

CHAPTER 2: EXISTING CONDITIONS

Introduction

This chapter presents an overview of the existing conditions within the study area, and beyond, for the Grounding McGrath study. This comprehensive picture of the varying components of the study area reflects the current and evolving conditions that influence the McGrath corridor. As described in Chapter 1, there were many factors considered in developing future alternatives for the McGrath corridor. The study began with a thorough examination of existing conditions such as regional traffic flows, local pedestrian and bicycle connections, public transit access, consistency with local plans, and the ability to spur economic development. This allowed key opportunities and issues to be identified that informed the analysis described in subsequent chapters.

Before the effects of any future alternative could be evaluated relative to study evaluation criteria, the first major step was to first understand the McGrath corridor and larger study area as they exist today. This chapter establishes, by category, an analysis of base (2011) year conditions to be used as a benchmark from which future conditions can be established and evaluated, and are presented in the categories described below:

McGrath Corridor - The physical characteristics of the corridor including the structures, roads, intersections, pedestrian, bicycle and public transportation infrastructure.

Demographics and Land Use - Population, employment, zoning and development analysis including recent trends.

Environmental Conditions - Description of environmental factors and conditions, including open space, wetlands, air quality and other factors, as needed.

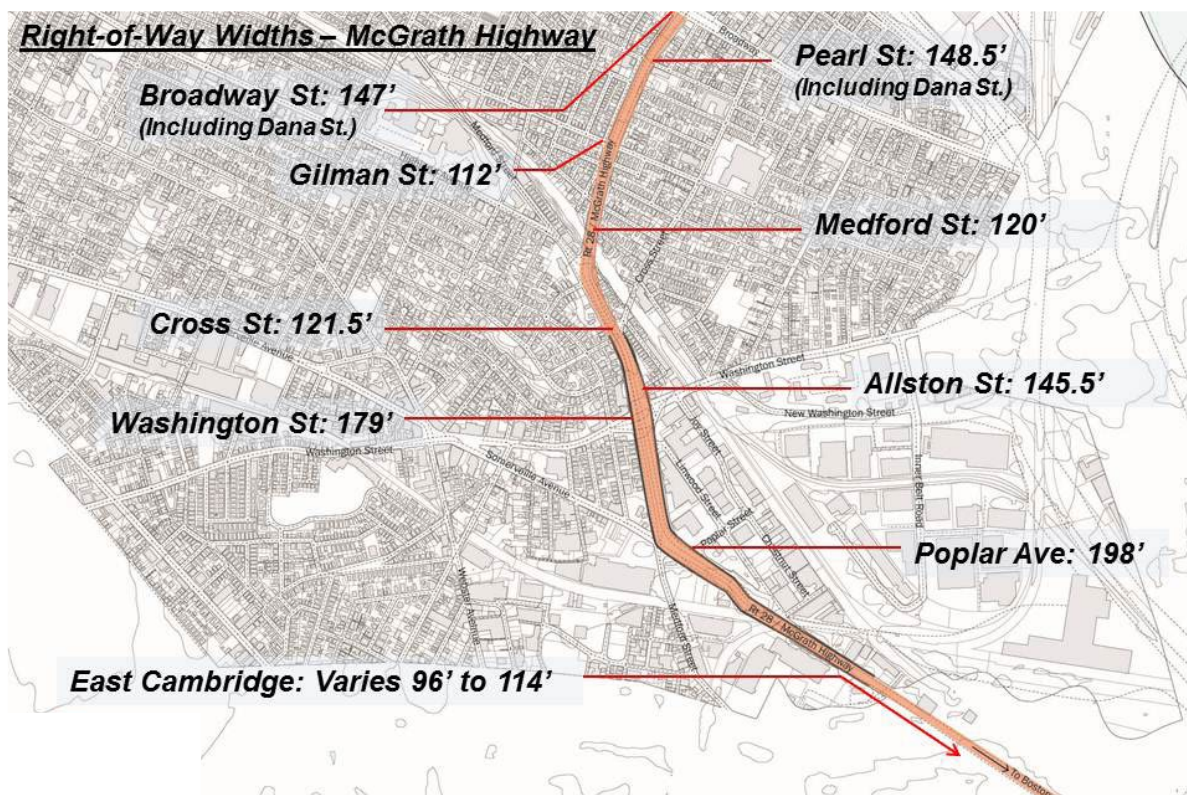


Figure 2-1: Right of Way Widths - McGrath Corridor

Current Transportation Utilization - Compilation of existing transportation utilization and analysis, including multi-modal volumes, levels of service, and crash data.

In establishing a comprehensive picture of the study area, data was compiled from a range of sources, including data directly collected through this study. Data sources are local and/or regional, depending on the category and level of detail necessary, and are generally cited either within the text or in the appendices included at the end of this study.

Moreover, through the interdisciplinary Existing Conditions analysis, the Grounding McGrath study identified the critical issues and opportunities that will drive the development of alternatives, and form the quantitative basis upon which to measure the alternatives to the Goals and Objectives. These issues and opportunities are presented at the end of the

chapter and represent a distilled version of the larger trends, immediate needs, overall constraints and/or driving forces that were accounted for in the alternatives development and analysis tasks.

McGrath Corridor

The character and design of the McGrath corridor varies significantly throughout the study area. The overall right-of-way, now owned by MassDOT, ranges from 96 feet wide in parts of Cambridge, to almost 200 feet wide at the bend at Poplar Street in Somerville. Additionally, the McGrath corridor width varies as needed to include the elevated structures, their supports, and the access ramps. Within the right-of-way, MassDOT owns all of the at-grade roadways, associated sidewalks, and traffic signals. Figure 2-1 shows the corridor, and the right-of-way width at several locations.

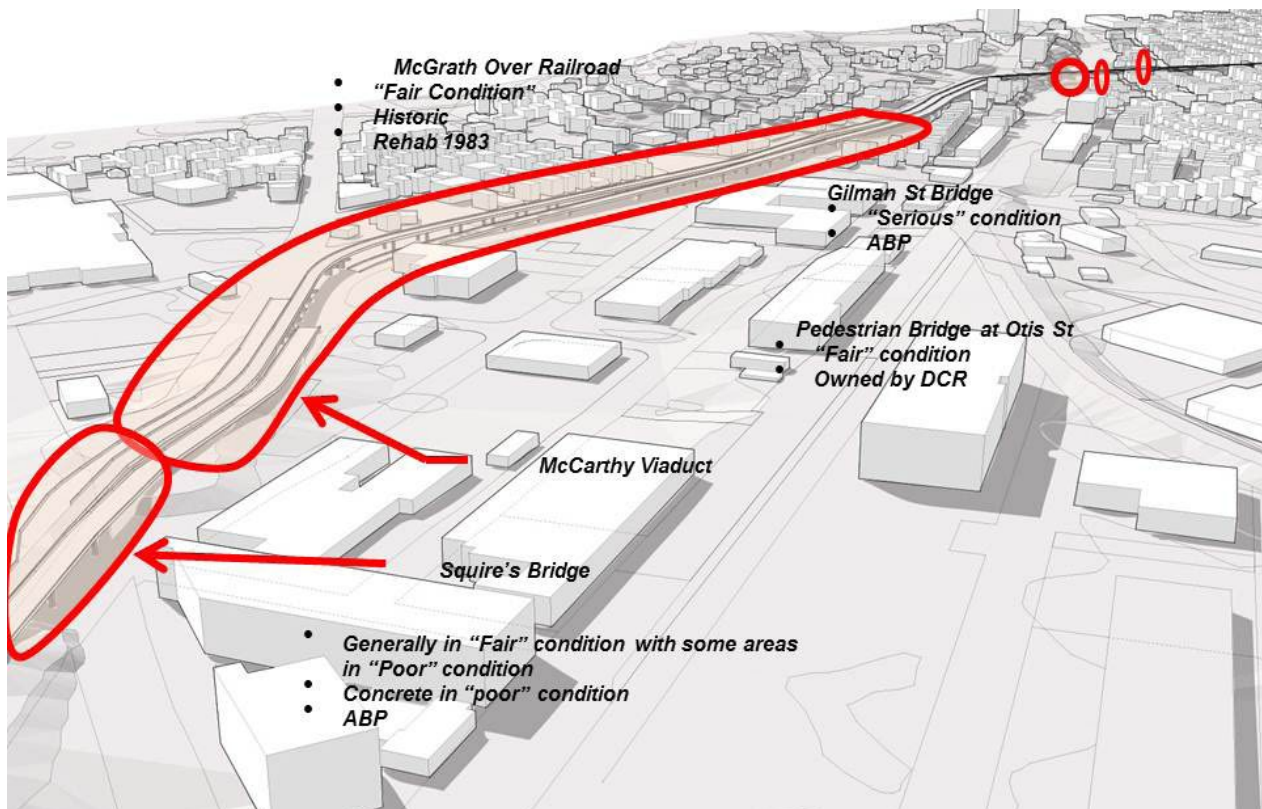
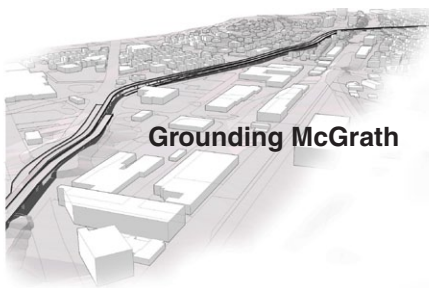


Figure 2-2: Key Structures



Consistent with Federal Highway Administration (FHWA) guidelines, MassDOT identifies a functional classification for various roadways as part of the Highway Performance Monitoring System. The functional classification of a roadway refers to the general character of a roadway and the type of service and access that it is intended to provide. Functional classifications include arterial, collector, and local roadways.

MassDOT Planning developed a function classification system with the same three general categories in 1993, in cooperation with the Metropolitan Planning Organizations (MPOs) and in accordance with Section 1006(c) of the Intermodal Surface Transportation Efficiency Act.¹ The main difference between the FHWA and MassDOT classification systems are that the FHWA system separates the interstates and local roadways into urban and rural designations and classifies limited access arterials (non-Interstates) separately from full-access arterials.²

As described in Chapter 1, Massachusetts State Route 28 within the McGrath study area is classified by MassDOT as an “other freeway”, and also classified as “Other NHS Route” within the National Highway System (NHS) by the Federal Highway Administration.³

Structures

Although there may be a perception that the McGrath corridor consists of a monolithic structure, in reality the McGrath corridor is comprised of five key structures, as shown in Figure 2-2. The McCarthy Viaduct, McGrath Over the Railroad (Lowell Line Bridge), Gilman Street Bridge, and Squire’s Bridge were all part of the recent transfer of the corridor to MassDOT, while the Otis Street pedestrian bridge is still owned by the Department

of Conservation and Recreation (DCR). All of these structures are located in Somerville.

Two of the five structures were identified for repairs or replacement under MassDOT’s Accelerated Bridge Program (ABP). The Gilman Street Bridge is currently being designed for replacement and the McCarthy Viaduct is currently undergoing short-term repairs and rehabilitation. The other three structures typically exhibit isolated areas of deterioration, but do not currently require any repairs in the short term. Based on regular physical inspection, MassDOT has given these three structures condition ratings by MassDOT inspection of *Fair* or *Satisfactory*. Conditions ratings are descriptors defined by the FHWA to determine the condition of a structure as follows:

- Fair is defined as “All primary structural elements are sound but may have minor section loss, cracking, spalling and scour”.
- Satisfactory is defined as “Structural elements show some minor deterioration.”

For additional detail, the actual Bridge Inspection reports are included in Appendix B.

Squire’s Bridge

The Squire’s Bridge was constructed in 1958 and rehabilitated in 1983. It is the southeastern most structure in the study area, and is comprised of three travel lanes, and a narrow sidewalk on each side of the guardrail-divided roadway. This elevated structure carries the McGrath corridor at an angle across the MBTA’s Fitchburg Commuter Rail Line (see Figure 2-3). The proposed Green Line Extension (GLX) to Union Square is also being designed to use the Fitchburg Line right-of-way and travel under the Squire’s Bridge. As it crosses active commuter rail lines, the Squire’s Bridge cannot be brought to grade because MassDOT would not seek to create a new railroad grade crossing, especially one with frequent high-speed commuter rail traffic.

Furthermore, the Squire’s Bridge must meet MBTA clearance requirements, and cannot be lowered. Along with the bridge over the Lowell Line (see below), it represents one of the “fixed points” in the study area; these structures are not being considered for

1 <http://www.massdot.state.ma.us/planning/Main/MapsDataandReports/Maps/FunctionalClassification.aspx>

2 <http://www.massdot.state.ma.us/planning/Main/MapsDataandReports/Maps/FederalFunctionalClassification.aspx>

3 <http://services.massdot.state.ma.us/maptemplate/roadinventory>



Figure 2-3 : Squire's Bridge (S-17-024) - Looking West Along the Fitchburg Commuter Rail Line

reconstruction or reconfiguration, since addressing the clearance requirements would require a much more complex and expensive solution such as raising the bridge or tunneling, or changes to the GLX already in advanced design.

The bridge is in “fair” condition, with isolated problem areas along the steel beams and concrete piers. There is rusting at the deck joints, and spalls and cracks in the concrete piers and abutments.

McCarthy Viaduct

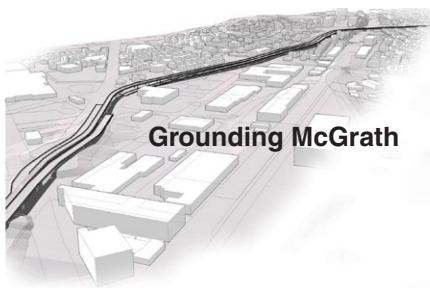
The McCarthy Viaduct, built in 1951, is the longest segment structure in the McGrath corridor. The elevated overpass carries two lanes of traffic in each direction along the corridor, beginning at the Highland Avenue/ Medford Street intersection. In the southbound direction, the structure continues and connects to the Squire's Bridge, with two off ramps – one to Washington Street and the other to Somerville Avenue. In the northbound direction, the structure begins after a short at-grade section at Poplar Street, and serves primarily to provide an unimpeded, grade-separated “flyover” movement over Washington Street. There are no sidewalks on the McCarthy Viaduct itself, and pedestrians are not allowed on the structure. There are no dedicated bicycle facilities.



Figure 2-4 : McCarthy Viaduct (S-17-039) View of McGrath along at-grade segment near Poplar Street



Figure 2-5 : McCarthy Viaduct (S-17-039) View of McGrath along at-grade segment at the Washington Street Intersection



The steel beams were given a “Fair” condition rating due to rusting at the deck joints and concrete was rated in “Poor” condition, due to spalls and exposed reinforcements. The steel and concrete repairs to the viaduct are currently underway as part of the ABP. See Figure 2-4 and Figure 2-5 for a view of the McCarthy Viaduct from Poplar Street and Washington Street.

McGrath over Railroad (Lowell Line Bridge)

The McGrath overpass over the Lowell Line is the oldest structural segment of the McGrath corridor (see Figure 2-6). This historic bridge was first built in 1908 and was rehabilitated in 1983. The Lowell Line Bridge is just north of the McGrath corridor intersection with Medford Street and Chester Avenue. The bridge is at a higher overall elevation than the McCarthy Viaduct because the topography in this area builds towards Prospect Hill.

The Lowell Line Bridge carries three lanes of traffic in each direction, separated by a median. Narrow sidewalks exist on both sides of the bridge, separated from the roadway by the bridge structure itself. The Lowell Line Bridge carries the entire McGrath corridor over the MBTA's Lowell Commuter Rail Line. This rail corridor is the planned route of the main trunk of the GLX, and will also incorporate the Somerville Community Path discussed later in this chapter. As with the Squire's



Figure 2-7 : Gilman Street Bridge (S-17-025) - Looking West Along Gilman Street



Figure 2-6 : McGrath over Railroad (S-17-022) - Looking North from Medford Street Intersection



Figure 2-8 : Pedestrian Bridge at Otis Street (S-17-041) - Looking South Along McGrath

Bridge, this structure represents a “fixed point” in that MBTA clearance requirements must be maintained, and addressing any changes would be complex, costly and disruptive to the GLX process.

The Lowell Line Bridge was given a “Fair Condition” rating, as primary structural elements are sound but may have minor section loss, cracking, spalling and scour.

Gilman Street Bridge

The Gilman Street Bridge was built in 1908 and rebuilt in 1926. It is located between the Pearl Street and Medford Street intersections, just north of the Lowell Line Bridge. This three-span bridge structure carries three approximately 12-foot wide lanes in each direction above Gilman Street, and includes a sidewalk on each side. The bridge tunnel underneath requires about 11' - 4" feet for minimum vertical clearance for vehicles along Gilman Street (see Figure 2-7). Sidewalks on either side of Gilman Street are narrow, but provide an important link connecting the neighborhoods on either side of the corridor.

The structure was rated in “Serious” condition, with extensive rusting and large cracks in the foundation. As noted previously, it will be replaced as part of the ABP. As of this writing, it is anticipated that bridge construction will start in the summer of 2014 and end in summer of 2016.

Pedestrian Bridge at Otis Street

The pedestrian bridge at Otis Street was constructed in 1964 and is still owned by DCR. This elevated footbridge spans across the McGrath corridor along Otis Street (see Figure 2-8). It was constructed as a passageway for pedestrians to provide separated walking access across the McGrath corridor, and is the only crossing in the quarter mile between Pearl Street and Broadway. The Otis Street pedestrian bridge is accessed via ramp structures on the east side of the McGrath corridor and on the west side of Dana Street. The bridge also provides an important link from East Somerville to the Otis Street Playground. The pedestrian bridge is comprised of a pre-stressed concrete deck.

The bridge was given a “Fair Condition” rating, as primary structural elements are sound but may have minor section loss, cracking, spalling and scour.

Existing Roadway

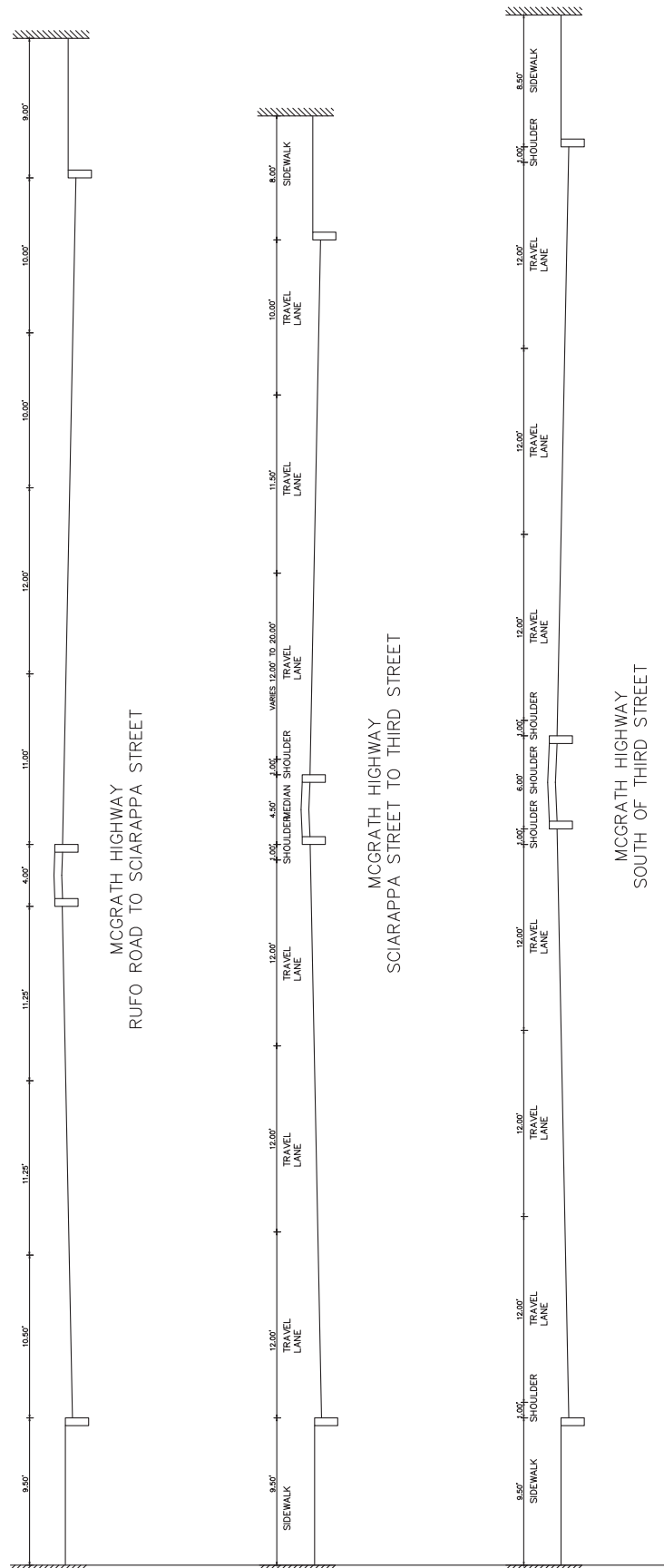
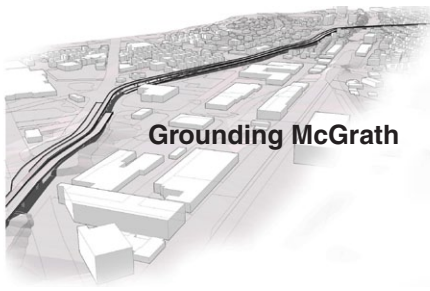
The McGrath corridor curves and changes direction within the study area. North of Poplar Street (in the vicinity of the Squire’s Bridge and the Inner Belt/Brickbottom area) the McGrath corridor is primarily a north-south roadway. South of this area, the McGrath corridor travels in a southeast to northwest direction. However, the roadway is predominantly north-south, and is described as a north-south roadway for the purposes of this report.

The existing roadway conditions also change along the corridor depending on access needs for local neighborhoods and whether or not the roadway is elevated. The elevated segments of the McGrath corridor, from the north at the Gilman Street Bridge to the southern point at the Squire’s Bridge, provide ramps that allow motor vehicles access to surface roads. The elevated portion of the McGrath corridor generally includes two travel lanes in each direction.

North and south of the elevated portion, the roadway is at-grade and provides access to a variety of land uses and neighborhoods. The existing roadway conditions in the northern segment of the corridor, north of the Lowell Line Bridge, accommodate three 12-foot travel lanes in each direction and a buffered median that divides both directions. Directly beside the McGrath corridor is a one-way residential street, which is separated by a divisional island. There is no bicycle accommodation, but there are two 10-foot sidewalks that outline the extent of the right-of-way. The existing at-grade sections of roadway provide travel lanes ranging from 10 to 12 feet wide, with medians that range from 4.5 feet to 8 feet wide. Sidewalks along at-grade sections of roadway range from 6 feet to 10-feet wide.

See Figure 2-9 for existing cross-sections at the following locations along the McGrath corridor:

- Between Pearl Street and Broadway
- Rufo Road to Sciarappa Street
- Sciarappa Street to Third Street
- South of Third Street



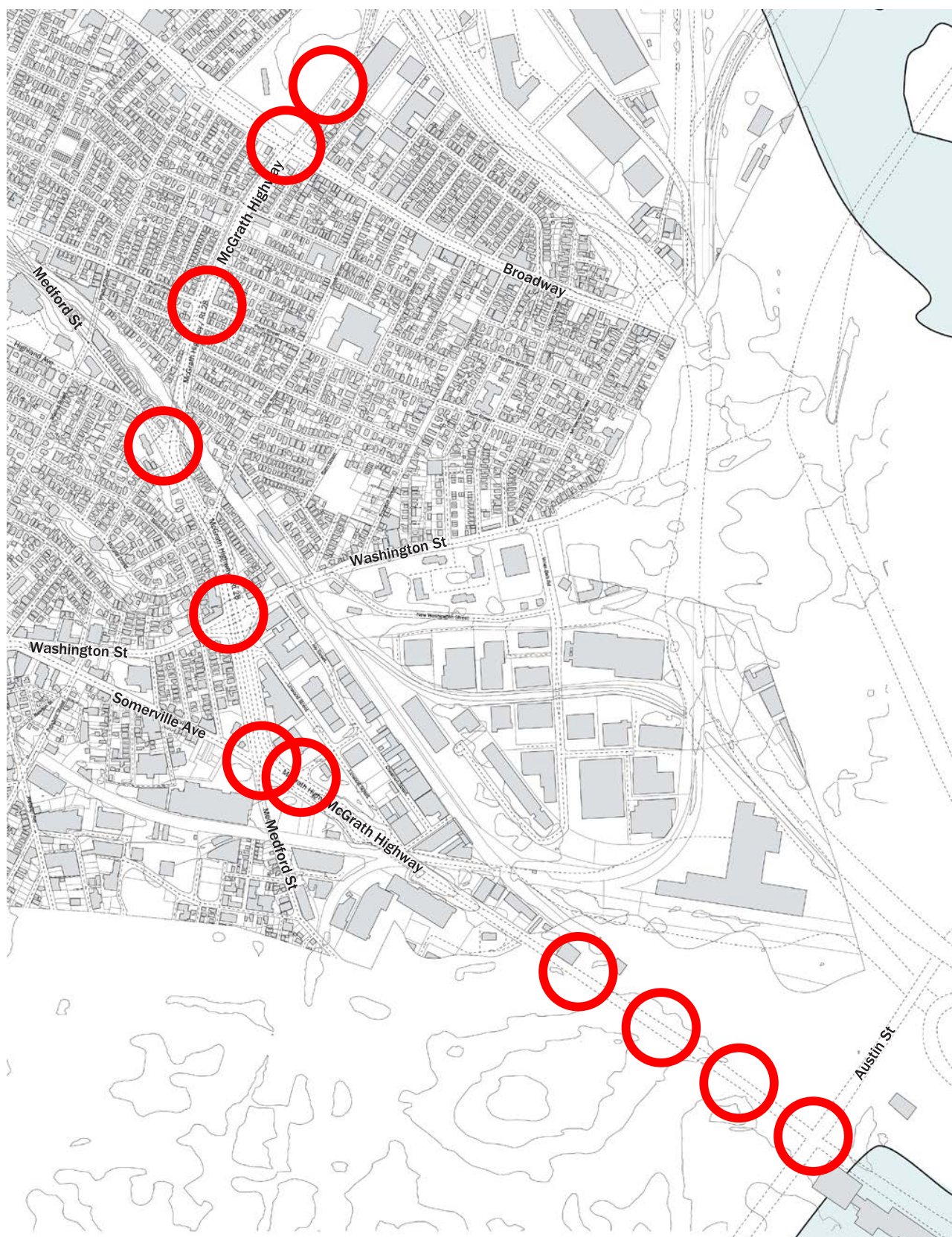
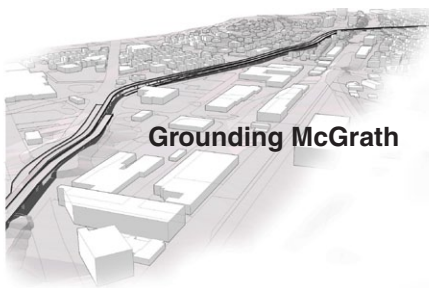


Figure 2-10 : Study Area Intersections



Intersections

As described in Chapter 1, the study area consists of the McGrath corridor from Broadway in Somerville to the north, to Land Boulevard in Cambridge to the south, and includes the following intersections as shown in Figure 2-10:

- Blakeley Avenue
- Broadway
- Pearl Street
- Medford Street/Highland Street
- Washington Street
- Poplar Street
- Somerville Avenue/Medford Street
- Rufo Road
- Third Street
- Cambridge Street/East Street
- Land Boulevard/Austin Street

Existing Intersection Geometry

The various roadway configurations at each of the study area intersections are depicted in Figure 2-11 and are described below in order from north to south.

Blakeley Avenue: Blakeley Avenue is located north of Broadway and provides access into the Super Stop and Shop Plaza and the adjacent residential neighborhood of East Somerville. The northbound McGrath corridor approach provides four travel lanes. Right-turns are permitted onto Blakeley Avenue. The southbound McGrath corridor approach provides three through lanes prohibiting left-turns and U-turns at the signalized intersection. The Blakeley Avenue approach has an exclusive left-turn lane and an exclusive right-turn lane. A pedestrian crosswalk is provided across Blakeley Avenue, but not across the McGrath corridor.

Broadway: Broadway is classified as an urban principal arterial to the east of the McGrath corridor and as an urban minor arterial west of the McGrath corridor. Broadway is signalized at its intersection with McGrath, providing protected signal phases for the McGrath corridor exclusive left-turn movements, split phasing for the Broadway movements, as well

as concurrent pedestrian phasing. The northbound and southbound intersection approaches provide an exclusive left-turn lane, two through lanes and a shared through/right-turn lane in each direction. The eastbound Broadway approach contains an exclusive left-turn lane, a shared left-turn/through lane, two through lanes and a right-turn lane. The westbound Broadway approach contains an exclusive left-turn lane, a shared left-turn/through lane, through lane and a channelized right-turn lane. Pedestrian crosswalks and median refuges are provided across each of the intersection approaches and channelized lanes.

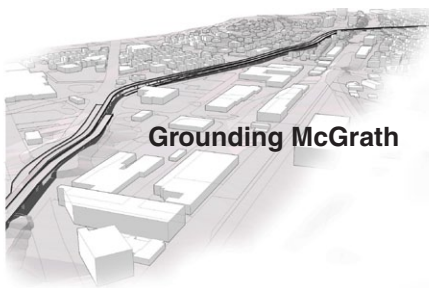
Pearl Street: Pearl Street is classified as an urban collector and intersects with the McGrath corridor north of the Gilman Street Bridge. The intersection of Pearl Street and the McGrath corridor is signalized and provides an exclusive pedestrian phase. The northbound and southbound McGrath corridor approaches provide an exclusive left-turn lane, two through lanes and a shared through/right-turn lane in each direction. The eastbound Pearl Street approach provides a shared left-turn/through lane and an exclusive right-turn lane. The westbound Pearl Street approach contains a single general purpose lane. Crosswalks are provided across each approach of the intersection.

Medford Street/Highland Avenue: Medford Street, an urban minor arterial, intersects with the McGrath corridor in a "T" intersection configuration, just east of the merge with Highland Avenue. Medford Street is signalized at its intersection with the McGrath corridor. The McGrath corridor northbound provides two-left turn lanes and three through lanes, and the southbound approach provides two through lanes and a shared through/right-turn lane. The Medford Street approach provides an exclusive left-turn lane and two right-turn lanes. Chester Avenue which is a one-way street under stop control also intersects the McGrath corridor at this location. Crosswalks are located across all of the approaches of the intersection and the traffic signal provides an exclusive pedestrian crossing phase.

Washington Street: Washington Street is classified as an urban principal arterial and provides access to Union Square to the west and to Sullivan Square and Interstate 93 to the east. Washington Street travels beneath



Figure 2-11: Intersection Geometry



the elevated portion of the McGrath corridor and intersects with its on- and off-ramps. The intersection of Washington Street and the McGrath corridor ramps is signalized. The configuration of the intersection of the McGrath corridor's ramps and Washington Street is complicated but each approach can be broken down into simpler roadway geometries:

- The northbound McGrath corridor off-ramp contains two travel lanes, which expand to two left-turn lanes, a through lane and a right-turn lane.
- The southbound McGrath off-ramp provides two travel lanes through the intersection providing full access to Washington Street as well as a U-turn to the McGrath corridor northbound.
- The eastbound Washington Street approach provides two left-turn lanes and three through lanes.
- The westbound Washington Street approach contains three general purpose lanes providing full access to the McGrath corridor and Washington Street.

Somerville Avenue/Medford Street: The signalized intersection of Somerville Avenue and Medford Street is located at-grade, west of Poplar Street, and provides access to and from the McGrath corridor southbound. Medford Street runs parallel to the elevated segment of the McGrath corridor. Somerville Avenue provides access to Union Square. Ramps to and from the elevated portion of the McGrath corridor southbound are also included in this signalized intersection. The northbound Medford Street approach provides a shared left-turn/through lane, a through lane and a channelized right-turn lane. Medford Street continues north within the Route 28 right-of-way as a tunnel section under Route 28, between Somerville Avenue and Washington Street. The southbound approach, combined from Medford Street and the McGrath corridor southbound off-ramp, provides two left-turn lanes, a through lane and a shared through/right-turn lane. The eastbound Somerville Avenue approach contains two general purpose lanes, providing full access to Medford Street and the McGrath corridor. Crosswalks are provided across the northbound Medford Street approach, the eastbound Somerville Avenue approach and the southbound McGrath corridor ramp approach.

Poplar Street: Poplar Street intersects with the at-grade northbound portion of the McGrath corridor and provides access into the Brickbottom area of Somerville. The intersection is a right-in/right-out stop-controlled intersection, with three through lanes on the McGrath corridor and a single approaching lane on Poplar Street. No crosswalks exist at this intersection.

Rufo Road: Rufo Road provides access to the Twin City Plaza, located southeast of the Squire's Bridge. This signalized intersection also provides access to a car wash and shopping plaza on the east side of The McGrath corridor. The northbound McGrath corridor approach provides an exclusive left-turn lane and three through lanes permitting right turns to the north. The southbound approach provides three through lanes and a channelized right-turn lane and prohibits left turns and U-turns to the north. The eastbound Rufo Road approach contains a right-turn lane and a left-turn lane providing full access to The McGrath corridor and the adjacent driveways. Crosswalks are provided on the northern leg and western leg of the signalized intersection.

Third Street: The intersection of the McGrath corridor and Third Street is a signal controlled "T" intersection located north of Cambridge Street, providing access to Kendall Square to the south. The northbound McGrath corridor approach contains a shared left/through lane and two through lanes, and the southbound approach contains two through lanes and a shared through/right-turn lane. The eastbound Third Street approach provides two travel lanes, an exclusive left-turn lane and a shared left-turn and right-turn lane. Crosswalks are located across the Third Street and northbound McGrath approaches to the intersection, and both exclusive and concurrent pedestrian phases are provided by the traffic signal.

Cambridge Street/East Street: South of Third Street is the signalized intersection of the McGrath corridor and Cambridge Street and East Street. Cambridge Street provides access into East Cambridge and East Street provides access into the NorthPoint development. The northbound McGrath corridor approach provides two exclusive left-turn lanes onto Cambridge Street, a through lane and a shared through/right-turn lane. The southbound McGrath corridor approach contains

an exclusive left-turn lane, three through lanes and an exclusive left-turn lane. Cambridge Street provides an exclusive left-turn lane, providing access to the McGrath corridor northbound and East Street, and two through lanes providing access to The McGrath corridor southbound. The westbound East Street approach provides a single general purpose lane and bike lane. Access to the bus terminal at Lechmere Station is also provided at this intersection. Crosswalks are located at each approach. The intersection of Cambridge Street and First Street is located approximately 250 feet west of the McGrath corridor and operates in coordination with the East Street intersection.

Land Boulevard/Austin Street: Land Boulevard and Austin Street intersect with the McGrath corridor at the southern end of the study area. Land Boulevard provides access to Kendall Square and Austin Street provides access to Charlestown. The northbound McGrath corridor approach provides an exclusive left-turn lane, two through lanes and an exclusive right turn lane. The southbound McGrath corridor approach contains an exclusive left-turn lane, three through lanes and a channelized right-turn lane. The eastbound Land Boulevard approach provides an exclusive left-turn lane, two through lanes and an exclusive right turn lane and the westbound Austin Street approach contains two general purpose lanes. The traffic signal provides concurrent pedestrian phasing and crosswalks are provided across all but the southbound Austin Street approach.

On-Street Parking

On-street parking is currently not permitted on the McGrath corridor itself. As shown in Figure 2-12, on-street parking within the study area is located only on the parallel surface roads, owned by the City of Somerville, along the west side of the McGrath corridor. Parking is provided on Dana Street, between Broadway and Pearl Street, and on Medford Street, slightly north of Prospect Hill Avenue to Somerville Avenue. Additional on-street parking as located on adjacent cross-streets, primarily serving local abutting land uses.

Pedestrian and Bicycle

Pedestrian and bicycle access across the McGrath corridor within the study area is very limited.

The current design of the roadway, with elevated structures allowing high speeds, does not give pedestrians and bicyclists many safe access points. Unmet pedestrian and bicycle desire lines include in particular east/west connections across the corridor. Examples provided by the Working Group for desirable connections include Somerville Avenue to and from Brickbottom, and Washington Street east and west of the McGrath corridor. These locations were also identified by Working Group members for bicycle access, in addition to improved access along the McGrath corridor between Broadway and the Medford Street/Highland Avenue intersection.

The ramps and bridges over and on the McGrath corridor are less than desirable and pose significant safety risks to travel on foot and by bicycle. Most importantly, the infrastructure is inconsistent: a pedestrian or cyclist can start a journey on one portion of the corridor, but is left stranded without a choice but to turn around and take an alternative route.

The bicycle and pedestrian accommodations, or lack thereof, on the McGrath corridor structures also present major challenges.

The McCarthy Viaduct and its connecting ramp structures provide no sidewalks or accommodations for cyclists. Although records indicate that bicycling on the viaduct is legal, it is certainly both uninviting and potentially unsafe. With unimpeded vehicle movements and a long stretch of elevated roadway, vehicles are invited to travel at higher speeds and do not expect to encounter cyclists. Those who do cycle have to use a small shoulder or the right travel lane amongst these higher-speed vehicles to use the viaduct. Thus, all non-motorized travelers are typically accommodated on the adjacent, parallel roadway.

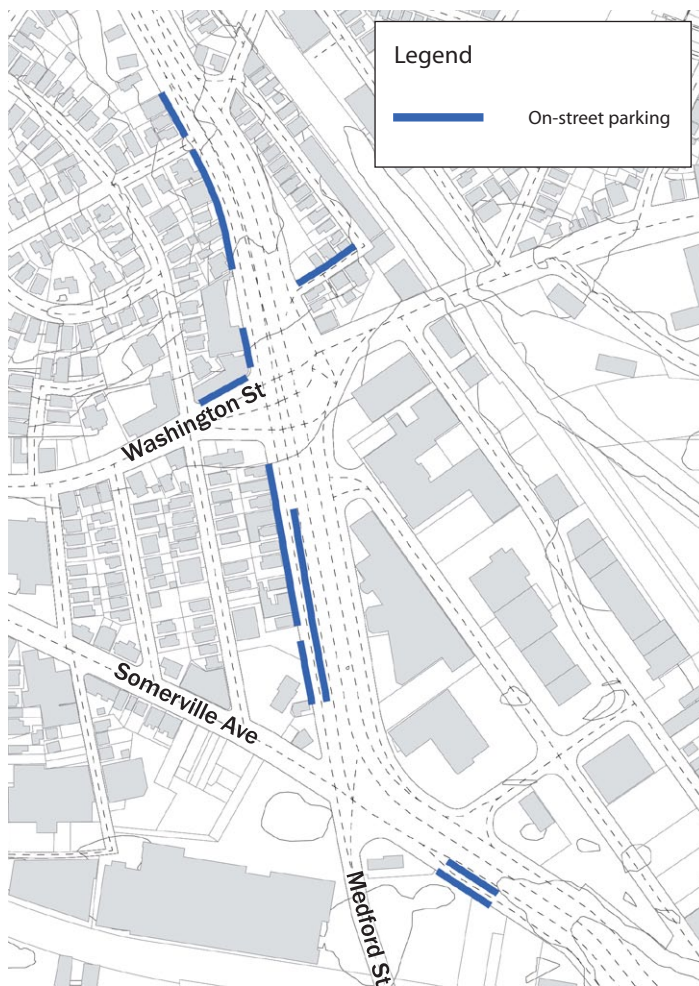
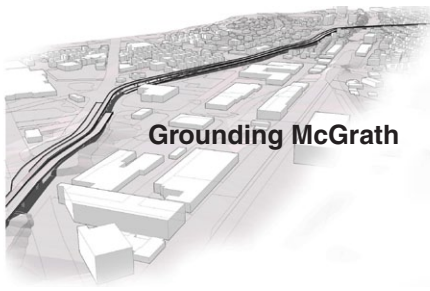
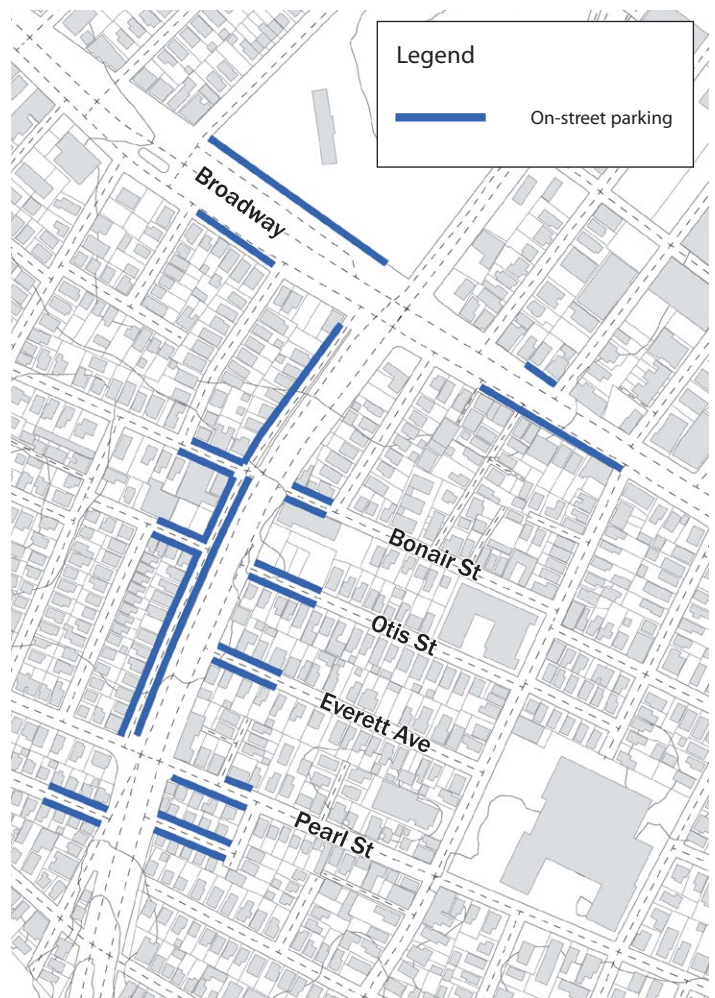


Figure 2-12 : On-Street Parking



Whether elevated or at-grade, the McGrath corridor physically, visually and functionally divides neighborhoods, separating Prospect Hill from East Somerville, and Brickbottom from Union Square. The lack of connectivity across and along the McGrath corridor creates accessibility, health, and safety issues for people who are walking and biking. Somerville is a dense city with many residential areas, especially around the McGrath corridor, and has been shown through the HIA study to exhibit higher levels of public health issues than the region as a whole. With limited access to needed amenities (parks, supermarkets) for improved health, this pedestrian barrier presents an ever more complex challenge. In fact, Somerville is so dense and compact that it does not offer school buses to its students, and thus students and parents without access to a vehicle must walk - exacerbating the impact of any pedestrian barriers.

The lack of pedestrian and bicycle infrastructure along the McGrath corridor may also contribute to discouraging investment in the building stock along the McGrath corridor. One of the prime motivations of the Grounding McGrath study has continually been to improve pedestrian and bicycle connections along and across the McGrath corridor. As Union Square revitalization continues, plans for the development of Brickbottom are formulated, and the GLX is implemented, connections along the McGrath corridor will only become more important to the future of these areas.

Sidewalks

Consistent with its densely populated and heavily urbanized context, the McGrath corridor generally has a comprehensive sidewalk network, albeit one that has significant shortcomings. Sidewalks are missing or broken in several areas, and in other places these facilities are too narrow or do not meet ADA accessibility standards. The sidewalks within the McGrath corridor are relatively narrow (about 4 to 8 feet wide), and they are generally immediately adjacent to the corridor's high-speed travel lanes, with no buffer.

Sidewalks are present along the surface segments of the McGrath corridor at the following locations:

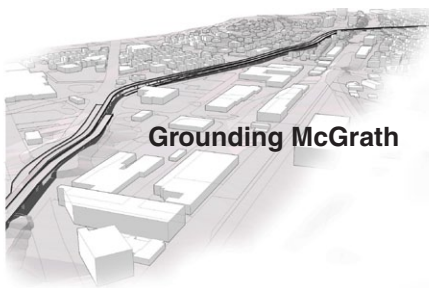
- Broadway and Washington Streets, both sides of the street, including on Gilman Street Bridge crossing the railroad tracks north of Medford Street.
- Medford Street, between Washington Street and Somerville Avenue.
- South of Somerville Avenue, both sides of the street, including Squire's Bridge. Sidewalks on the Squire's Bridge are separated from traffic by a barrier. Access to the Squire's Bridge is provided via ramps at Poplar Street, or by using staircases built into the bridge structure closer to the Fitchburg Line tracks at the Somerville Avenue extension.

Another issue in the study area is the number of curb cuts, particularly along the southern end of the McGrath corridor. Curb cuts expose pedestrians to traffic entering and exiting the roadway, causing more points of conflict and safety concerns. This is especially true for a high-speed corridor with no buffer between the travel lanes and the sidewalks.

Most of the side streets that connect to the McGrath corridor have sidewalks on both sides, including Broadway, Medford Street, Washington Street, and Somerville Avenue. However, few of these sidewalks connect across the McGrath corridor, providing only "T" intersections for pedestrians at many of these locations. Consequently, this prevents many pedestrians from crossing the McGrath corridor on trips that otherwise would be easily accomplished. Also, on these side streets, similar to the McGrath corridor, the quality of the sidewalks is generally low. Numerous curb cuts interrupt the sidewalks, including a curb cut over 200-feet long on Somerville Avenue, just to the west of the McGrath corridor.

Roadway Crossings

To cross over the McGrath corridor, pedestrians and cyclists must travel much longer distances than they otherwise would within typical Somerville city blocks. Crosswalks are at least 1,000 feet apart in many places along the McGrath corridor, as shown in Figure 2-13. In an urban area, a typical city block of about 300 feet is seen as desirable to foster connections, and allow for pedestrian mobility. Limiting block length is one of the



design principles for encouraging pedestrian connectivity. As seen in other parts of Somerville and Cambridge, older urban cities in the United States usually have block lengths less than 500 feet, and some communities are beginning to establish maximum block lengths for new development. The theory is that shorter blocks mean more intersections, which allows shorter travel distances and greater number of routes between locations.

At more than three times the recommended length of 300 feet, the crossings of McGrath are closer to a quarter mile apart. With the elevated structures, ramps and high traffic volumes, there are extremely limited opportunities to improve the crosswalk connectivity in the current configuration. The lack of connectivity makes the McGrath corridor a major barrier to access destinations by foot from one side to the other.

There are several major crossings (described from north to south along the corridor) that were observed in 2011 as part of the Grounding McGrath Study. MassDOT Highway District 4 responded to local concerns about the need to improve crossings, and installed pedestrian signals and crosswalks in several locations by 2012 (see Figure 2-14):

- At Broadway: This four-way intersection with raised medians on each leg makes crossing distances much shorter. Crosswalks are present at each crossing. The longest distance to cross is about 60 feet; the shortest is about 40 feet. Curb extensions (particularly on the west side of the intersection) substantially reduce the travel distance from

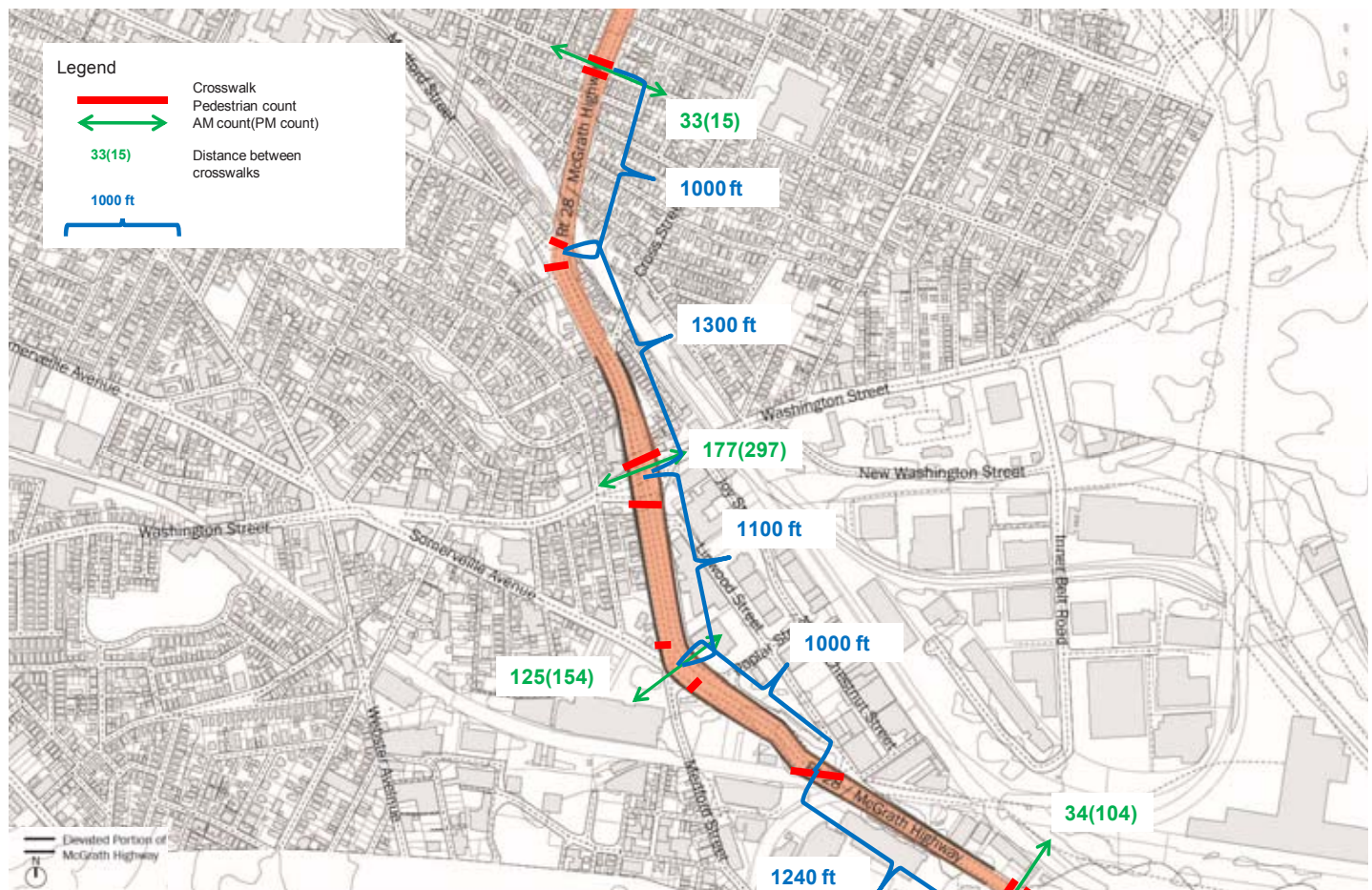


Figure 2-13 : Existing Crosswalk Length Measurements along McGrath

curb to curb. Curb extensions, or bulb outs, extend the sidewalk into the parking lane to narrow the roadway and provide additional pedestrian space at key locations. They can improve pedestrian safety by increasing pedestrian visibility to drivers, shorten crossing distance, and encourage drivers to slow down. Pedestrian signals are present, but do not have countdown timers. Pedestrian signals are concurrent with vehicular signals, meaning pedestrians receive a “walk” signal for the same direction as vehicles with a green signal.

- Between Bonair Street and Otis Street: A 200-foot long elevated pedestrian bridge crosses over the McGrath corridor and Dana Street, providing a direct connection for residents, customers to area businesses, and to the Otis Street Playground. The pedestrian bridge was likely constructed to improve pedestrian safety crossing the McGrath corridor. However, this is not ideal and an unfriendly way to cross the roadway, because the ramp structures are long, and the bridge deck can feel isolated from the

surrounding area given its height over the corridor and its over 100 foot length. Field observations note that it is not highly used.

- At Pearl Street: This four-way intersection has crosswalks at each leg, with an exclusive pedestrian signal phase (i.e., vehicles are stopped when pedestrians receive a “walk” signal). While narrow medians exist on the McGrath corridor between north and southbound traffic, the medians do not provide sufficient shelter to pedestrians, and the signals are currently designed for a pedestrian to make the crossing of approximately 90 feet of highway (six lanes of traffic and one turn lane) in a single move. Pearl Street is a much shorter crossing of about 50 feet.
- At Medford Street: This intersection design is more complicated and has wider turn radii for cars to navigate on and off of the McGrath corridor. Providing wider turn radii for vehicles generally creates longer crosswalks for pedestrians. Although crosswalks are present on each leg of



Figure 2-14 : MassDOT short-term pedestrian crossing improvements

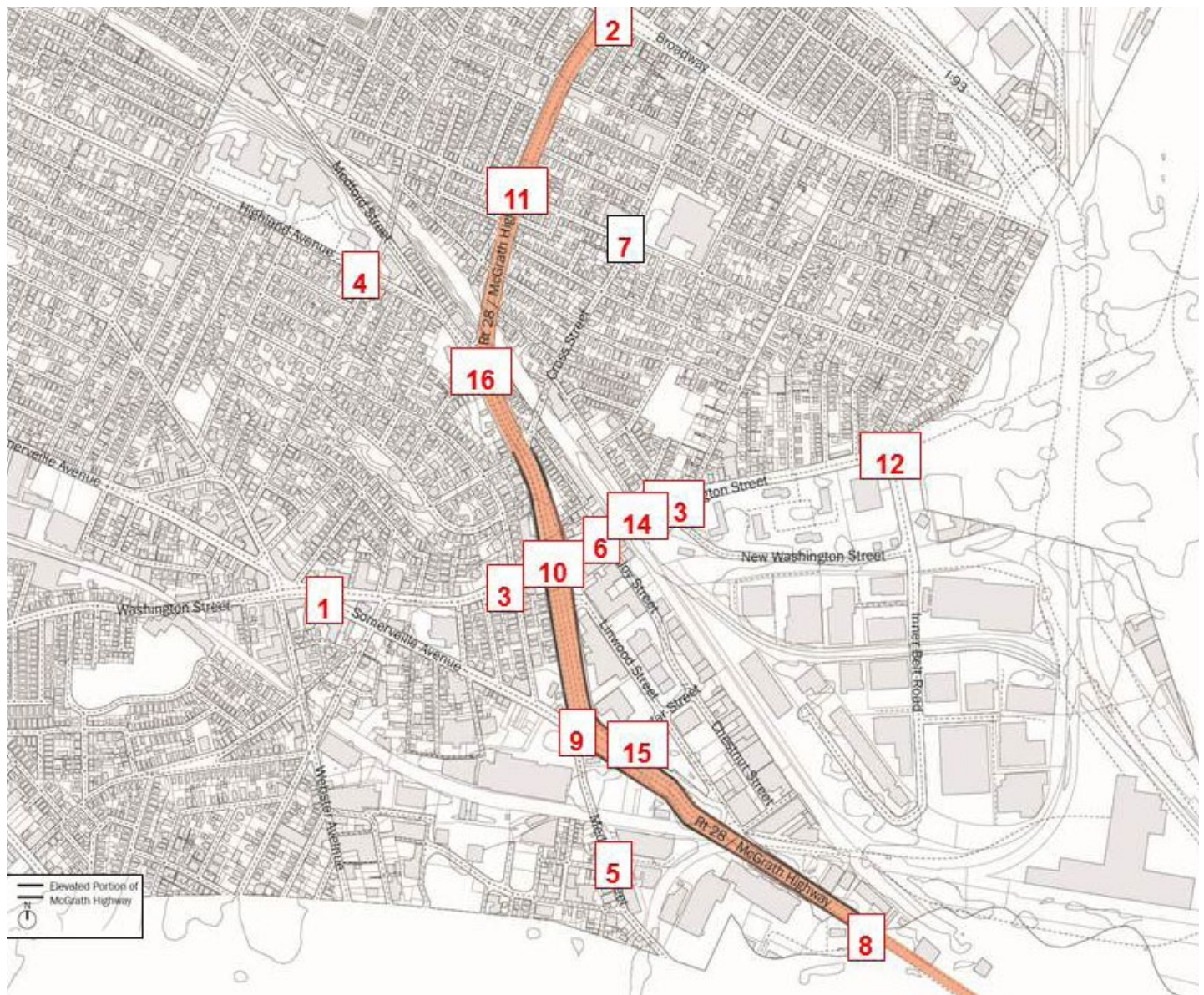
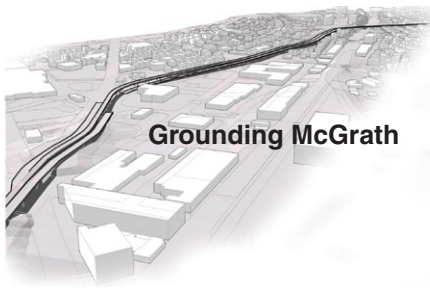
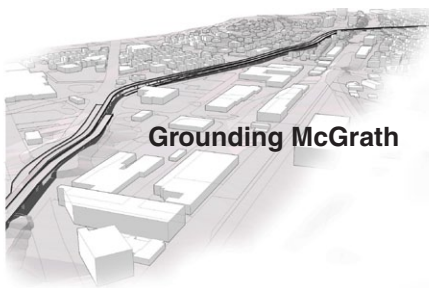


Figure 2-15 : Primary Crossing Locations



Figure 2-16 : Pedestrian Islands at Washington Street and At-grade McGrath Intersection



Grounding McGrath

the intersection, crossing distances range between 40 and 90 feet. A 7-foot median at Medford Street provides a pedestrian refuge; however, it is too narrow to provide a safe refuge place to break the crossing in two. In addition, an exclusive pedestrian signal phase is provided, encouraging pedestrians to cross both segments of McGrath during a single signal phase. Crossing the McGrath corridor south of Medford Street requires the pedestrian to traverse six lanes of traffic and two turning lanes. MassDOT District 4 recently upgraded the signal heads and restriped the crosswalks at this location in response to concerns from the public.

- At Washington Street: Although the McGrath corridor is elevated at Washington Street, the crossing is difficult due to complicated vehicle circulation and lane channelization, number of conflict points, multiple traffic signals, and many lanes of traffic. This intersection also experiences a higher number of pedestrians than other intersections in the McGrath corridor (See Figure 2-15), as it connects the Union Square and East Somerville neighborhoods. Navigating this intersection is confusing, with multiple “island” stops to get from one side to the other. The lack of pedestrian traffic signals and crosswalks adds to the confusion and delay in crossing. Figure 2-16 highlights the islands in red.

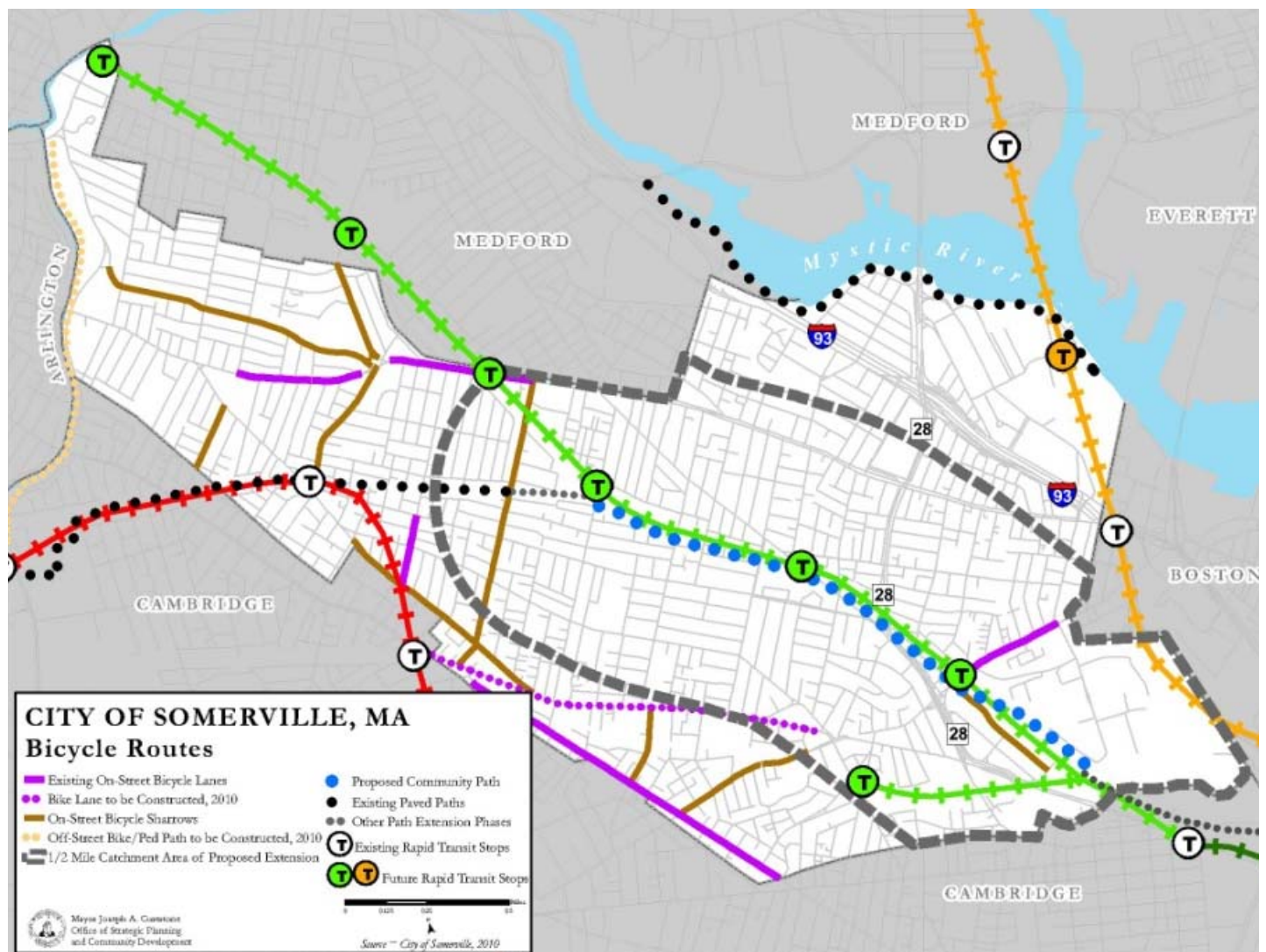


Figure 2-17 : City of Somerville Existing and Proposed Bicycle Facilities

- At Somerville Avenue: Pedestrians must navigate more than 200 feet of pavement to cross the McGrath corridor at Somerville Avenue. Crosswalks at the start of the Grounding McGrath project were faded and existed on only three legs of the intersection. A fourth crosswalk connects Somerville Avenue north to south about 180 feet to the east of the intersection. It should be noted that MassDOT has since improved this intersection with additional pedestrian crossing amenities.

Bicycle Lanes & Markings

The McGrath corridor currently has no bicycle lanes or markings. Although bicyclists are allowed on the McGrath corridor crossing the bridge, high traffic speeds, high traffic volumes, and a lack of specific accommodation make it challenging for even experienced cyclists. The vast majority of cyclists that use the study area roadways do not ride on the McGrath corridor itself, but rather ride on adjacent or crossing routes that have slower traffic speeds, dedicated bicycle lanes, and/or shared lane markings (“sharrows”) to indicate the presence of cyclists in the roadway. Cycling along the elevated portion of the corridor carries an additional risk associated with traveling on an elevated roadway with no bicycle lanes, shoulders or other features for the cyclist to use as an escape if forced out of the travel lane by traffic.

Overall, the opportunities for cycling to and across the McGrath corridor are limited, although some cross streets accommodate cyclists with bike lanes or shared lane markings sharrows and others have slower traffic and narrower roadways that are more amenable to cycling. Gilman Street is designated as a “bicycle friendly route”⁴ between Cross Street and Walnut Street. Washington Street has bicycle lanes between Tufts Street and Mount Vernon Street. To the south, Somerville Avenue has bicycle lanes from Union Square to Medford Street. Near Lechmere, Cambridge Street has bicycle lanes in East Cambridge and some sharrows over the Monsignor O’Brien Highway Bridge. Parallel roadways, Walnut Street and Cross Street, are designated as “bicycle friendly roads”. Walnut Street connects Broadway to Medford Street to Union Square. Cross

Street connects from Mystic Avenue to Washington Street via Tufts Street.

The Somerville Community Path currently reaches from Grove Street to Cedar Street in Somerville, and complements the Alewife Linear Park stretching from Davis Square to Alewife MBTA station in Cambridge. The future development section of this chapter provides details regarding the planned extension to the McGrath corridor.

Public Transportation

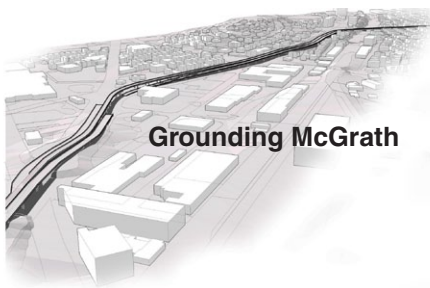
Buses

The McGrath corridor both carries and is crossed by a number of MBTA bus routes, which provide local service (see Figure 2-18). These bus routes connect the McGrath corridor to local and regional destinations, while also providing connections to Sullivan Square Station (connecting with the Orange Line) or Lechmere Station (connecting with the Green Line).

In the northern section of the study area, MBTA Routes 89 and 101 traverse Broadway in Somerville. Route 89 connects Sullivan Square and Davis Square or Clarendon Hill, while Route 101 traverses Winter Hill in Somerville to serve Medford Square and Malden Center, via Main Street, Salem Street and Pleasant Street.

Routes 80, and 88 serve the local Somerville neighborhoods north of Washington Street, and converge on the McGrath corridor in the vicinity of Medford/ Highland Street continuing to Lechmere. Route 80 parallels the McGrath corridor and the Green Line Extension, providing connections to West Medford and Arlington. Route 88 connects to Davis Square and Clarendon Hill, via Highland Avenue. Route 87 connects at Union Square along Somerville Ave and also continues to Lechmere; it also serves Davis Square and Arlington Center, via Somerville Avenue. Route 90, connects Davis Square and Sullivan Square, via Highland Avenue and travels only within the McGrath corridor to connect to Cross Street to access Broadway.

⁴ <http://www.somervillema.gov/sites/default/files/Somerville%20by%20bike%20tr.pdf>



Washington Street carries significant bus traffic, providing a direct link between Union Square and Sullivan Square. Routes 86 and 91, and CT-2 (providing limited stop weekday cross-town service) all converge in Union Square and provide parallel service across the McGrath corridor .

Table 2-1 shows the bus routes that directly serve the study area, and includes information on frequency and daily ridership.

Buses operate on the surface streets to the extent possible, and must use the Squire's Bridge and the Lowell Line Bridge. Buses do not use the McCarthy Viaduct. There are also numerous stops along the McGrath corridor, including some with a bus shelter. Stops on the routes that bisect the McGrath corridor using Broadway and Washington Street tend to be close to the McGrath corridor, to permit transfers between routes. However, the identified pedestrian access issues along the corridor may inhibit non-transfer uses of these bus stops. Union Square and the adjacent corridor neighborhoods all have direct service; while the Inner Belt and Brickbottom areas are served along the periphery of either Washington Street or the McGrath corridor.

Commuter Rail Lines

The Fitchburg and Lowell MBTA Commuter Rail Lines run through the study area, connecting North Station to and from the north. There are no commuter rail stations within the study area.

Table 2-1: McGrath Corridor Bus Route Headways and Ridership

Route	From	To	Via	Peak Frequency Headway (minutes)	Daily Ridership	Total Daily Ridership at stops within McGrath Corridor
80	Arlington Center	Lechmere	McGrath corridor	20	1,872	324
86	Sullivan Square	Cleveland Circle	Washington St	17	5,139	127
87	Clarendon Hill	Lechmere	O'Brien Highway	18	3,373	132
88	Clarendon Hill	Lechmere	O'Brien Highway	18	3,785	464
90	Davis Square	Wellington	Broadway	35	920	20
91	Sullivan Square	Central Square	Washington St	30	1,482	98
CT2	Sullivan Square	Kendall MIT	Washington St	23	857	170

MBTA Green Line

Green Line trolley service is provided from Boston starting from Government Center or Park Street stations, with service running westward on four branches or north to Lechmere station in East Cambridge at the southern end of the Grounding McGrath study area. As mentioned in Chapter 1, the planned MBTA Green Line Extension (GLX) will extend the Green Line north from a relocated Lechmere station to Union Square in Somerville and College Avenue in Medford. The Squire's Bridge and the Lowell Line Bridge carry the McGrath corridor over the

proposed GLX. The future development section of this chapter provides details regarding the planned extension within the McGrath corridor. The project has begun preliminary construction of initial improvements and is in the final design stage.

See Figure 2-18 for the existing and planned transit service.

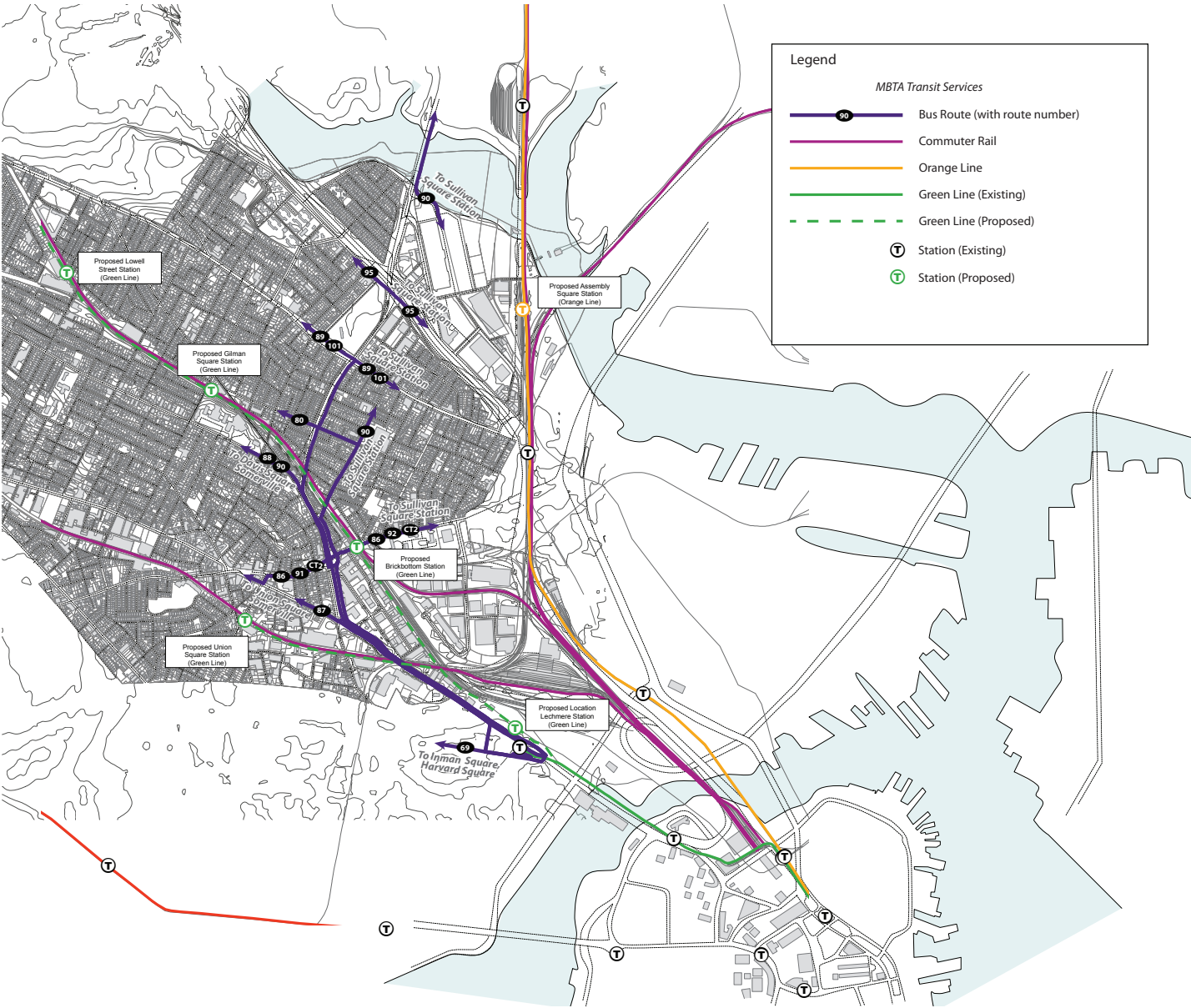


Figure 2-18 : Existing and Planned Transit Service in the McGrath Corridor

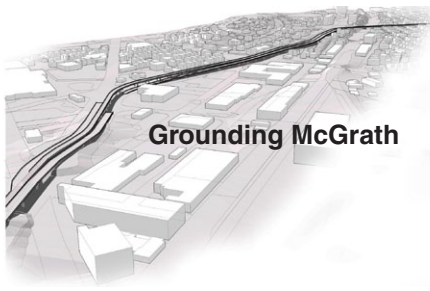
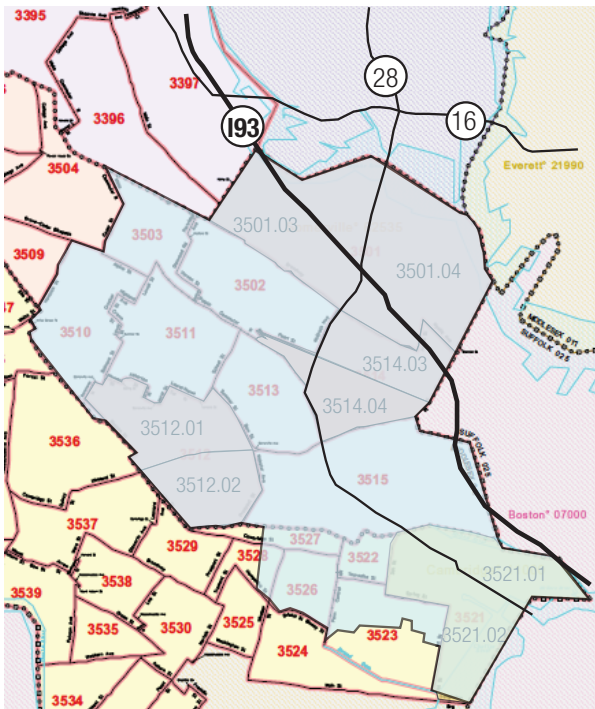
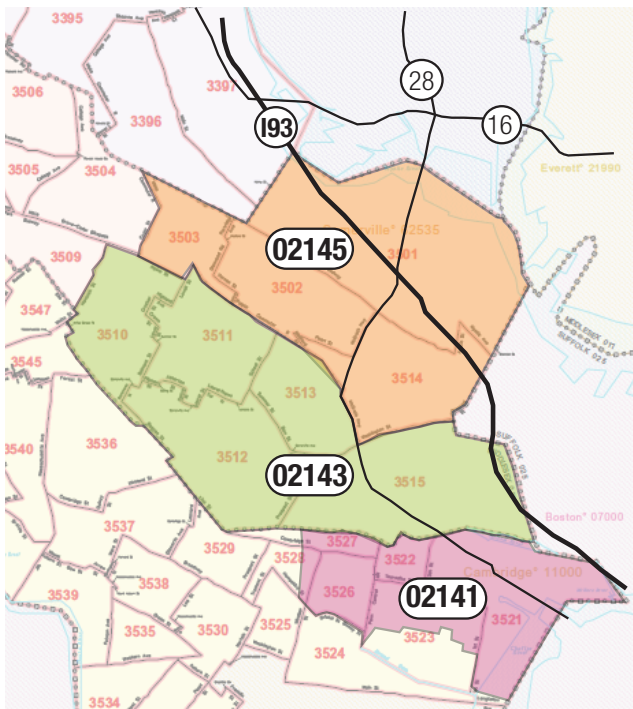


Figure 2-19 : Topography in the McGrath Corridor Study Area

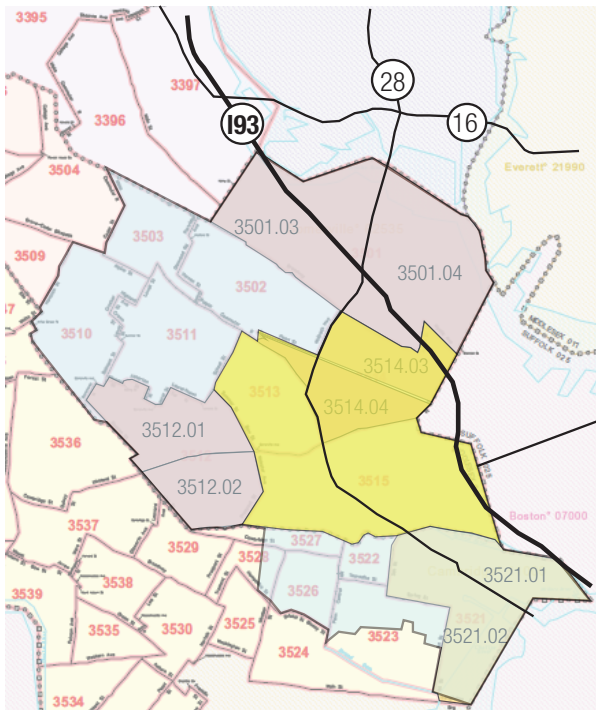
1. “Corridor Area” - Census Tracts for demographic info



2. Zip Codes for business info



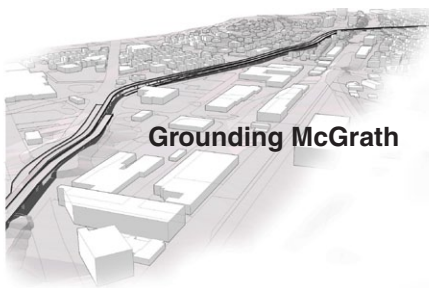
3. “Corridor” and “Focus Area” for demographics



City	Census Tracts		Zip Codes
	1990 - 2000	2010	
Somerville	3501	3501.03	02145
		3501.04	02145
	3502	3502	02145
	3503	3503	02145
	3511	3511	02143
	3512	3512.01	02143
		3512.02	02143
Focus Area	3513	3513	02143
	3514	3514.03	02145
		3514.04	02145
	3515	3515	02143
Cambridge	3521	3521.01	02141
		3521.02	02141
	3522	3522	02141
	3526	3526	02141
	3527	3527	02141

Map Source: 1990 U.S. Census

Figure 2-20 : Corridor Census Tracts, Figure 2-21 : Study Area Zip codes, Figure 2-22 : Focus Area for Demographics



Demographics and Land Use

The de-elevation of the McGrath corridor through Somerville and Cambridge presents an opportunity to benefit the local businesses and employers and serve a residential neighborhood growing in population, diversity, educational achievement, and housing ownership. The following analysis is intended to identify the underlying demographic and market attributes available to the City, property owners, residents, merchants, and the local development community.

For the purposes of this analysis, the McGrath study area is defined by 16 census tracts, 11 in Somerville and 5 in Cambridge (See Figure 2-20). This area is also covered by three zip codes: 02141, 02143, and 02145 (See Figure 2-21). The study area contains several neighborhoods, including Prospect Hill, East Somerville, Winter Hill, Ward Two, and parts of Industrial Park and the Inner Belt / Brickbottom district. In order to determine the closest and most appropriate area of impact of the de-elevation work, a smaller focus area has been defined, made up of four Somerville census tracts: 3513, 3514.03, 3514.04, and 3515 (See Figure 2-22). This focus area is defined by the Somerville/Cambridge border to the south, the Charlestown border to the east, Prospect, Summer, and School Streets to the west, and Pearl Street, Broadway, and Myrtle Avenues to the north. The population, housing, and business studies were conducted using the US Census, the American Community Survey, and the 2008 Economic Census. The market analysis was done based on recent sales and current listings on the online resources of Trulia and Zillow.

Population

Population in the McGrath corridor has grown slightly over the past 20 years and has been rapidly changing in terms of diversity.⁵ The census tract boundaries in the overall corridor (11 in Somerville and 5 in Cambridge)

⁵ Source: 1990, 2000, 2010 US Census; 2009 American Community Survey, 5-year estimate. Race and household information for 2000 and 2010 are referenced from the 2010 PL94 redistricting data

have changed slightly in their definition between the 1990 census and the 2010 census. Figure 2-23 shows the census tracts used for analysis with those in blue representing the larger study area, and those in red covering the focus area between the Lowell Line and Squire's bridges.

In 2010, the population of the study area was 56,560 residents, with 14,860 in the focus area alone. Between 1990 and 2010, the overall corridor population grew 3.6 percent, while the focus area grew by 4.1 percent. During this same period, Somerville lost 1 percent of its overall population, while Cambridge's overall population increased by 9 percent. Population in both the corridor and focus areas has been diversifying rapidly. The White population declined from 88 percent to 64 percent. The diversity has been spread amongst ethnic groups, with growth in the Black, Asian, and Hispanic populations in the area. The Hispanic population in particular has risen from 2 percent of the total population to 13.9 percent since 1990.

The population of people on both ends of the age spectrum has been declining as the numbers of the youngest (0-18 years old) and oldest (65 and older) residents have decreased. Meanwhile, working age cohorts of the population are growing. On a corridor basis, the educational attainment of the population has also shifted as residents with less than a high school diploma declined from 31 percent to 16 percent, and those population cohorts with a bachelor's degree or a graduate degree each increased by 65 percent. On an income basis, corridor median household income in was \$59,757 in 2010 – 100% of the state average.

A large portion of Somerville includes Environmental Justice (EJ) population areas designated by the Massachusetts Executive Office of Energy and Environmental Affairs based on factors related to household income and minority populations.⁶ For the purpose of this study, an EJ area is defined by the criteria in the Boston MPO's regional equity program (low income and minority population). The McGrath corridor bisects many EJ communities and neighborhoods,

⁶ <http://www.somervillema.gov/sites/default/files/documents/D%20Tran.%20%26%20Infra.%20Final.pdf>

Route 28 Corridor for Demographic, Economic Study

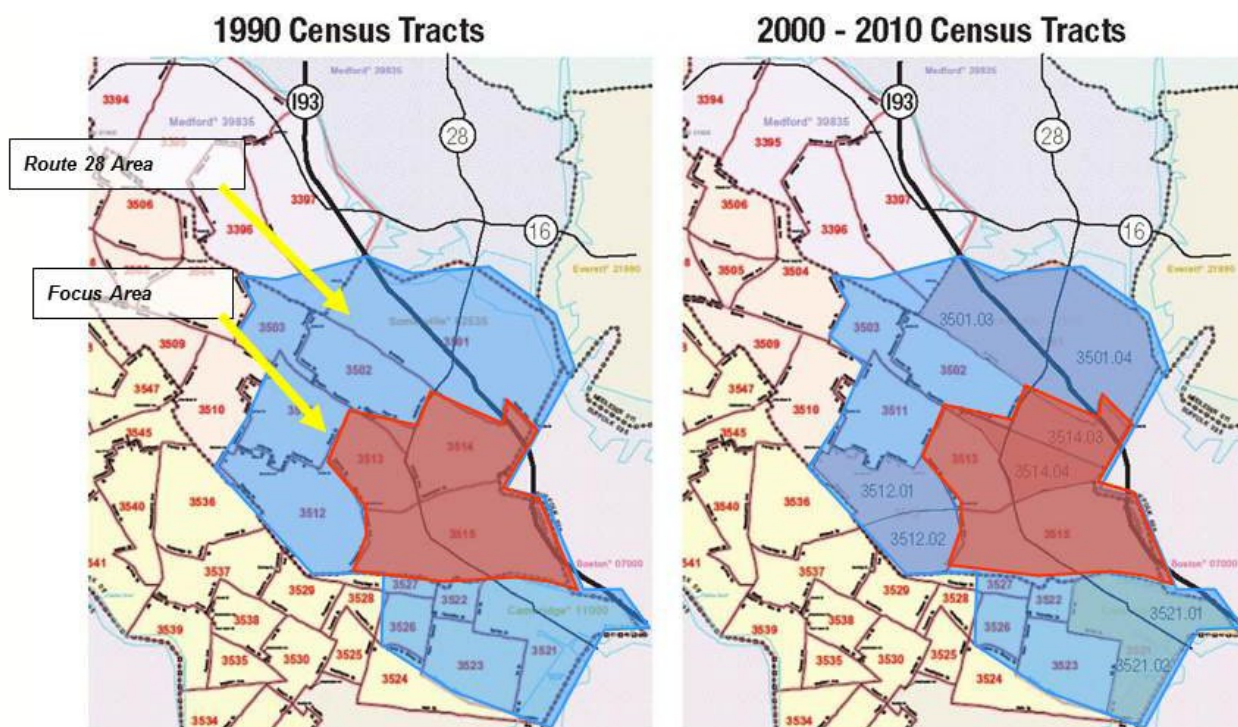
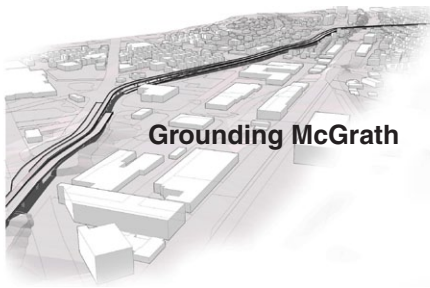


Figure 2-23 : Census Tracts Comparison 1990-2010



- 1,300 establishments
- 23,000 employees
- \$983 M in Payroll
- Business size clustered in 1-50 employee cohort (80% of firms in these cohorts)
- Concentrated in FIRE Sector

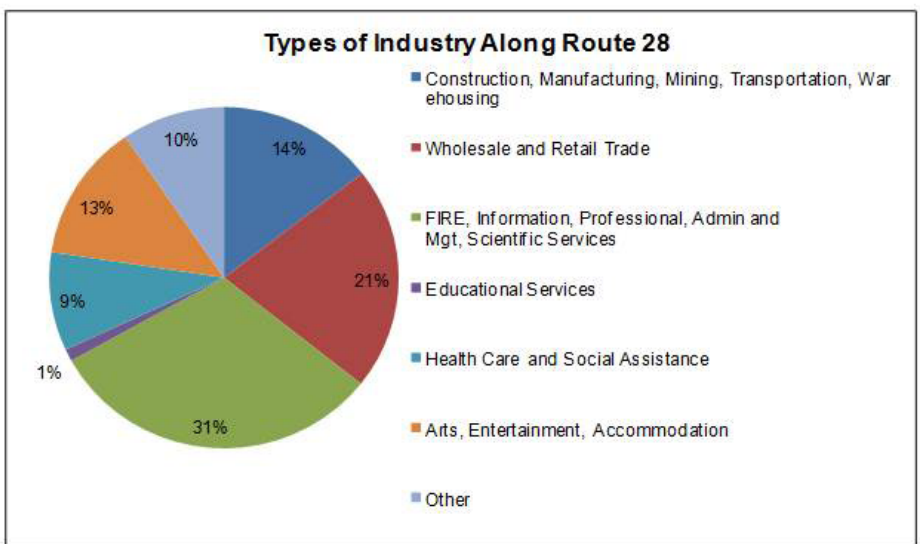


Figure 2-24 : Types of Industry Along the McGrath Corridor

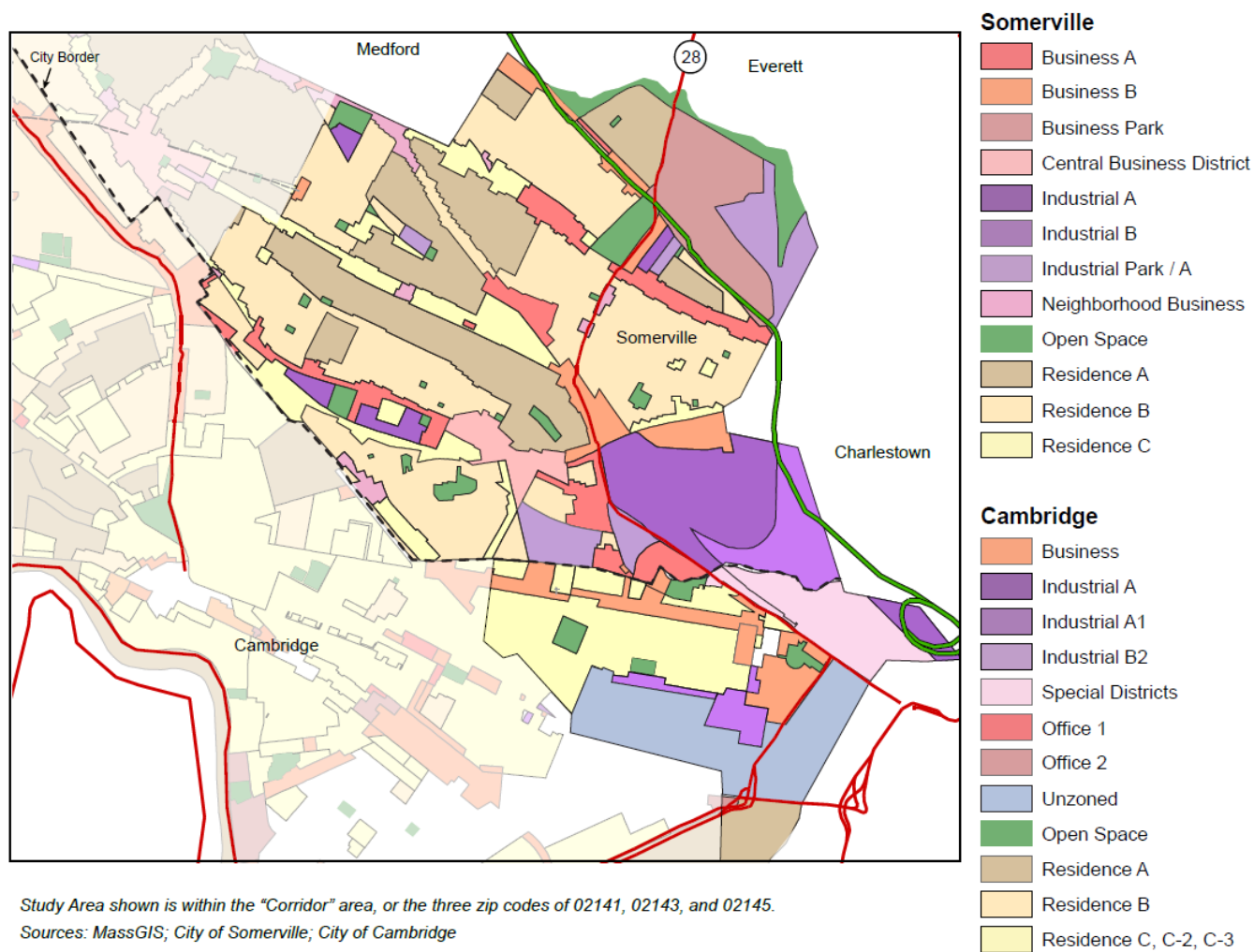
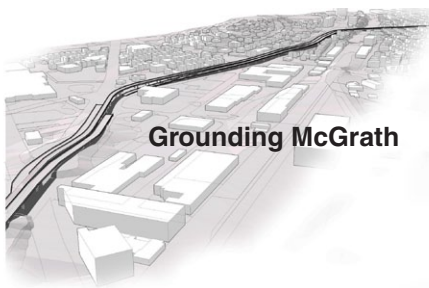


Figure 2-25 : Zoning Along the McGrath corridor



especially in East Somerville, affecting the quality of life of those who live near or directly adjacent to the elevated structure. This Grounding McGrath study includes a separate environmental justice analysis conducted by CTPS, described in Chapter 5 – Alternatives Analysis. The analysis takes into account air quality, mobility, and accessible factors and their effects on both the EJ and non-EJ populations adjacent to the corridor and prioritizes alternative scenarios based on the results of these ratings.

Land Use

Land use directly abutting the McGrath corridor varies, with single family homes, industrial uses, commercial properties and limited retail all fronting the corridor. There are two large retail developments along the corridor at Twin City Plaza in Cambridge and Target Plaza in Somerville.

The McGrath corridor also serves as the boundary between a number of Somerville's neighborhoods, which are principally residential with some local storefront retail. North of the Lowell Line Bridge, East Somerville begins at the McGrath corridor and continues to the Boston city line. Winter Hill meanwhile runs up to the west side of the McGrath corridor. Prospect Hill slopes down to the McGrath corridor south of the Lowell Line tracks and Highland Avenue. The Ward 2 neighborhood fills in the area around Union Square and runs up against the corridor.

Nearby Union Square is a neighborhood center with local shops, restaurants and other services. Washington Street has limited retail between the McGrath corridor and Sullivan Square. The adjacent Brickbottom area, between the McGrath corridor and the Lowell Line tracks is primarily industrial, although it does have the Brickbottom Lofts residential development. The Inner Belt area, located south of Washington Street between the Lowell Line tracks and I-93, is even more industrial, with larger parcels and industrial establishments. In Cambridge, the area around Lechmere Station is occupied by NorthPoint, a dense mixed-use development of residential, office, retail, and other uses that are

currently in the process of being built out on former industrial and rail property. To the west of NorthPoint is the Cambridgeside area, with retail and office uses, as well as the residential neighborhood of East Cambridge.

A review of the types of business establishments and industry along the McGrath corridor was completed as well. There are a total of over 1,300 commercial establishments in the study area that employ approximately 23,000 persons. The majority (80%) of the firms identified (over 1,000) employ between 1 and 50 people. In total, the 23,000 employees represent a cumulative annual payroll of \$983 million in the study area. The largest percentages of businesses are in the FIRE (Finance, Insurance, Real Estate) sector, with Figure 2-24 showing the type of industry in the study area by percentage.

Zoning

Current zoning along the McGrath corridor varies along the corridor. Although residential zoning is scattered throughout the McGrath corridor, generally residential zoning is clustered at the northern portion of the study area, north of Washington Street. South of the Gilman Street Bridge, large portions are dedicated and zoned as business and central business district. The southern portion of the McGrath corridor generally has fewer residential areas and contains more business and industrial uses. The southeast portion of McGrath is largely zoned as an industrial area with small portions of business zoning. See Figure 2-25 for zoning districts.

Property Values and Tax Revenue

To determine the future impact of potentially de-elevating the McGrath corridor between Somerville Avenue and Washington Street, property assessments and tax liabilities were identified in the immediate area. Smaller than the "Focus Area," this 56-acre "Impact Area" is bounded by Dell Street to the north, Bonner Avenue and Allen Street to the west, the Fitchburg commuter line to the south, and Poplar Street and the Lowell commuter line to the east. The Inner Belt and Brickbottom neighborhoods lie immediately east of the "Impact Area." With a mix of dense residential and low-

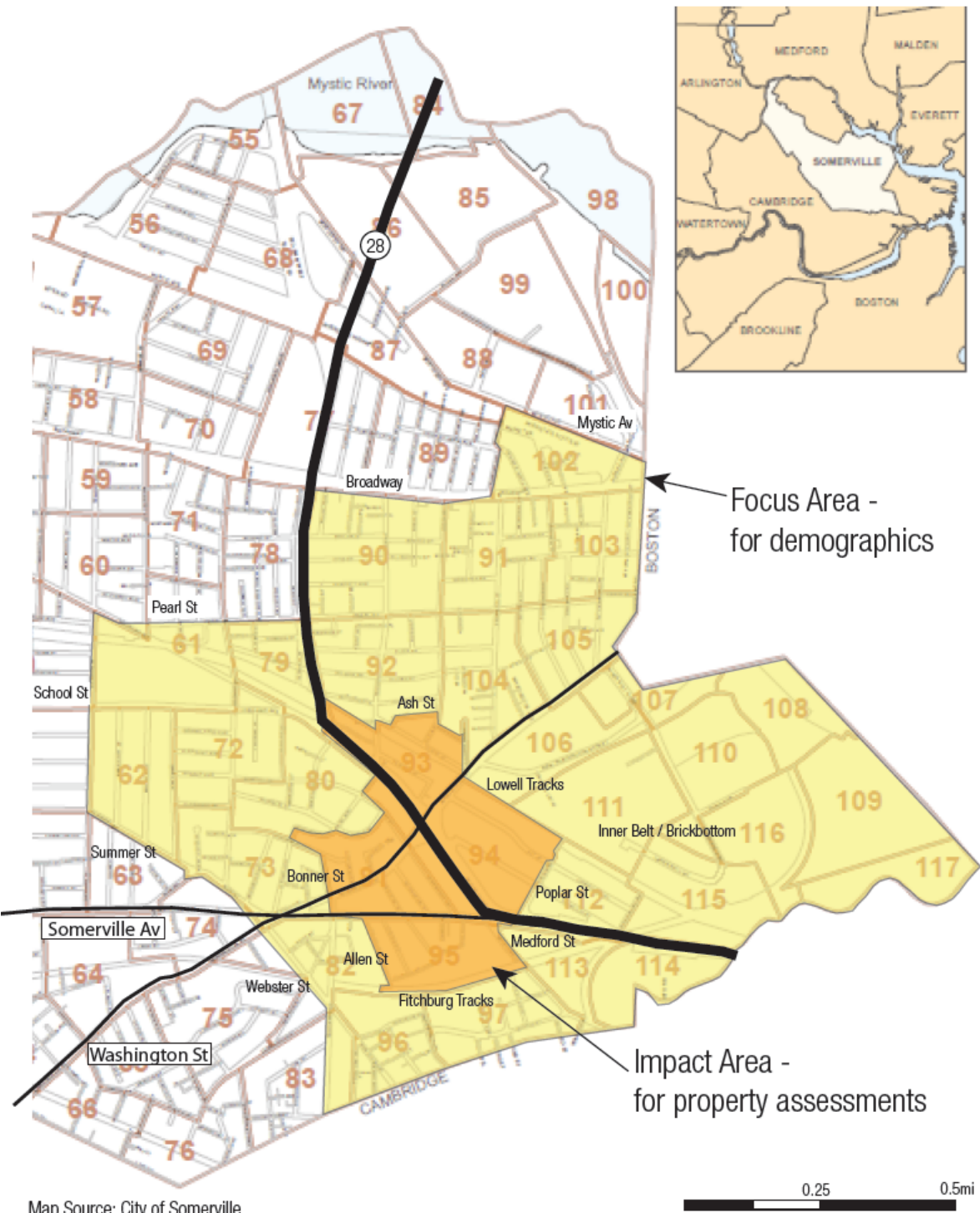
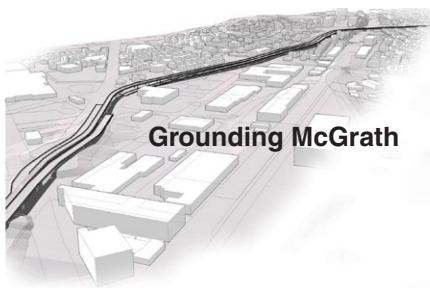


Figure 2-26: Impact Area



density commercial uses like garages and auto services, the aggregate property value in this area is assessed at \$190 million, and represents \$2.5 million of unadjusted tax liability to the city of Somerville.

Trend Analysis

An initial trend analysis was also completed on the economics of the study area. It should be noted that the city of Somerville's Inner Belt/Brickbottom study is completing a more detailed study of the development economics of those areas to understand the types of development most viable for the revitalization of those neighborhoods. While the Grounding McGrath overall results and analysis are being coordinated with that effort, the initial analysis shows the following:

Housing

The general study area makes up a significant portion of the eastern half of Somerville. Within the focus area, the population has been reasonably stable over the past 20 years, with approximately 14,860 residents in 6,557 households. The median household income is \$48,481, below the state-wide median household income of \$64,496. Housing production rose by 11 percent between 1990 and 2010, and by 6.4 percent in the focus area, as compared to the Commonwealth's overall housing supply increase of 14 percent.

Of the approximately 6,557 dwelling units in the focus area in Somerville, 6,249 units, or 95.7 percent, are occupied, a rate that is higher than the general area of Somerville of 91 percent. Compared to the Commonwealth of Massachusetts, the general occupancy rate of the focus area has consistently been lower than the larger study areas in Somerville and Cambridge, rising from 91 percent in 1990 to 94 percent in 2000 and back down to 91 percent in 2010. The focus area also exhibits a strong growth rate in owner-occupied units as compared to renter-occupied units: owner-occupied units represent 34 percent of the focus area and 35 percent of the general study area, a 22 percent increase since 1990 levels of 28 percent ownership. The Commonwealth of Massachusetts, for comparison, has had a generally higher rate of ownership, but a slower rate of growth of 2 percent since 1990.

Residential – Rental

- According to the census, for renter-occupied households, median gross rent rose at a steady pace in the last twenty years: by 35 percent between 1990 and 2000, and by 38 percent between 2000 and 2009.
- Market rents in buildings profiled in the study range from \$1.15 to \$2.25 per square foot, but are clustered around \$1.20 to \$1.50 per square foot, or \$1,600 to \$2,000 per month, for a typical two-bedroom unit.
- Mezzo Design Lofts a new, professionally managed apartment building near the focus area has higher rents, in the \$2.50 - \$2.80 per square foot range.

Residential – For-Sale

- According to the census, the median value of owner-occupied households rose 13 percent between 1990 and 2000, and by 90 percent between 2000 and 2009.
- In East Somerville and its neighborhoods, among 66 recent transactions dating back to summer 2010, sales average \$170 per square foot for single-family homes, \$130 for multi-family homes, and \$303 for condos.
- Per neighborhood, the average per square foot (psf) prices are as follows:
 - » East Somerville - \$176 psf
 - » Prospect Hill - \$228 psf
 - » Ward Two - \$265 psf
 - » Winter Hill - \$195 psf

These trends represent relatively current market conditions, while the Inner Belt/Brickbottom study will also look at longer term trends. The analysis further shows that the areas of greatest potential for economic development, that is those with the lowest population and highest employment densities are the areas currently under investigation in that effort, as shown in the Figure 2-27 and Figure 2-28.

Development

The City of Somerville is currently investing in the redevelopment in various industrial districts and neighborhoods aligned along the McGrath corridor.

The Grounding McGrath study builds upon and coordinates with the work of several parallel and previous efforts. These inform the existing and future conditions evaluated, influence the goals and measures developed, and must work in tandem with the alternatives developed. Within the project study area, there are a number of infrastructure projects and adjacent development districts already being studied, as indicated in Figure 2 - 29. These areas are being revitalized in conjunction with the anticipation of the Green Line Extension (GLX) and include projects such as the Assembly Square, Union Square, and Inner Belt Brickbottom Districts as well as the extension of the Somerville Community Path. The Grounding McGrath Study's proposed alternatives will strive to better connect these developments, create economic opportunities for the city, and increase the accessibility of amenities for local residents and visitors.

Green Line Extension (GLX)

As mentioned previously, MassDOT and the Massachusetts Bay Transportation Authority (MBTA) are working jointly on this important project that will extend the MBTA Green Line service from a relocated Lechmere Station in East Cambridge to Union Square in Somerville on one branch and to College Avenue in Medford on another branch. It will

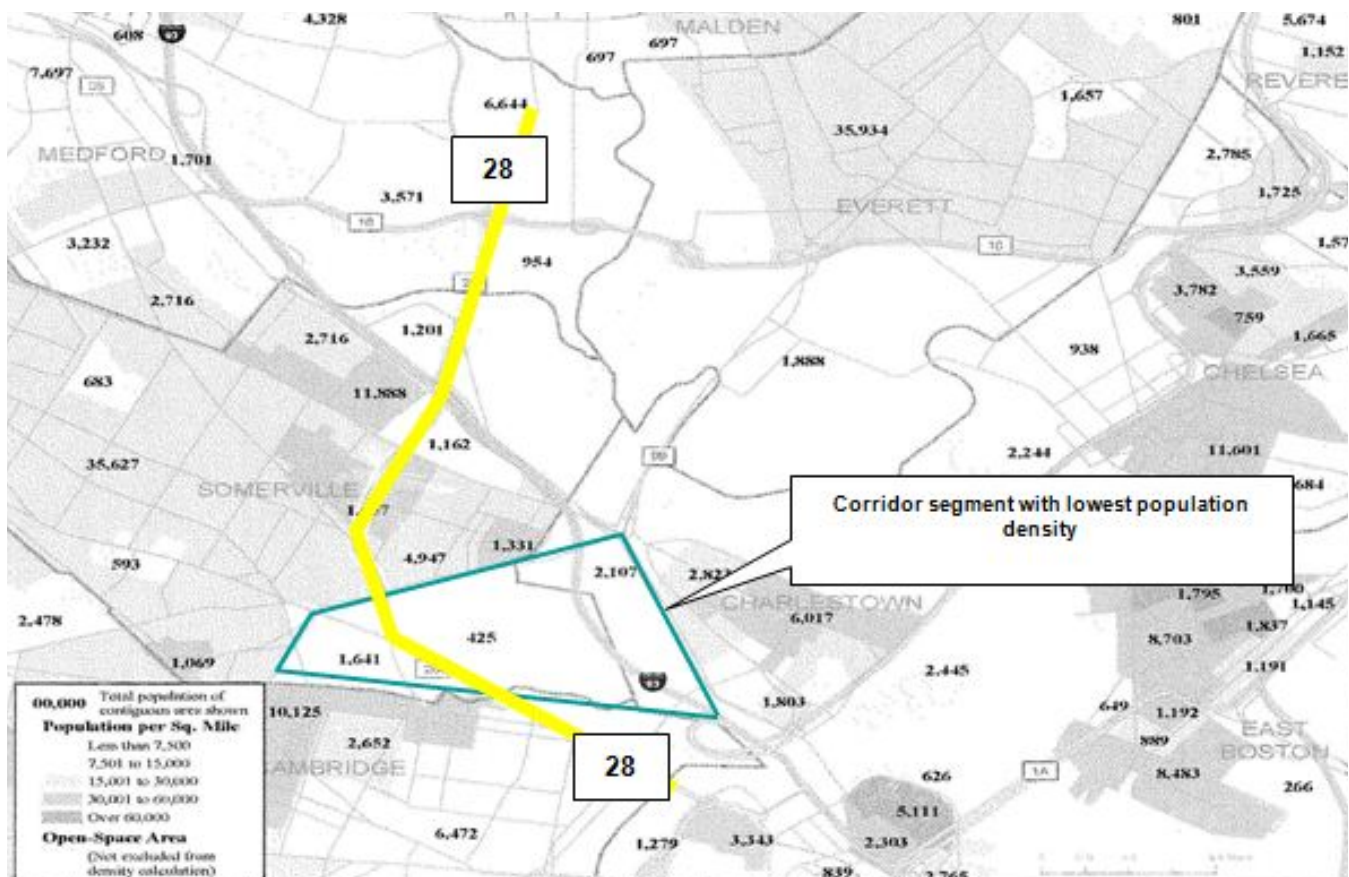
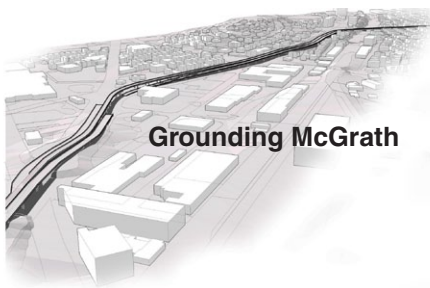


Figure 2-27 : Population Density , 2000 U.S. Census, CTPS *Toward a Route 28 Corridor Transportation Plan*



provide new and better opportunities for residents and visitors to travel within their communities and within the region. The GLX includes a new station at Washington Street directly abutting the study area, as well as a station in Union Square.

The Washington Street station, which will be on the Medford Hillside branch, will be located just east of the McGrath corridor at the corner of Washington Street near Brickbottom. The station would be on the elevated railroad abutment and extend south from Washington Street towards Poplar Street. The City of Somerville is working closely with the MBTA on the specifics of the design, and a likely local bus connection on the Inner

Belt (east) side of the station. The Brickbottom Station is expected to increase transit use in the area, and create additional pedestrian desire lines and crossings of the McGrath corridor.

Lechmere Station – the current Green Line terminus with a turnaround along Cambridge Street across from First Street and Second Streets – will be relocated from the west side to the east side of the McGrath corridor. This relocation is necessary for the extension to proceed along the existing Lowell and Fitchburg commuter rail right-of-ways. Design of the new station is being coordinated with the city of Cambridge and the surrounding NorthPoint development.

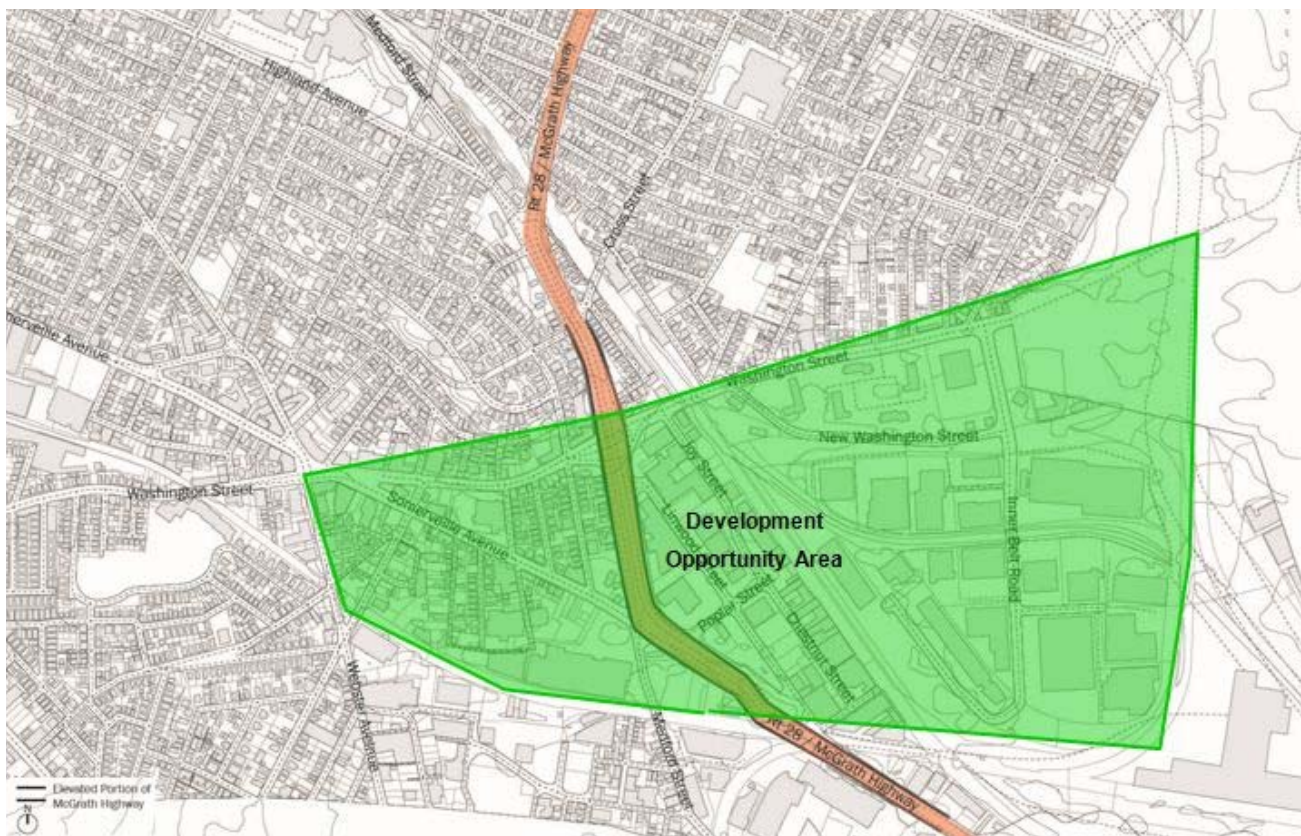


Figure 2-28 : Development Opportunity Area

The GLX is seen as a catalyst project for the development and improvement of the areas it will serve. It will provide new and better opportunities for residents and visitors to travel within their communities and within the region. Connections for pedestrians, bicyclists, and buses to these stations are an important consideration in the Grounding McGrath study. The GLX has begun preliminary construction of initial improvements and is in the final design stage.

Brickbottom District

The recommendations of the Grounding McGrath study will have a major effect on the Inner Belt and Brickbottom districts of Somerville. The City of Somerville's Office of Strategic Planning and Community Development (OSPCD) has undertaken a major planning initiative for this area, a 160-acre light industrial zone located in the southeast corner of Somerville adjacent to the McGrath corridor along its western edge. The goal of the redevelopment of Inner Belt/Brickbottom (IBBB) is to expand the land uses of the area and to improve and increase access to the Districts from the rest of

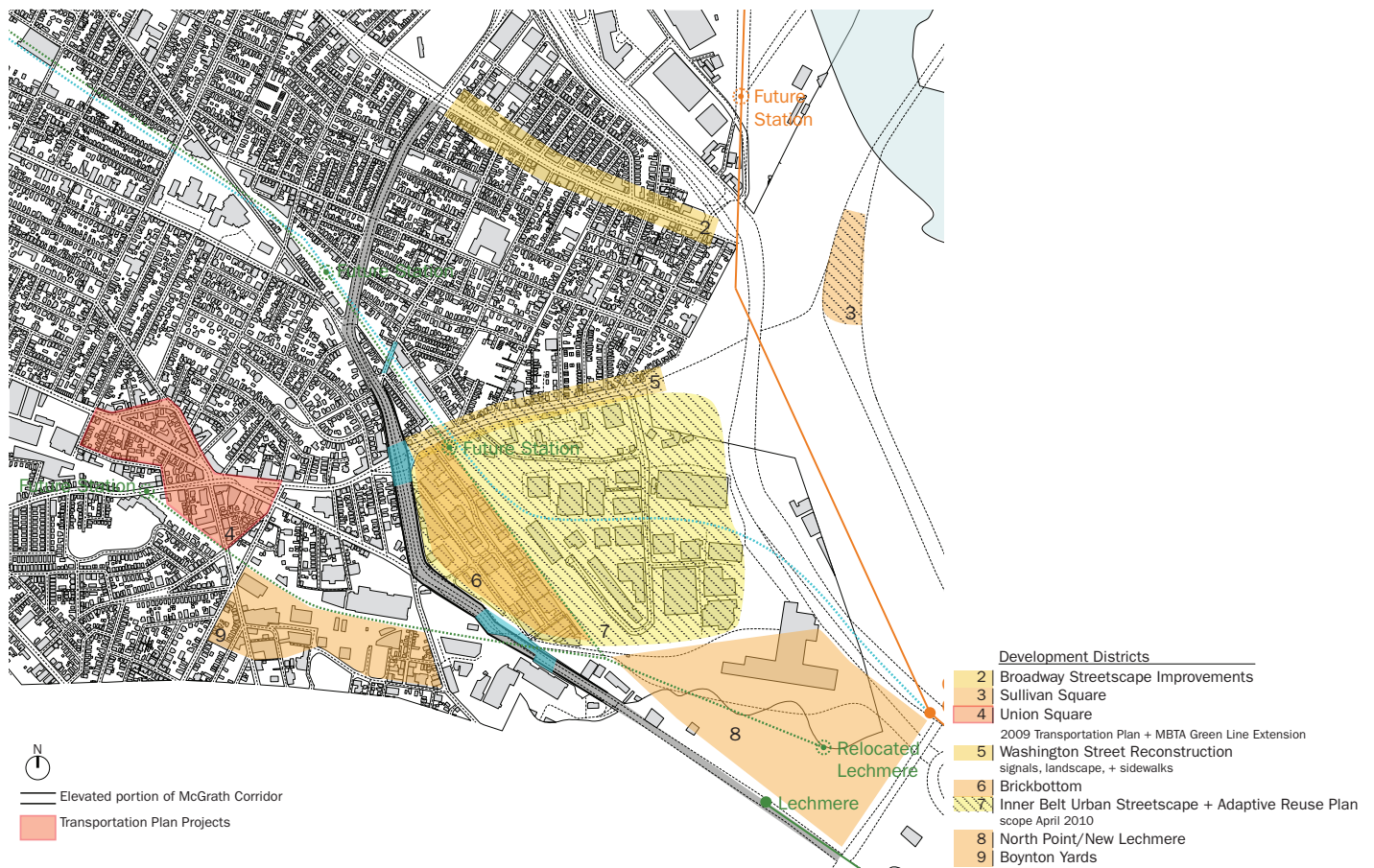


Figure 2-29 : Coordinated Development and Infrastructure