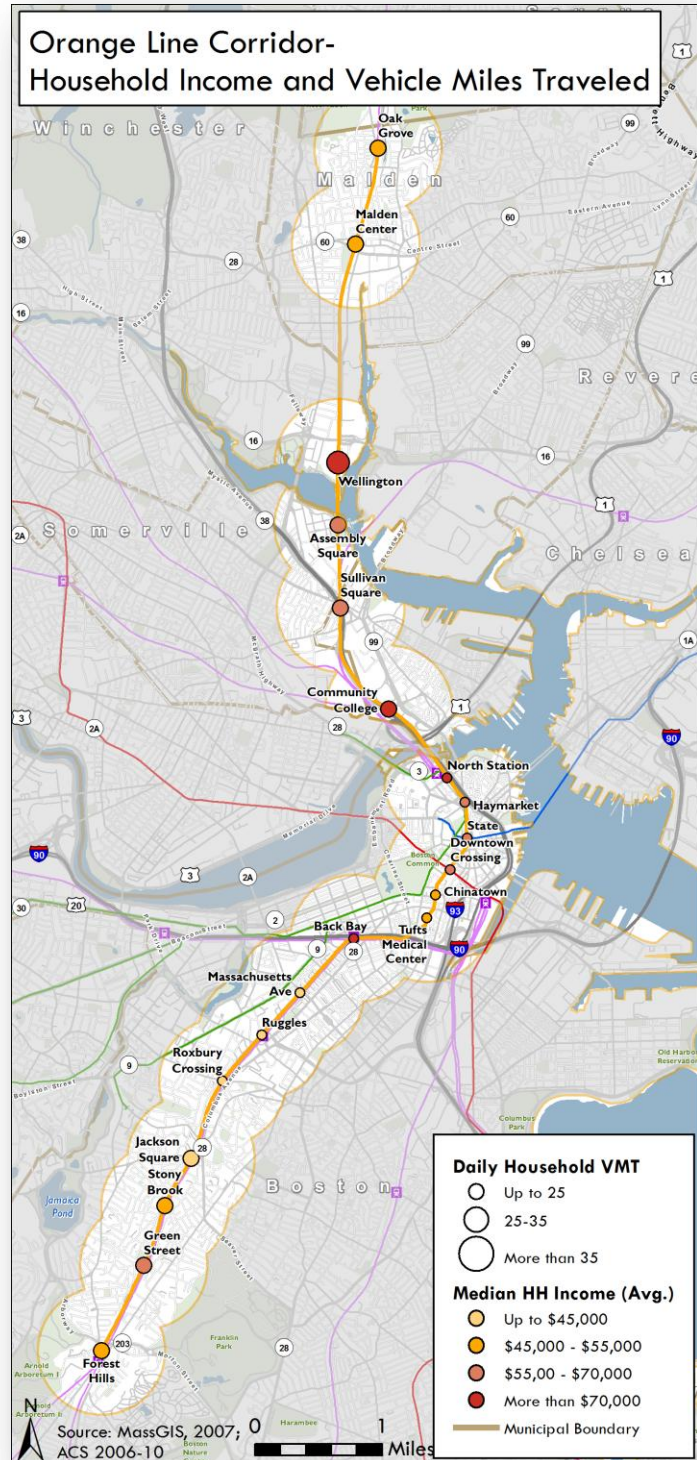
The Orange Line feeds into a larger regional transit network and provides connections to the Commuter Rail at four stations. In addition, there are two major recreational assets at both ends of the corridor. In the South segment, the SouthWest Corridor Park is a 4.7-mile linear park that runs parallel to the train through the South End, Back Bay, Roxbury, and Jamaica Plain. In the North segment, the Northern Strand Trail, also known as the Bike to the Sea Trail, uses nine miles of abandoned rail lines as a trail that stretches through six municipalities and it has two entry points in Malden near Malden Square. This section examines the commuting patterns of households including vehicle miles traveled and household and transportation costs, ridership and station boardings, station area walkability, and bike and pedestrian connections along the corridor.

Commuting Patterns of Households

As a result of the above household characteristics, and due to proximity to the Orange Line, households along the corridor drive an average of 27 miles⁹ per day, which is lower than the regional average of 49 miles per household per day. As figure 5 shows, the average daily household vehicle miles traveled (VMT) is higher along the northern section with Wellington station area households driving almost 45 miles every day. High income households along North Station and Back Bay stations tend to drive less. Corresponding to the patterns, transportation costs for a typical household in the central section is low at around 8- 10 percent of household income. The transportation costs increase to an average of 13-14 percent of household income along the southern and northern segments of the corridor¹⁰.

Similar to workers employed in the corridor, not all workers in corridor

Figure 6: Household Income and Vehicle Miles Traveled

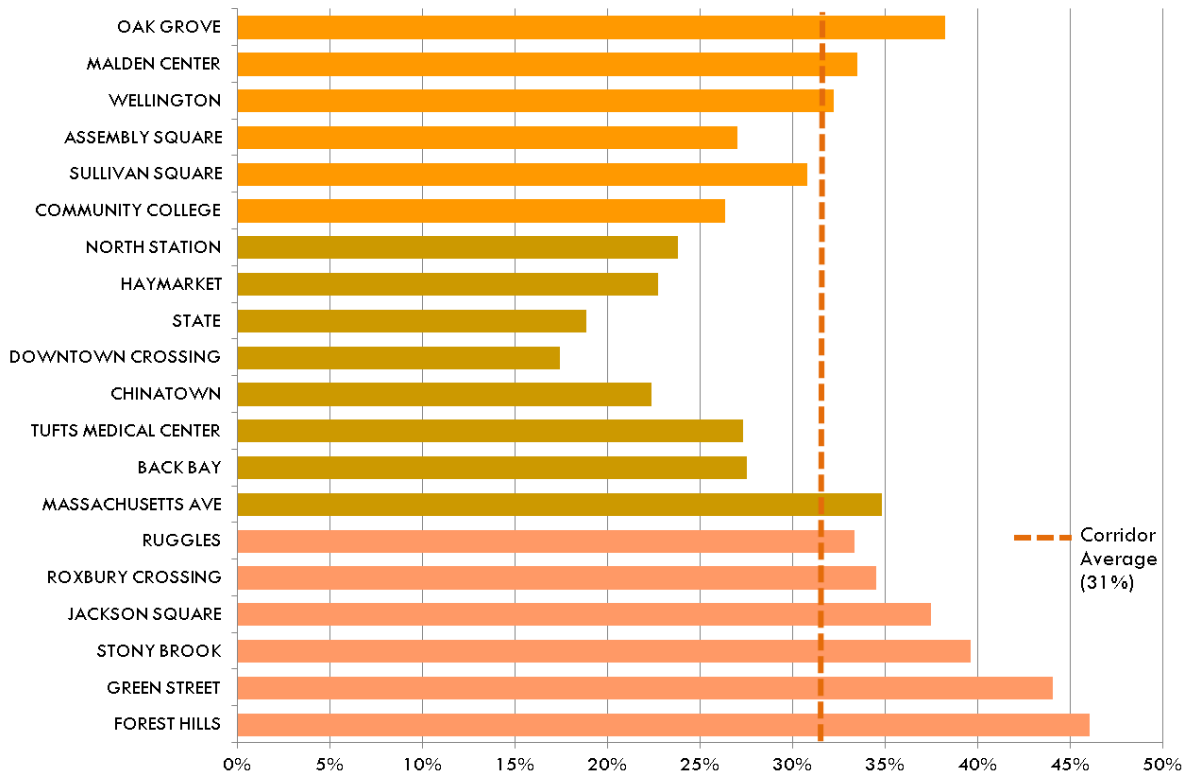


⁹ MassGIS VMT data, 2007

¹⁰ Estimates from Center for Neighborhood Technology - Housing and Transportation Cost for Typical household.

housing units commute via transit. As figure 6 shows, an average of 31 percent of commuters from the corridor households use transit, which is higher than the regional average of 17 percent. The low transit commute share for households in the central segment indicates more walk-bike commuters. ¹¹

Figure 7: Percent of Commuters Using Transit – by Boarding Station



Source: ACS 2006-10 estimates for Station Area Census Tracts

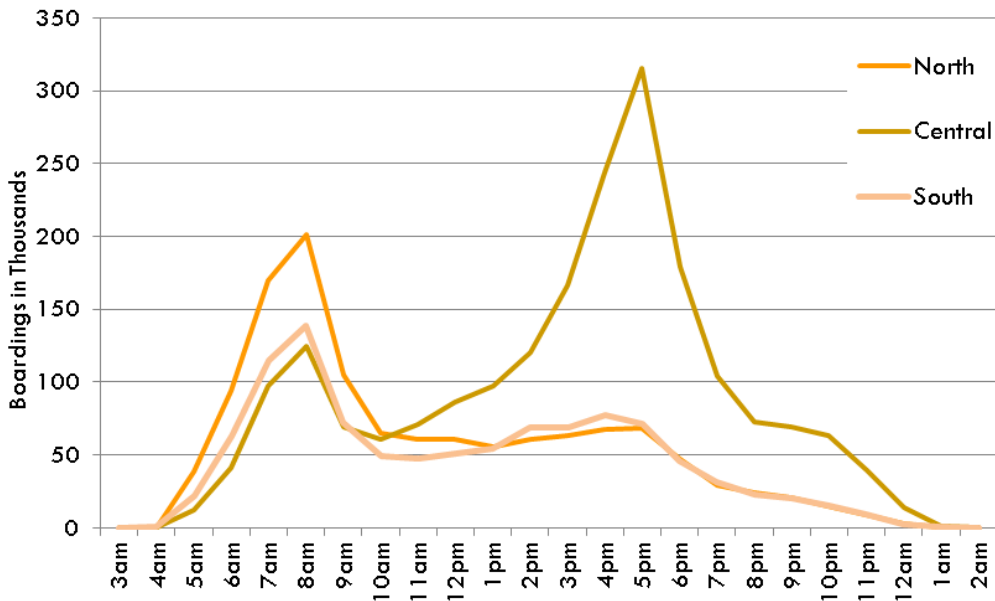
Ridership and Station Boardings

Most of the Orange Line stations feed into the larger regional transit network with commuter rail connections at Malden Center, North Station, Back Bay, Ruggles, and Forest Hills stations, and other subway connections in the central segment stations. Boardings at the stations are an indication of the commuters riding different trains available and not exclusive to the Orange Line service. Figure 7 shows the total hourly boarding by segment along the corridor. Rush hour boarding (6am-9am) is highest for all three segments indicating a high number of workers in households taking the Orange Line to work. The ridership trend holds steady after the peak until 5 pm for the northern and southern segments, and expectedly peaks for the central segment during the evening rush hour. While boardings are an indication of the connections the Orange Line has to the rest of the system, they can also indicate trips to recreational destinations and other non-employment purposes. Boarding numbers around mid-day indicate off-peak trips - 50,000 such trips are made from each segment.

Ridership on the Orange Line has been increasing since 1997 according to MBTA Boarding data. Back Bay has the highest number of boardings with almost 17,000 people boarding daily from the station. Station-by-station boarding trends vary- the southern segment station boardings have increased steadily over the last decade or so, but Downtown Crossing and State Street boardings declined in 2009. With MBTA ridership at all time highs^{vi} the ridership along the corridor is on an upward trend.

¹¹ ACS 2006-2010 estimates. Both subway and bus usage is included in this transit usage estimate.

Figure 8: Average Hourly Boarding – by Corridor Segment

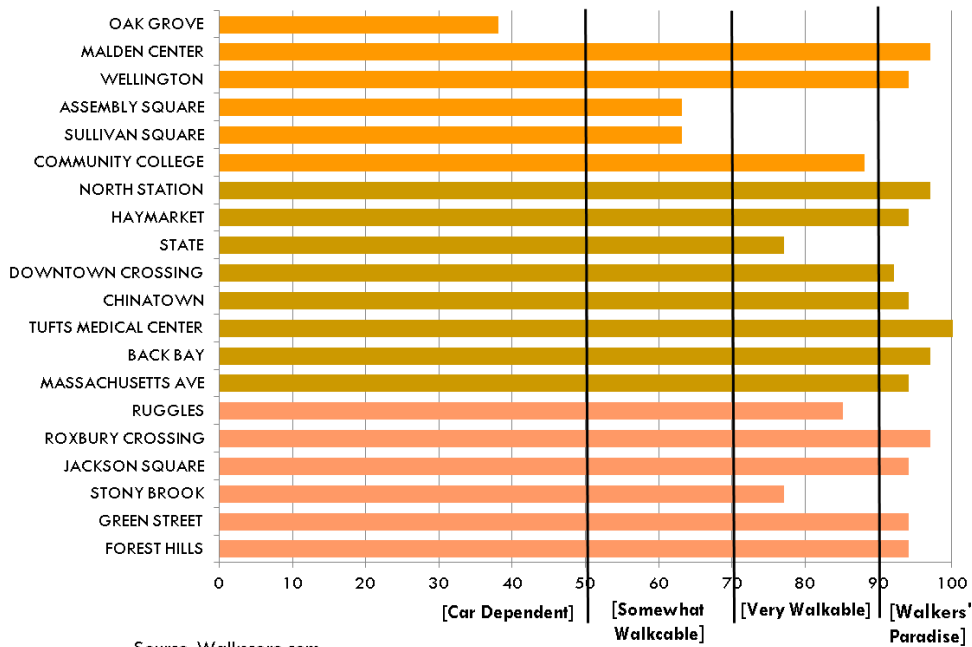


Source: MBTA, 2009

Walkability Around Station Areas

Walk Score^{vii} is an indicator that relatively scores proximity of common household destinations within walking distance of homes, and categorizes neighborhoods based on the pedestrian infrastructure. All stations in the central segment have a Walk Score of over 90, and stations on the north and south segment are categorized in the next tier as 'Very Walkable', with the exceptions at both ends of the line. Forest Hills has a Walk Score of 63 (Somewhat Walkable), and Oak Grove is categorized as 'Car dependent'.

Figure 9: Walkscore by Station Area



Source: Walkscore.com

Bicycle and Pedestrian Connections in the Corridor

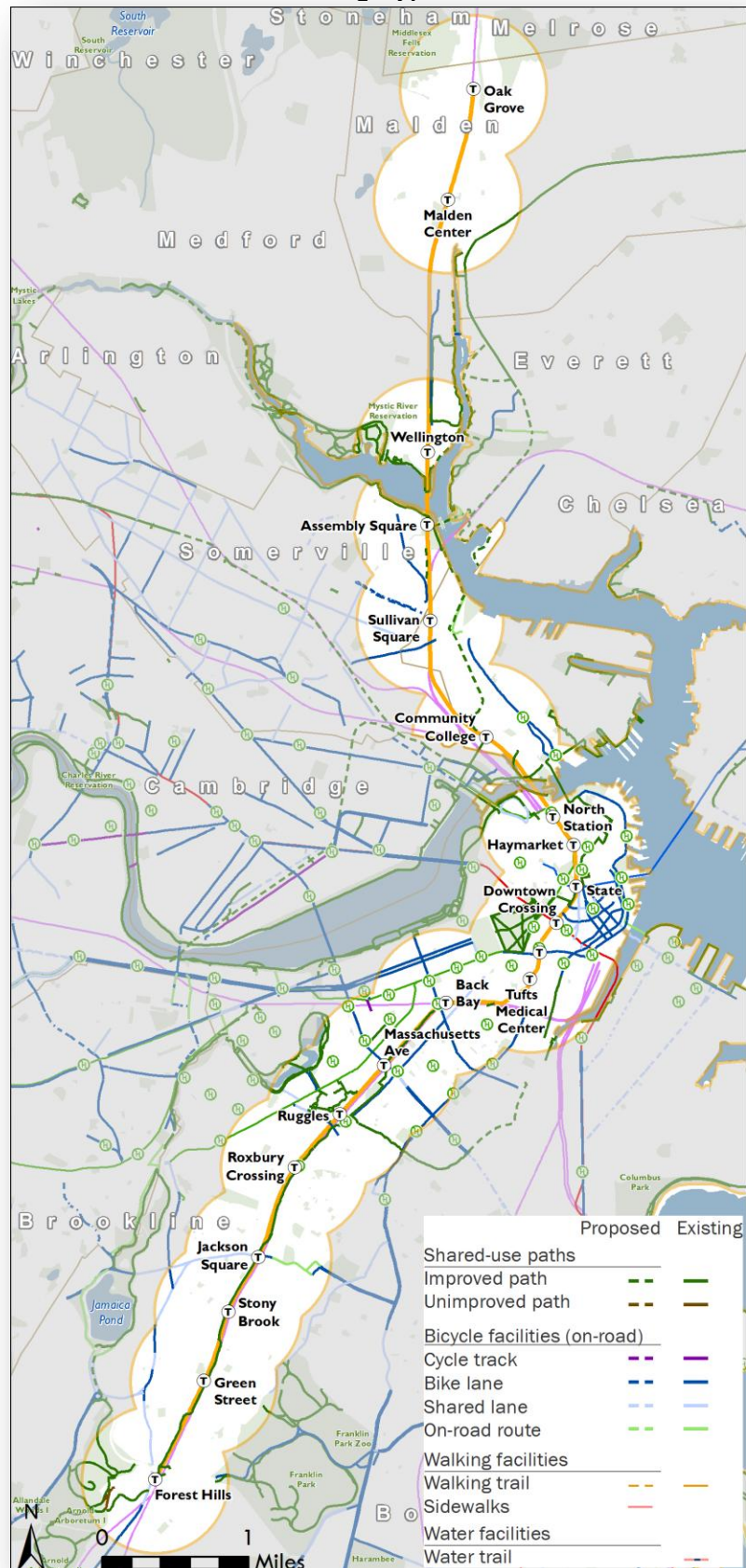
The corridor is home to several noted resources that includes park open space, dedicated walking and biking trails, and bike share facilities.

In the Central and South segments, Southwest Corridor Park is a 4.7 mile path that spans 52 acres adjacent to the Orange Line. It includes eleven community gardens, tot lots, pools, basketball and tennis courts, and a granite embankment that replaces what was previously an area residents used to protest the proposed I-95 extension. The Park serves the diverse Boston neighborhoods of the South End/Saint Botolph, Roxbury, and Jamaica Plain.

In the North segment, the Northern Strand Trail, also known as the Bike to the Sea Trail, is a recent success built on years of advocacy by bike and trail advocates. The trail is a shared use path to the sea along the Saugus Branch rail line, using nine miles of the abandoned rail line stretching from Medford through Malden, Everett, Revere, and Saugus; advocates hope for a future extension to the ocean in Lynn. Through the advocacy of Bike to the Sea and the support of Iron Horse Preservation Society, the earth beneath the abandoned rails and ties has been graded and compacted, turning it into trails for biking and walking. The Malden Redevelopment Authority has allocated funding through the City's Chapter 90 allocation for an engineering firm to coordinate the construction of the three-mile section of the Trail from the Everett to the Revere city lines in Malden.^{viii} The trail can be accessed through two areas near Malden Square on the westbound and eastbound sites of Route 60.

Two municipalities in the corridor – the City of Boston and the City of

Figure 10: Bicycle and Pedestrian Connections in the



Somerville – participate in the regional Hubway bikeshare system and there are currently three Hubway bikeshare stations at the Community College, Back Bay, Ruggles, and Roxbury Crossing stations. The municipalities of Malden, Medford, and Somerville have expressed interest in joining the Hubway system. There are opportunities to strengthen shared path resources in the North segment particularly around the Oak Grove, Malden Center, and Wellington station areas.

The Southwest Corridor Park links bicycle and pedestrian shared use paths and open space and recreation resources in the South and Central segments of the corridor. In contrast, there are bicycle and pedestrian paths in the North segment, but they are disjointed and there are segments with no connectivity.

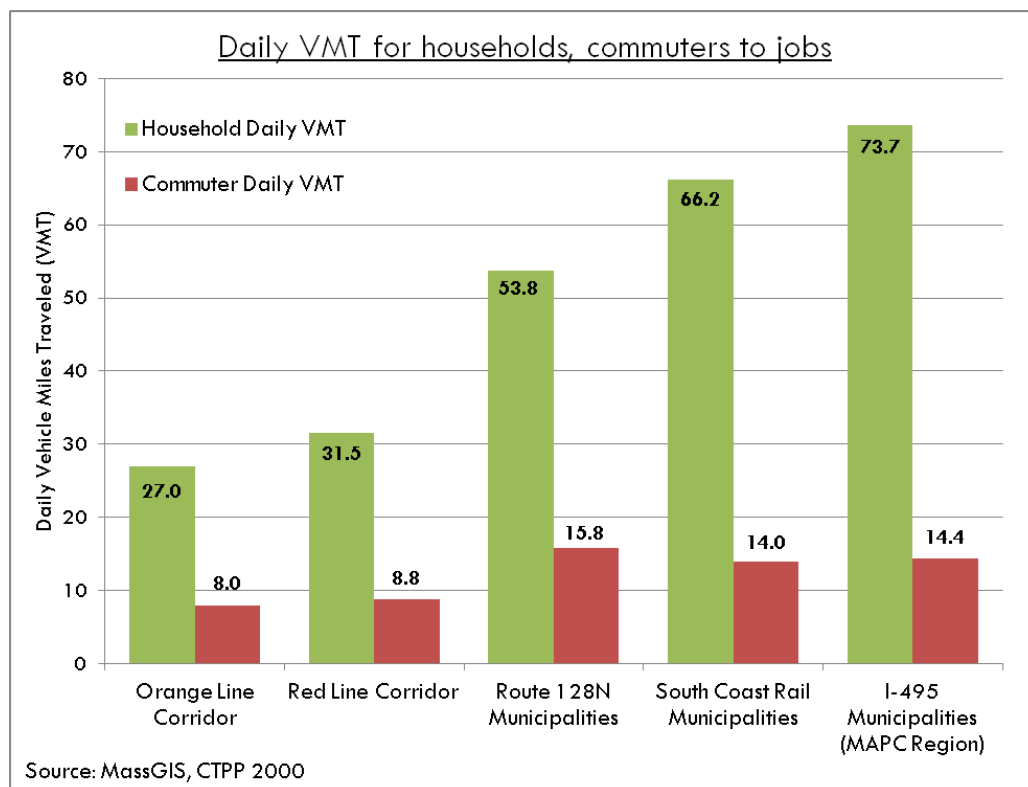
Commuting Patterns of Workers

Not all workers in these businesses necessarily commute using public transit. Estimates show that even though transit commuters are a large share in the central segment of the corridor, a majority the workers in the southern and northern segments commute by other modes. The share of public transit commuters who work along the corridor is 31%, ranging from over half of the estimated workers in the central segment commuting by public transit to under 10 percent public transit commuters for jobs around Forest Hills and Oak Grove¹².

Vehicle Miles Traveled (VMT)

When compared to other major corridors in the MAPC region, households in the Orange Line corridor drive less miles per day. On average, Orange Line Corridor households drive an average of 27 miles¹³ per day, which is lower than the regional average of 49 miles per household per day. Commuters in the Orange Line Corridor travel an average distance of 8 miles per day.

Figure 11: Daily VMT for households, commuters to jobs



¹² CTPP 2000 Commute modeshare by Census Tract

¹³ MassGIS VMT data, 2007

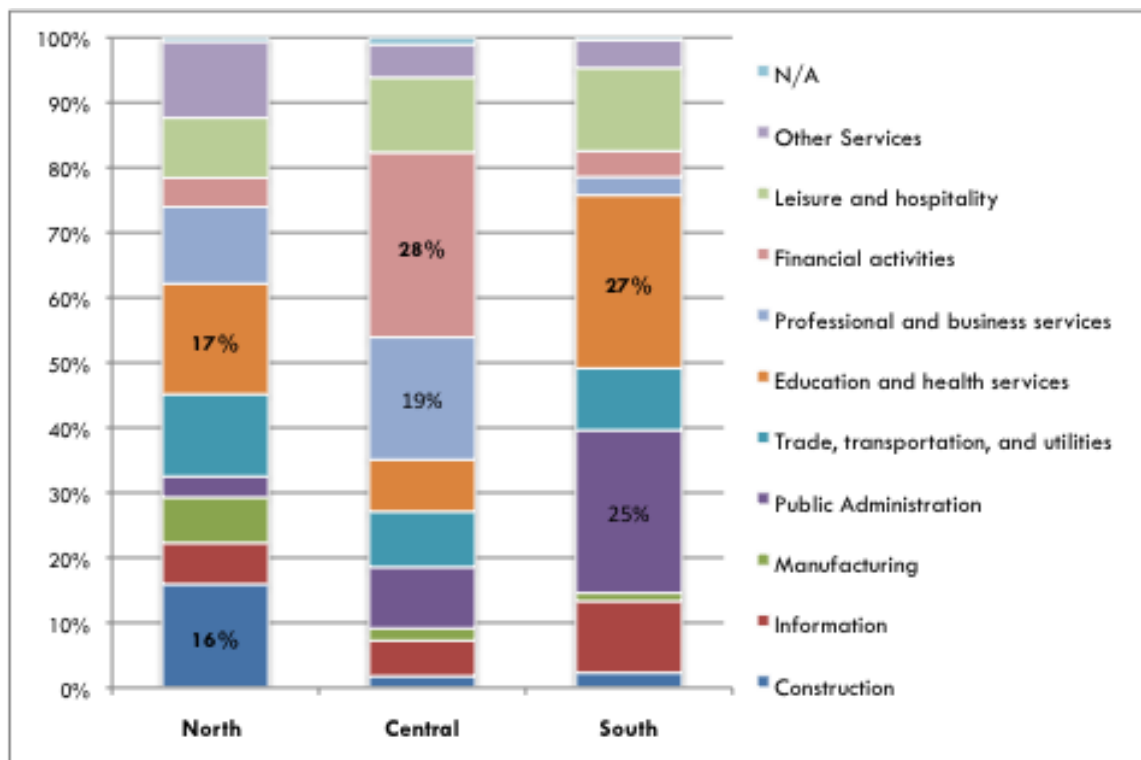
Economic Characteristics

The Orange Line serves important employment centers in Downtown Boston, Back Bay and institutions within its station areas. The corridor area has a total of 17,500 businesses that employ 295,350 workers¹⁴. The high density and employment centers in the central segment account for 85 percent of the jobs along the corridor, with the rest being equally divided along the northern and southern segments. The mix of sectors served by each segment varies as shown in figure 12. The southern segment serves institutions like Northeastern University, Roxbury Community College, and Bunker Hill Community College while the central segment covers the financial district, Downtown Boston, Tufts Medical Center, and Back Bay businesses.

Highlights:

- 295,350 jobs exist in the corridor – 16 percent of total jobs in the MAPC region¹⁵
- The Orange Line serves major employment centers including State Street, Downtown Crossing, Back Bay, and major hospitals and educational institutions. The central segment accounts for 85 percent of jobs along the entire corridor, with the rest equally divided in the northern and southern segments.
- The corridor is home to six major colleges and universities including Northeastern University, Massachusetts College of Art, Suffolk University, Emerson College, Bunker Hill Community College, and Wentworth Institute of Technology. InfoGroup 2011 data estimates that these institutions employ over 4,000 individuals in the campuses within a half mile of the Orange Line.

Figure 12: Employment Industries by Sector



Source: InfoGroup, MAPC Analysis

¹⁴ InfoGroup Data, 2011. This data on employees is reported by the institutions and does not represent all of the people who reside in the corridor and are employed.

¹⁵ InfoGroup Data, 2011.

Land Use Characteristics

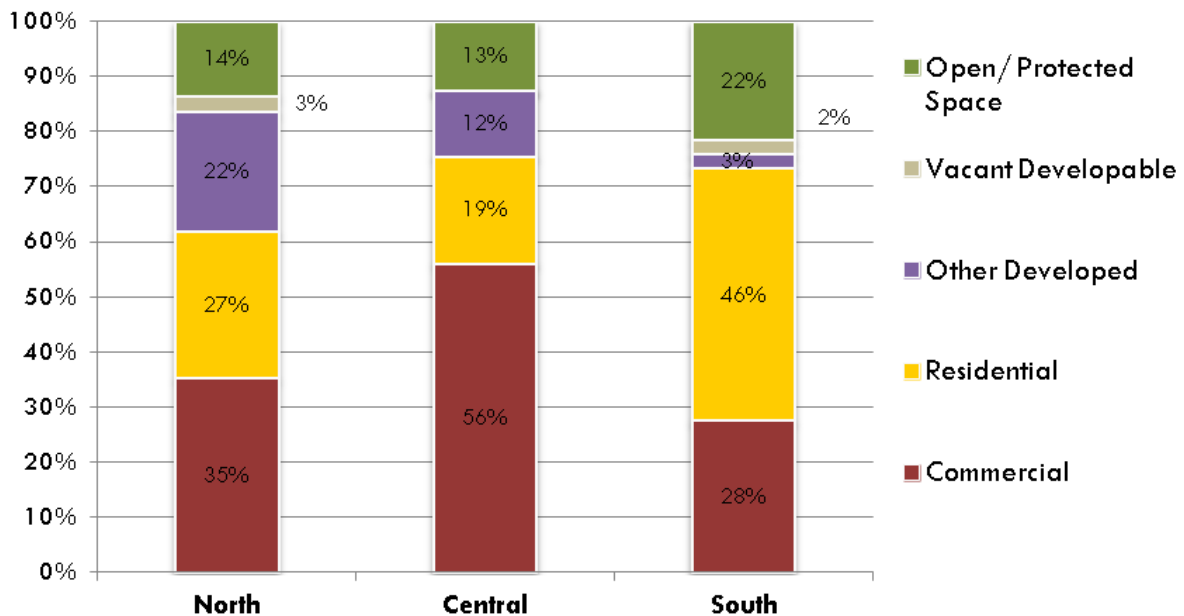
Each segment of the corridor has an identifiable mix of land uses.

- As Figures 10 and 11 show, more than half of the Central segment is commercial, with Back Bay and Mass Ave stations having a higher share of residential land use than the other 'core' stations.
- The Malden stations in the northern segment, namely Malden Center and Oak Grove, have about 40 percent residential land use, while the other stations have a higher share (almost 70 percent) of commercial and other developed land uses.
- The southern segment is primarily residential, most of it being high-density residential development.

While the three segments have a different land use mix, the common characteristic along the corridor is the low amount of available developable vacant land. As development interest is strong, the focus will be on intensifying existing development scale, and redevelopment.

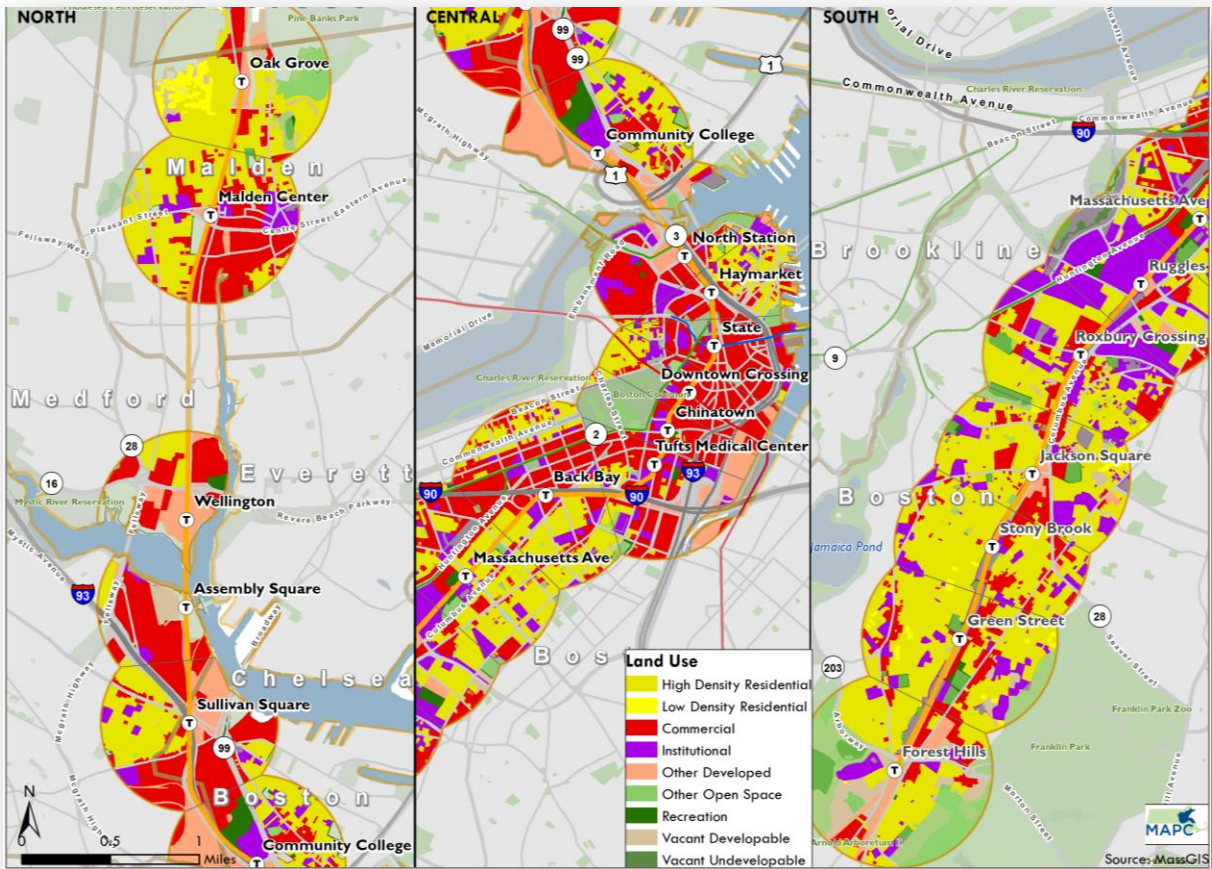
MAPC analyzed available surface parking lots along the corridor to estimate their redevelopment potential. On average, about 20 percent of the northern segment along the Orange Line is surface parking area, with Sullivan Square and Assembly Square station areas having almost a third of their areas as surface parking lots. These stations have the potential to accommodate district scale development, a big part of which is already underway.

Figure 13: Corridor Segment Land Use Mix by Percent



Source: MassGIS, 2005

Figure 14: Corridor Land Use Mix by Segment



Source: MassGIS, 2005

Planned Development Activity

Between April and October 2012, MAPC collected information on almost 400 development project along the corridor, which have either been completed, are under construction, being planned, or are likely to happen (projected). Municipalities and community development corporations were asked to provide information about major 20+ unit projects.

This section provides a snapshot of corridor developments projected, planned/permitted, under constructed, or completed as reported by municipalities and community development corporations. About 140 projects along the corridor have added 5,300 housing units and over 20,000 jobs, and future growth trends look strong. An additional 65 projects are in the pipeline till 2020, which are estimated to add 20,000 new jobs and 7,300 new residents. Most of the development beyond 2020 is currently classified as projected. Figure 12 shows the location of these projects along the corridor. Table 1 and Figure 13 show the projects along the corridor by development completion timeframe.

Profiles of model TOD projects along the corridor that are in various stages – complete, in the planning phase or permitted, or under construction – are also highlighted. View Appendix A for additional charts, tables, and maps pertaining to reported corridor development activity.

Between 2012 and 2020, a significant number of TOD projects in the Assembly Square, Chinatown, and Jackson Square, Back Bay, and Roxbury Crossing station areas will near completion. As we look further out to a longer timeframe of 10 – 20 years, a significant number of TOD projects in the Sullivan Square, Haymarket, New England Medical Center, and Massachusetts Avenue station areas are projected to near completion.

Figure 15: Corridor Development Activity by Status

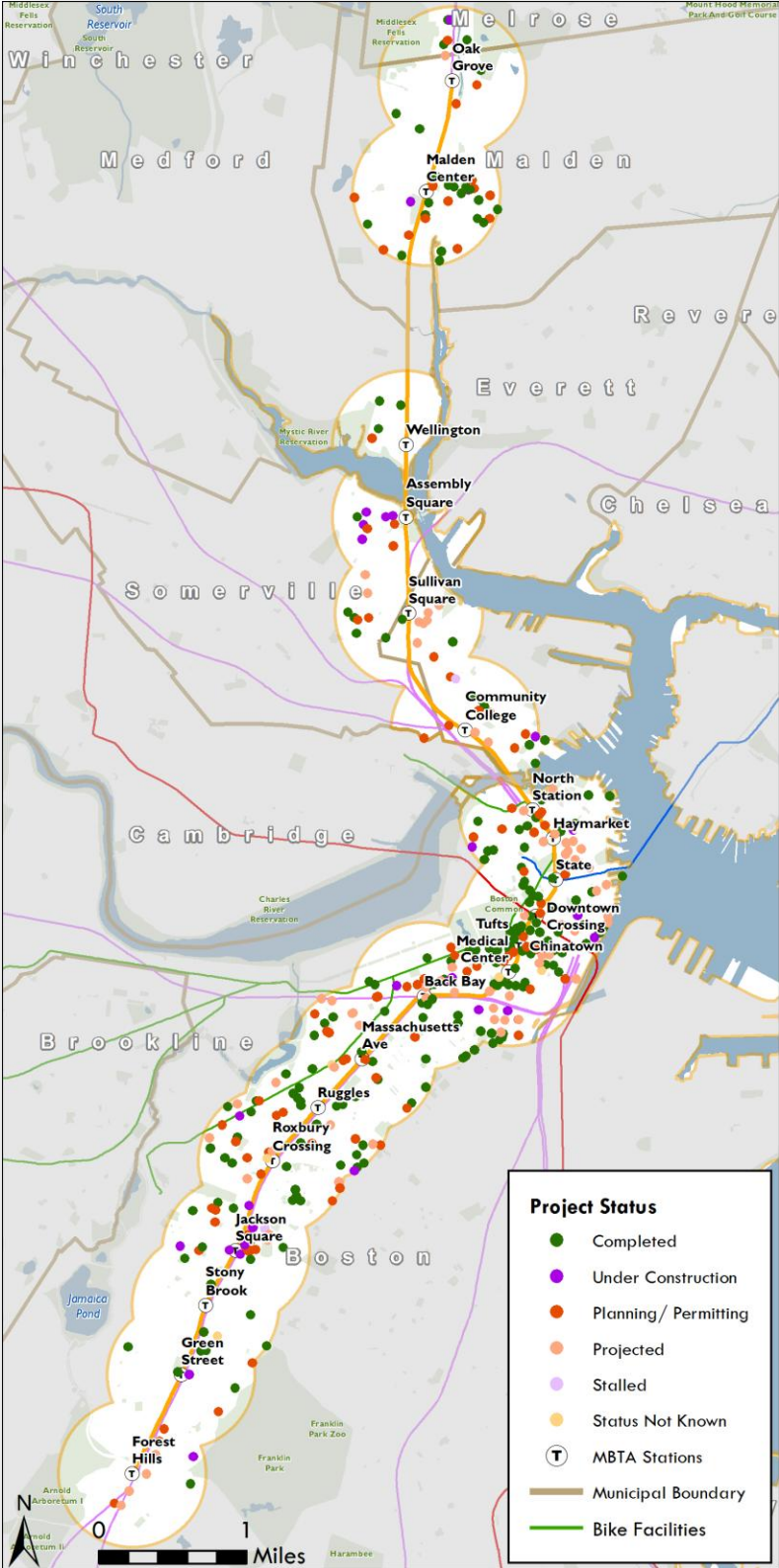
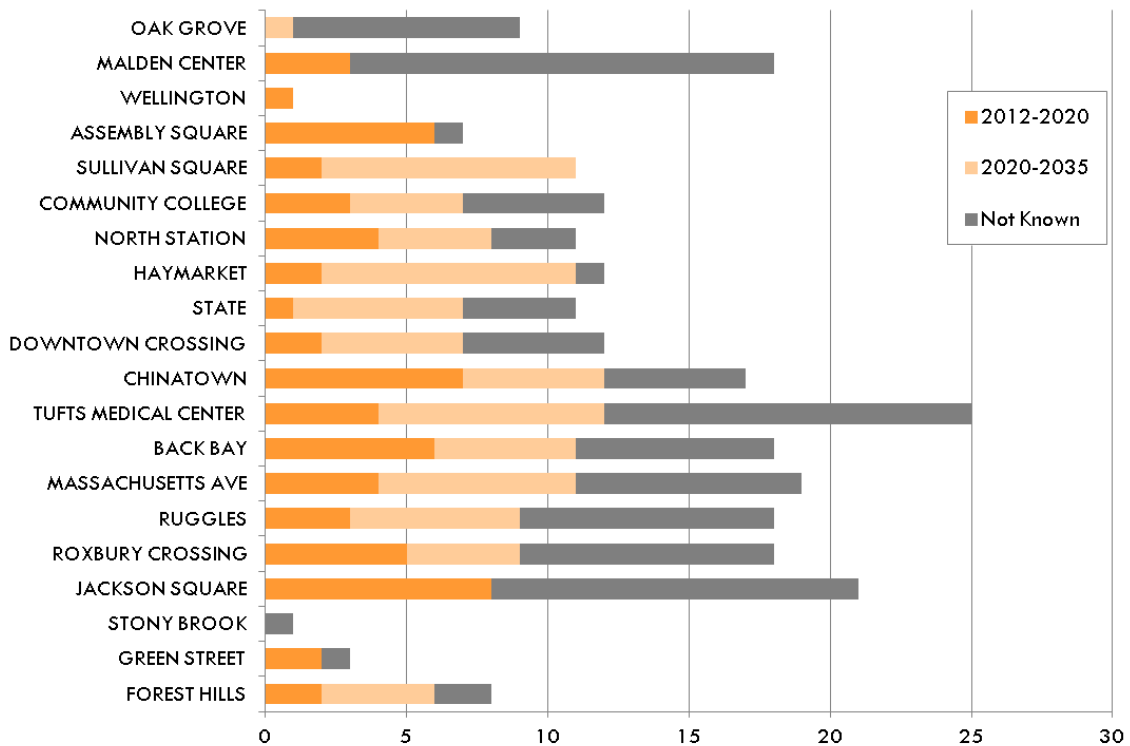


Table 1: Corridor Development Activity by Status and Development Timeframe

| | Status | Completed | Under Construction | Planning/Permitting | Projected | Stalled | (blank) | Grand Total |
|-----------|----------------------------------|-----------|--------------------|---------------------|-----------|---------|---------|-------------|
| All | Total Number of Projects (Count) | 192 | 29 | 99 | 70 | 2 | 5 | 397 |
| | Total Housing Units (HU) | 5,300 | 2,667 | 12,025 | 11,007 | - | 740 | 31,740 |
| | Total Jobs | 25,251 | 4,117 | 29,467 | 41,587 | - | - | 100,422 |
| 2000-2012 | # of Projects | 137 | 5 | 3 | | | | 145 |
| | Housing Units | 5,300 | 871 | 61 | | | | 6,232 |
| | Jobs | 20,585 | - | 386 | | | | 20,972 |
| 2012-2020 | # of Projects | 2 | 17 | 46 | 2 | | | 67 |
| | Housing Units | - | 1,165 | 6,680 | - | | | 7,845 |
| | Jobs | 168 | 4,117 | 16,694 | 470 | | | 21,450 |
| 2020-2035 | # of Projects | | | 15 | 62 | | | 77 |
| | Housing Units | | | 4,566 | 10,983 | | | 15,549 |
| | Jobs | | | 12,227 | 41,117 | | | 53,344 |
| Not known | # of Projects | 53 | 8 | 36 | 6 | 2 | 5 | 110 |
| | Housing Units | - | 705 | 1,189 | 24 | - | 740 | 2,658 |
| | Jobs | 4,498 | - | 228 | - | - | - | 4,726 |

Source: MAPC Development Database

Figure 16: Corridor Development Projects by Completion Year



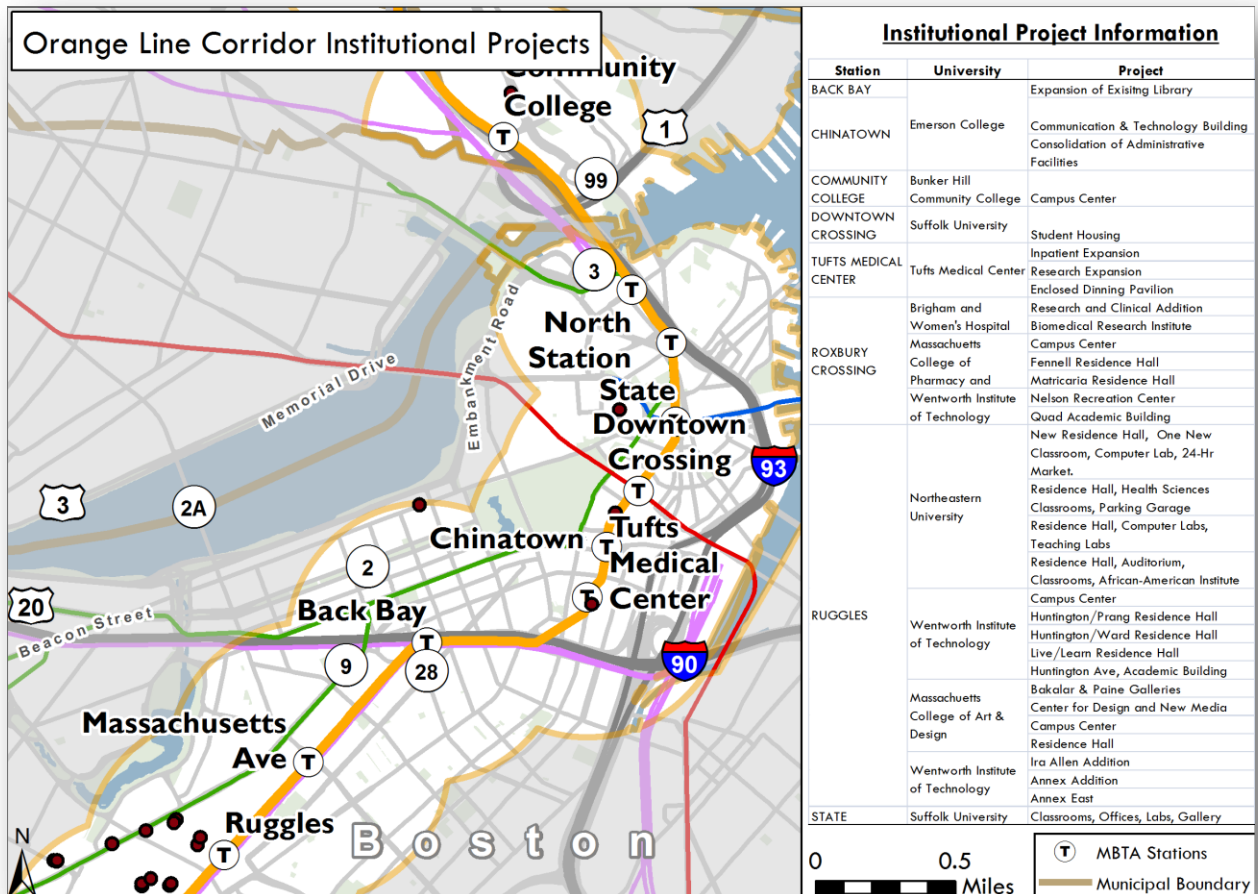
Source: MAPC Development Database

Count of Projects

Institutional Development Activity

A scan of institutional master plans indicates that two station areas will see major development from several area colleges and universities over the next decade. Roxbury Crossing is slated to house several new residence halls and academic facilities, and Ruggles is also slated to house numerous residence halls and academic facilities. It will be crucial for community development corporations, advocacy groups, and residents in the corridor to keep abreast of these institutional master planning processes in order to advocate for public benefits such as open space, shared use of select facilities, and workforce development opportunities and other measures that will mitigate negative impacts for current residents.

Figure 17: Orange Line Corridor – Major Institutions' Development Activity



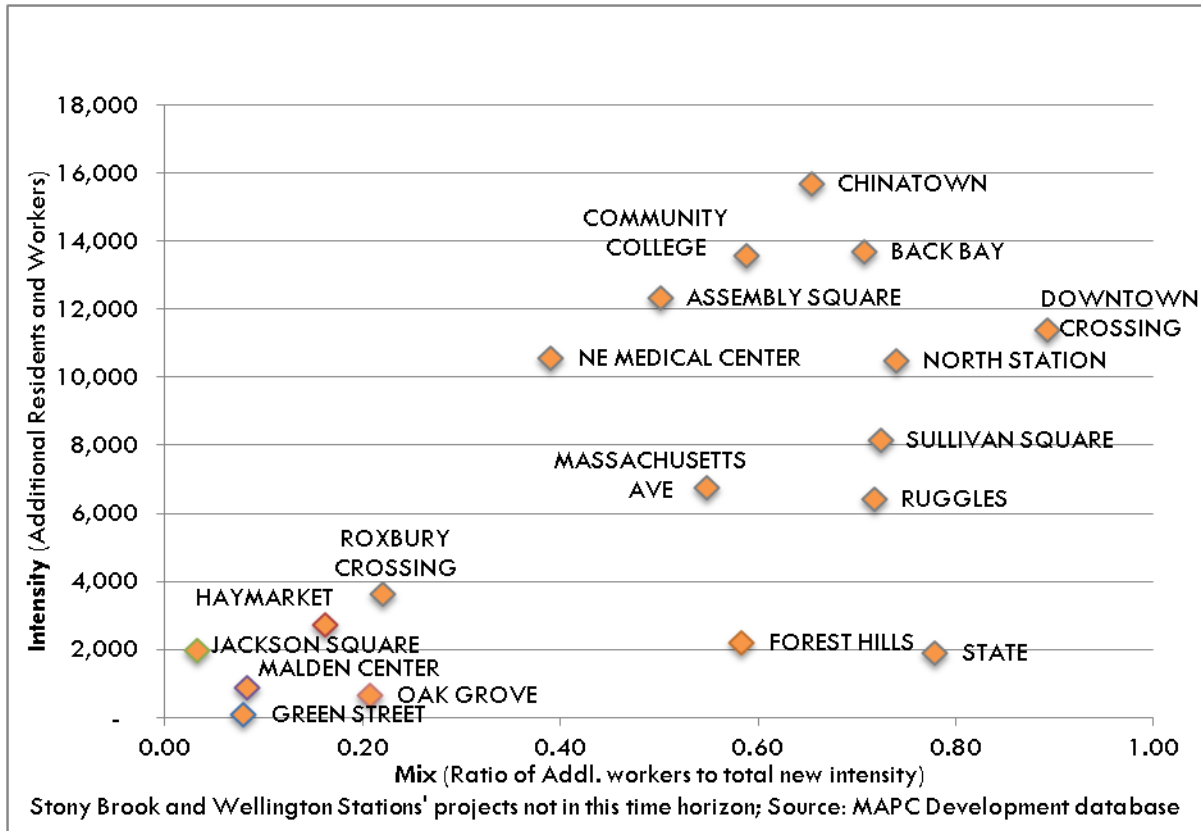
Source: MAPC review of institutional master plans. Note: Some planned institutional development activity may not be reflected in this table.

Development Activity by Station Area

Taken as a whole, the list of major completed, planned, and projected development projects along the corridor by station area have implications for each station area's resident to worker mix. Based on projected development activity, the resident to worker ratio will change in the following station areas:

- Ruggles and Massachusetts Avenue will have a significantly greater number of workers to residents;
- Community College will add a significant resident population;
- the overall mix in Chinatown will increase significantly in real numbers;
- development activity at Assembly Square will draw roughly 12,000 residents and workers; and
- North Station will also have a greater number of workers to residents.

Figure 18: Development Pipeline 2012-35: Intensity and Mix



Impact of Development Projects: Projected Corridor Change

The following projections of planned housing units, jobs, and ridership were generated using the development data supplied by municipalities and CDCs in the corridor between April and October 2012. Projections are generating using MAPC’s projections methodologies.^{ix}

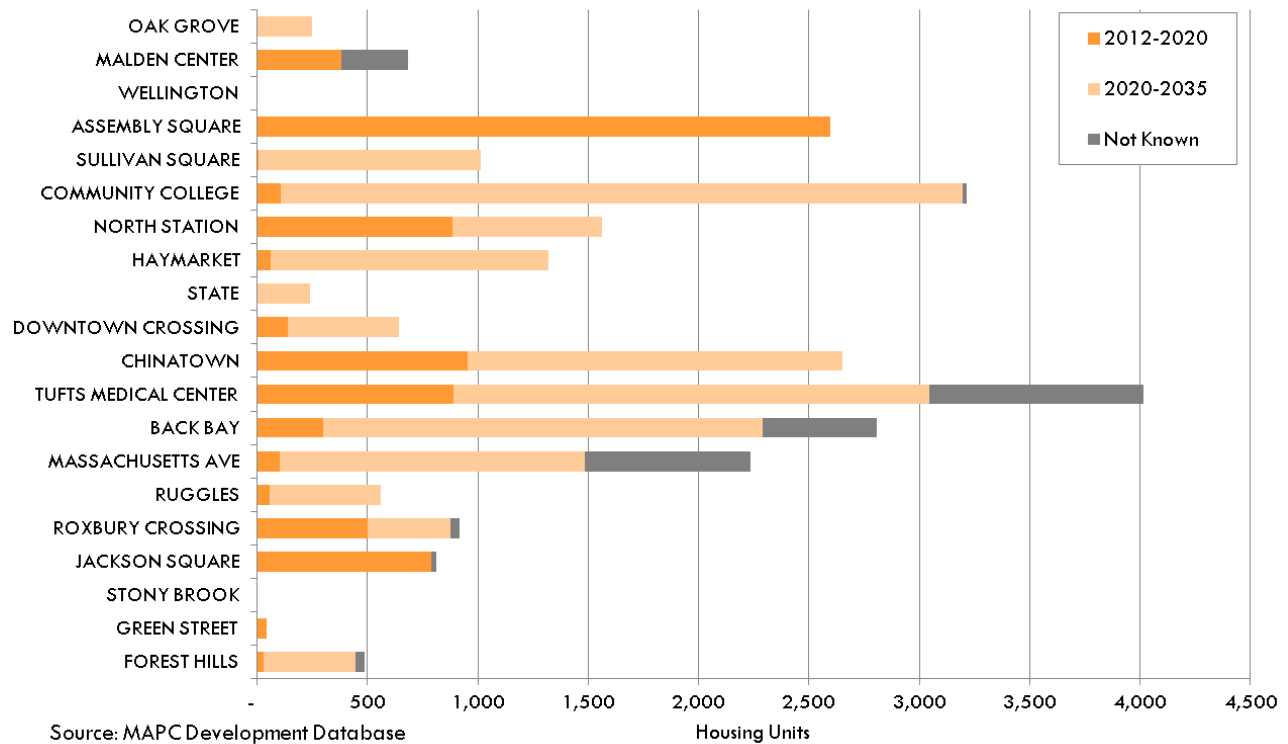
Planned Housing Units

Planned and projected development activity in the Corridor is projected to create

- up to 7,300 new housing units between 2012-2020 and
- up to 15,550 new housing units between 2020-2035.

The Community Economic Development Assistance Corporation (CEDAC) monitors affordable units at risk of expiring that have subsidized mortgages or receive Department of Housing and Urban Development (HUD) project-based rental assistance. These are units that are currently affordable to low income households whose subsidies are not permanently assured. Based on available data, there are 21 properties along the corridor that are at risk of expiring beginning 12/31/2015. These 21 properties account for 977 housing units along the corridor. A look at where these expiring units are concentrated indicates that Stony Brook has the highest number of units (267) expiring. Green Street, Back Bay and Roxbury Crossing each have over 100 units expiring. With the exception of Sullivan Square, which has two units expiring, the other station areas in the North segment do not have units marked as being at risk of expiring in the CEDAC monitor of properties.

Figure 19: Housing Development by Station Area – Units by Completion Year

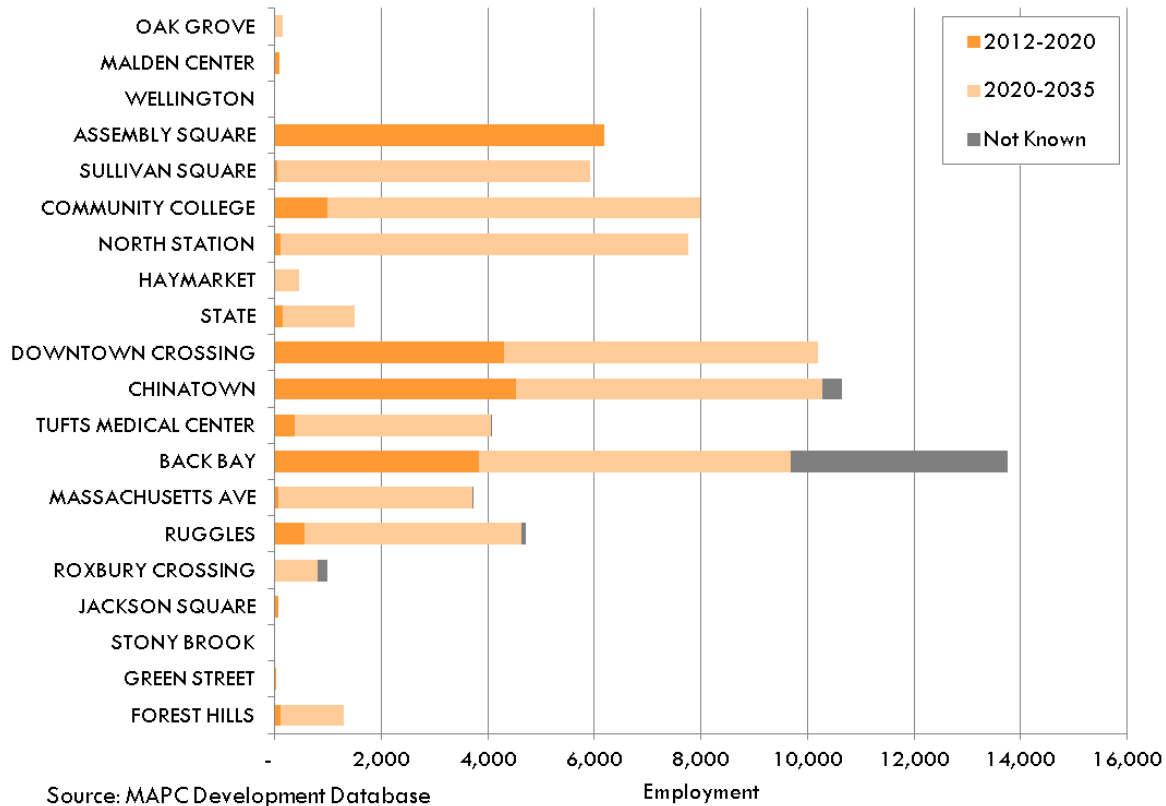


Planned Commercial Development/ Jobs

Planned and projected development activity in the Corridor is projected to create

- up to 21,380 new jobs between 2012 - 2020 and
- up to 53,344 new jobs by 2020-2035.

Figure 20: Employment (Jobs) by Station Area – by Completion Year



Future Ridership

Planned and projected development activity in the Corridor is projected to generate between 2,905 and 8,000 new commuters on the Orange Line between 2012 and 2035.

Assumption: Using ACS 2006-10 commute mode to work and CTPP 2000 workplace geography mode data, similar mode share was assumed for workers either living or working in the station areas. The estimate of new riders is approximate, and excludes non-work trips that will be generated as a result of development along the corridor. The estimated new commuters represent a 2.5% increase from the current estimated commuters using the Orange Line by 2020 and 8% increase by 2035.

Table 2: Estimated New Commuters, 2012-2020 and 2020-2035

| Corridor Segment | New Residents | New Workers | Estimated New Commuters |
|--------------------|---------------|---------------|-------------------------|
| | 2012-2020 | | |
| North | 7,192 | 7,302 | 1,250 |
| Central | 5,346 | 13,354 | 1,475 |
| South | 3,897 | 725 | 180 |
| Grand Total | 16,434 | 21,380 | 2,905 |
| 2020-2035 | | | |
| North | 8,185 | 13,013 | 1,990 |
| Central | 19,139 | 34,265 | 5,340 |
| South | 3,722 | 6,066 | 670 |
| Grand Total | 31,046 | 53,344 | 8,000 |

Source: MAPC Analysis

Profiles of Orange Line Corridor TOD Projects

This section highlights nine TOD projects completed and underway in different segments of the corridor.



Malden Center: 100 & 150 Exchange Street

Wellington: Station Landing

Wellington: 200 River's Edge Drive

Assembly Square: Assembly Square Development

North Station: Avenir

Tufts Medical Center: Parcel 24

Massachusetts Avenue: Parcel 6 / Susan Bailis Assisted Living Facility

Roxbury Crossing: Parcel 25

Jackson Square: 225 Centre Street

STATION AREA: MALDEN CENTER / TOD PROJECT: 100 AND 150 EXCHANGE STREET

www.cityofmalden.org - Mayor's Information Center

Development Timeframe: 2012-2013

DEVELOPER: COMBINED PROPERTIES, Inc..



Image credit: Combined Properties, Inc.

WALKSCORE: 91 – Walker's Paradise

TOTAL HOUSING UNITS: 210

AFFORDABLE UNITS: 0

PERMANENT JOBS: Not Provided

NOTABLE DESIGN ELEMENTS: Located within a block of the Malden Center MBTA station, the proposal enhances the walkability of Malden's downtown with pedestrian-friendly elements that include new sidewalks, streetscape landscaping and lighting, upgraded pedestrian crossings at nearby intersections and includes 1,950 square feet of retail space on the ground floor, a car-sharing program and bicycle parking.

FINANCING INFORMATION: Not Available

PROJECT DESCRIPTION: The proposal for this project was filed under the City's recently enacted Residential Incentive Overlay-B zoning district, designed to encourage mid-rise, transit-oriented and pedestrian-friendly, multifamily residential development in the downtown by allowing increased density and reduced parking.

STATION AREA: WELLINGTON / TOD PROJECT: STATION LANDING

<http://www.stationlanding.com>

Development Timeframe: 2006-Present

DEVELOPER: NATIONAL DEVELOPMENT



Image credit: National Development

WALKSCORE: 71 – Very Walkable

TOTAL HOUSING UNITS: 595

AFFORDABLE UNITS: 10

PERMANENT JOBS: 1250

NOTABLE DESIGN ELEMENTS: Station Landing is designed to create vertical mixed use space in the context of a pedestrian friendly environment. Three of the four buildings include ground floor retail and ND created a beautifully landscaped main street that serves as the spine of the development. The main street leads directly to a park on the waterfront and includes wide sidewalks, use of hardscape materials, parallel parking and outdoor cafe areas. Adjacent to the property along the Mystic River are over 500 acres of pathways for pedestrian and recreational use.

FINANCING INFORMATION: Not Available

PROJECT DESCRIPTION: Station Landing is a New Urbanist, mixed-use development that includes 595 housing units, 125,000 square feet of retail and commercial uses, and 160,000 square feet of office space. The development shares a 1,900 space parking garage with the MBTA and Zipcars are available on-site. Currently there are three residential buildings including Arborpoint (apartments), Skyline (condos), and 75SL (apartments). In addition, the project includes an office building, three story fitness club and a 1900 car parking garage shared with MBTA commuters. There is room for two more buildings that are included in the master plan. The site was previously owned by a developer that had planned to construct an office park. The lender eventually fore-closed on the property. However, a new developer, National Development (ND), purchased the property from the lender in 2002 in order to build a mixed use village. The first phase of construction was completed in 2006 and included 292 luxury apartments and 67,000 square feet of retail space.

STATION AREA: WELLINGTON / TOD PROJECT: RIVER'S EDGE

<http://www.riversedgema.com/>

Development Timeframe: 2008-Present

DEVELOPER: PREOTLE, LANE & ASSOCIATES, CRITERION DEVELOPMENT PARTNERS



Image credit: Preotle, Lane & Associates, Ltd.

WALKSCORE: 71 – Very Walkable

TOTAL HOUSING UNITS: 222

AFFORDABLE UNITS: 33 (considered at 120% AMI for this area)

PERMANENT JOBS: 289

NOTABLE DESIGN ELEMENTS: River's Edge is a waterfront development on a 215-acre public/private development site. The development includes a 10-acre Park at River's Edge with a mile of paths, 100 yards of granite seat walls, 44 benches, 40 lights, an irrigation system fed by well water, 8000 plants and 1.5 acres of new or restored wetlands. The development also includes the 9000 square foot Tufts University Boathouse. The boathouse has unique features such as a butterfly roof, glazed walls, bamboo floors, and an L-shaped deck with views of the river. The office building on site achieved LEED pre-certification at the gold level and was the first office building to achieve this for core and shell in Greater Boston.

FINANCING INFORMATION: Funding sources included EPA Brownfields Assessment Grants, EPA Brownfields Cleanup Grants, Other EPA funds, DOT funds, HUD funds, DOE Sustainable Development funds, Army Corps of Engineers funds, NSF Partnerships for Innovation funds, EDA funds, State funds, and Tufts University Funds.

PROJECT DESCRIPTION: River's Edge is a multi-use, transit-oriented, waterfront development that offers access to Route 93, Logan airport, and direct service to downtown Boston on the MBTA's Orange Line from Wellington Station. The River's Edge development removed over 1500 tons of abandoned tires, rubber, metal and other debris from the site and is now being developed in three phases. Phase 1 of the project, located in Medford and Malden, includes an 115,000 square foot office building, the 222-unit Residences at River's Edge, and a 1-acre development parcel that will house 2 retail tenants. The Malden Redevelopment Authority operates a shuttle service which runs between River's Edge and the Wellington Orange Line MBTA Station. Preotle, Lane, & Associates, Ltd. recently appeared before the Mystic Valley Development Commission (MVDC) to present conceptual plans for the development of a second residential building containing 220 luxury units.

STATION AREA: ASSEMBLY SQUARE / TOD PROJECT: ASSEMBLY SQUARE

www.somervillema.gov/departments/ospcd/squares-and-neighborhoods/assembly-square

Development Timeframe: 2012-2014

DEVELOPER: FEDERAL REALTY INVESTMENT TRUST



Image credit: Federal Realty Investment Trust

WALKSCORE: 68 – Somewhat Walkable
TOTAL HOUSING UNITS: 2,100
AFFORDABLE UNITS: 252
PERMANENT JOBS: 6,835

NOTABLE DESIGN ELEMENTS: The buildings have been designed with active retail first floors and minimal "back of house" sections so that the pedestrian experience will be pleasant around each city block.

FINANCING INFORMATION: Total 2009 Public Funds, \$73m and DIF financing used

PROJECT DESCRIPTION: The Assembly Square Master Plan is for a mixed-use, transit-oriented development with approximately 5 million square feet of total development including 1.75 million square feet (sf) of commercial space (including but not limited to office, research and development, laboratory, medical office, manufacturing, etc.), 512,000 sf of retail space including restaurants and cinema, 2,100 residential units, up to a 200-room hotel, and approximately 10,066 parking spaces.

STATION AREA: NORTH STATION / TOD PROJECT: AVENIR

http://www.archstoneapartments.com/apartments/massachusetts/boston/archstone_avenir/

Development Timeframe: 2007-2010 (completed)

DEVELOPER: TRINITY FINANCIAL



Image credit: Trinity Financial

WALKSCORE: 94 – Walker’s Paradise

TOTAL HOUSING UNITS: 241

AFFORDABLE UNITS: 17

PERMANENT JOBS: 62

NOTABLE DESIGN ELEMENTS: Avenir is a transit-oriented development offering vibrant retail and transportation links at street level in addition to ample parking and 241 residential apartments on upper levels. The block-long structure is designed to appear as a series of varied building masses ranging from three to ten stories, reminiscent in character of separate buildings along existing streets in the Bulfinch Triangle. The building is structured to sit directly over the MBTA North Station superstation. Existing MBTA headhouses have been incorporated into the structure with new enclosures and canopies, honoring the transit-influenced character of Haverhill Street.

FINANCING INFORMATION: Not Provided

PROJECT DESCRIPTION: Located in the heart of Boston’s historic Bulfinch Triangle, Trinity developed Avenir as a 10-story mixed-use, transportation-oriented development. The development is built directly above the North Station Green and Orange lines, and is the subject of a 99-year ground lease with the MBTA. The block-long building features retail on the ground floor, a 121-space parking garage on the second and third floors wrapped with housing, and 241 residential units, including 17 affordable units. Avenir is now owned and operated by Archstone Smith REIT, and has surpassed the projected absorption benchmarks. With its stylish interiors and links to public transportation, Archstone Avenir has become one of Boston’s most appealing places to live.

STATION AREA: TUFTS MEDICAL CENTER / TOD PROJECT: PARCEL 24

www.asiancdc.org/content/parcel-24-0

Development Timeframe: 2012-2015

DEVELOPERS: ASIAN COMMUNITY DEVELOPMENT CORPORATION and NEW BOSTON FUND, INC.



Image credit: Asian Community Development Corporation and New Boston Fund, Inc.

WALKSCORE: 100 – Walker’s Paradise
TOTAL HOUSING UNITS: 363
AFFORDABLE UNITS: 95 (rental) and 50 (condos) – 145 total
PERMANENT JOBS: 20

NOTABLE DESIGN ELEMENTS: Ground floor retail, community space, park space open to the public

FINANCING INFORMATION: Multiple financing sources including but not limited to: Federal LIHTCs, City NHT funds, City HOME funds, City Linkage funds, State AHTF funds, State HOME funds, State affordable housing tax credits, State CBH and FCF funds, MassDevelopment Brownfields Grant, Private Debt, and Private Equity

PROJECT DESCRIPTION: Parcel 24 is a joint-venture between the Asian Community Development Corporation – a 25-year-old non-profit, community-based organization that serves the Asian American community of Greater Boston and the neighborhoods in which they live and work – and New Boston Fund, Inc., a privately owned real estate investment manager and an industry leader in providing real estate investment, development and management services. The Parcel 24 Plan responds to the Hudson Street for Chinatown coalition’s Vision by creating 363 units of new housing, with approximately 40% of all units affordable for rental and ownership to low- and moderate-income households, in addition to creating approximately 700 construction period jobs and 20 permanent jobs that will bolster regional economic development. Parcel 24 is a significant part of the master plan effort to build a vibrant, healthy, and diverse Chinatown. The Project will restore the urban fabric and vibrancy of the Hudson Street neighborhood that existed nearly half a century ago. The Plan includes a 13,000 square foot park, ground-floor commercial and community space that will activate the adjacent streets and be an asset to surrounding residents and community members.

STATION AREA: MASSACHUSETTS AVENUE / TOD PROJECT: PARCEL 6 – SUSAN BAILIS ASSISTED LIVING FACILITY

www.susanbailis.org

Development Timeframe: Completed in 2003

DEVELOPERS: FENWAY COMMUNITY DEVELOPMENT CORPORATION and SOLOMON VENTURES



Image credit: MAPC

WALKSCORE: 97 – Walker’s Paradise

TOTAL HOUSING UNITS: 82

AFFORDABLE UNITS: 36

PERMANENT JOBS: 55

NOTABLE DESIGN ELEMENTS: The exterior architectural design fits within the culture of the community. Its Brownstone appeal fits the South End neighborhood. Susan Bailis Assisted Living had initiated an “Eco Friendly” plan for the community and with the continued efforts of the management team and the residents we look forward to reaching our goal.

FINANCING INFORMATION: Market, Middle, Moderate, GAFC, SCO, and PACE

PROJECT DESCRIPTION: Located just minutes from Symphony Hall, the Isabella Stewart Gardner Museum and the Museum of Fine Arts, residents of the Susan Bailis Assisted Living Community live in the heart of Boston’s thriving cultural and entertainment world. Convenient to nearby shopping, restaurants, and a host of local services, our neighborhood has the best that Boston has to offer. Built in 2003, the community features spacious studio and one-bedroom apartments, beautiful common areas, and a comprehensive range of programs designed to ensure that our residents remain active, healthy, and independent.

STATION AREA: ROXBURY CROSSING / TOD PROJECT: PARCEL 25

www.missionhillnhs.org/parcel-25

Development Timeframe: Not Provided

DEVELOPER: MISSION HILL PARCEL 25 LLC and MISSION HILL NEIGHBORHOOD HOUSING SERVICES



Image credit: Mission Hill Neighborhood Housing Services

WALKSCORE: 88 – Very Walkable

TOTAL HOUSING UNITS: 68

AFFORDABLE UNITS: 0

PERMANENT JOBS: 733

NOTABLE DESIGN ELEMENTS: 247 parking spaces will be created below grade in addition to streetscape and site improvements to allow for better pedestrian access and connections to non-vehicular modes of transport including connections to the Southwest Corridor bike path, bus stop and MBTA Orange Line.

FINANCING INFORMATION: Not Provided

PROJECT DESCRIPTION: The Mission Hill Neighborhood Housing Services (Mission Hill NHS) Parcel 25 Community Planning and Development Initiative created a truly unique development vision for this long vacant parcel at Roxbury Crossing in Mission Hill. The vision for this development will reclaim the area's history as an important transit-oriented development and gateway to the Mission Hill neighborhood and will include 65 units of workforce housing in flats above retail and townhomes, eight to ten small neighborhood-serving retail stores, a signature community building with non-profit office, youth training, and multipurpose function rooms, and a first-class office building of approximately 175,000 square feet that ensures financial viability.

STATION AREA: JACKSON SQUARE / TOD PROJECT: 225 CENTRE STREET

<http://225centre.com/about/>

Development Timeframe: 2012-2013

DEVELOPERS: MITCHELL PROPERTIES and THE COMMUNITY BUILDERS, INC.



Image credit: Mitchell Properties and The Community Builders, Inc.

WALKSCORE: 77 - Very Walkable
TOTAL HOUSING UNITS: 103
AFFORDABLE UNITS: 35
PERMANENT JOBS: Not Available

NOTABLE DESIGN ELEMENTS: Project includes an underground parking structure and dramatic landscape improvements.

FINANCING INFORMATION: The project uses \$2.3 million in state issued low-income housing tax credits, \$2 million in Department of Housing & Community Development (DHCD) program subsidies and another \$503,988 in federal low-income housing tax credits.

PROJECT DESCRIPTION: In 1995, a consortium of community groups, including the Jamaica Plain Neighborhood Development Corporation, Urban Edge and the Hyde Square Task Force, began planning the comprehensive redevelopment of Jackson Square. Working closely with city and state officials and a private developer, Mitchell Properties, the team created a master plan that includes over 400 units of housing, 60,000 square feet of retail space, 13,000 square feet of office space and 50,000 square feet of community facilities. 225 Centre Street is the first phase of this new \$250 million redevelopment effort.

Recommendations

The corridor's demographic diversity and diversity of land uses are both assets and challenges. While there is ethnic and economic diversity in population and households at station areas in all three segments of the line, there is also discontinuity in land use mix between station areas and inequities in terms of access to economic and academic opportunity. Some station areas are rich with job and educational opportunities, whereas other areas that are only a few stations away have a poverty rate that is almost twice the MAPC regional average. The projected development pipeline highlights several station areas that will have intense development activity by major institutions. This finding underscores the need to engage in coordinated planning for TOD that mitigates the risk of displacement particularly in these station areas to ensure that the people who live in the Corridor benefit fully from the planned jobs, housing, and other opportunities that may come.

This section outlines five opportunities for addressing the challenges outlined above towards the goal of ensuring equity and sustainability for the people who live and work along the corridor:

1. Advocating for investments in the Orange Line infrastructure
2. Maximizing large-scale land acquisition opportunities
3. Optimizing TOD scenarios along the corridor through zoning policies and financial resources
4. Mitigating the risk of displacement
5. Enhancing corridor identity through increased multimodal connections
6. Establishing a coalition of public and private stakeholders

Advocating for Investments in the Orange Line Corridor Infrastructure

The Orange Line's infrastructure needs and capacity issues are well documented by both public agencies and academics. The Boston Metropolitan Planning Organization (Boston MPO) states that one of the most urgent modernization needs in the region is replacing 120 cars on the Orange Line that were built between 1979-1981, which is expected to cost approximately \$1 billion.^x

The Massachusetts Bay Transportation Authority (MBTA) Capital Investment Program for FY 2012-2017 also calls for the procurement of 152 new cars, but without the adequate resources needed to purchase them. Replacing aging infrastructure improves system reliability and quality of service, which in turn will encourage more people to use the Orange Line.



Image credit: Dukakis Center at Northeastern University

Maintenance of the T is also important from a mobility perspective – a good infrastructure is capable of expanding to meet demand and helps ensure reliable service. Reliable service, in turn, increases the likelihood that more people will choose public transit over automobile use, and reduced auto dependency will reduce the emissions that cause climate change. A March 2012 MBTA ScoreCard report shows that the Orange Line requires 103 trains to be available but in recent months only 96 were available.

The Orange Line's infrastructure needs also go beyond repair of train cars. Linking bicycle, pedestrian and transit facilities in a network contribute to improving transportation options and accessibility for users. The LRTP notes that there are no bicycle accommodations connecting to stations along the northern portion of the Orange Line and there is poor pedestrian access to some stations in the northern portion of the Orange Line.

A documented increase in ridership levels over the past two decades combined with known capacity constraints and congestion problems runs the risk of impeding TOD along the Corridor. Research suggests that congestion in Boston’s urban core – including along segments of the Orange Line – may impede TOD projects, raising concern for real estate developers and possible riders as to the quality of service. The Orange Line from North Station to Downtown Crossing has been categorized as “highly congested” and Back Bay Station has been categorized as a congestion “hot spot”.^{xi} Back Bay is an important employment anchor and mixed use neighborhood. These facts underscore the need for transportation finance reform as a quality Orange Line system directly impacts those who live, work, and seek to invest in development along the Corridor.

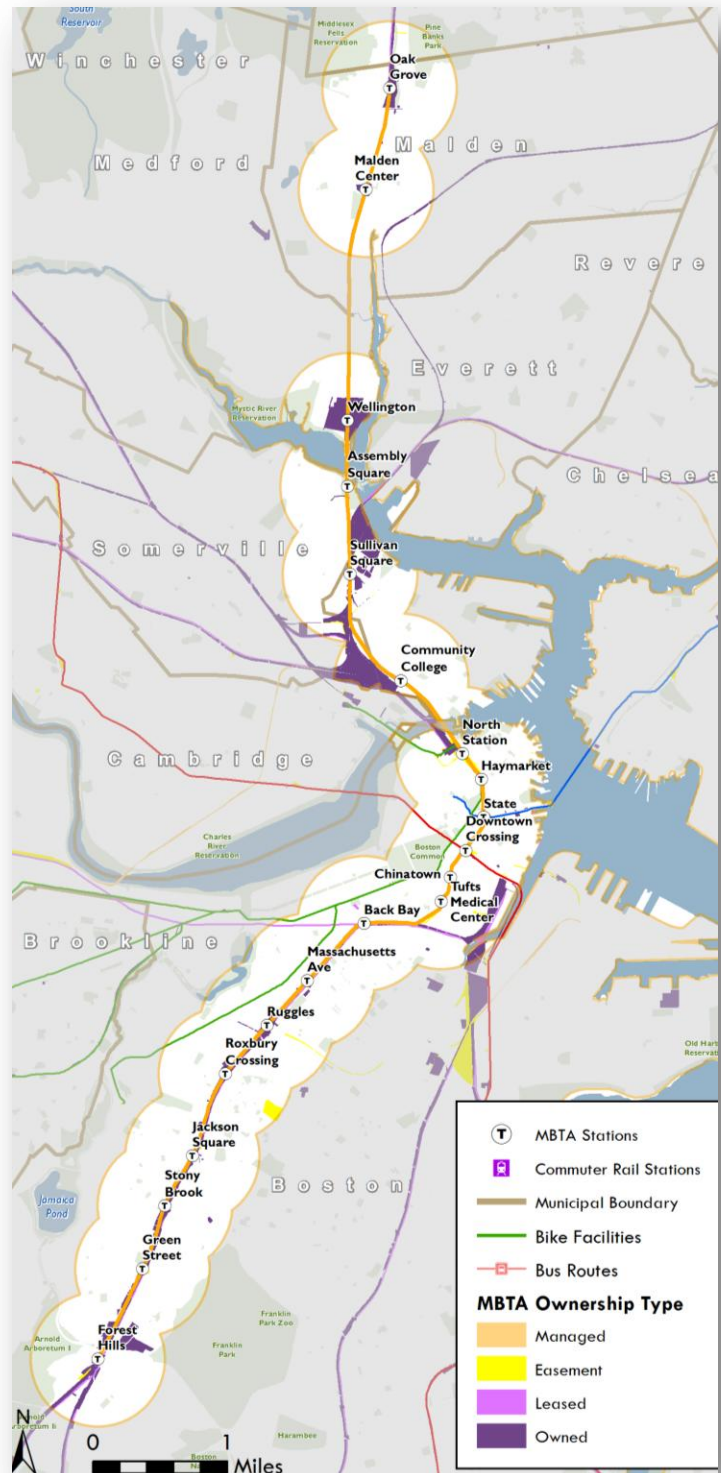
In addition to the infrastructure needs of the Orange Line train system itself, there are other corridor infrastructure improvement opportunities including roadway improvements and pedestrian connections. For example, the Casey Arborway Project in Jamaica Plain is undergoing study to explore designs and recommended alternatives to the current Casey Overpass, the elevated section of Route 203 that is adjacent to the Forest Hills station.^{xii}

Maximizing Large-Scale Land Acquisition Opportunities

While the Central segment of the Corridor is resource-rich, with the Downtown Boston stations linking residents traveling from either end of the line to employment and educational opportunities in the urban core, the other segments of the line do not have this diversity of resources. In comparison, the North segment is primarily commercial and residential with some industrial swathes, and the South segment is a predominantly residential mix.

There are large areas of underutilized land in many station areas along the corridor, which are currently under the ownership of the Massachusetts Bay Transportation Authority (MBTA), municipalities, and private landowners. As noted in an MAPC Growing Station Areas study, station areas in the North segment – Oak Grove, Wellington, and Sullivan Square, and Assembly Square – and stations in the South segment – Roxbury Crossing, Ruggles, and Forest Hills – have large areas available for development or redevelopment. When we look more closely at the land use mix in these station areas, we find that stations like Sullivan Square are surrounded by industrial uses and acres of

Figure 21: MBTA Properties along the Orange Line Corridor,



MBTA-owned property that could potentially be acquired for TOD. MAPC will be working with the Boston Redevelopment Authority (BRA) on a land use visioning project in Sullivan Square in the near future. The MBTA and the Boston Redevelopment Authority also own several parcels used mostly as parking lots. The vision is to turn the area into a gridded street network that will free up land near and around the rotary. It is important to note that if MBTA parking is removed as part of transit-oriented development, the MBTA has a policy about replacing that parking, especially when the utilization rate is high. This is an important consideration in areas like Wellington station. Stations like Oak Grove also have acres of MBTA owned property that could potentially be acquired; this station area could also benefit from new street networks that will improve pedestrian connectivity.

The accompanying map and table show the MBTA property acquisition opportunities managed by Transit Reality Associates as of November 2012. The MBTA owns many acres of land in the Wellington, Sullivan Square, Community College, Tufts Medical Center, and Forest Hills station areas. In addition to MBTA land, MassDOT, municipalities and private landowners hold major land areas that have the potential for TOD development. The [MAPC Development Database](#) is not inclusive of these acquisition opportunities. Public and private developers can collaborate with the MBTA, municipalities, and the state to strategically identify optimal sites for TOD. Compiling data on MBTA, municipal, and state land disposition policies and opportunities are possible topics for continued study.

Table 3: MBTA Properties in the Orange Line Corridor by Ownership Type

| MBTA Ownership Type | Acres within Station Areas | Acres along Orange Line Corridor |
|---------------------|----------------------------|----------------------------------|
| Managed | 28 | 1 |
| Easement | 210 | 35 |
| Leased | 15 | 1 |
| Owned | 2,637 | 405 |

Optimizing Transit-Oriented Development Scenarios Along the Corridor Through Zoning Policies and Financial Resources

Some station areas have strong markets with a mix of uses whereas others are predominantly residential. A combination of zoning changes and financial resources are needed to support private and nonprofit developers in seizing these TOD opportunities. There is a need for advocacy to 1) support the adoption of zoning policies at the municipal level and 2) secure state, federal, and private financial resources that will enhance the potential for equitable TOD around all station areas. This is particularly important in the North segment where some station areas have weaker markets and a land use mix that is not as diverse as those in the North and South segments.

Highlight of recent developments: the City of Melrose has created a Smart Growth Overlay District about ¼ to ½ mile north of the Oak Grove station. There is already one development underway on an old mill building site that will add 200-300 units. There are also plans to expand this development even further.



Image credit: MAPC

There are not enough financial resources provided by the state and federal government to support equitable TOD. Advocacy at the state and federal levels and investment by the private sector is needed to increase resources available to both private developers and community development corporations (CDCs) so they can pursue and develop mixed use and mixed income TOD projects at higher densities that include a significant stock of affordable units, which can help mitigate displacement.

If sufficient public investment and private philanthropic resources can be secured, it can boost the capacity of CDCs in the corridor and options may include 1) supporting the development of new CDCs in the North segment station areas that are not currently served by CDCs or 2) enabling existing CDCs to expand service areas to cover these North segment station areas to ensure the development of good TOD projects in these weaker market areas where private developers might not be immediately attracted to developing. An example of the power of CDC organizing is evident in the redevelopment of Jackson Square, a model TOD planning effort spurred by three CDCs and a private developer – Jamaica Plain Community Development Corporation, Urban Edge, the Community Builders, Inc. and Mitchell Properties. While CDCs do not exist in these station areas, two nonprofit housing organizations – Tri-City Community Action Program (Tri-CAP) and Housing Families, Inc. are providing stabilization services for vulnerable populations and transitional housing in Malden and Medford.

Mitigating the Risk of Displacement

The corridor is home to rich ethnic and economic diversity, but it is also home to vulnerable populations. Eight station areas along the corridor have a high percentage of populations of color and/or a high percentage of households in poverty. As the baseline conditions review indicates, despite the fact that the line provides direct transit access to the educational and employment resources of the urban core in areas like Back Bay, State, and Downtown Crossing, the overall poverty rate for households along the corridor is still twice the MAPC regional average. The Stony Brook, Green Street, Back Bay, and Roxbury Crossing station areas each have over 100 affordable units at risk of expiring. Particularly in station areas like Ruggles and Roxbury Crossing, where major development activity is planned over the next two decades, there is a high concentration of low-income households, indicating a high risk of gentrification and displacement.

Municipalities, community development corporations, and advocacy groups can coordinate planning and community development efforts to ensure that residents have access to workforce development opportunities – potentially provided in partnership with these institutions – and affordable housing. In some cases, this may include transferring the deed of a private property to a nonprofit organization to ensure that the property is affordable to low- or moderate-income households. In areas like Sullivan Square, where there are no CDCs and there is significant projected development activity but no set timeline for development yet, an early planning process is needed to promote good TOD projects that preserve affordability.

Planning for mixed-income TOD from a corridor-wide perspective may also help mitigate displacement impacts, as residents may be able to maintain community connections while residing in other segments of the line. Below is an outline of policies, funding, and programs that can assist with ensuring the preservation of affordable housing.

- Adoption of zoning policies like inclusionary zoning and 40R districts can also support the inclusion of affordable units and TOD at higher densities.
- Funding sources like Community Development Block Grants (CDBG) and federal HOME funds can be used to preserve affordable housing. Municipalities can choose to target their funding to priority areas along the corridor and consider adopting a preservation strategy that specifically targets these areas in order to preserve affordability. This strategy might include creating a “preservation catalog” that identifies and tracks subsidized housing near the transit stations that is at the highest risk of loss. The strategy could also include prioritizing the use of Low Income Housing Tax Credits (LIHTC) and other funding sources to recapitalize and modernize location-efficient affordable homes or creating tax incentives to encourage the preservation of affordable rental housing.
- Shared equity homeownership programs are also useful for creating and preserving affordable homes near transit. Some common forms include community land trusts, deed-restricted housing and limited equity cooperatives. The municipalities might also consider creating Tax Increment Financing (TIF) districts and directing the incremental increase in property tax revenue to support the creation or

preservation of affordable units. The City of Somerville has a commercial linkage fee program that collects modest charges from new non-residential and/or market-rate residential construction at the time of development and re-directs this money into their Affordable Housing Trust Fund. Each of the municipalities should consider creating a linkage fee program or utilizing their existing linkage fee program to specifically tie the fees to transit areas in the orange line corridor.

- Municipal affordable housing trusts enable municipalities to collect funds for affordable housing, segregate them out of the municipal budget into a trust fund, and can be used to fund for local initiatives to preserve and create affordable housing. The money can be used to preserve properties that are faced with expiring affordability restrictions. In the corridor, the City of Somerville has created the Somerville Affordable Housing Trust Fund (SAHTF). In addition, MassHousing and the Commonwealth's Department of Housing and Community Development administer the Massachusetts Affordable Housing Trust Fund, which provides funds to support affordable housing pre-development activities and public housing modernization. Eligible applicants include governmental subdivisions, community development corporations, local housing authorities, community action agencies, community-based or neighborhood-based non-profit housing organizations, other non-profit organizations, for-profit entities, and private employers.^{xiii}

Enhancing Corridor Identity Through Increased Multi-Modal Connections

Promoting multimodal connections along the entire corridor has a number of benefits: it can enhance public health by providing people with options to walk, bike, or run to other destinations in the corridor, and it can reduce vehicle miles traveled by providing those who wish to avoid potential Orange Line congestion with another mode of getting to where they need to go – without driving. Segments of the corridor provide walk/bike options: there is good connectivity in the South segment, as Southwest Corridor Park extends a bike and walking trail from downtown Boston through to Jamaica Plain. In contrast, bicycle and pedestrian connections in the North segment are disjointed. The industrial uses near Wellington station are one of the barriers to increasing pedestrian connectivity along the northern end of the line. Advocacy to expand the multimodal nature of the Orange Line Corridor is beneficial as increased recreational space can foster community building and pride in the corridor. Hubway bikeshare stations are now located at four station areas along the corridor; funding and advocacy is needed to ensure that bikeshare stations are placed at every Orange Line station area. Bike and pedestrian connections are particularly needed between the Community College, Sullivan Square, Wellington, Malden Center, and Oak Grove stations in three specific areas:



Image credit: MAPC

- Malden Center: The City Hall is undergoing a feasibility study that may move the City Hall to another location. If redevelopment of the City Hall takes place, there is an opportunity to enhance pedestrian connections from the Center to the Northern Strand Trail.
- Between Malden Center and Wellington Station: There is an opportunity to link the North Strand Trail with planned MassDOT bridge reconstructions at the Route 16 bridge over the Malden River and the bridge over the MBTA tracks.
- Between Community College and Sullivan Square: No shared use path exists between Rutherford Avenue in Charlestown and Community College station; the potential for a trail has been discussed by planning authorities. The Boston Transportation Department and Boston Redevelopment Authority are moving forward with planning and design work in this area and as part of this work, safer pedestrian crossings and connections to the Orange Line are being explored.



Establishing a Coalition of Public and Private Sector Advocates to Ensure Corridor Investment

Coordinated planning among municipalities, community development corporations, private developers, and nonprofits is needed to promote sustainable, equitable TOD projects that both benefit the people who already live and work in the corridor and welcome new populations to the corridor while mitigating the potential for displacement. An organized coalition of stakeholders along the corridor is needed to ensure that the corridor grows and manages projected changes equitably and sustainably through advancement of these recommendations. An organization must serve as the lead organizer and manage the collaborative advocacy efforts of public and private stakeholders. A primary task of the coalition is to continue to brand the corridor and elevate the need for investment to maximize its potential. This coalition can also advocate for continued corridor level planning that may be multi-municipal in nature.

Project Partners

Metropolitan Area Planning Council (MAPC)

MAPC is the regional planning agency serving the people who live and work in the 101 cities and towns of Metropolitan Boston. Our mission is promoting smart growth and regional collaboration. Established in 1963, MAPC is a public agency created under Massachusetts General Law Chapter 40B Section 24.

We work toward sound municipal management, sustainable land use, protection of natural resources, efficient and affordable transportation, a diverse housing stock, public safety, economic development, an informed public, and equity and opportunity among people of all backgrounds.

MAPC is governed by representatives from each city and town in our region, as well as gubernatorial appointees and designees of major public agencies. Each municipality in our region belongs to one of eight subregions, each led by one MAPC staff member. The MetroWest subregion is led by an independent board and director. Each subregion includes municipal officials and regional and community stakeholders, all of whom work together to develop an annual work plan and priorities.

Massachusetts Association of Community Development Corporations (MACDC)

MACDC is an association of mission-driven community development organizations dedicated to working together and with others to create places of opportunity where people of diverse incomes and backgrounds access housing that is affordable, benefit from economic opportunities and fully participate in the civic life of their community. We achieve this by building and sustaining a high performing and adaptive community development sector that is supported by private and public investment and sound public policies.

MACDC's vision for Massachusetts:

We envision a Commonwealth of interconnected communities where people of different incomes, ethnicities, races and backgrounds live with dignity and fulfillment. We envision communities that encourage all residents, including once disenfranchised residents, to participate in civic processes that define the physical, economic, educational and cultural characteristics that distinguish these communities. We see a Massachusetts where all people build assets and realize the benefits of a healthy economy which provides full employment at good wages, stable housing at affordable prices, and strong public supports for human needs. We see a community development movement led by a diverse and democratic leadership that is at the forefront, in both substance and process, when determining public policy and development priorities that serve the long-term interests of communities. We envision government and the private sector working in partnership with the community development movement to achieve excellence in the projects we undertake and to promote a true "common wealth" for all who live in Massachusetts.

CDCs and Non-Profit Housing Developers in the Orange Line Corridor

Asian Community Development Corporation (Asian CDC)

<http://asiancdc.org/>

Asian Community Development Corporation (Asian CDC), a community-based organization, is committed to high standards of performance and integrity in serving the Asian American community of Greater Boston, with an emphasis on preserving and revitalizing Boston's Chinatown.

The Corporation develops physical community assets, including affordable housing for rental and ownership; promotes economic development; fosters leadership development; builds capacity within the community and advocates on behalf of the community.

The Community Builders, Inc.

<http://tcbinc.org/>

The Community Builders, Inc. is one of the largest and most accomplished non-profit development corporations in the United States. Its mission is to build and sustain strong communities where people of all incomes can achieve their full potential.

Methods:

- Plan, finance, develop, and operate high-quality affordable housing.
- Coordinate access to support services and asset-building activities.
- Collaborate with neighborhood groups, residents, public and private agencies, and philanthropic interests to shape community and economic initiatives.
- Focus on meeting the needs of low-income people not effectively served by market forces.
- Transform large-scale distressed housing projects into anchors for revitalization efforts.
- Serve as a long-term stakeholder in the neighborhoods we help transform.
- Create effective local implementation teams that combine neighborhood understanding, technical skills, and managerial ability.

Housing Families, Inc.

<http://housingfamilies.org>


Housing Families works to end family homelessness. We provide safe, temporary shelter and quality affordable housing to homeless and at-risk families. We offer individualized supportive services to enrich children's lives, nurture the potential of each family member, and help families maintain permanent housing.

In 1986, community members concerned about the crisis of homelessness among families in the Greater Boston cities of Everett, Malden, and Medford created what is now Housing Families Inc. (HFI). HFI's first shelter, the Broadway Shelter, opened in 1987, providing shelter and case management services for four families. Since then, HFI has expanded its services to include an academic and therapeutic program for children, youth and adults, which includes after school and summer enrichment components. In addition, HFI operates a nationally recognized eviction prevention program, a housing stabilization program, and has grown into one of the largest operators of affordable housing for homeless and very low-income families in Massachusetts.

Jamaica Plain Neighborhood Development Corporation

<http://jpndc.org/>

The mission of the Jamaica Plain Neighborhood Development Corporation is to promote equitable development and equal opportunity in Jamaica Plain and adjacent neighborhoods through affordable housing,



organizing, and economic opportunity initiatives that improve the lives of low- and moderate-income people and create a better community for all.

Our vision is of a vibrant, stable and diverse community in which people from all walks of life enjoy decent housing in a caring neighborhood, good jobs and opportunities to build careers or businesses, political power, and a promising future for our children.

Madison Park Development Corporation

<http://madison-park.org/>

Founded in 1966, Madison Park Development Corporation is one of the nation's first community-based, non-profit organizations to independently develop affordable housing for low and moderate income residents. MPDC created a model of resident-led community development, and has evolved to become a comprehensive agency promoting the full revitalization and redevelopment of Roxbury. With resident leadership, MPDC has undertaken numerous programs to address the social and economic needs of the community and has endeavored to link all of its efforts into a sustainable, holistic approach to revitalizing our target area.

Despite the successes we have achieved over the last four decades, the work of revitalizing Roxbury is not complete. MPDC strongly believes in community partnerships because we want to build, and be members of, a strong and healthy community. We embrace partnerships that strengthen each other's organizations and institutions. We know through collaboration we can build power and harness our collective capacity to advocate for change.

Somerville Community Corporation (SCC)

<http://www.somervillecdc.org/>

Somerville Community Corporation (SCC) is a membership organization that provides leadership for sustaining the City of Somerville as a vibrant, diverse and tolerant community. We offer services and lead community organizing that supports low- and moderate-income Somerville residents in their efforts to achieve economic sustainability and increase civic participation. SCC has determined that preserving and enhancing the remaining economic, racial, and ethnic diversity of our population is the overarching priority that drives our work today. This decision was made after witnessing the substantial displacement of low-income and working families from the western half of Somerville since the 1980s.

TRI-City Community Action Program (Tri-CAP)

<http://tri-cap.org/>

TRI-City Community Action Program (Tri-CAP) is the anti-poverty agency for Malden, Medford, Everett, and surrounding towns. Our goal is to build strong local communities where everybody can meet their basic needs, advance economically, and achieve their full potential.

Urban Edge Community Development Corporation

<http://www.urbanedge.org/>

Urban Edge is a community development corporation (CDC) that works in partnership with residents, businesses and government institutions committed to developing and sustaining stable, healthy, and diverse communities in Jamaica Plain, Roxbury and surrounding communities in Massachusetts.

We accomplish this through the development of high quality, affordable rental and owner housing, assistance to small businesses, homeownership education and lending and the development of educational facilities for youth and families.

Nonprofit Organizations Affiliated with the Bicycle and Pedestrian Assets in the Corridor

The Parkland Management Advisory Board (PMAC)

PMAC, created during the planning process, in the 1970s, with input from the State Legislature, MBTA, and citizens, has been an active player in the management and oversight of the park: it is the voice of the people to the Massachusetts Department of Conservation and Recreation (DCR).. Meetings are held the first Wednesday of each month, and rotate between the three sections. During the first part of the meeting public safety issues are discussed with the police, and community concerns round out the meeting.

Southwest Corridor Park Conservancy (SWCPC)

The Conservancy is a nonprofit organization made up of volunteers who work to maintain and enhance the park through fundraising, frequent volunteer days, and coordination of “park stewards” which are neighborhood residents who volunteer to maintain gardens and landscaping in the park. In the most recent gardening season, volunteers contributed over 1,000 hours to the park.



Image credit: MAPC

Carleton Court Dog Park

The dog park was initiated, designed, and financed by dog owners. It is a lively, fenced in site where dogs can socialize and play off-leash. It is located at the end of Holyoke St., between Dartmouth and W. Newton Streets.

The Community Garden Council

The Community Garden Council deals with concerns related to the eleven community gardens along the Southwest Corridor Park.

The Mission Hill Basketball and Tennis Courts Project

Roxbury residents are coordinating with the Massachusetts Department of Conservation and Recreation (DCR) to provide sports lights on the three basketball and two tennis courts, located on the deck between the Ruggles and Roxbury Crossing Stations.

Bike and Pedestrian Paths

Path users monitor the use and maintenance of the Southwest Corridor Park paths, and make recommendations for improvements.

Learn more about the Southwest Corridor Park organizations by visiting <http://www.swcpc.org>

Bike to the Sea

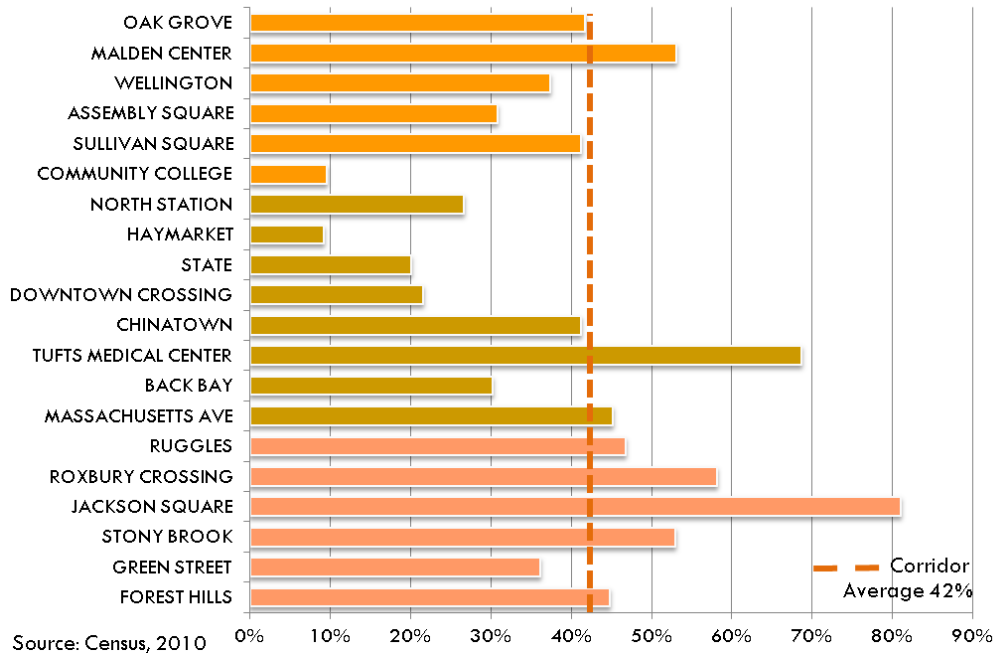
One of the first bicycle trips made in the 1890's by the Malden Bicycle Club was to Revere Beach. 100 years later Bike to the Sea continues the tradition. Founded in 1993, Bike to the Sea, Inc. (B2C) is a charitable, non-profit 501(c)(3) corporation that promotes bicycling and bicycle safety in the Malden area. B2C promotes the development of a bicycle and pedestrian trail from the Malden area to the beaches of Revere, Lynn, and Nahant. <http://www.biketothesea.com>

Note: This is not a comprehensive listing of all bike, pedestrian, and open space groups in the corridor.

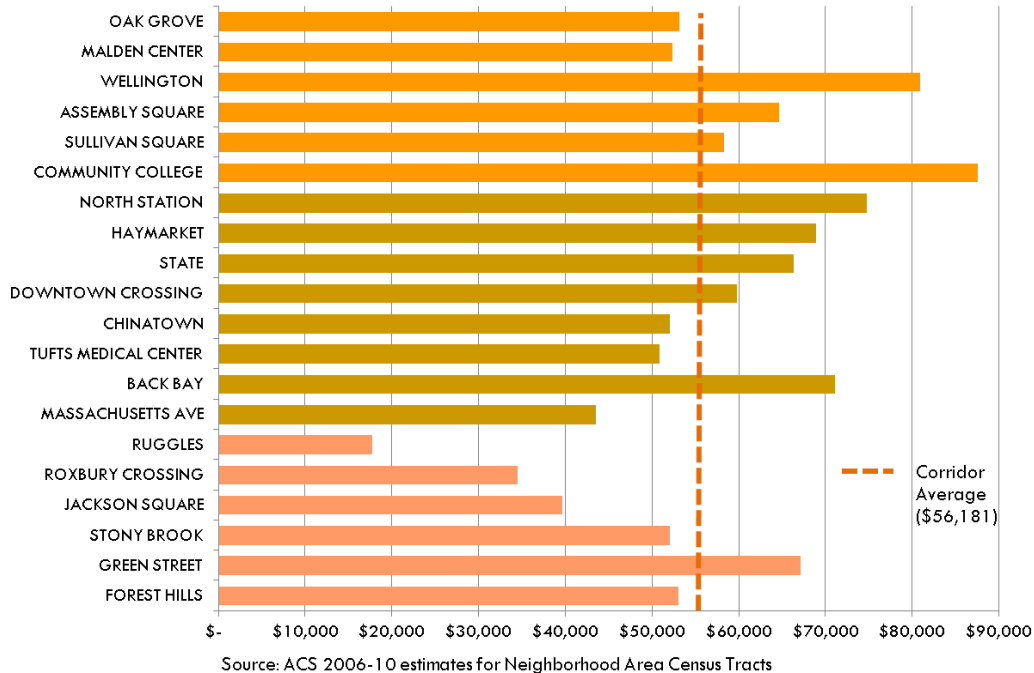
Appendix A: Baseline Conditions Supplemental Charts, Maps, and Tables

Population and Household Characteristics

Percent Minority Population by Station Area



Average Median Household Income by Station Area

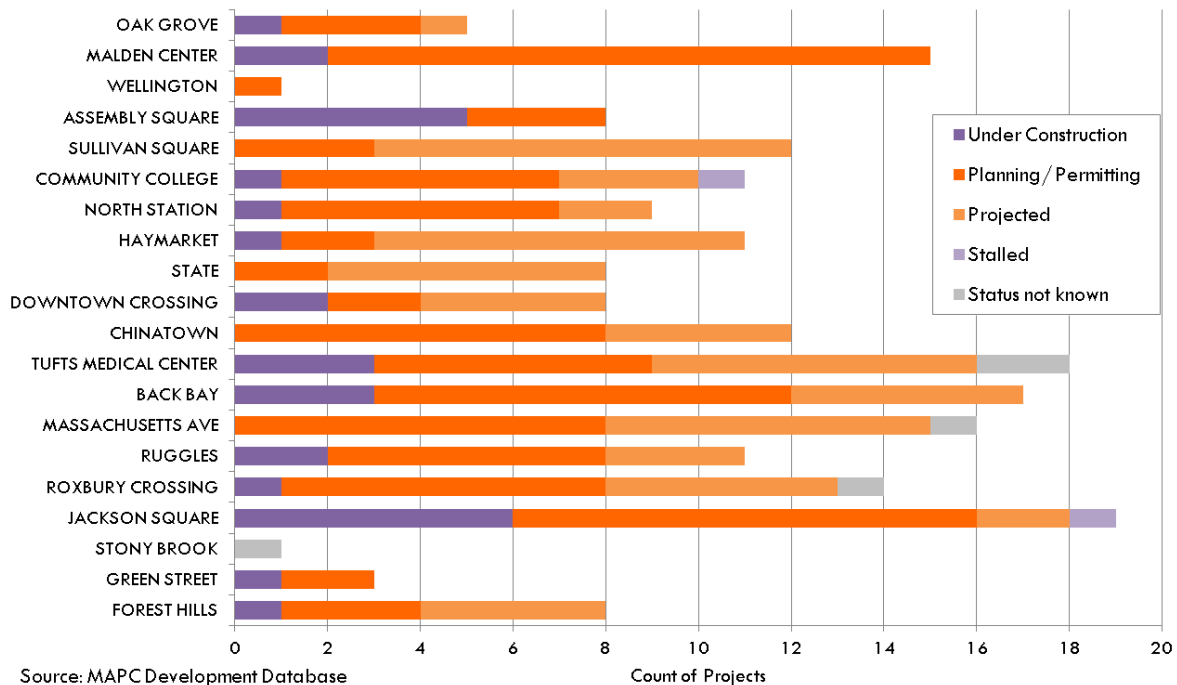


Walkscore by Station Area

| Station | Segment | TOD Station Typology | Walkscore | Walkscore Category |
|----------------------|---------|-------------------------|-----------|--------------------|
| OAK GROVE | North | Transformational Subway | 38 | Car Dependent |
| MALDEN CENTER | North | Urban Gateway | 89 | Very Walkable |
| WELLINGTON | North | Transformational Subway | 71 | Very Walkable |
| ASSEMBLY SQUARE | North | Transformational Subway | 68 | Somewhat Walkable |
| SULLIVAN SQUARE | North | Transformational Subway | 80 | Very Walkable |
| COMMUNITY COLLEGE | North | Neighborhood Subway | 88 | Very Walkable |
| NORTH STATION | Central | Metro Core | 94 | Walker's Paradise |
| HAYMARKET | Central | Metro Core | 97 | Walker's Paradise |
| STATE | Central | Metro Core | 98 | Walker's Paradise |
| DOWNTOWN CROSSING | Central | Metro Core | 92 | Walker's Paradise |
| CHINATOWN | Central | Metro Core | 94 | Walker's Paradise |
| TUFTS MEDICAL CENTER | Central | Metro Core | 100 | Walker's Paradise |
| BACK BAY | Central | Metro Core | 97 | Walker's Paradise |
| MASSACHUSETTS AVE | Central | Metro Core | 97 | Walker's Paradise |
| RUGGLES | South | Metro Core | 85 | Very Walkable |
| ROXBURY CROSSING | South | Neighborhood Subway | 88 | Very Walkable |
| JACKSON SQUARE | South | Neighborhood Subway | 77 | Very Walkable |
| STONY BROOK | South | Neighborhood Subway | 77 | Very Walkable |
| GREEN STREET | South | Neighborhood Subway | 83 | Very Walkable |
| FOREST HILLS | South | Transformational Subway | 63 | Somewhat Walkable |

Development Characteristics

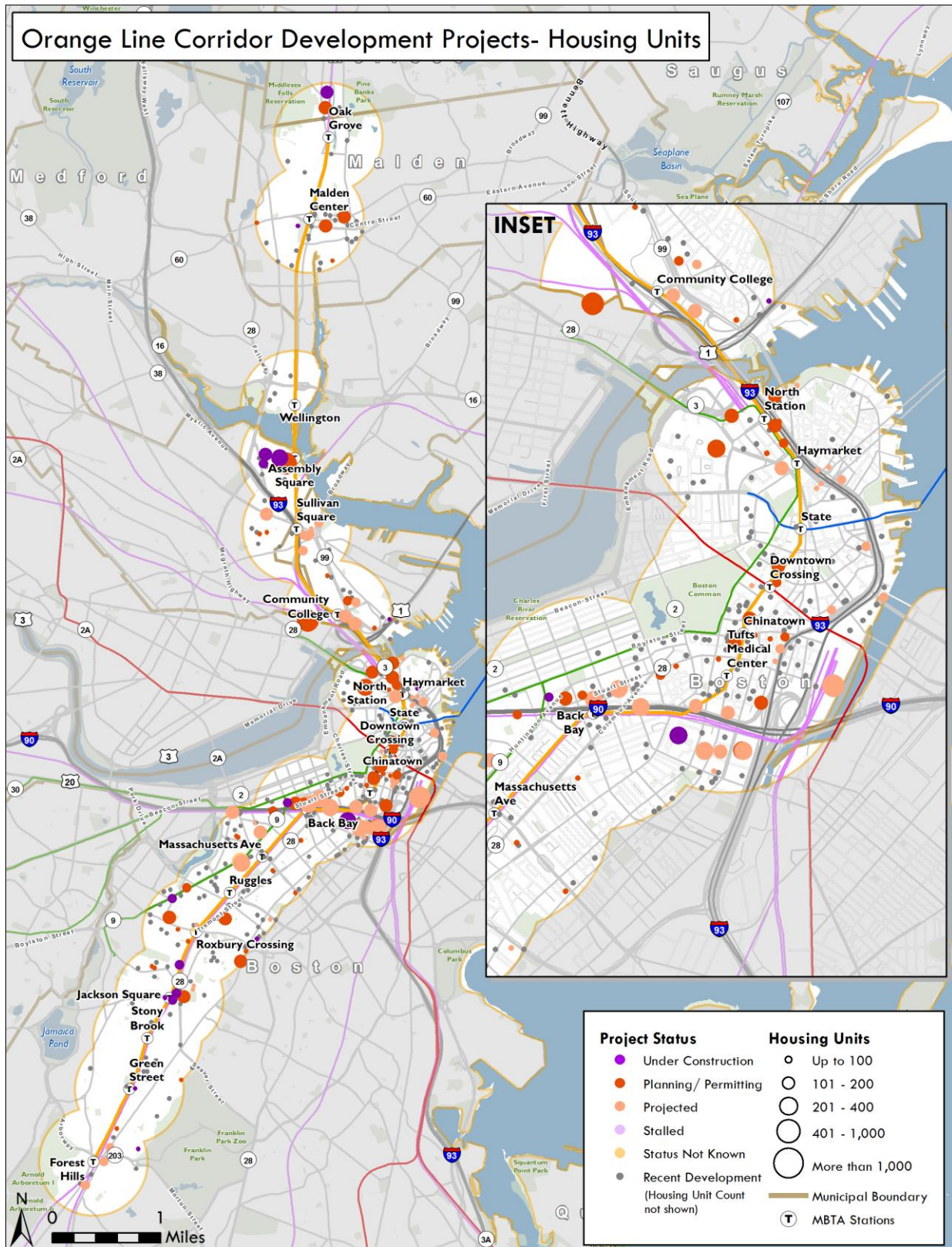
Corridor Development Activity—Project Count by Status



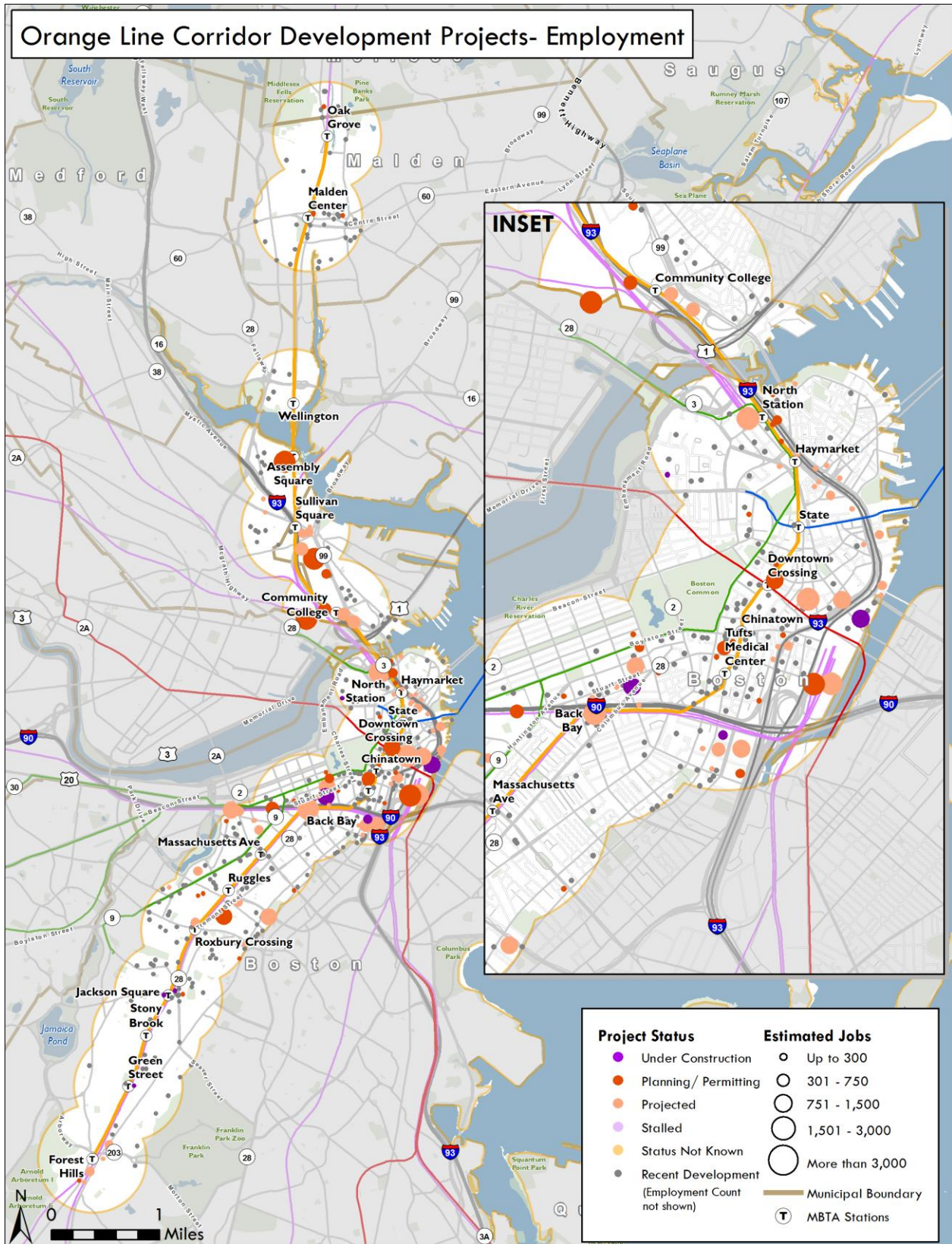
Orange Line Corridor Development Projects by Completion Year

| STATION AREA | 2000-2012 | | | 2012-2020 | | | 2020-2035 | | | Not Known | | |
|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|
| | Project Count | Housing Units | Jobs | Project Count | Housing Units | Jobs | Project Count | Housing Units | Jobs | Project Count | Housing Units | Jobs |
| FOREST HILLS | 1 | 62 | - | 2 | 29 | 99 | 4 | 415 | 1,193 | 2 | 42 | - |
| GREEN STREET | 5 | 72 | 24 | 2 | 44 | 8 | - | - | - | 1 | - | - |
| STONY BROOK | 4 | 56 | 85 | - | - | - | - | - | - | 1 | - | - |
| JACKSON SQUARE | 8 | 321 | - | 8 | 789 | 65 | - | - | - | 13 | 24 | - |
| ROXBURY CROSSING | 8 | 58 | 780 | 5 | 499 | - | 4 | 378 | 804 | 9 | 40 | 190 |
| RUGGLES | 11 | 596 | 851 | 3 | 57 | 553 | 6 | 502 | 4,069 | 9 | - | 85 |
| MASSACHUSETTS AVE | 6 | 25 | 7 | 4 | 105 | 58 | 7 | 1,380 | 3,650 | 8 | 748 | 3 |
| BACK BAY | 19 | 662 | 3,213 | 6 | 299 | 3,841 | 5 | 1,993 | 5,853 | 7 | 515 | 4,060 |
| TUFTS MEDICAL CENTER | 10 | 521 | 649 | 5 | 890 | 436 | 8 | 2,155 | 3,694 | 13 | 971 | 11 |
| CHINATOWN | 14 | 297 | 767 | 7 | 952 | 4,528 | 6 | 1,700 | 5,745 | 5 | - | 377 |
| DOWNTOWN CROSSING | 11 | 263 | 8,548 | 2 | 140 | 4,294 | 5 | 503 | 5,896 | 5 | - | - |
| STATE | 5 | - | 1,522 | 1 | - | 151 | 6 | 242 | 1,341 | 4 | - | - |
| HAYMARKET | 4 | 103 | 195 | 2 | 63 | - | 9 | 1,255 | 446 | 1 | - | - |
| NORTH STATION | 9 | 571 | 2,775 | 4 | 883 | 115 | 4 | 681 | 7,640 | 3 | - | - |
| COMMUNITY COLLEGE | 2 | 60 | 386 | 3 | 108 | 985 | 4 | 3,089 | 6,995 | 5 | 17 | - |
| SULLIVAN SQUARE | 7 | 200 | - | 2 | 6 | 50 | 9 | 1,006 | 5,878 | - | - | - |
| ASSEMBLY SQUARE | 2 | 450 | 234 | 6 | 2,598 | 6,191 | - | - | - | 1 | - | - |
| WELLINGTON | 3 | 742 | 143 | 1 | - | - | - | - | - | - | - | - |
| MAIDEN CENTER | 13 | 323 | 776 | 3 | 383 | 76 | - | - | - | 15 | 301 | - |
| OAK GROVE | 3 | 850 | 17 | - | - | - | 1 | 250 | 141 | 8 | - | - |
| TOTAL | 145 | 6,232 | 20,972 | 65 | 7,300 | 21,380 | 77 | 15,549 | 53,344 | 110 | 2,658 | 4,726 |

Orange Line Corridor Development Projects – Housing Units by Project Status



Orange Line Corridor Development Projects – Estimated Jobs



References

- ⁱ Marx, Walter H. “Orange Line Memories” and “Orange Line Replaced Old Railroad Embankment”. Jamaica Plain Historical Society. Sources: <http://www.jphs.org/transportation/orange-line-memories.html> and <http://www.jphs.org/transportation/orange-line-replaced-old-railroad-embankment.html>
- ⁱⁱ Southwest Corridor Park Conservancy website, 2012. A brief history of the Southwest Corridor Park. Source: <http://www.swcpc.org/pmac.htm>
- ⁱⁱⁱ Southwest Corridor Park Conservancy website, 2012.
- ^{iv} Mann, Roy. 1991. Boston’s Southwest Corridor: From Urban Battleground to Paths of Peace. Places Journal, 7(3), UC Berkeley. Source: <http://escholarship.org/uc/item/7kj609x0>
- ^v Metropolitan Area Planning Council. 2012. *Growing Station Areas: The Variety and Potential of Transit-Oriented Development in Metro Boston*. Source: <http://www.mapc.org/tod>
- ^{vi} The Boston Globe. 2012. MBTA Ridership Hits New Record Topping Million Rides. <http://bostonglobe.com/metro/2012/07/31/mbta-ridership-hits-new-record-topping-million-rides/TJ3eyz6XwA8V7uaxFUkxAM/story.html>
- ^{vii} Walk Score. 2012. Source: <http://www.walkscore.com/>
- ^{viii} Bike to the Sea website. 2012. Source: <http://www.biketothesea.com>
- ^{ix} Metropolitan Area Planning Council. 2012. Regional Growth Projections. Source: <http://mapc.org/data-services/available-data/projections>
- ^x Boston Metropolitan Planning Organization. 2011. *Long Range Transportation Plan: Paths to a Sustainable Region*. Source: http://www.ctps.org/bostonmpo/3_programs/1_transportation_plan/plan/2035_LRTP_Chapter3_9.11.pdf
- ^{xi} Pollack, Stephanie. June 2012. *Hub and Spoke: Core Transit Congestion and the Future of Transit and Development in Greater Boston*. Northeastern University: Dukakis Center for Urban and Regional Policy. Source: <http://nuweb9.neu.edu/dukakiscenter/wp-content/uploads/Final-Hub-and-Spoke-Report.pdf>
- ^{xii} Massachusetts Department of Transportation. 2012. *Casey Arborway Project Planning and Concept Design Study – Final Report*. Source: http://www.massdot.state.ma.us/Portals/24/docs/FinalReport_031212.pdf
- ^{xiii} MassHousing website. 2013. Massachusetts Affordable Housing Trust Fund. Source: https://www.masshousing.com/portal/server.pt/community/affordable_housing_trust_fund/208