

## PUBLIC NOTICE

The Boston Redevelopment Authority ("BRA"), pursuant to Article 80A-2.1 and Article 80B-5.2(c) of the Boston Zoning Code (the "Code"), hereby gives notice that a Project Notification Form for Large Project Review ("PNF") was filed by Equity Residential for the Garden Garage Project, located off Martha Road and Lomasney Way at Longfellow Place in the West End neighborhood of Boston. The Garden Garage Project involves replacing the existing Garden Garage with two buildings: the North Tower with approximately 200 residential units and the South Tower with approximately 300 residential units (the "Proposed Project"). The Proposed Project provides approximately 985,000 square feet of development, of which approximately 551,000 square feet is residential space, 22,000 square feet is common area and amenity space for residents, and approximately 385,000 square feet is for parking and mechanical equipment.

The BRA, in the Scoping Determination for such PNF, may waive further review pursuant to Section 80B-5.3(d) of the Code, if, after reviewing public comments, the BRA finds that such PNF adequately describes the Proposed Project's impacts.

The PNF may be reviewed in the office of the Secretary of the BRA, Room 910, Boston City Hall, Boston, MA, between 9:00 a.m. and 5:00 p.m., Monday through Friday, except legal holidays. Public comments on the PNF, including the comments of public agencies, should be submitted in writing to Mr. Jay Rourke, Senior Project Manager, BRA, Boston City Hall, Boston MA 02201, or by email to [Jay.Rourke.BRA@cityofboston.gov](mailto:Jay.Rourke.BRA@cityofboston.gov) by February 25, 2011.

BOSTON REDEVELOPMENT AUTHORITY  
Brian P. Golden  
Executive Director/Secretary

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## PROJECT NOTIFICATION FORM

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# GARDEN GARAGE

*Submitted Pursuant to Article 80 of the Boston Zoning Code*



*Submitted to:*

**Boston Redevelopment Authority**  
One City Hall Square  
Boston, Massachusetts 02201

*Prepared by:*

**Epsilon Associates, Inc.**  
3 Clock Tower Place, Suite 250  
Maynard, Massachusetts 01754

*Submitted by:*

**Equity Residential**  
1953 Gallows Road, Suite 340  
Vienna, VA 22182

*In Association with:*

**Elkus Manfredi Architects Ltd.**  
**Howard/Stein-Hudson Associates, Inc.**  
**Nitsch Engineering, Inc.**  
**Rackemann, Sawyer & Brewster**  
**RW Sullivan Engineering**  
**Sandborn, Head & Associates**

January 7, 2011

**Epsilon**  
ASSOCIATES INC.



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**EPSILON ASSOCIATES, INC.**  
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January 7, 2011

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## List of Acronyms

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APCC	Air Pollution Control Commission
BLC	Boston Landmarks Commission
BRA	Boston Redevelopment Authority
BTD	Boston Transportation Department
BWSC	Boston Water and Sewer Commission
CMP	Construction Management Plan
DEP	Department of Environmental Protection
DPIR	Draft Project Impact Report
ENF	Environmental Notification Form
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
GPD	Gallons Per Day
IAG	Impact Advisory Group
IPOD	Interim Planning Overlay District
ITE	Institute of Transportation Engineers
LEED	Leadership in Energy and Environmental Design
MBTA	Massachusetts Bay Transportation Authority
MEPA	Massachusetts Environmental Policy Act
MGD	Million Gallons per Day
MGH	Massachusetts General Hospital
MHC	Massachusetts Historical Commission
PDA	Planned Development Area
PNF	Project Notification Form
SH	Southern High Service
SL	Southern Low Service
TAPA	Transportation Access Plan Agreement
TDM	Transportation Demand Management
WECA	West End Civic Association



## 1.0 Summary

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## 1.0 SUMMARY

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Equity Residential is proposing to redevelop the Garden Garage, located at 35 Lomasney Way at the intersection of Downtown and Boston's West End. The redevelopment of this garage site will add 500 new rental apartments to the Boston housing pipeline and bring an expanded range of residential options to the West End community.

The proposed Project will add retail options and create a strong pedestrian connection that will re-energize the Nashua Street area and reconnect the West End to the Bulfinch Triangle and North End neighborhoods. As a result, this new development is an opportunity to create a "sense of place" in the West End, to pull together the individual buildings toward a centerpiece, a place with community retail and open spaces that invite residents to socialize with residents of this historic community.

The Equity Residential Team initiated a community outreach process prior to submitting a Letter of Intent, by meeting with former Impact Advisory Group (IAG) members and community groups in the West End. The planning process was predicated on a set of agreed-upon planning principles:

- ◆ Development that recognizes, respects, and reinforces the scale and character of the existing residential neighborhood;
- ◆ Improved pedestrian access into, through, and around the site;
- ◆ Creation of an active pedestrian friendly edge along Lomasney Way; and
- ◆ Creation of new open space.

Based on these discussions, Equity Residential is submitting a design that has benefitted from the input of these local residents.

As the owner and property manager of the West End Apartments, formerly Charles River Park Apartments, since 1999, Equity Residential has a strong commitment to Boston's West End. In 2008, Equity Residential completed its first development project in Boston, adding 310 new housing units to the West End community. Located adjacent to Boston's historic Beacon Hill, this development was the first addition of housing to the West End community in over 20 years, diversifying the housing stock with the addition of three new townhouses. Today, Equity Residential owns, operates and manages approximately 1,500 apartment units in Boston's West End, with a current occupancy rate of 95.2 percent.

## 1.1 Project Identification

Project Name:	Garden Garage
Address/Location:	Garden Garage will be located off of Martha Road and Lomasney Way at Longfellow Place in the West End.
Developer	Equity Residential 1953 Gallows Road, Suite 340 Vienna, VA 22182 (703) 714-1637  Greg White
Architects	Elkus/Manfredi Architects Ltd 300 A Street Boston, MA 02110 (617) 426-1300  David Manfredi Kevin Lennon
Permitting Consultants	Epsilon Associates, Inc. 3 Clock Tower Place, Suite 250 Maynard, MA 01754 (978) 897-7100  Peggy Briggs Laura Rome Holly Carlson
Transportation and Parking Consultants	Howard/Stein-Hudson Associates, Inc. 38 Chauncy Street Boston, MA 02111 (617) 482-7080  Jane Howard Joe SanClemente
Legal Counsel	Rackemann, Sawyer & Brewster 160 Federal Street Boston, MA 02110 (617) 951-1115  Louis Miller



Geotechnical Engineer	Sanborn, Head & Associates 1 Technology Park Drive Westford, MA 01886 (978) 577-1005  Mat DiPilato
Structural Engineer	McNamara/Salvia, Inc. 160 Federal Street, 5 <sup>th</sup> Floor Boston, MA 02110 (617) 737-0040  Joseph Salvia John Matuszewski
Civil Engineer	Nitsch Engineering, Inc. 186 Lincoln Street, Suite 200 Boston, MA 02111 (617) 338-0063  Josh Alston Chelsea Christenson
Mechanical Engineer	RW Sullivan Engineering 529 Main Street, Suite 203 Boston, MA 02129 (617) 337-9300  Paul Sullivan Anthony Preteroti
Public Relations	McDermott Ventures 30 Rowes Wharf, Suite 470 Boston, MA 02110 (617)557-9190  Pamela McDermott Brooke Botello
Estimated Commencement:	Fall 2012
Estimated Completion:	Fall 2015
Approximate Development Cost:	\$300 million
Status of Project Design:	Preliminary

## 1.2 Project Summary

### 1.2.1 *Project Site*

The Garden Garage (“the Project”) will be located on an approximately three-acre parcel of land along the southern edge of Lomasney Way in Boston’s West End. The Project site contains two existing buildings with approximately 293,125 square feet that is predominantly parking garage space and also includes fifth-floor commercial tenant space, currently known as Basketball City. The Project area is bordered by Martha Road, Lomasney Way, and the Massachusetts Bay Transportation Authority’s (MBTA’s) Green Line portal to the north, the O’Neill Federal Building and 150 Staniford Street to the east, Longfellow Place to the south, Hawthorne Place to the southwest, Thoreau Path to the west, and 55 and 65 Martha Road to the northwest. Figure A-1 in Attachment A of this Project Notification Form (PNF) shows the location of the Project site on a USGS map; Figure A-2 and Figure A-3 show the urban context of the Project site, while Figure A-4 is an Existing Conditions Survey Plan.

### 1.2.2 *Proposed Development*

The Project will replace the existing 710-space Garden Garage on Lomasney Way with two major buildings with heights of approximately 240 and 310 feet (excluding mechanical penthouses) and an 850-space parking structure that will extend approximately 50 feet below grade. A proposed site plan is provided as Figure A-5; Figure A-6 and Figure A-7 are site plans comparing the proposed development to existing site conditions.

Redevelopment of the site will involve demolition of the existing garage and a small, vacant one-story wooden structure formerly used as the Boston Children’s School Annex. The Project will provide a total of approximately 958,000 square feet of development, which will include approximately 551,000 square feet of residential space (500 units), 22,000 square feet of common area and amenity space for residents, and approximately 385,000 square feet for parking and mechanicals. The 21-story North Tower will contain approximately 200 residential units, and the 28-story South Tower will have approximately 300 residential units.

Loading operations and trash bays will be located within the existing Longfellow Place service area with access from Lomasney Way (see below and Section 3.1.3 for a discussion of parking).

#### 1.2.2.1 **On-Site Parking**

The existing Garden Garage is permitted through the Boston Air Pollution Control Commission (APCC) for 710 parking spaces, composed of 410 commercial/public parking spaces available to the general public and 300 residential/private/exempt spaces available to employers and merchants in the immediate surrounding area (see Table 1-1). Of the 300

residential/private/exempt spaces, 14 are committed under a lease to the Amy Lowell Apartments. According to parking occupancy data collected by the Project team in January 2009, the existing Garden Garage is never fully occupied.

**Table 1-1 On-Site Parking Summary**

<i>Parking Space Type</i>	<i>Number of Spaces</i>		
	<i>Existing<sup>1</sup></i>	<i>Proposed</i>	<i>Change</i>
Commercial/Public	410	410	0
Residential/Private/ Exempt	300 <sup>2</sup>	440	140 <sup>3</sup>
Total	710	850	140

1. APCC Permit #8.1.

2. 14 spaces are committed to lease for use by the Amy Lowell Apartments and will be maintained by the Project.

3. Parking for the Project will be provided at 0.4 spaces per dwelling unit. 60 of the existing residential/private/exempt spaces will be available to residents of the new building.

The Project involves replacing the existing garage with an 850-space below-ground parking structure for residential, employee, and public use. These 850 parking spaces will accommodate the following users:

- ◆ 410 spaces will be retained as *commercial/public* spaces for public use, representing a 1-to-1 replacement of the existing commercial spaces; and
- ◆ 440 spaces will be designated as *residential/private/exempt*, including 1-to-1 replacement of the existing 300 residential/private/exempt spaces per the APCC permit and 140 new spaces. These 440 spaces will provide the following:
  - 200 spaces (140 new spaces and 60 existing residential/private/exempt spaces) located in a controlled, dedicated area of the proposed garage will be reserved for Project residents, corresponding to a parking ratio of 0.4 parking spaces per dwelling unit;
  - 14 spaces will continue to be leased to the Amy Lowell Apartments; and
  - 226 spaces (300 existing spaces less 14 spaces for the Amy Lowell Apartments and 60 spaces for new residential use) will continue to be available to employers and merchants in the surrounding area as detailed in the APCC permit.

Based on parking data collected by the Project team, the proposed parking ratio of 0.4 spaces per new residential unit is consistent with average market demand for parking at other similar residential apartment buildings in the West End (i.e., Asteria at 4 Emerson Place, the Villas at 6/7/8 Emerson Place, and 1 and 10 Emerson Place). Boston



Transportation Department (BTD) guidelines for this City neighborhood are, at a maximum, 0.5 to 1.0 spaces per residential unit. The proposed parking supply is appropriate given the Project's convenient location to a wide range of public transportation alternatives and proximity to the downtown, hospitals, and other area businesses.

The 60-space reduction in residential/private/exempt spaces is not expected to have an adverse effect on parking supply in the Project area since the existing garage is not fully occupied during peak demand periods.

As shown in Table 1-1, the Project will result in a net increase of only 140 parking spaces. The Proponent will work with BTD and the Boston Environment Department to size and manage the Project garage.

### ***1.2.3 Public Review***

The Project is subject to Large Project Review under Article 80 of the Boston Zoning Code. This PNF is intended to initiate that review, and the Proponent expects that it will facilitate a comprehensive public process.

### ***1.2.4 Public Benefits***

The Project will include numerous benefits to the neighborhood and the City of Boston, including:

- ◆ Providing approximately 500 housing units, consistent with the Mayor's initiative to create more housing in Boston;
- ◆ Setting aside up to 15 percent of the Project's units as affordable housing;
- ◆ Replacing an unattractive parking structure with new, appealing residential buildings that complement the surrounding area;
- ◆ Improving the pedestrian environment within Boston's West End neighborhood by providing new lighting, landscaping, and walkways;
- ◆ Increasing the area of open space on the Project site;
- ◆ Creating approximately 450 full-time and part-time construction jobs; and
- ◆ Providing significant property tax revenues for the City of Boston (i.e., approximately \$2.6 million estimated, compared to approximately \$663,000 under existing conditions).

### 1.3 Consistency with Zoning

The Project is located within an H-3 (Residential, Apartments) district under the City of Boston Zoning Code (the Code), and lies within Subdistrict M of the Downtown Interim Planning Overlay District (IPOD).

The Project is located within the West End Land Assembly and Renewal Project Area and is, therefore, also governed by the 1957 West End Urban Renewal Plan, which establishes the basic guidelines for land use and development in the West End Project Area. The Project is located within Planned Development Area (PDA) Number 7, which became effective on February 16, 1972. The existing development on the Project site was built out in accordance with the West End Plan and the PDA; pursuant to the plan and the PDA, BRA approval is required for any additions or expansions of the existing development. The Proponent will seek an amendment to the PDA.

#### **1.3.1 Permitted Uses**

Under both the West End Urban Renewal Plan and the Code, multi-family residential use is permitted as-of-right. The Project will entail the creation of 500 units of housing; accordingly, it will not require zoning relief for use.

#### **1.3.2 Dimensional Restrictions**

##### **1.3.2.1 Height**

The maximum height allowed as-of-right in Subdistrict M of the Downtown IPOD is 125 feet; however, a project that undergoes Large Project Review is eligible for an enhanced maximum height of 155 feet. Excluding rooftop mechanicals, the South Tower will be approximately 310 feet high and the North Tower will be approximately 240 feet high. Accordingly, relief from the Code will be required.

##### **1.3.2.2 Floor Area Ratio**

The as-of-right floor area ratio (FAR) for the Project is 3.0. The Project will have an FAR of 4.4; accordingly, relief from the Code will be required.

##### **1.3.2.3 Open Space**

For residential uses, the minimum area per dwelling unit of usable space is 100 square feet. The Project will comply with this requirement.

##### **1.3.2.4 Off-Street Parking**

There are currently 710 parking spaces at the Project site. The Proponent proposes to construct an 850-space parking garage, for a net increase of 140 spaces; 200 of the spaces will be dedicated for use by building residents, at a ratio of 0.4 spaces per unit. Under the

Code, the BRA determines off-street parking requirements during Large Project Review. Also, as noted above, the Proponent will seek an amendment to the PDA, in which case the Project's parking requirements will be established in the Project's PDA Development Plan. Accordingly, the Code's underlying zoning requirement of 0.6 spaces per dwelling unit does not apply to the Project, and the Proponent will not need to seek relief for off-street parking.

#### 1.3.2.5 Off-Street Loading

Under the Code, no loading bays are required for the Project; however, the BRA will determine any off-street loading requirements during Large Project Review. Any such requirements will be included in the PDA Development Plan.

#### 1.3.3 Inclusionary Housing

The Mayor's Executive Order dated February 29, 2000 established as City policy that a residential project seeking zoning relief must set aside at least 10 percent of its units to be affordable to moderate income and middle income households or contribute a per unit subsidy to a housing creation fund for 15 percent of the total number of project units. The Project will meet the applicable inclusionary housing goals by setting aside up to 15 percent of the units on the Project site as affordable units.

### 1.4 Public Agencies

Table 1-2 contains a list of state and local agencies from which permits or other actions are or may be required.

**Table 1-2 Anticipated Permits, Reviews, and Approvals Required for the Project**

<i>Agency</i>	<i>Permit, Review or Approval</i>
<b>Federal</b>	
Federal Aviation Administration	◆ Determination of No Hazard to Air Navigation
<b>State</b>	
Department of Environmental Protection – Division of Water Pollution Control	◆ Sewer Extension / Connection Permit ◆ Construction Dewatering Permit
Executive Office of Energy and Environmental Affairs	◆ Environmental Review ◆ Public Benefit Determination (for landlocked tidelands [see Figure A-8])
Massachusetts Historical Commission	◆ State Register Review

**Table 1-2      Anticipated Permits, Reviews, and Approvals Required for the Project (Continued)**

<i>Agency</i>	<i>Permit, Review or Approval</i>
<b>City</b>	
Boston Civic Design Commission	♦ Schematic Design Review
Boston Committee on Licenses/Public Safety Commission	♦ Flammable Storage License
	♦ Permit to erect and maintain parking garage
Boston Landmarks Commission	♦ Article 85
Boston Inspectional Services Department	♦ Demolition Permit
	♦ Building Permit
Boston Public Improvement Commission	♦ Specific Repair Plan
Boston Redevelopment Authority	♦ Large Project Review
	♦ West End Urban Renewal Plan Modification
	♦ Cooperation Agreement
	♦ Development Plan
Boston Transportation Department	♦ Transportation Access Plan Agreement
	♦ Construction Management Plan
Boston Water and Sewer Commission	♦ Water and Sewer Connection Permits
Boston Zoning Commission	♦ PDA Amendment

## 2.0 Project Description

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## 2.0 PROJECT DESCRIPTION

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### 2.1 Existing Site

The Garden Garage Project will be located on approximately three acres of land at Longfellow Place in Boston's West End. The Project site is bordered by Martha Road, Lomasney Way, and the MBTA Green Line portal to the north, the O'Neill Federal Building and 150 Staniford Street to the East, Longfellow Place to the south, Hawthorne Place to the southwest, Thoreau Path to the west, and 55 and 65 Martha Road to the northwest. Figure A-1 and Figure A-2 in Attachment A show the location of the Project site; Figure A-3 and Figure A-4 show existing site conditions.

The West End is primarily a residential community. It is a collection of high- and mid-rise residential buildings organized around a pedestrian network and green spaces with connections to the Charles River waterfront and the surrounding vehicular street grid (see Figure A-9 and A-10). The Project will enhance pedestrian access to the West End and increase the amount of open space. The Project area has excellent access to mass transit and vehicular transportation systems.

Figures A-11 through A-20 are photographs of existing conditions in the area surrounding the Project site.

### 2.2 Proposed Development Program

#### *2.2.1 Building Program and Site Design*

Redevelopment of the Garden Garage site includes site and landscape improvements. A primary objective of the site design is to improve connectivity to and through the development to link North Station and surrounding neighborhoods with the West End (see Figure A-21). In addition, new outdoor gathering spaces for residents will replace or enhance existing underutilized or outdated open spaces. These private spaces will be associated with pedestrian pathways designed to connect to Thoreau Path while still providing clear delineation between public and private spaces. Plantings, paving, and site furnishings will be selected to support and encourage pedestrian connectivity with the surrounding neighborhood.

As shown in Figure A-5, the Project includes two residential buildings to be located at Longfellow Place in Boston's West End. Figures A-22 and Figure A-23 offer perspective views of the proposed buildings.

The Project will replace an aging parking garage with two residential buildings and a below-grade parking structure. The North Tower, a 21-story high-rise apartment building, will contain approximately 190 residential units. The South Tower, a 28-story high-rise apartment, will contain approximately 310 units.

The unit mix for the Project will be based on the following ratios:

- ◆ 20 percent studio/1 bath apartments;
- ◆ 50 percent 1 bedroom/1bath apartments; and
- ◆ 30 percent 2 bedroom/2 bath apartments.

The four-level, below-grade parking garage will be located below both towers and will provide parking for approximately 850 cars. Primary pedestrian access to the building lobbies will be from Lomasney Way; a secondary residential entry will be provided from Thoreau Path. Access to the parking structure will be from within the proposed towers as well as from the existing curb cut on Lomasney Way. Site preparation will involve the demolition of the 97-foot-high (8-story equivalent) pre-cast concrete parking garage and a one story wood frame building, shown in Figure A-4.

The urban design goals of the Project are described in detail in Section 3.3.

### **2.2.2      *Approximate Dimensions***

Table 2-1 presents the approximate dimensions of Project components.

**Table 2-1      Approximate Project Dimensions**

<b>Project Element</b>	<b>Dimension</b>
Project Site	3.02 acres (131,600 square feet)
Building Footprint (at grade)	31,675 square feet (total) South Tower: 20,795 square feet North Tower: 10,880 square feet
Residential Space	551,000 square feet
Common Area/Amenities	22,000 square feet
Parking	360,000 square feet / 850 spaces
<i>Building Height</i>	
South Tower	28 stories/310 feet
North Tower	21 stories/240 feet
Open Space ( <i>see note</i> )	2.07 acres (90,470 square feet)

Note: Open space includes planting areas, pedestrian walkways, sidewalks, and recreation areas.

Figures A-24 through A-31 show proposed floor plans. Two section-views are illustrated in Figure A-32 and Figure A-33. Elevations of the proposed buildings are provided in Figures 34 through 37.

## **2.3 Planning Context**

The West End is a defined Boston neighborhood with a unique history, identity, and character. That character is largely described by the principal use functions, including health care and research, and housing for a diverse population. Other ancillary functions include retail, office, worship, and transportation.

The West End neighborhood was largely rebuilt in the 1960s when high-rise residential, office, and research buildings replaced a dense fabric of four- to six-story masonry buildings laid out in relatively small blocks. This entire precinct is planned around a pedestrian network and green space with connections to the Charles River waterfront as well as the surrounding vehicular street grid.

Clearly, one of the most important principles of urban design in this neighborhood is to respect and enhance the established character of the residential area and to recognize its historic relevance.

## **2.4 Graphics**

Attachment A includes a site plan, floor plans, building sections and elevations, and a massing diagram of the Project. As mentioned above, Attachment A also includes a locus map and photographs of existing site conditions.

## **2.5 Schedule**

Project construction is expected to commence in fall 2012 and be completed in approximately 36 months.



### 3.0 Assessment of Development Review Components

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## 3.0 ASSESSMENT OF DEVELOPMENT REVIEW COMPONENTS

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Article 80 of the Boston Zoning Code specifies that the BRA may require in its Scoping Determination that the applicant conduct studies to determine the direct or indirect impact to the environment reasonably attributable to a project. The development review components include transportation, environmental protection, urban design, historic resources, and infrastructure systems. Where potential for direct or indirect impacts exists, design measures may be required to mitigate the impacts, to the extent economically feasible. The areas for which studies and mitigation may be required are addressed below.

### 3.1 Transportation

#### **3.1.1**        *Introduction*

This section summarizes the transportation issues related to the Project and discusses preliminary Project trip generation estimates, preliminary anticipated transportation impacts, and potential transportation demand management (TDM) measures.

The Proponent expects that a comprehensive analysis of the Project's transportation-related aspects, including pedestrian, transit, automobile traffic, parking, and loading activity will be prepared and presented in a Draft Project Impact Report (DPIR) submitted to the BRA. This transportation study will be developed in cooperation with the BTB, BRA, and the community.

#### **3.1.2**        *Site Access*

Vehicular access to the Garden Garage is currently provided from Lomasney Way. The Project will maintain Lomasney Way as the point of vehicular access (see Figure A-7).

The Project will use the existing loading and service area located adjacent to the building and also accessed via Lomasney Way. Trash, loading, and move-in/move-out activities will occur on-site.

Primary pedestrian access to the residential lobbies will be provided from Thoreau Path, with secondary pedestrian connections onto Lomasney Way.

#### **3.1.3**        *Parking*

##### **3.1.3.1**      *On-Site Parking*

The existing Garden Garage is permitted through the APCC for 710 parking spaces, composed of 410 commercial/public parking spaces available to the general public and 300 residential/private/exempt spaces available to employers and merchants in the immediate surrounding area (see Table 3-1). Of the 300 residential/ private/exempt spaces, 14 are

committed under a lease to the Amy Lowell Apartments. According to parking occupancy data collected by the Project team in January 2009, the existing Garden Garage is never fully occupied.

**Table 3-1 On-Site Parking Summary**

<i>Parking Space Type</i>	<i>Number of Spaces</i>		
	<i>Existing<sup>1</sup></i>	<i>Proposed</i>	<i>Change</i>
Commercial/Public	410	410	0
Residential/Private/ Exempt	300 <sup>2</sup>	440	140 <sup>3</sup>
Total	710	850	140

1. APCC Permit #8.1.

2. 14 spaces are committed to lease for use by the Amy Lowell Apartments and will be maintained by the Project.

3. Parking for the Project will be provided at 0.4 spaces per dwelling unit. 60 of the existing residential/private/exempt spaces will be available to residents of the new building.

The Project will replace the existing garage with an 850-space below-ground parking structure for residential, employee, and public use. These 850 parking spaces will accommodate the following users:

- ◆ 410 spaces will be retained as *commercial/public* spaces for public use, representing a 1-to-1 replacement of the existing commercial spaces; and
- ◆ 440 spaces will be designated as *residential/private/exempt*, including 1-to-1 replacement of the existing 300 residential/private/exempt spaces per the APCC permit and 140 new spaces. These 440 spaces will provide the following:
  - 200 spaces (140 new spaces and 60 existing residential/private/exempt spaces) located in a controlled, dedicated area of the proposed garage will be reserved for Project residents, corresponding to a parking ratio of 0.4 parking spaces per dwelling unit;
  - 14 spaces will continue to be leased to the Amy Lowell Apartments; and
  - 226 spaces (300 existing spaces less 14 spaces for the Amy Lowell Apartments and 60 spaces for new residential use) will continue to be available to employers and merchants in the surrounding area as detailed in the APCC permit.

Based on parking data collected by the Project team, the proposed parking ratio of 0.4 spaces per new residential unit is consistent with average market demand for parking at other similar residential apartment buildings in the West End (i.e., Asteria at 4 Emerson Place, the Villas at 6/7/8 Emerson Place, and 1 and 10 Emerson Place). BTD guidelines for

this City neighborhood are, at a maximum, 0.5 to 1.0 spaces per residential unit. The proposed parking supply is appropriate given the Project's convenient location to a wide range of public transportation alternatives and proximity to the downtown, hospitals, and other area businesses.

The 60-space reduction in residential/private/exempt spaces is not expected to have an adverse effect on parking supply in the Project area since the existing garage is not fully occupied during peak demand periods.

As shown in Table 3-1, the Project will result in a net increase of only 140 parking spaces. The Proponent will work with BTB and the Boston Environment Department to size and manage the Project garage.

### 3.1.3.2 Off-Site Parking

Approximately 10,903 off-street parking spaces (including the Garden Garage) are located in garages and lots within approximately a quarter of a mile of the Project; 5,948 of these spaces are in public facilities and 4,955 are in private facilities. These parking facilities and their capacities are identified in Figure A-38 and Table 3-2.

**Table 3-2 Off-Street Parking in Surface Lots within a Quarter-Mile of the Site**

<i>Map #</i>	<i>Facility</i>	<i>Observed Capacity</i>
<b>Public Facilities</b>		
A	Charles River Plaza Surface Lot	104
B	Charles River Plaza Garage	780
C	Government Center Garage	1,912
D	26-28 Lancaster Street Lot	25
E	Stanhope Lot	47
F	101 Merrimac Garage	70
G	204 Friend Street	46
H	P & P Parking	87
I	TD Banknorth Garden (North Station) Garage	1,214
J	J & O Parking	54
K	Chardon Realty Lot	26
L	226-234 Causeway Lot	5
M	Pinstripe Parking	143
N	Asteria Garage	556
O	Garden Garage	710
P	Longfellow Garage (Public Level)	169
<b>Public Facilities Subtotal</b>		<b>5,948</b>

**Table 3-2 Off-Street Parking in Surface Lots within a Quarter-Mile of the Site (Continued)**

<i>Map #</i>	<i>Facility</i>	<i>Observed Capacity</i>
<b>Private Facilities</b>		
1	Staniford Street Lot	22
2	Shriner's Burn Center Surface Lot	16
3	Shriner's Burn Center Garage	100
4	Regina Cleri Lot	36
5	Boston Fire Department Lot	10
6	Massachusetts General Hospital (MGH) Wang Valet Lot	131
7	MGH Parkman Garage	590
8	MGH Fruit Street Garage	675
9	Hawthorne Place Garage	111
10	202-204 Friend Street Lot	12
11	One Bowdoin Square Garage	25
12	120-126 Canal Street	11
13	Whittier Place Lot	98
14	Whittier Place Garage	278
15	MBTA North Station Operations Lot	38
16	181-189 Friend Street Lot	12
17	169 Friend Street Lot	14
18	Spaulding Rehabilitation Lot	95
19	Spaulding Rehabilitation Visitor Lot	98
20	MGH Employee Lot	477
21	Lovejoy Place Lot	56
22	MGH Yawkey Center Garage	676
23	Massachusetts Eye & Ear Infirmary Lot East	176
24	Massachusetts Eye & Ear Infirmary Lot West	145
25	Vesta Garage	105
26	Suffolk County Sheriff's Department	—
27	Suffolk County Sheriff's Department	—
28	DCR Lot	73
29	DCR Lot Charles River Locks	60
30	Longfellow Garage Nested Area	396
31	Hurley Building Garage	180
32	Tip O'Neill Federal Building Garage	239
<b>Private Facilities Subtotal</b>		<b>4,955</b>
<b>Overall Parking Total</b>		<b>10,903</b>

### 3.1.4 Public Transportation

The Project site is located within convenient walking distance to a wide variety of public transportation alternatives (see Figure A-39 and Table 3-3).

**Table 3-3 MBTA Transit Service within a Quarter-Mile Walk of the Site**

<i>Transit Service</i>	<i>Description</i>	<i>Rush-hour Headway (in minutes)*</i>
<b>Rapid Transit Routes</b>		
Green Line	Lechmere–Heath Street	5
	Cleveland Circle–North Station	7
Orange Line	Forest Hills–Oak Grove	5
<b>Local Bus Routes</b>		
4	North Station–World Trade Center	16
<b>Commuter Rail</b>		
Fitchburg Line	Fitchburg–North Station	32
Lowell Line	Lowell–North Station	18
Haverhill Line	Haverhill–North Station	30
Newburyport/Rockport Line	Newburyport/Rockport–North Station	19

\* Headway is the time between trains or buses, as applicable.

The MBTA Green and Orange Line rapid transit services are located within one-quarter mile (i.e., a five-minute walk) of the site, with Orange and Green Line service at North Station and Green Line Service at Science Park/West End Station. North Station also provides commuter rail service to the north on the Fitchburg, Lowell, Haverhill, and Newburyport/Rockport Commuter Lines.

Local MBTA bus route #4 is located within one-quarter mile of the site, providing connections between North Station, South Station, and the South Boston Waterfront.

Within approximately one-half mile of the site (i.e., a ten- to fifteen-minute walk) are Charles/MGH Station on the MBTA Red Line, Bowdoin Station on the Blue Line, and Haymarket Station, which connects to MBTA Green and Orange Line services and local/regional bus services.

### 3.1.5 *Transportation Impact Overview*

#### 3.1.5.1 Project Trip Generation

Trip generation associated with the 500 proposed residential apartment units was estimated based on the Institute of Transportation Engineers (ITE) data published in *Trip Generation*, 8<sup>th</sup> Edition for high rise apartments.

**Land Use Code 222—High Rise Apartment.** This land use code refers to units located in rental buildings that have more than 10 levels (floors) and most likely have one or more elevators.

The ITE rates produce vehicle trip estimates, which are then converted to person trips based on average vehicle occupancy rates. Using BTD's mode split data for Area 1, a BTD-designated zone that encompasses the Project site, the total person trips for each time period are then reallocated to walk/bike, transit, and vehicle trips. The mode split data for Area 1 are summarized in Table 3-4.

**Table 3-4 Mode Split Assumptions**

<i>Period/Direction</i>		<i>Walk/Bike Share<sup>1</sup></i>	<i>Transit Share<sup>1</sup></i>	<i>Auto Share<sup>1</sup></i>	<i>Local Vehicle Occupancy Rate<sup>2</sup></i>
Daily	In	65%	14%	21%	1.1
	Out	65%	14%	21%	1.1
a.m. Peak Hour	In	68%	15%	17%	1.1
	Out	70%	13%	17%	1.1
p.m. Peak Hour	In	70%	13%	17%	1.1
	Out	68%	15%	17%	1.1

<sup>1</sup> Source: Boston Transportation Department, Area 1 for residential uses.

<sup>2</sup> U.S Census, Journey to Work: 2000, Tract 203.

Based on the land use trip rates and mode split assumptions described above, Table 3-5 summarizes the resulting adjusted Project-generated vehicle trips; Attachment B contains detailed trip generation data for the Project.

**Table 3-5 Project Trip Generation**

<i>Period/Direction</i>		<i>Walk/Bike Trips</i>	<i>Transit Trips</i>	<i>Auto Trips</i>
Daily	In	826	178	243
	Out	826	178	243
	<b>Total</b>	<b>1,652</b>	<b>356</b>	<b>486</b>
a.m. Peak Hour	In	31	7	7
	Out	94	17	21
	<b>Total</b>	<b>125</b>	<b>24</b>	<b>28</b>
p.m. Peak Hour	In	88	16	19
	Out	54	12	13
	<b>Total</b>	<b>142</b>	<b>28</b>	<b>32</b>

<sup>1</sup> Based on ITE LUC 222 High Rise Apartment for 500 units.

The residential use is expected to generate approximately 486 vehicle trips (243 trips in and 243 trips out) on a daily basis. In the morning peak hour, an estimated 7 new vehicle trips in and 21 new vehicle trips out will occur; in the afternoon peak hour, 19 new vehicle trips in and 13 new vehicle trips out will occur.

These vehicle trips will be in addition to the existing vehicle trips associated with the public parking spaces, which be analyzed under the Existing and No-Build Conditions and retained as part of the Project.

### 3.1.5.2 Project Trip Distribution

The vehicular trip distribution is based on BTD guidelines using origin-destination characteristics for Area 1. The vehicle trip distribution shown in Table 3-6 indicates that the majority of traffic (approximately 80%) will use the regional highway system to access the site. Figures A-40 and A-41 present expected local vehicle trip distribution to and from the site, respectively. As indicated by these graphics, access to regional highways from the site is excellent as the area has had significant roadway infrastructure improvements with the recent completion of the Central-Artery/Tunnel project.

**Table 3-6 Project Vehicle Trip Distribution**

<i>Direction/Origin–Destination</i>	<i>% Entering/Exiting Traffic</i>
<b>Regional Traffic</b>	
To/from North I-93 Route 1 (via I-93)	25%



**Table 3-6 Project Vehicle Trip Distribution (Continued)**

<i>Direction/Origin–Destination</i>	<i>% Entering/Exiting Traffic</i>
To/from South I-93 Route 1A	25%
To/from West I-90 (via I-93) Storrow Drive	25%
To/from East Route 1A (via Sumner/Callahan Tunnels)	5%
<b>Subtotal Regional</b>	<b>80%</b>
<b>Local Traffic</b>	
To/from North Cambridge/Charlestown/Somerville	10%
To/from South Downtown	5%
To/from East North End/South Boston	3%
To/from West Back Bay	2%
<b>Subtotal Local</b>	<b>20%</b>

### 3.1.5.3 Service and Loading

Service and loading activities, including resident move-in/move-out, will occur in the adjacent Longfellow Place loading dock, as shown in Figure A-7. Access to the service and loading area will continue to be provided on Lomasney Way.

On-site management will schedule trash removal and resident move-in/move-out during off-peak hours.

### 3.1.5.4 Proposed Study Area

Detailed analysis of intersection operations and development of appropriate mitigation measures will be prepared and addressed by the Proponent. Redevelopment of the site is expected to increase overall traffic to the general area. Any traffic impacts that require mitigation will be carefully coordinated with BTM as well as with neighboring property owners.

To evaluate both existing and future conditions, the study team proposes to study the following seven intersections (see Figure A-42), in addition to the site driveway:

- ◆ Charles River Dam Road/Storrow Drive/Nashua Street (Leverett Circle);
- ◆ Charles Street/Martha Road/Nashua Street (Leverett Circle);
- ◆ Red Auerbach Road/Martha Road;
- ◆ Lomasney Way/Martha Road/Garage Driveway;
- ◆ Staniford Street/Merrimac Street/Lomasney Way/Causeway Street (Lowell Square);
- ◆ Merrimac Street/Congress Street/New Chardon Street; and
- ◆ Staniford Street/Cambridge Street.

New traffic, bicycle, and pedestrian counts will be conducted at the above-listed study area intersections during the weekday morning (7:00–9:00 a.m.) and evening (4:00–6:00 p.m.) peak periods. These data will serve as the Existing Conditions scenario for the analysis to be presented in the subsequent documents.

The Proponent will coordinate with BRA and BTM to identify the appropriate study area, build year, and growth rate in the traffic model, as well as to determine which are the appropriate area development projects to include in the future-year traffic models.

### ***3.1.6 Transportation Demand Management***

The Proponent is committed to implementing TDM measures to minimize automobile usage and Project traffic impacts. The TDM program will support City efforts to reduce dependency on the automobile by encouraging travelers to use alternatives to driving alone, especially during peak periods. The Proponent will continue to leverage the Project site's excellent downtown location and transit access in marketing the development to future residents. In an effort to maintain a sustainable development over time, the Proponent will encourage the use of public transportation, ridesharing, bicycling, and walking through implementation of TDM measures.

The TDM program will include an on-site transportation coordinator, bicycle parking areas, distribution of transit maps and schedules to residents, guests, and employees, and other measures. Specific TDM measures will be described and evaluated in the DPIR and the Transportation Access Plan Agreement (TAPA) for the Project.

### ***3.1.7 Construction Period Transportation Impacts***

The Proponent will enter into a Construction Management Plan (CMP) with BTM that will describe the need to occupy lanes of surrounding streets and/or sidewalks during construction and discuss measures for minimizing negative impacts associated with trucking activity and construction worker parking, including demand management for construction workers.

## 3.2 Environmental Protection

### 3.2.1 *Wind*

The South and North Towers are proposed to be 310 and 240 feet tall, respectively. The proposed building heights are similar to the heights of the adjacent residential high-rise residential buildings at Emerson Place, Whittier Place and Longfellow Place. The Proponent expects that the DPIR will include the results of quantitative analysis of potential pedestrian-level wind impacts at selected locations.

### 3.2.2 *Shadow*

The Project proposes two high-rise buildings, with the South Tower at 310 feet tall and the North Tower at 240 feet tall. For the DPIR, shadow impacts will be studied for the 21<sup>st</sup> of March, June, September, and December.

### 3.2.3 *Daylight*

In addition to casting shadows, buildings can also, depending on their locations, heights, and proximity to other buildings, block views of the sky. Project is composed of two “wedge” shaped towers, with carefully considered building massing. The arrangement of the two towers on the site recognizes the adjacent buildings and has been designed to preserve access to daylight for the adjacent existing building. The DPIR will include the results of a daylight analysis conducted using the BRADA model.

### 3.2.4 *Solar Glare*

Non-reflective glass will be included in the Project design to avoid adverse impacts from spot glare. Steps will be taken in final design to mitigate areas where reflected sunlight and glare have the potential to impact vehicular traffic or pedestrian areas.

### 3.2.5 *Air Quality*

Potential long-term air quality impacts will be limited to emissions from Project-related mechanical equipment and pollutant emissions from vehicular traffic generated by the Project. If changes in traffic operations are significant, the potential air quality impacts will be modeled for both existing and future conditions in the PIR to demonstrate conformance with the National Ambient Air Quality Standards.

Construction-period air quality impacts and mitigation are discussed in Section 3.2.12.1.

### 3.2.6 *Stormwater/Water Quality*

Given that the Project will not increase the amount of impervious area on the Project site, post-construction stormwater run-off rates will not exceed existing rates. Furthermore, by upgrading garage stormwater collection systems from existing conditions, the Project will

significantly improve the quality of stormwater runoff. Stormwater collected from the loading dock and lower levels of the garage will be collected and directed through MWRA-compliant gas, sand, and oil interceptors. Stormwater collected from parking areas and ramps receiving direct rainfall will be directed through a Stormceptor water quality structure before discharging to the municipal system.

As described in Section 3.5.2.5, the Project will also include a stormwater management system to address the phosphorus content of stormwater runoff within the Charles River Watershed. The Proponent is considering a stormwater recharge system consisting of perforated pipe and crushed stone to remove phosphorus from runoff. The Proponent will coordinate with the Boston Water and Sewer Commission (BWSC) to determine the appropriate level and method of phosphorus removal.

### ***3.2.7 Flood Hazard Zones/Wetlands***

The Project site is not within the floodplain as delineated by the Federal Emergency Management Agency (FEMA). The Project site is developed and does not contain wetlands.

### ***3.2.8 Groundwater***

Based on monitoring wells sampled around the Project site in June 2009, groundwater occurs at depths from approximately 5 to 20 feet below the ground surface (between elevations 6 and 10 feet Boston City Base [BCB] datum). Groundwater levels near the site could be influenced by leakage into and out of sewers, storm drains, water utilities, and other below-grade structures as well as environmental factors such as precipitation, season, and temperature.

### ***3.2.9 Geotechnical***

#### **3.2.9.1 Existing Site Conditions**

The Project site is an approximately three-acre area currently occupied by the Garden Garage, an above-grade concrete parking garage which is supported on a combination of spread footings and concrete-filled steel pipe piles. The existing garage provides five levels of parking, but at 97 feet high has a height equivalent to an eight-story building. The existing parking garage on the Project site is connected to a sub-surface parking garage at 5 Longfellow Place, which is located below tennis and basketball courts that exist at grade south of the Project site. A single-story wood frame building, which serves as an annex to the Boston Children's School, is also located on the Project site.

Surface elevations on the Project site range from approximately 17 feet BCB at the northern margin along Lomasney Way and Martha Road to 25-30 feet BCB on the southern margin along Thoreau Path. The ground surface along the south side of the existing garage is at an elevation of approximately 12 feet. Numerous underground utilities are located adjacent to the Project site in Lomasney Way, Martha Road, and Thoreau Path. A steam line is also

located beneath the sidewalk that runs between the existing garage and 65 Martha Road. The MBTA Green Line subway portal is located approximately 35 feet away from the northern corner of the existing garage.

### **3.2.9.2 Subsurface Soil and Bedrock Conditions**

Based on available data, the subsurface conditions on the Project site generally consist of a layer of urban fill that overlies marine deposits, glacial till, and bedrock. Urban fill encountered below the surface treatment ranges in thicknesses from approximately 5 to 15 feet. The fill typically consists of sand with varying amounts of silt and gravel with minor amounts of organic material, asphalt, ash, wood, brick, metal, and concrete.

Marine deposits varying from sands to silty clay have been encountered below the urban fill. These deposits generally range in thickness from approximately 22 to 50 feet, and increase in thickness toward the north. A layer of silts and sands with minor amounts of organics and shells that is consistent with a former intertidal zone underlies urban fill in the eastern portion of the Project site and is generally 6 to 9 feet thick, where encountered. Glacial till approximately 3 to 10 feet thick is generally present below the marine deposits. Depending on the specific location within the Project site, bedrock is present at a depth of approximately 18 to 64 feet (elevation -6.5 to -39 feet BCB).

### **3.2.9.3 Potential Impacts to Adjacent Buildings and Utilities**

Potential impacts to adjacent facilities due to foundation construction include impacts to area groundwater levels, noise, ground vibrations and ground movement due to excavation and rock removal. The foundation design and construction will need to be completed to limit adverse impacts to adjacent facilities.

### **3.2.9.4 Mitigation Measures**

Provisions will be incorporated into design and construction procedures to limit potential adverse impacts to adjacent structures and utilities. Mitigation measures may include the following:

- ◆ The design team will conduct studies, prepare designs and specifications, and review contractor's submittals for conformance to the Project contract documents with specific attention to protection of nearby structures and facilities.
- ◆ Performance criteria will be established for the lateral earth support systems with respect to movements, noise, and ground vibrations. The construction sequence of the below-grade portion will be controlled by specific requirements in the Project specifications. The contractor will be required to modify construction methods and take necessary steps during the work to protect nearby buildings and other facilities.

- ◆ Geotechnical instrumentation will be installed and monitored during the below-grade portion of work to observe the performance of the excavation, adjacent buildings and structures, and area groundwater levels. Groundwater observation wells will be monitored before and during construction. When construction begins, observation wells will be monitored for the duration of below-grade construction.

### ***3.2.10 Operational Solid and Hazardous Wastes***

Solid waste generated by residents will be collected and disposed of off site by a licensed contractor. The Proponent will implement an aggressive recycling program throughout the Project, and residents will be encouraged to recycle. Recycled materials are expected to include newspaper, cardboard, cans, and bottles.

With the exception of household hazardous wastes typical of residential developments (e.g., cleaning fluids and paint), the Project will not involve the generation, use, transportation, storage, release, or disposal of potentially hazardous materials.

### ***3.2.11 Noise***

During occupancy, neither the Project's mechanical equipment nor traffic noise associated with the Project are expected to result in a perceptible change in noise levels. These impacts, and the Project's compliance with the City of Boston Noise Ordinance, will be studied in the DPIR.

Construction period noise impacts and mitigation are discussed below in Section 3.2.12.2.

### ***3.2.12 Construction Impacts***

The proximity of city streets and abutting residential properties to the site will require careful scheduling of material removal and delivery, as well as evaluation of the existing use of the Project site. Planning with the City and neighborhood will be essential to the successful Project construction.

A CMP will be submitted to the BTD for review and approval prior to issuance of a building permit. The CMP will define truck routes which will help in minimizing the impact of trucks on local streets. A police detail will be provided to maintain access to adjacent properties and to direct pedestrian and vehicle flow.

Appropriate construction techniques will be employed to ensure public safety and protect nearby residences and businesses. These techniques may include, as necessary, barricades, walkways, painted lines, and signage. Construction management and scheduling will minimize impacts on the surrounding environment by planning for construction worker commuting and parking, routing plans and scheduling for trucking and deliveries, protection of existing utilities, maintenance of fire access, and control of noise and dust.

Throughout Project construction, a secure perimeter will be maintained to protect the public from construction activities.

#### **3.2.12.1 Construction Air Quality**

Short-term air quality impacts from fugitive dust may be expected during the early stages of construction. Plans for controlling fugitive dust during construction include mechanical street sweeping, wetting portions of the Project site during periods of high wind, and careful removal of debris by covered trucks. The construction contract will provide for a number of strictly enforced measures to be used by contractors to reduce potential emissions and minimize impacts. These measures are expected to include:

- ◆ Use of wetting agents where needed on a scheduled basis;
- ◆ Use of covered trucks;
- ◆ Minimize exposed storage of debris on-site;
- ◆ Monitor construction practices to minimize unnecessary transfers and mechanical disturbances of loose materials;
- ◆ Store aggregate materials away from the areas of greatest pedestrian activity, where and when possible;
- ◆ Establish a tire cleaning area at the exit gate to prevent dirt from reaching the street; and
- ◆ Clean streets and sidewalks regularly to minimize dust accumulations.

#### **3.2.12.2 Construction Noise**

Noise will be generated during the construction period, although construction activities will be conducted generally during daytime hours to minimize impacts. Construction-period noise impacts will be minimized through the use of mufflers on heavy equipment (as appropriate), construction hour restrictions, and other noise mitigation measures. Construction work will comply with the requirements of the City of Boston Noise Ordinance. Mitigation measures are expected to include:

- ◆ Use of appropriate mufflers on equipment, with proper maintenance of intake and exhaust mufflers;
- ◆ Use of muffling enclosures on continuously-operating equipment (e.g., air compressors and welding generators);
- ◆ Use of the most quiet construction operations, techniques, and equipment, where feasible;

- ◆ Scheduling equipment operations to keep average noise levels low, synchronize noisiest operations with times of highest ambient noise levels, and maintain relatively uniform noise levels;
- ◆ Turn off idling equipment; and
- ◆ Use shielding or distance to separate noisy equipment from sensitive receptors.

### **3.2.12.3 Construction Waste Management**

The Proponent will reuse or recycle demolition and construction materials to the greatest extent feasible. Construction procedures will allow for the segregation, reuse, and recycling of materials. Materials that cannot be reused or recycled will be transported in covered trucks by a contract hauler to a licensed facility.

### **3.2.13 Rodent Control**

A rodent extermination certificate will be filed with the building permit application to the City. In compliance with City requirements, rodent inspection monitoring and treatment will be carried out before, during, and at the completion of construction. Rodent extermination prior to work start-up will consist of treatment throughout the Project area, including building interiors. During construction, regular service visits will be made to maintain effective rodent control levels.

Operation of the Project will focus on a high quality of maintenance. Although the details have not yet been finalized, the Proponent will develop a safe, cost-effective, and ecologically sound pest management program.

### **3.2.14 Wildlife Habitat**

The Project is located in a densely developed urban area and will not impact wildlife habitat.

### **3.2.15 Sustainable Design**

The Project's location within the mature environment of the West End allows new development to occur with minimum impact on existing infrastructure. Due to the Project's proximity to mass transit (i.e., commuter rail, MBTA rapid service, and bus) as well as vehicular access to highways, the Project supports the objectives of smart growth, i.e., new development at existing nodes of excellent transportation facilities.

Energy conservation and other sustainable design measures will be integral parts of the proposed project. The buildings will employ energy and water efficient features for mechanical, electrical, architectural, and structural systems, assemblies, and materials



where possible. Sustainable design elements relating to building energy management systems, lighting, recycling, conservation measures, local building materials, and clean construction vehicles will be included, as practicable.

The City of Boston requires sustainable design in new development projects. Article 37 requires that projects be designed as certifiable under the U.S. Green Business Council's Leadership in Energy and Environmental Design (LEED) program based on the most appropriate LEED building rating system. Figure A-43 is a preliminary LEED checklist showing measures that the Proponent may implement to comply with Article 37.

### **3.3 Urban Design**

#### ***3.3.1 Surrounding Urban Fabric***

The West End is a distinct Boston neighborhood with a unique history, identity, and character. The neighborhood was largely rebuilt in the 1960s when high rise residential, office, and research buildings replaced a dense fabric of four- to six-story masonry buildings in relatively small blocks. The West End represents a well-known example of an urban design strategy that can be characterized as "towers-in-the-park" – a hallmark of mid 20th century modernism. This entire precinct is planned around a meandering pedestrian network and green spaces with connections to the Charles River waterfront and the surrounding neighborhoods. This urban green space is cherished by the residents of the West End.

The character of the West End is largely described by the principal use functions, which include health care and research, housing for a diverse population, a park, and recreation. Ancillary functions include retail, office, worship, parking structures, and transportation. The existing 1960s residential buildings, as seen in Figures A-11 and A-17, are a collection of modern high-rise structures with distinct building heights of 16 stories/160 feet, 24 stories/240 feet, and 38 stories/350 feet. Over the past decade the residential character has been enhanced with the additions of the West End Place Condominiums, an 11-story residential building, and five new residential buildings (ranging from 3 to 14 stories) at the West End Apartments to complement the existing towers.

##### **3.3.1.1 Reconnecting the West End**

The Project site presents a unique opportunity to re-energize the Nashua Street area and to reconnect the West End to the Bullfinch Triangle and North End neighborhoods. The existing Garden Garage, with its austere brutalist façade, creates a physical barrier between the West End and the surrounding neighborhoods. Demolishing the Garden Garage and constructing a new residential development will provide the opportunity to create strong pedestrian connections and will visually link the West End to the adjoining neighborhoods and North Station.

### **3.3.2 Building Design**

The Project's program includes 500 residential units and 850 parking spaces. The 500 residential units will be split between two slender residential towers: the North Tower and the South Tower. The 21-story North Tower will be approximately 240 feet tall and will provide 190 residential units. The 28-story South Tower will be approximately 310 feet tall and will provide 310 residential units.

The main residential lobbies for both towers will be accessed from Lomasney Way. The building design also incorporates secondary residential entrances oriented toward Thoreau Path to allow direct access to the established pedestrian network and open space.

The two towers are linked with a below-grade parking structure which will provide public, residential exempt, and non-residential exempt parking spaces. The parking garage entrance will be in the North Tower, and vehicular access to parking will be via the existing curb cut on Lomasney Way. A separate pedestrian parking garage lobby will be incorporated on the ground floor of the North Tower, directly accessible from Lomasney Way.

#### **3.3.2.1 Urban Design Principles**

The design of the Project embodies several key urban design principles specific to the West End and the Project site, which include:

- ◆ Development that recognizes, respects, and reinforces the scale and character of the existing residential neighborhood;
- ◆ Improved pedestrian access into, through, and around the site;
- ◆ Creation of an active, pedestrian-friendly edge along Lomasney Way; and
- ◆ Creation of new urban open space.

#### **3.3.2.2 Massing, Form, and Response to the Urban Context**

The proposed development is designed and sited to respect and complement the established arrangement of buildings and open space, and to strengthen the cohesive residential quality of the West End. The Project is composed of two "wedge"-shaped towers with carefully considered building massing, which is derived in direct response to both the urban design principals outlined above and site-specific conditions. The arrangement of the two towers on the site recognizes the adjacent buildings, Lomasney Way, and Thoreau Path as important elements of the neighborhood. Maximizing the space between the two wedge-shaped towers, as well as adjacent buildings, allows light to penetrate the site. The strategy of placing the parking below grade reduces the overall building footprint on the site

and responds to a long-standing community desire to provide new landscaped open space and enhance the pedestrian realm.

The space formed between the two towers reveals a new active pedestrian connection through the site, which provides a safer, more humane pedestrian experience connecting North Station to MGH and the Charles River Esplanade. The new pedestrian way also strengthens the West End's connection to the surrounding neighborhoods and districts. The placement of the two towers provides a more active pedestrian edge along Martha Road and Lomasney Way. Ground floor uses such as residential lobbies, retail, and other tenant amenities will help activate the streetscape and pedestrian walkways.

The narrow ends of the wedge-shaped towers are deliberately turned into the site to provide wider view corridors from neighboring residential buildings and Thoreau Path, visually connecting the West End to other neighborhoods and providing a sense of connection to the city as a whole (see Figures A-21 and A-22). The height and density of the two-tower massing is appropriately concentrated on the northern edge of the site, against the bustling Leverett Connector ramps and North Station; this shields the enclave-like open space from the noise of the city and minimizes the potential impacts to adjacent buildings. Locating the tower massing to the north also helps minimize the impact to established east-west view corridors from adjacent buildings.

The height and massing of the two towers are composed to complement the scale and character of surrounding buildings. The North Tower, approximately 240 feet tall, is similar to the scale of the twin residential buildings at Emerson and Whittier Place, which also are approximately 240 feet tall. The primary massing of the South Tower is a slender tower, approximately 310 feet tall, which is smaller than but relates to the twin Longfellow Place Towers; the height of the South Tower adds a new element to the district skyline that is distinct from the regular shape of the 1960s-era towers. The South Tower also has a secondary massing that responds to the dual scale of the neighborhood. The secondary massing, which is approximately 97 feet high, includes the lower eight floors, extends from Lomasney Way to the south, and complements the scale of the West End Place Condominiums and the pedestrian scale of Thoreau Path. The length of the secondary massing has been pulled back from the southern edge of the existing garage, thereby expanding the breadth of Thoreau Path by visually linking the elevated courtyard at West End Place to the existing open space network.

### **3.3.2.3 Façade Design Fenestration, and Building Materials**

The facades of the two proposed towers use the same palette of building materials, but express individual personalities. The façade design features a contemporary expression of 21<sup>st</sup> century residential design that is intended to enrich and complement the character of the neighborhood. To present an elegant, slender design to the neighborhood and Nashua Street area, and to emphasize a vertical proportion, the towers are divided into two primary

materials and forms. These two vertical forms will gracefully slide past one another, one an architectural precast concrete frame and the other a contemporary glass curtainwall.

The architectural precast forms are designed to extend from grade up to the mechanical penthouse, and will frame and define the new pedestrian connection between the towers. Window openings on both towers are grouped to reinforce the vertical proportions, but the rhythms of the window openings are expressed differently in the two towers to add diversity and texture to the urban wall.

The two glass curtainwall forms are turned outward towards the city, each expressing a unique identity based on their orientation: the south- and west-facing curtainwall facades of the North Tower incorporate vertical fins for sun shading, adding pattern and a finer grain; the east-facing curtainwall façade of the South Tower uses a series of horizontal brise soleil for sun shading, producing a strong horizontal expression.

The secondary massing on the South Tower is primarily clad with metal panel, but uses architectural concrete and glass curtainwall in discrete areas in response to the neighboring context.

### **3.3.3        *Site Design***

The Project site offers many opportunities for dramatic views and movement due to the significant grade change between Lomasney Way and Thoreau Path. The primary goal of the site design is to improve and enhance the pedestrian circulation between the heart of the West End and the surrounding neighborhood. By enhancing the perception of rising into the site through the use of sculpted landforms that recall the three mountains of Boston, or Tremontaine, as the city was originally named, pedestrians will be directed through the “valleys” of the formations where circulation is most desired. In addition, the landforms provide for the subtle separation of uses or nodes with the site such as an overlook terrace, bocce courts, and informal gathering and community spaces.

The primary pedestrian circulation between the two towers will be provided through walks sloping at under 5 percent and intermittent stairs that create terraced overlooks. Low seat walls will be incorporated to direct circulation and absorb changes in grade where needed.

The landforms will be simple rolling lawns accented with flowering trees for seasonal interest and specimen canopy trees to provide shade and pedestrian scale to the open space. Shrubs will be used minimally to offer screening and privacy where needed, and low perennials and groundcovers will be planted in shallow soils on structures (e.g., green roofs).

#### **3.3.3.1 Pedestrian Access**

Pedestrian access to the site will be provided through a hierarchy of walkways. The primary walkway connecting Lomasney Way to Thoreau Path will vastly improve circulation between North Station and MGH. Secondary walkways will provide pedestrian access to the cross-connections between Thoreau Path and the adjacent properties as well as to entrances, gathering nodes, and outdoor activity spaces. All paths will connect seamlessly to Thoreau Path's existing system of walkways such that the overall appearance of the open space is unified.

Universal access requirements will be met to and from all public open spaces with the site.

#### **3.3.3.2 Parking Access**

Under existing conditions, vehicles enter and exit the existing Garden Garage from Lomasney Way. Loading and building servicing currently occur from a loading dock along Service Road off Lomasney Way.

As shown in Figure A-7, vehicular access to the proposed garage will be from the existing curb cut along Lomasney Way; access to the loading dock will be from the service drive off of Lomasney Way. The residential lobby will have a pick-up/drop-off area curb cut from Lomasney Way.

#### **3.3.3.3 Loading Access**

The existing Longfellow Place loading and service area will be used as the main staging area for all loading and unloading activities and deliveries. Access to the existing loading area is via the service drive off Lomasney Way.

### **3.4 Historic and Archaeological Resources**

This section identifies historic resources in the vicinity of the Project. A review of the State and National Registers of Historic Places and the survey files of the Massachusetts Historical Commission (MHC) and Boston Landmarks Commission (BLC), as well as a field review of the areas in the vicinity of the Project, were undertaken to identify historic resources.

#### ***3.4.1 Historic Resources within the Project Site***

The Project site encompasses two buildings: the existing 710-space Garden Garage on Lomasney Way, and a small, vacant one-story wooden structure formerly used as the Boston Children's School Annex. Neither of the buildings is included in the State or National Register of Historic Places or the *Inventory of Historic and Archaeological Assets of the Commonwealth* (Inventory) maintained by the MHC.

### 3.4.2 Historic Resources in the Vicinity of the Project Site

Multiple properties included in the Inventory or listed on the State and National Registers of Historic Places are located in the immediate vicinity of the Project. Table 3-7 contains the names and addresses of properties listed in the State and National Registers of Historic Places and properties included in the Inventory of Historic and Archaeological Assets of the Commonwealth that are within a quarter-mile radius of the Project. Figure A-44 shows the locations of these properties and is keyed to the Map Numbers shown in Table 3-7.

**Table 3-7 Historic Resources in the Vicinity of the Project**

<i>Map No.</i>	<i>Historic Resource</i>	<i>Address</i>
<b>State and National Register Listed Properties</b>		
A	Suffolk County Jail (aka Charles Street Jail)	215 Charles Street
B	Massachusetts General Hospital– Bulfinch Building and Ether Dome (National Historic Landmarks)	Fruit Street
C	Longfellow Bridge (contributing structure in the Charles River Basin Historic District)	Cambridge Street and the Charles River
D	Charles River Basin Historic District	Both banks of the Charles River from the Eliot Bridge to Charles River dam
E	Beacon Hill Historic District (Local Historic District and a National Historic Landmark)	Roughly bounded by Beacon Street, Embankment Road, Storrow Drive, and Cambridge and Bowdoin Streets
F	First Harrison Gray Otis House (National Historic Landmark)	141 Cambridge Street
G	Old West Church (National Historic Landmark)	131 Cambridge Street
H	Bulfinch Triangle Historic District	Canal, Causeway, Friend, Lancaster, Lowell Square, Merrimack, Portland and Traverse Streets
I	Sears Crescent & Sears Block	38-68 and 70-72 Cornhill
J	Suffolk County Courthouse	Pemberton Square
K	North Terminal Garage	600 Commercial Street
L	Copp's Hill Burial Ground	Snowhill Street
M	Copp's Hill Terrace	Snowhill Street
N	Town Hill Historic District	Rutherford Avenue, Main, Washington Street, Warren, Pleasant and Thompson Streets, Central Place
O	City Square Historic and Archaeological Site (LL, SR)	City Square
<b>Inventory of Historic and Archaeological Resources of the Commonwealth Properties</b>		
1	Charles Street/MGH Red Line Station, constructed 1931-32 (determined by MHC and BLC to be a contributing element within the Charles River Basin Historic District)	Charles Street and Cambridge Street
2	Resident Physician's House (1892)	Cambridge Street and North Grove Street

**Table 3-7 Historic Resources in the Vicinity of the Project (Continued)**

<i>Map No.</i>	<i>Historic Resource</i>	<i>Address</i>
3	West End Tenement House (1910)	23-25 Anderson Street
4	Ruth Sleeper Hall (Arthur H. Vinal, architect; 1884-85)	24 Blossom Street
5	West End Settlement House (1929)	16-18 Blossom Street
6	St. Joseph's Church (Alexander Paris, architect; 1823-24)	68 William Cardinal O'Connell Way
7	Holiday Inn	5 Blossom Street
8	Charles River Plaza	161-209 Cambridge Street
9	Exxon Gas Station	239 Cambridge Street
10	North Anderson Street Park	245 Cambridge Street
11	Apartment/retail building	309-311 Cambridge Street
12	Apartment/retail building	313 Cambridge Street
13	Boston Edison Electric Illumination Company Electric Substation	317-325 Cambridge Street
14	Lindemann Center	15-25 Staniford Street
15	Jewish Family and Children's Service	31 New Chardon Street
16	Royal Glove Insurance Co.	25 New Chardon Street
17	Bulfinch Building	15 New Chardon Street
18	Overseers of the Public Welfare Building	43 Hawkins Street, 31 Bowker Street, 41 New Chardon Street
19	Boston Edison Substation	29-33 Hawkins Street
20	R.K.O. General	40 Hawkins Street
21	New England Telephone	6 Bowdoin Square
22	One Bulfinch Place	One Bulfinch Place
23	JFK Federal Building	15 Cambridge Street
24	Boston City Hall	One City Hall Square
25	Government Center MBTA Station	Cambridge Street/City Hall Sq.
26	Center Plaza	1,2,3 Center Plaza, Cambridge St
27	Leverett Saltonstall Building	100 Cambridge Street
28	Suffolk County Courthouse (Addition)	Pemberton Square
29	Metropolitan District Commission	20 Somerset Street
30	McCormack Building	One Ashburton Place
31	Causeway/North Washington Street Area	Causeway and North Washington Streets
32	North End Area	Roughly waterfront to North Washington to Central Artery to Clinton Street to Atlantic Ave
33	Charles River Railroad Drawbridge #1	Charles River at North Station

### **3.4.3      *Archaeological Resources***

There are no known archaeological resources listed in the State and National Registers of Historic Places or included in the Inventory of Historic and Archaeological Assets of the Commonwealth within the Project site. In addition, the Project site is a previously-developed area, and therefore it is unlikely that the Project will affect archaeological resources.

### **3.4.4      *Coordination of Historic Resource Reviews***

#### **3.4.4.1      Boston Landmarks Commission Article 80 Review**

Submittal of this PNF initiates review of the Project by the BLC under the City's Article 80 Review process. Direct and indirect impacts to historic resources including, but not limited to, urban design, wind, and shadow will be addressed in the DPIR.

#### **3.4.4.2      Boston Landmarks Commission Article 85 Review**

The proposed demolition of the two existing buildings on the Project site (the Garden Garage at Lomasney Way and the former Boston Children's School Annex) will be subject to review by the BLC under Article 85 of the Boston Zoning Code. An Article 85 Application for each property will be submitted to the BLC.

#### **3.4.4.3      Massachusetts Historical Commission State Register Review**

The MHC has review authority over projects requiring state funding, licensing, permitting, and/or approvals that may have direct or indirect impacts to properties listed in the State Register of Historic Places. The State Register Review process will be initiated through the filing of an ENF under the MEPA.

## **3.5      Infrastructure Systems**

The following sections describe the capacity of the existing water, sewage, and drainage utility infrastructure surrounding the Project site and explain how these systems will service the Project.

### **3.5.1      *System Connections***

The Proponent will coordinate the design of the proposed water, drainage, and sewer connections with the BWSC. The appropriate permits and approvals will be acquired prior to construction. Utility connections will be designed to minimize adverse effects within the surrounding area, including existing business operations. Based on the analysis herein, there is adequate drainage and sewage capacity in the area to accommodate the Project. Results of pending BWSC flow tests will determine if there is sufficient water supply in the existing infrastructure to accommodate the Project.



### **3.5.2 Sewage and Stormwater Systems**

#### **3.5.2.1 Existing Conditions**

The existing sewer and drainage system infrastructure that services the Project site and surrounding area is owned and operated by the BWSC; the existing BWSC sewer system is shown on Figure A-45. A 32-inch x 60-inch combined sewer exists within Lomasney Way, and this combined sewer connects to a 48-inch combined sewer in Martha Road known as the West Side Interceptor. An existing 12- to 15-inch drain line and an existing 10-inch sewer line in Thoreau Path connect to a 30-inch combined sewer in Charles Street, which runs north up Charles Street and connects to the MWRA system across the Charles River.

The existing garage on the Project site is connected to the combined sewer in Lomasney Way/Martha Road. Stormwater from the areas south and west of the existing garage drain to a storm drain in Thoreau Path. Sewer from the Boston Children's School Annex is presumed to connect to the sewer main in Thoreau Path.

#### **3.5.2.2 Sewage Generation**

Existing and proposed sewage generation rates are provided in Tables 3-8 and 3-9, respectively. These rates were estimated using Massachusetts State Environmental Code (Title 5) 310 CMR 15.203. Based on these estimates, the Project is expected to increase the total effluent sewage discharge from the Project site by 70,980 gallons per day (GPD). Since the proposed effluent discharge rate exceeds 50,000 GPD, the Proponent anticipates that a Department of Environmental Protection (MassDEP) Sewer Connection Permit will be required.

**Table 3-8 Existing Sewage Generation**

<i>Use</i>	<i>Area (square feet)</i>	<i>Units</i>	<i>Sewage Generation Rate (gallons per day)</i>	<i>Total (gallons per day)</i>
Parking Garage			None	0
Athletic Club		60 lockers	20 per locker	1,200
Boston Children's School Annex (Daycare)	812	20 persons	10 per person	200
<b>TOTAL</b>				<b>1,400</b>

**Table 3-9 Proposed Sewage Generation**

<i>Use</i>	<i>Area (square feet)</i>	<i>Units</i>	<i>Sewage Generation Rate (gallons per day)</i>	<i>Total (gallons per day)</i>
North Tower (Residential)	214,000	255 bedrooms <sup>1</sup>	110 per bedroom	28,050
South Tower Residential)	336,680	403 bedrooms <sup>2</sup>	110 per bedroom	44,330
Garage	360,000		None	0
<b>TOTAL</b>				<b>72,380</b>

<sup>1</sup> 39 studio, 98 one-bedroom, and 59 two-bedroom units.

<sup>2</sup> 62 studio, 155 one-bedroom, and 93 two-bedroom units.

### 3.5.2.3 Sanitary Sewer System Capacity Analysis

The Proponent has analyzed the existing sanitary sewer and combined sewer mains in Lomasney Way, Martha Road, and Thoreau Path to determine whether they are of sufficient capacity to accommodate the Project (see Table 3-10). Pipe diameters and inverts were obtained from the Existing Conditions Plan prepared by Nitsch Engineering (dated February 20, 2009) as well as from electronic wastewater system maps purchased from the BWSC. Flow capacity was analyzed using Manning's equation.

Based on available information, the combined sewer mains in Lomasney Way and Martha Road have no slope; a slope of 0.001 feet/foot was used to approximate the hydraulic capacity of these mains for purposes of performing the calculations in Table 3-3. Results indicate the minimum hydraulic capacity of the systems is located along the 10-inch sewer main within Thoreau Path, which has a capacity of 1.22 million gallons per day (MGD). Based on the proposed peak flow estimate, the Project will not significantly burden the existing sewage system (see Table 3-3).

**Table 3-10 Sewer Hydraulic Capacity Analysis**

<i>Street</i>	<i>Size (inch)</i>	<i>Slope</i>	<i>Manning's Roughness Coefficient (n)</i>	<i>Existing Capacity (MGD)</i>	<i>Existing Capacity (GPM)</i>	<i>Proposed Peak Flow to Main (GPM)</i>
Thoreau Path	10	0.006	0.012	1.22	842	50
Lomasney Way	32"x60"	0.001*	0.012	25.22	17,513	0
Martha Road	48	0.001*	0.012	31.80	22,087	0

\* A minimum slope of 0.001 feet/foot was assumed for calculation.

#### **3.5.2.4 Sewer/Stormwater Connections**

In accordance with BWSC requirements, the Project's sewage and stormwater flows will be maintained separately and will be connected to the appropriate respective mains within Thoreau Path, with separate connection to Lomasney Way if needed. Although the existing sewer main in Thoreau Path ultimately flows to a combined system, the BWSC and the City of Boston are attempting to separate stormwater and wastewater over time to prevent periodic overflows of combined sewer and stormwater into receiving waters and to reduce the sewage treatment burden at Deer Island.

#### **3.5.2.5 Sewer and Stormwater Mitigation**

To minimize sewage generation, the Project will meet applicable code requirements for the installation of low-flow fixtures.

In terms of stormwater, given that the Project will not increase the amount of impervious area on the Project site, post-construction stormwater run-off rates will not exceed existing rates. Furthermore, by upgrading garage stormwater collection systems, the Project will significantly improve the quality of stormwater runoff. Stormwater collected from the loading dock and lower levels of the garage will be collected and directed through MWRA-compliant gas, sand, and oil interceptors. Stormwater collected from parking areas and ramps receiving direct rainfall will be directed through a Stormceptor water quality structure before discharging to the municipal system.

The Project will also include a stormwater management system to address the phosphorus content of stormwater runoff within the Charles River Watershed. The Proponent is considering a stormwater recharge system consisting of perforated pipe and crushed stone to remove phosphorus from runoff. The Proponent will coordinate with the BWSC to determine the appropriate level and method of phosphorus removal.

### **3.5.3 *Water Supply System***

#### **3.5.3.1 Existing Conditions**

Under existing conditions, the Project site has both domestic and fire service connections; the existing BWSC water system is shown on Figure A-46. Water is delivered through interconnected network water distribution systems designated as Southern Low Service (SL) and Southern High Service (SH): SL systems are generally used to meet domestic water needs and street hydrant demand; SH systems are generally used as the main supply to the low-pressure service system and supply water for building fire protection systems. The SL and SH systems are integrally connected to form loops that allow major water demands to be fed from more than one direction. Looping allows each distribution system to function at optimum efficiency and provides a measure of safety and redundancy in the event of a water main break.

Adjacent to the Project site is a 16-inch SL water main in Lomasney Way and a 12-inch SH water main in Thoreau Path. The existing garage is serviced by 6-inch fire and 4-inch domestic water connections from the 16-inch main in Lomasney Way. The Boston Children's School Annex building appears to be serviced from the 12-inch main in Thoreau Path.

Two existing hydrants are located near the northeast and southeast corners of the existing parking garage on the northeast side of Lomasney Way; an additional hydrant is located in Thoreau Path, across from the Boston Children's School Annex building. Nitsch Engineering has requested hydrant flow test results from the BWSC for hydrants H38, H36, H48, H46, and H44 in Thoreau Path and Lomasney Way, and has received results for H38 in Thoreau Path (provided in Table 3-11).

**Table 3-11 Existing Hydrant Flow Data**

<i>Static Hydrant</i>	<i>Flow Hydrant</i>	<i>Static Pressure</i>	<i>Residual Pressure</i>	<i>Total Flow (GPM)</i>	<i>Flow at 20 psi (GPM)</i>	<i>Flow at 10 psi (GPM)</i>
H38	H58	104 psi	90 psi	2,496	6,568	6,980

### **3.5.3.2 Anticipated Water Consumption**

The Project's average potable water demand is estimated as 110% of the sewage generation, or 79,618 GPD.

### **3.5.3.3 Water System Connections**

The Proponent anticipates that water system connections will be made to the SL system for domestic water and the SH system for fire protection. Since SL and SH systems are not available in the same location on the Project site, the Proponent may request approval to connect both the fire and domestic services to the same system. Water connections will be reviewed and coordinated with the BWSC to determine the most appropriate connections. Existing water connections not used by the Project will be cut and capped at the main.

### **3.5.4 Additional Utility Connections**

The Project site is serviceable from electric, telephone, cable, and gas services located within Lomasney Way and Thoreau Path. An 8-inch gas main exists in Thoreau Path, and a 12-inch gas main exists in Lomasney Way. Proposed utility connections will be coordinated with the appropriate utility providers.

## 4.0 Coordination with Other Government Agencies

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## **4.0 COORDINATION WITH OTHER GOVERNMENTAL AGENCIES**

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The Proponent will coordinate Project design and review with a number of governmental agencies and community groups, some of which are addressed below. Section 1.4 contains a list of agencies from which the Proponent will seek permits and approvals for the Project.

### **4.1 Architectural Access Board Requirements**

The Project will comply with the requirements of the Architectural Access Board and the standards of the Americans with Disabilities Act.

### **4.2 Massachusetts Environmental Policy Act**

The Project will require review under the Massachusetts Environmental Policy Act (MEPA). An Environmental Notification Form (ENF) will be filed. The ENF will include a Public Benefit Review, because since a portion of the Project site is located within landlocked tidelands (see Figure A-8).

### **4.3 Massachusetts Historical Commission**

Since the Project requires state permits, it will be reviewed by the Massachusetts Historical Commission (MHC) to demonstrate compliance with M.G.L., Chapter 9, Sec. 26-27c, as amended by Chap. 254 of the Acts of 1988 (950 CMR 71.00). The ENF to be prepared as part of the MEPA process will be submitted to the MHC.

### **4.4 Boston Civic Design Commission**

The Project will comply with the provisions of Article 28 of the Boston Zoning Code. This PNF will be submitted to the Boston Civic Design Commission by the BRA as part of the Article 80 process.

### **4.5 Meetings and Outreach**

The Proponent has met with several community organizations to introduce the Project and discuss its effects on and benefits to the neighborhood. These outreach efforts have included presentations to the following groups:

- ◆ Downtown North Association;
- ◆ West End Council;
- ◆ Several informal meetings with a group based on, among others, the prior Impact Advisory Group (IAG) constituted for the Emerson Place Project;
- ◆ West End Place; and
- ◆ West End Civic Association (WECA).

## 5.0 Project Certification

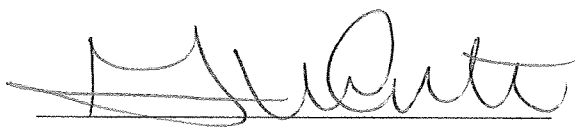
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## 5.0 PROJECT CERTIFICATION

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This form has been circulated to the BRA as required by the Boston Zoning Code, Article 80.



Signature of Proponent's Representative

Greg White  
Equity Residential  
1953 Gallows Road, Suite 340  
Vienna, VA 22182



Signature of Preparer

Laura Rome  
Epsilon Associates, Inc.  
3 Clock Tower Place, Suite 250  
Maynard, MA 01754

11/23/10  
Date

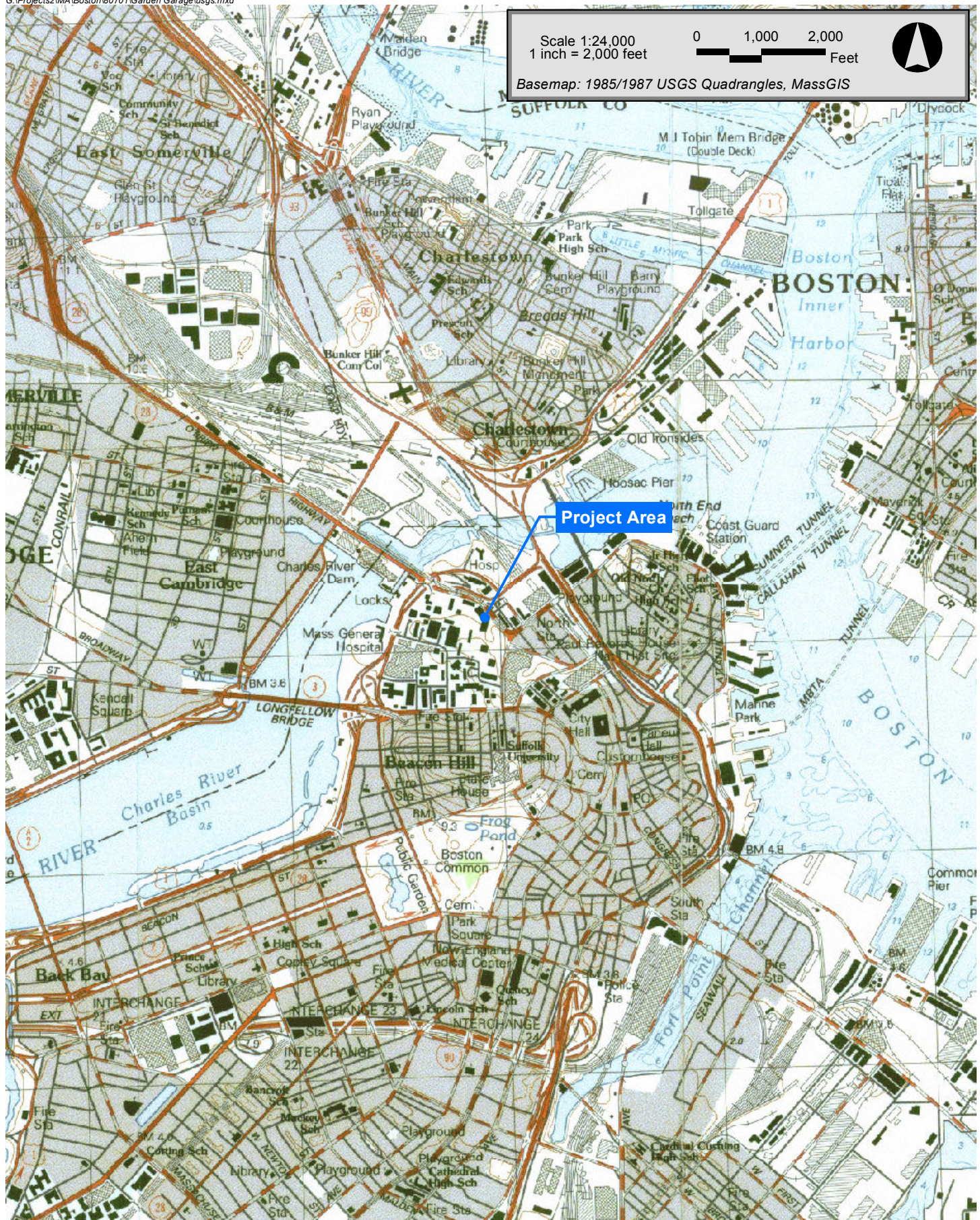
11/30/2010  
Date



## Attachment A – Figures

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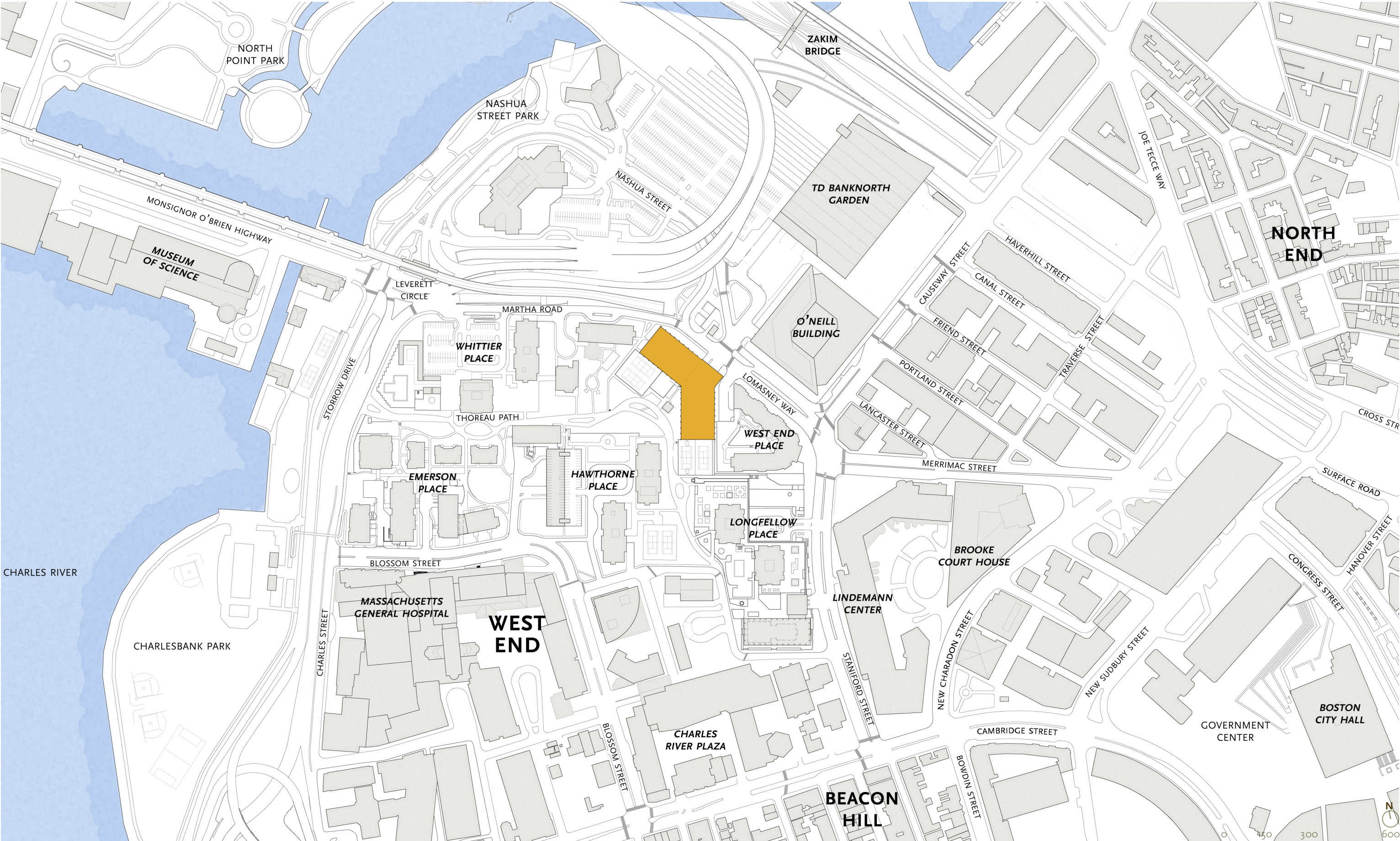
## Garden Garage Redevelopment PNF Boston, Massachusetts





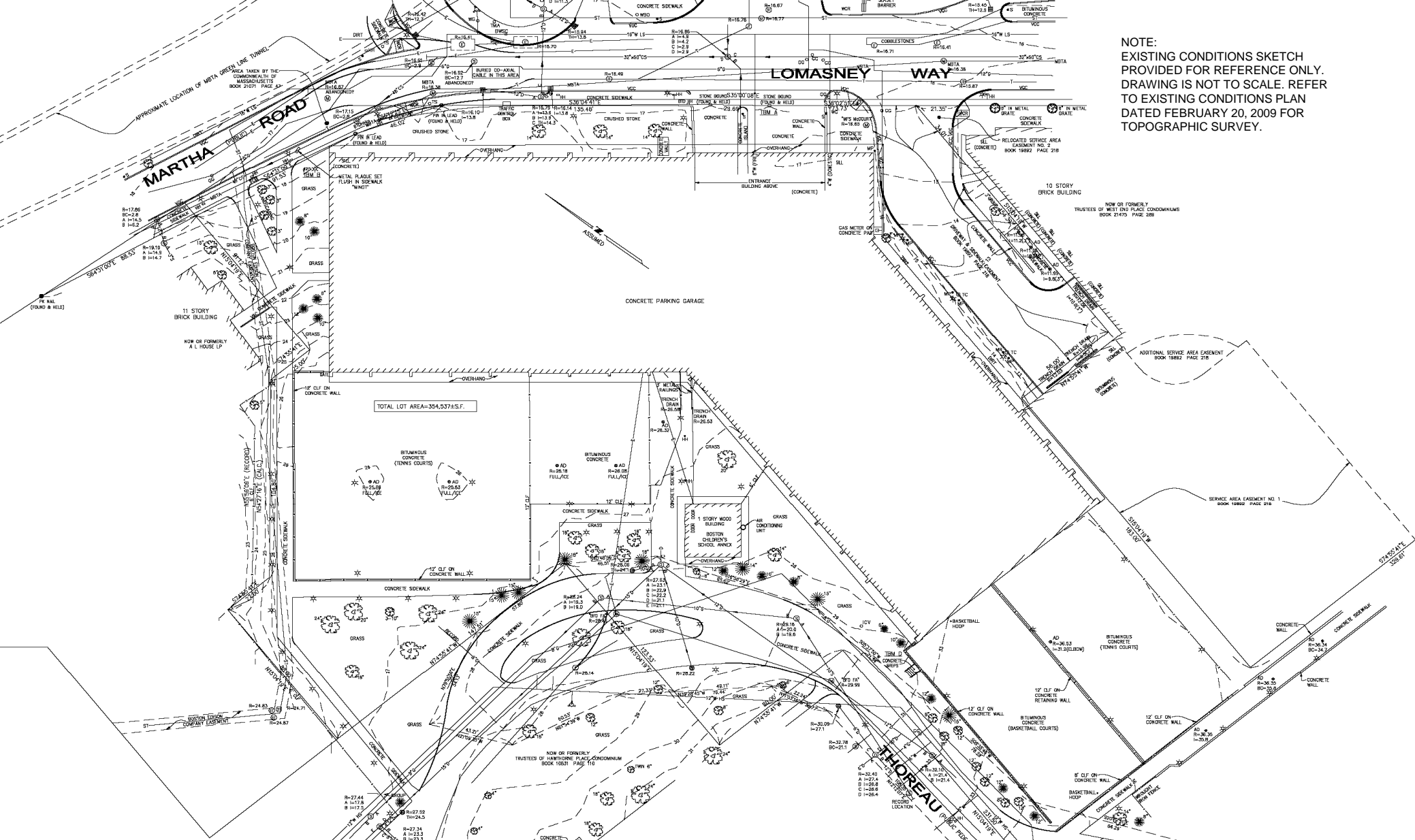
Garden Garage Redevelopment PNF Boston, Massachusetts





Garden Garage Redevelopment PNF Boston, Massachusetts



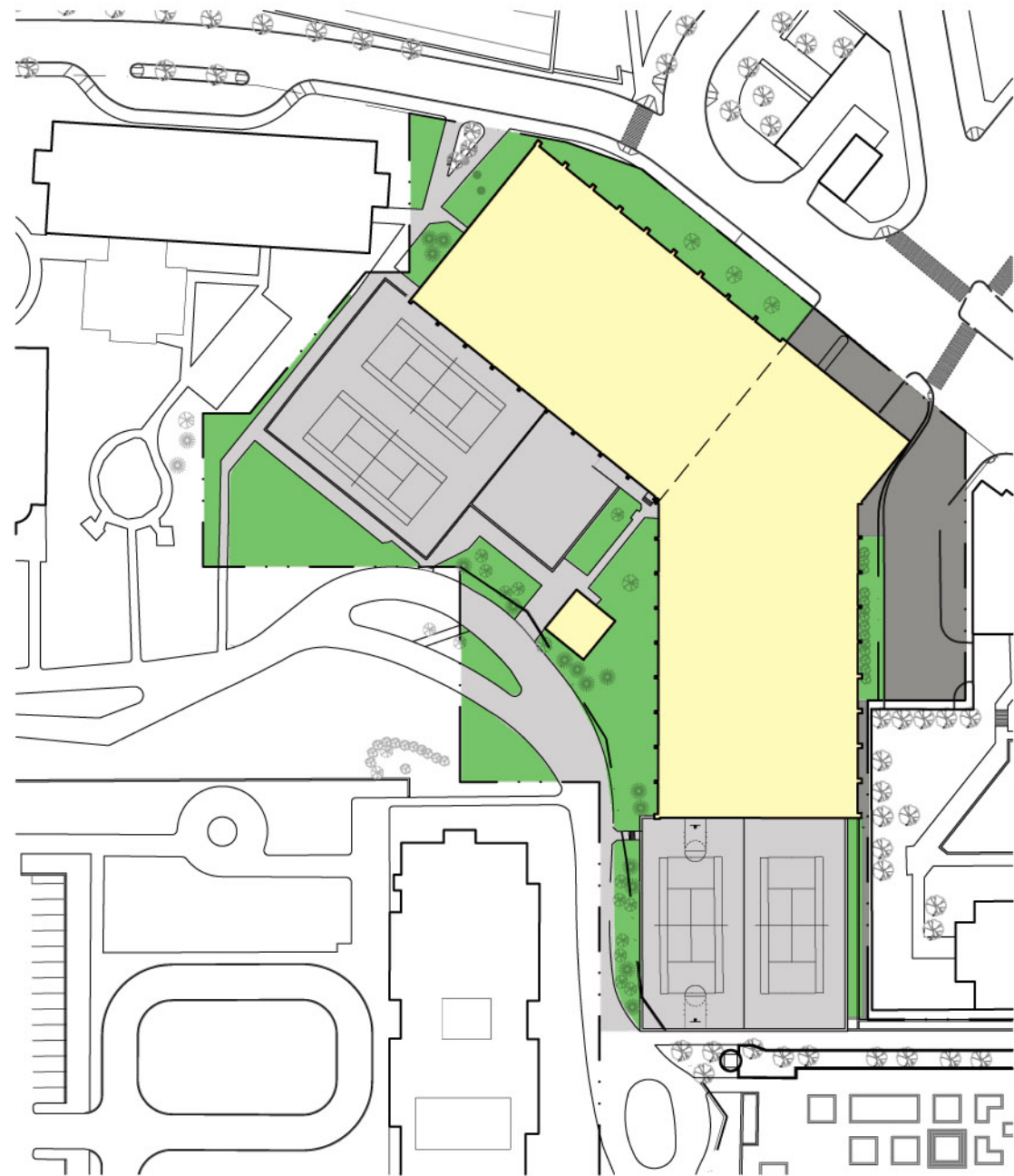






Garden Garage Redevelopment PNF Boston, Massachusetts









EXISTING SITE DEVELOPMENT



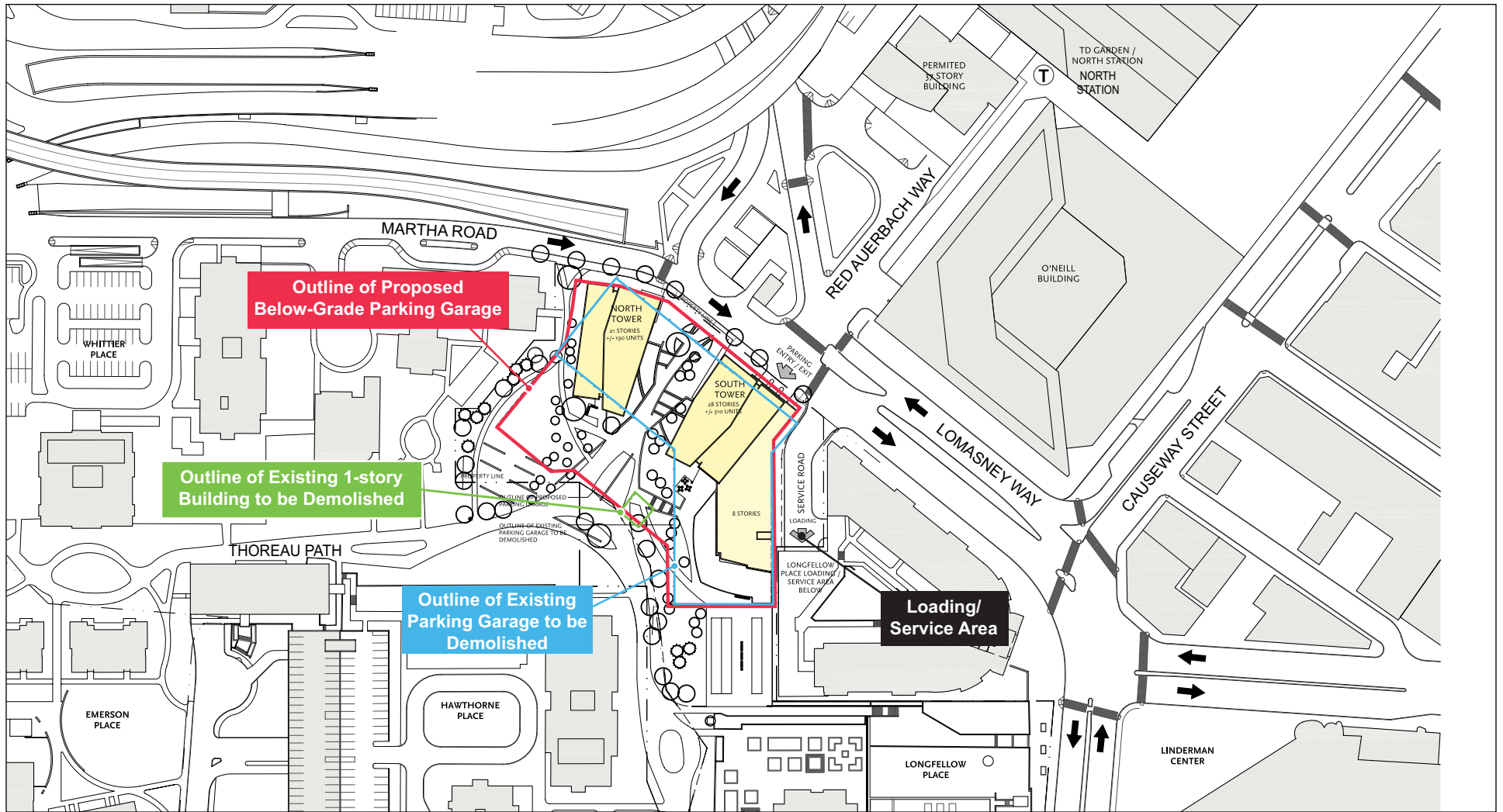
PROPOSED SITE DEVELOPMENT

COMPARISON OF NEW VERSUS EXISTING SITE DEVELOPMENT AREAS

ELEMENT	EXISTING	PROPOSED	CHANGE
 BUILDING FOOTPRINTS	50,150 SQUARE FEET	31,675 SQUARE FEET	-18,475 SQUARE FEET
 PLANTING AREA	27,248 SQUARE FEET	53,598 SQUARE FEET	+26,350 SQUARE FEET
 WALKWAYS /HARDSCAPE	43,616 SQUARE FEET	36,946 SQUARE FEET	-6,670 SQUARE FEET
 DRIVEWAY	10,586 SQUARE FEET	9,381 SQUARE FEET	-1,205 SQUARE FEET
SITE AREA	131,600 SQUARE FEET	131,600 SQUARE FEET	

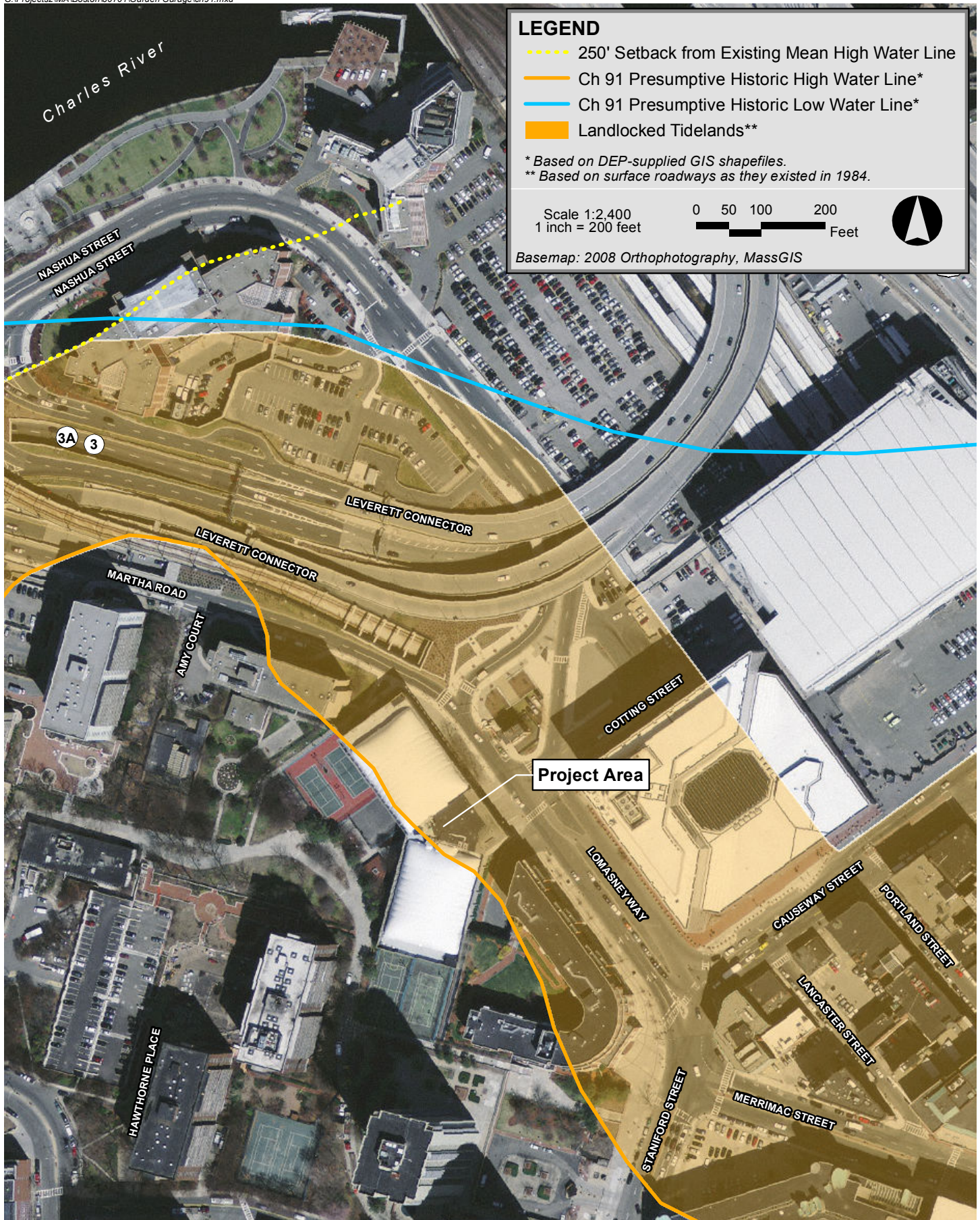
THE STRATEGY OF PLACING THE PARKING BELOW GRADE SIGNIFICANTLY REDUCES THE OVERALL BUILDING FOOTPRINT ON THE SITE AND PROVIDES 19,680 SQUARE FEET (0.45 ACRES) OF NEW USEABLE OPEN SPACE ON THE SITE.

USEABLE OPEN SPACE INCLUDES: PLANTING AREAS, WALKWAYS, AND HARDSCAPE.



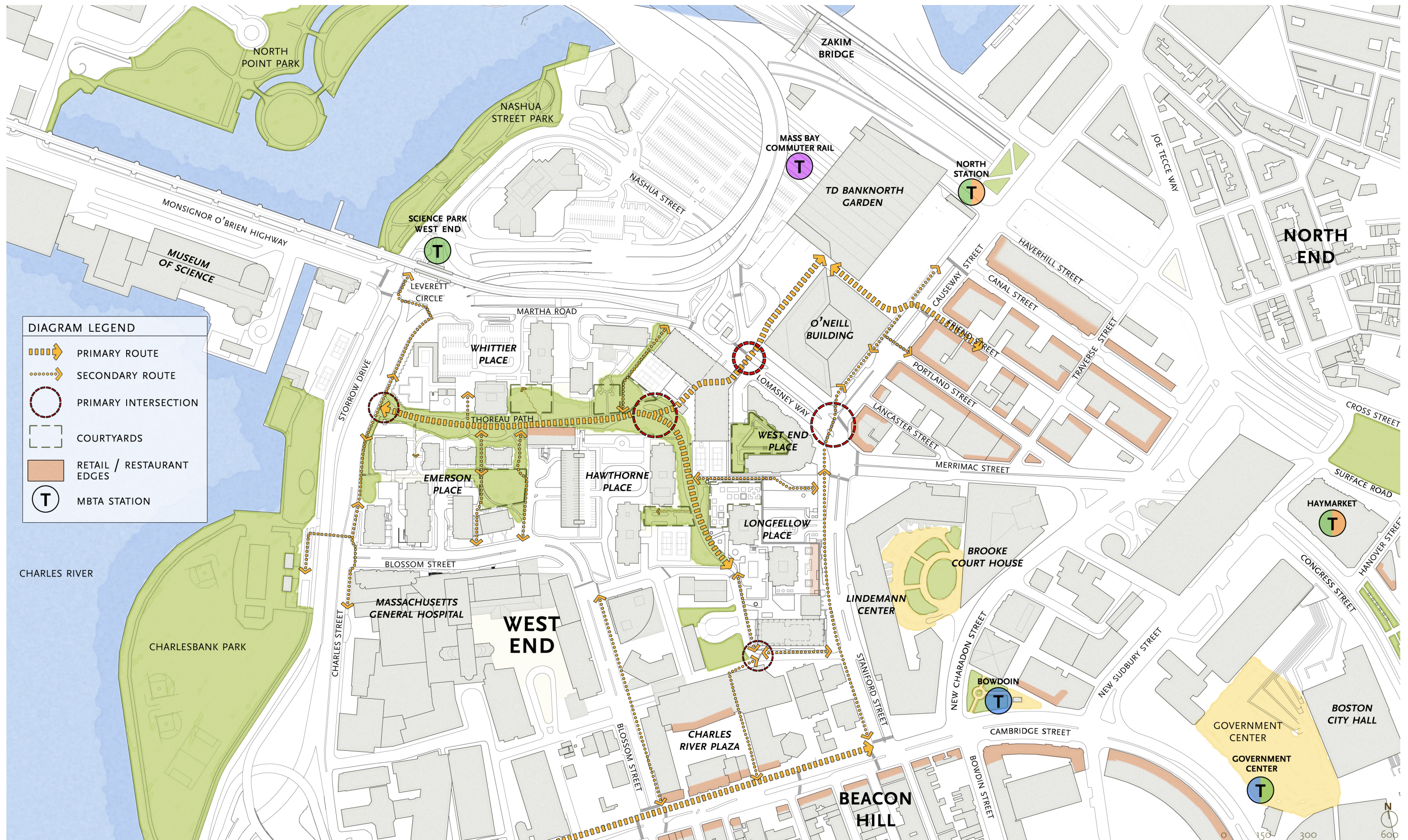
Garden Garage Redevelopment PNF Boston, Massachusetts





Garden Garage Redevelopment PNF Boston, Massachusetts





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Garden Garage Redevelopment PNF Boston, Massachusetts





**Garden Garage Redevelopment PNF Boston, Massachusetts**





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Figure A-15  
*Neighborhood Context/View through West End Place Condominium Archway*





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Garden Garage Redevelopment PNF Boston, Massachusetts





Garden Garage Redevelopment PNF Boston, Massachusetts





Garden Garage Redevelopment PNF Boston, Massachusetts









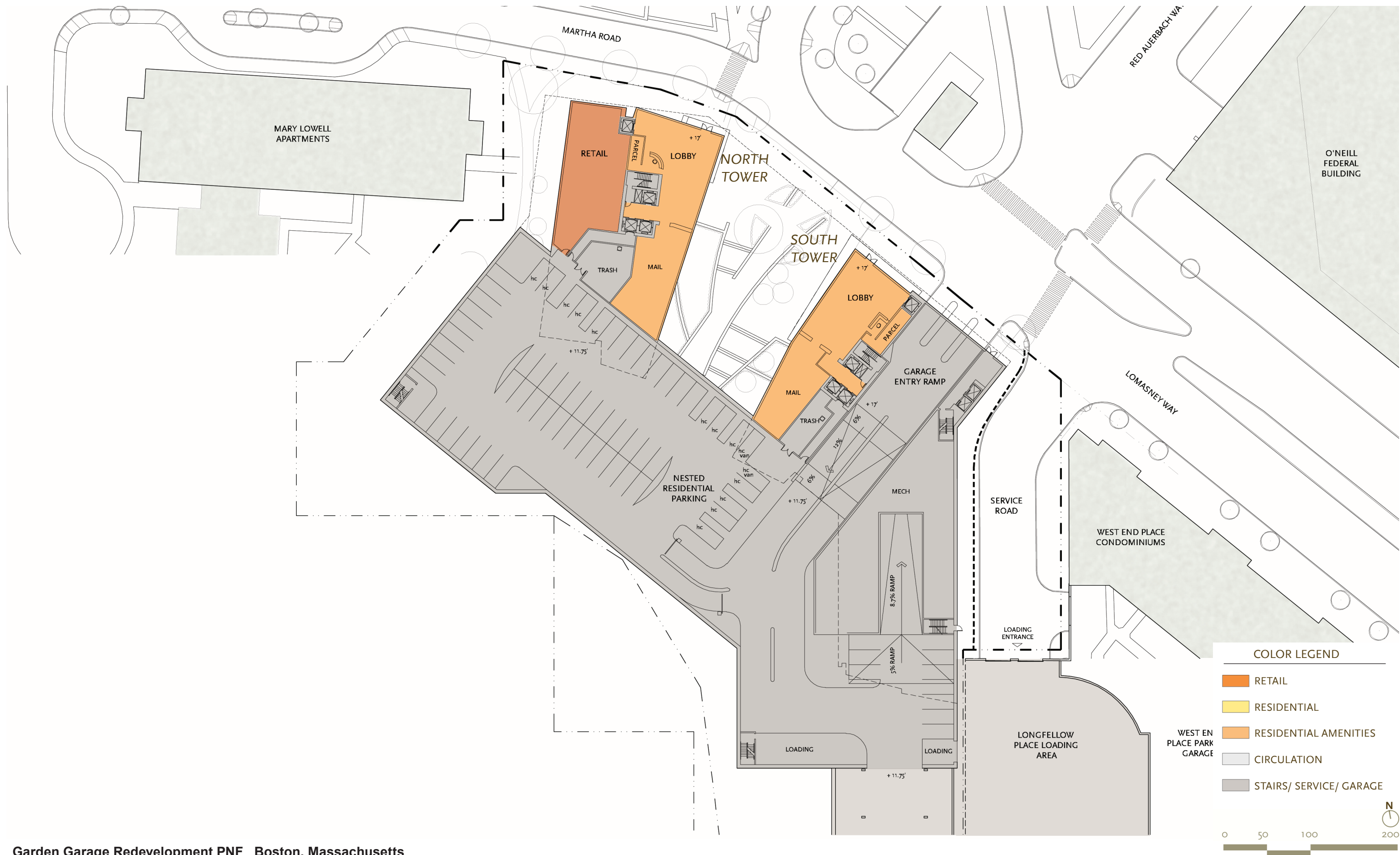
Garden Garage Redevelopment PNF Boston, Massachusetts





© ELKUS MANFREDI ARCHITECTS



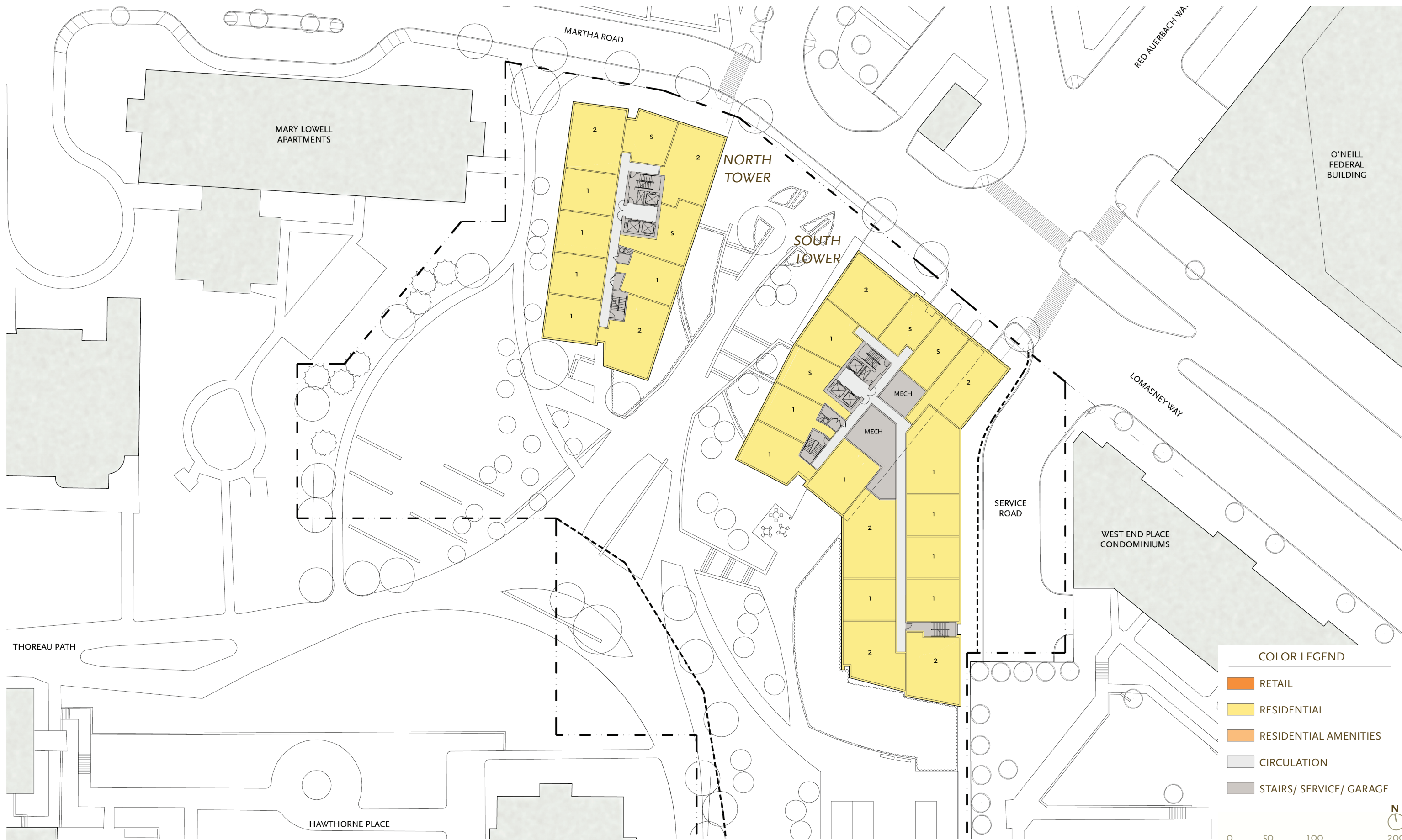


Garden Garage Redevelopment PNF Boston, Massachusetts

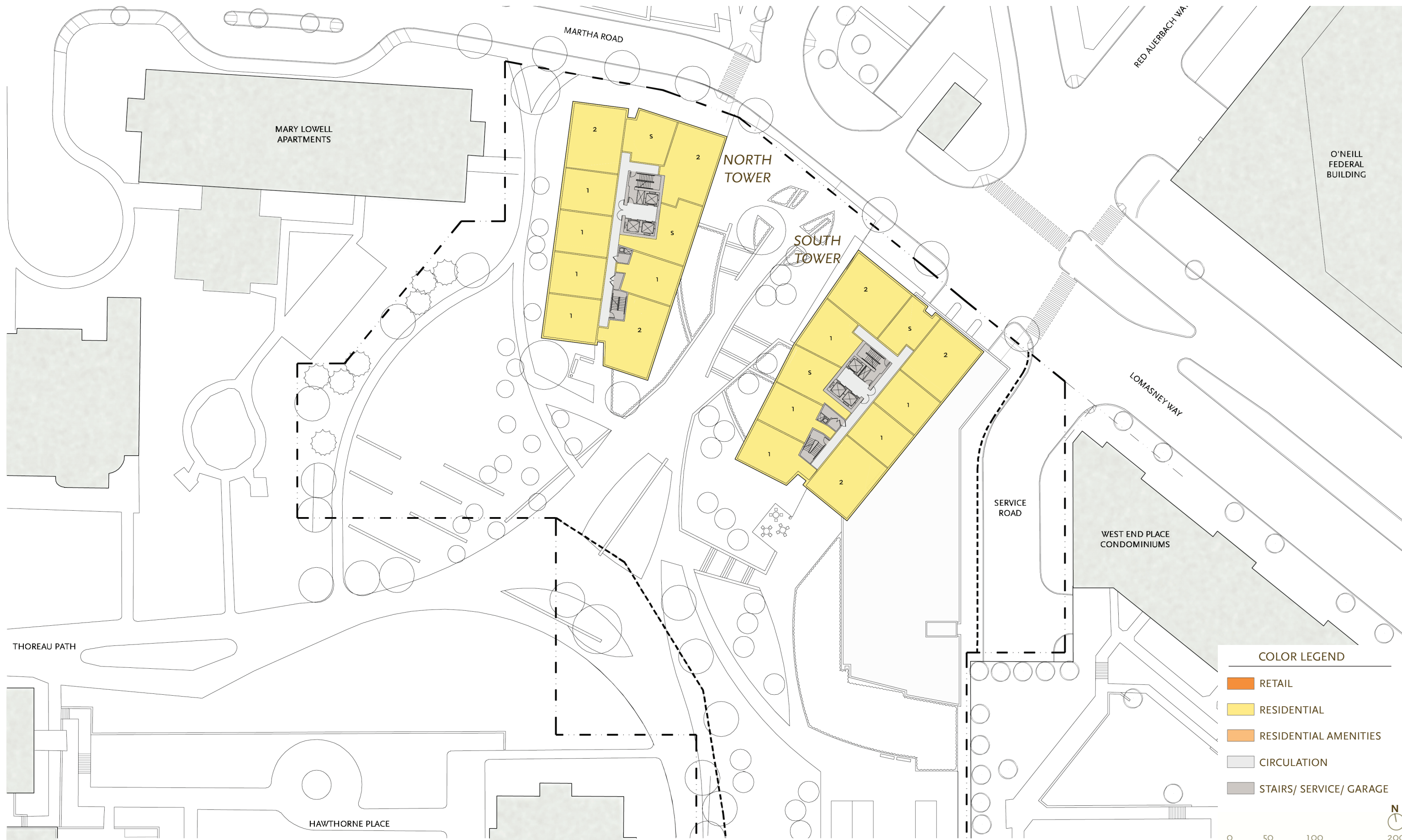


**Garden Garage Redevelopment PNF Boston, Massachusetts**



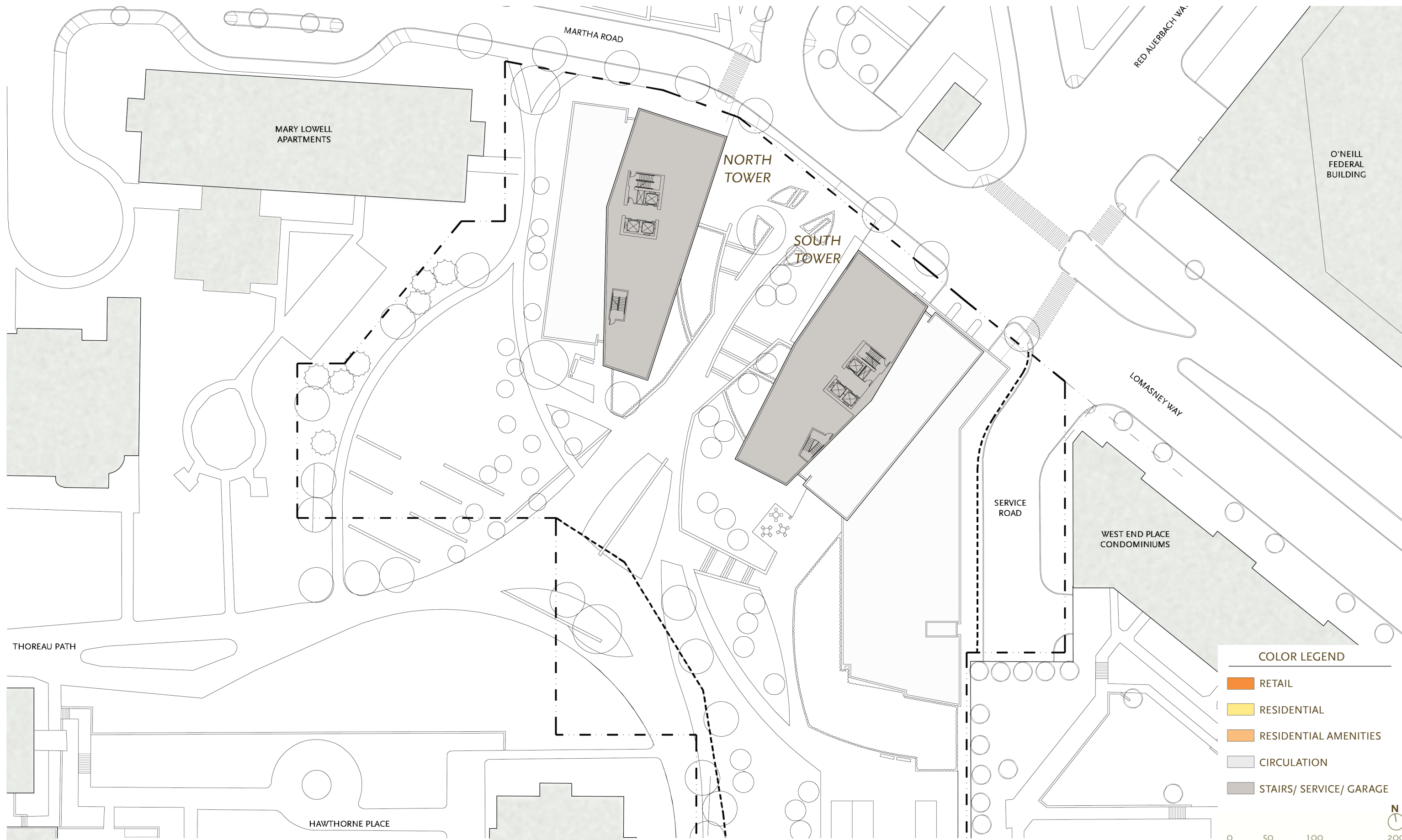


Garden Garage Redevelopment PNF Boston, Massachusetts

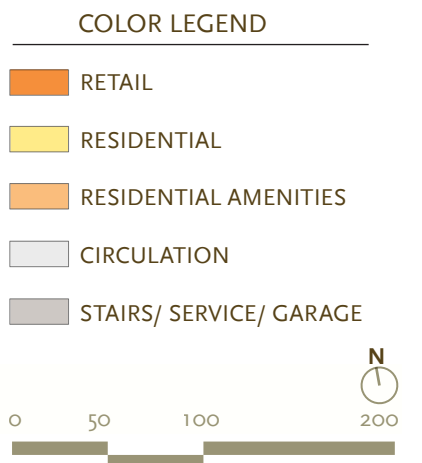
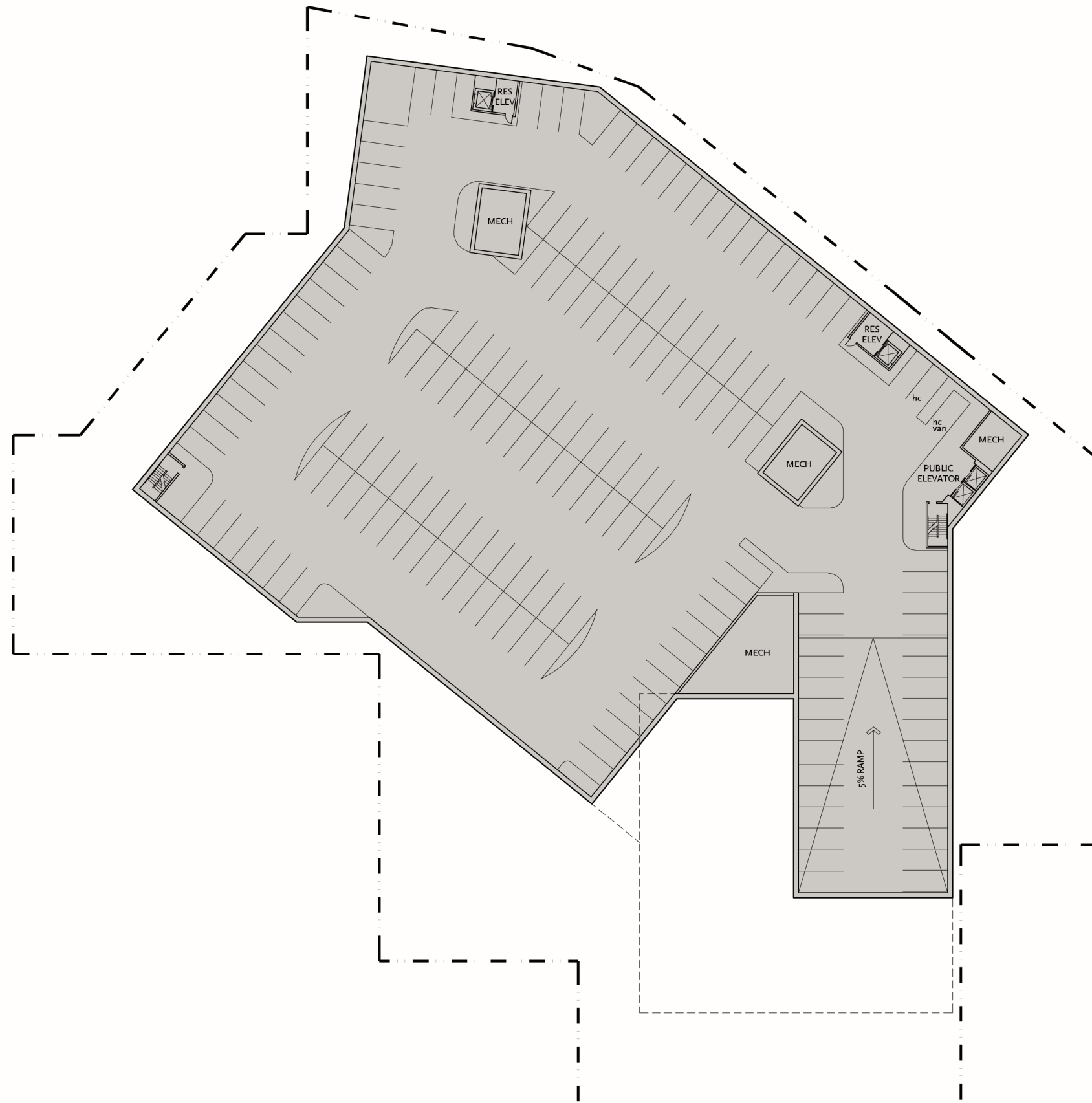


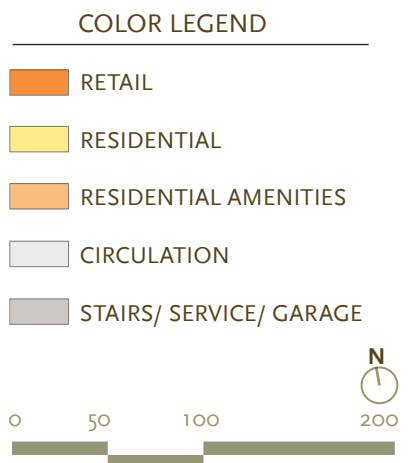
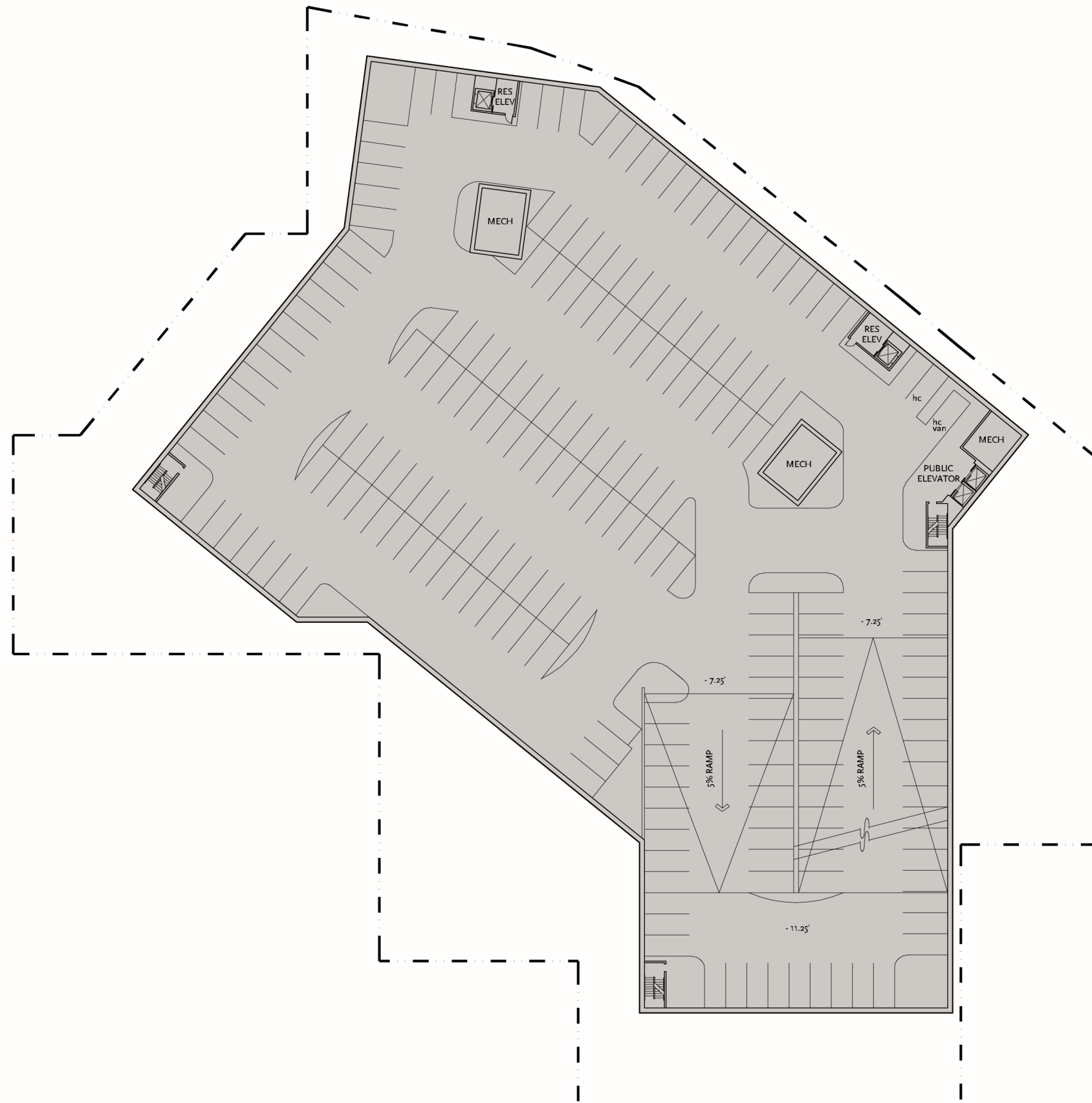
Garden Garage Redevelopment PNF Boston, Massachusetts



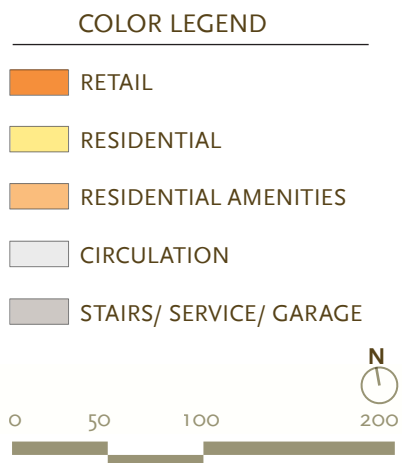
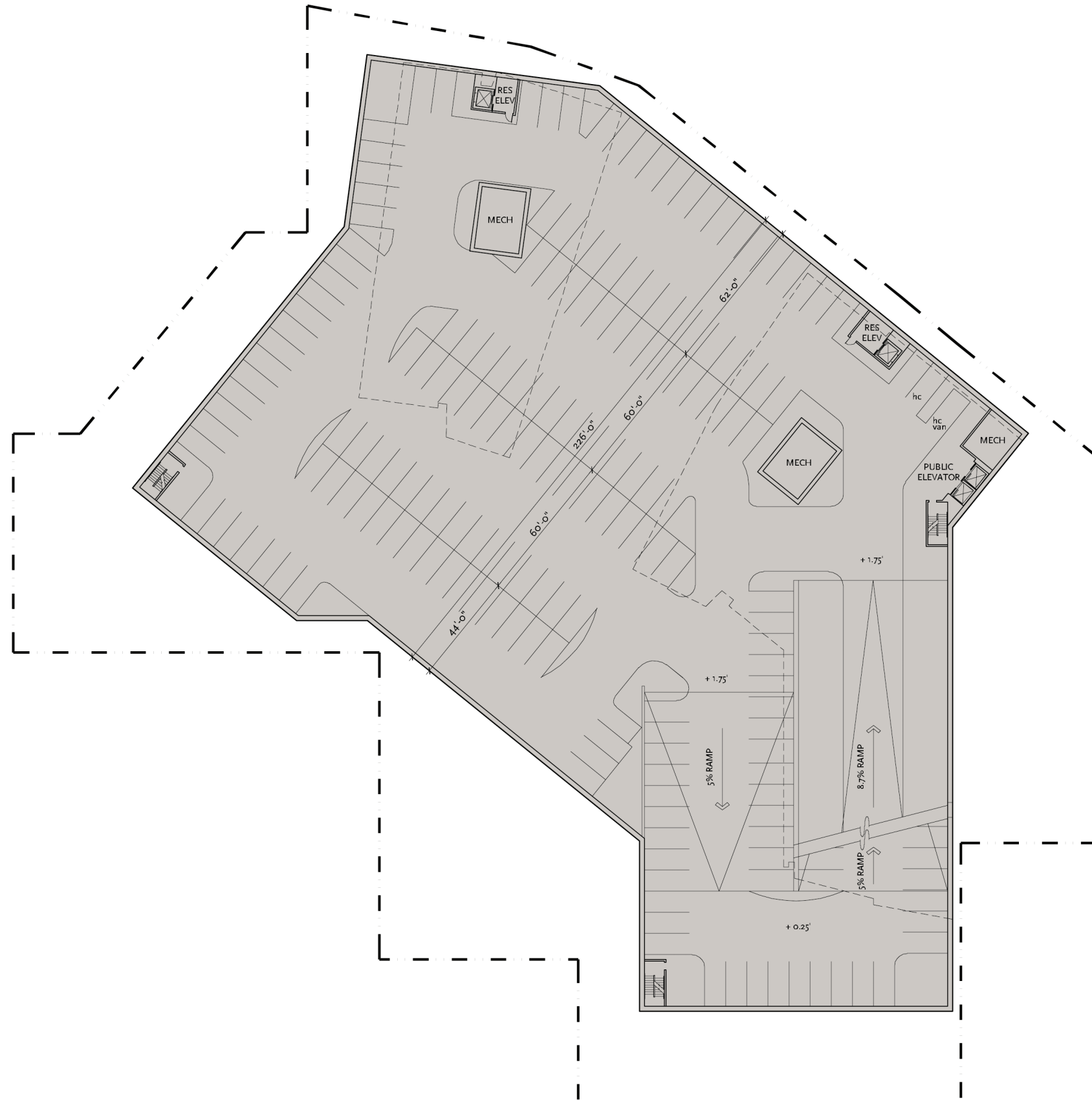


Garden Garage Redevelopment PNF Boston, Massachusetts

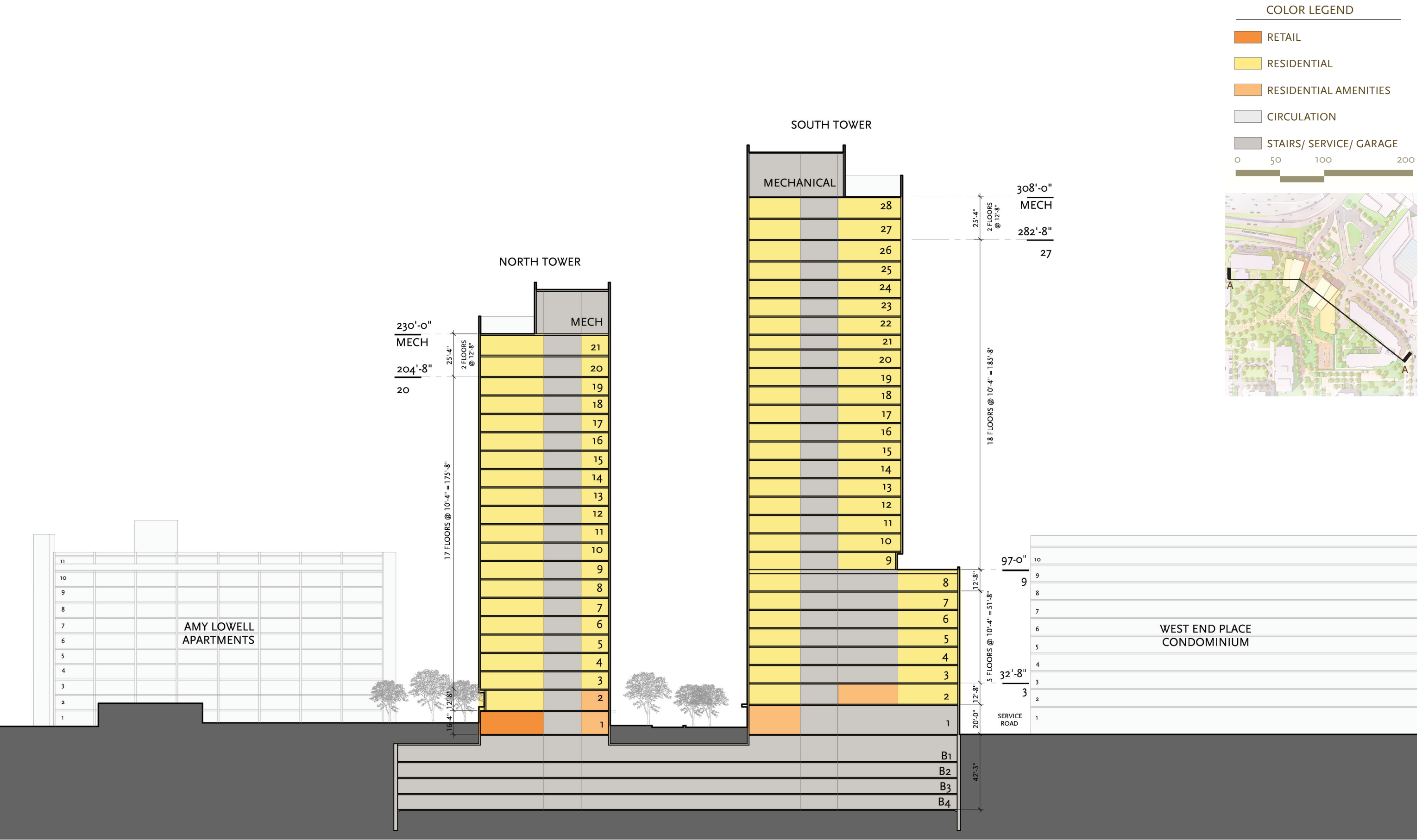




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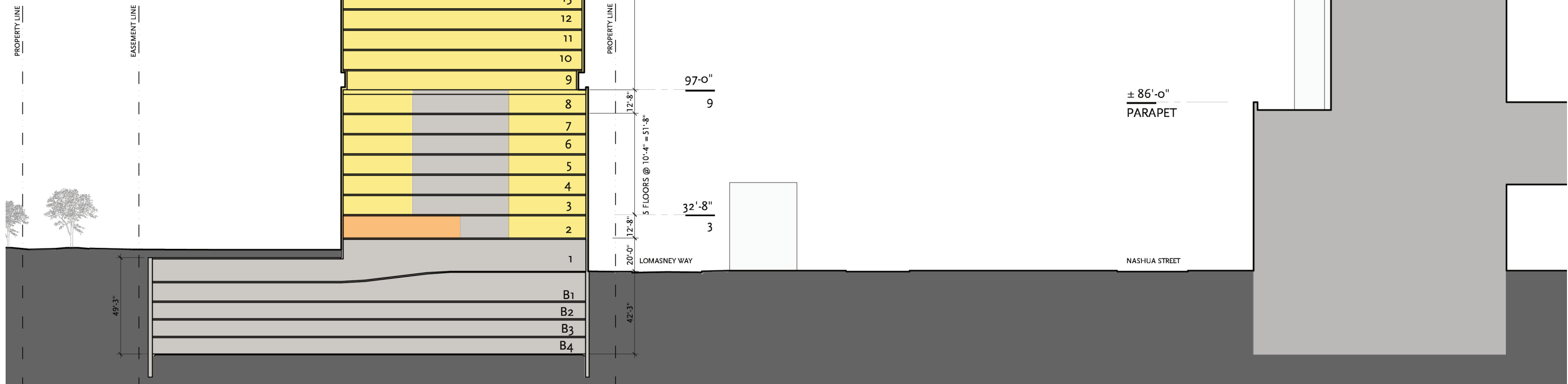
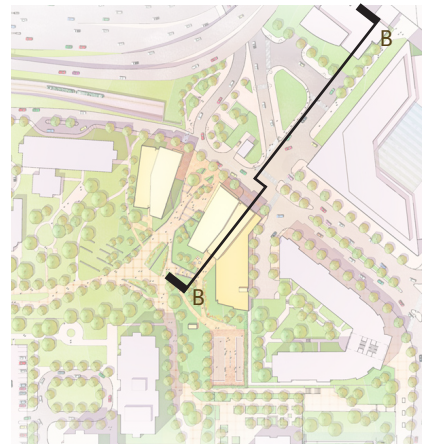




Garden Garage Redevelopment PNF Boston, Massachusetts

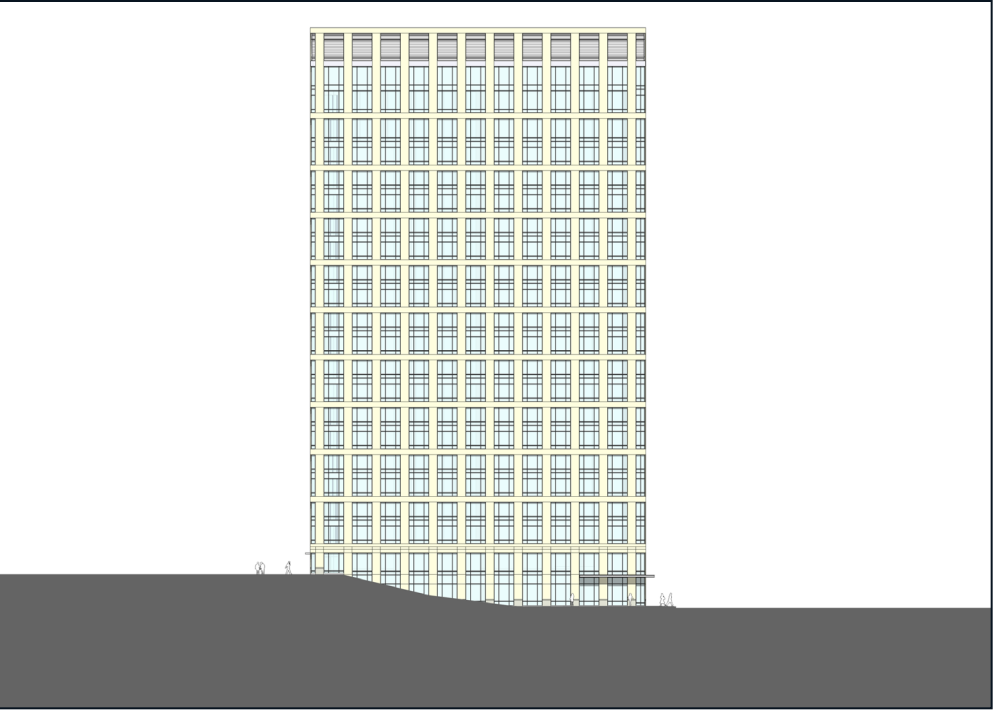
0 50 100 200

Category	Percentage
RETAIL	10%
RESIDENTIAL	10%
RESIDENTIAL AMENITIES	10%
CIRCULATION	10%
STAIRS/ SERVICE/ GARAGE	60%

**Garden Garage Redevelopment PNF Boston, Massachusetts**

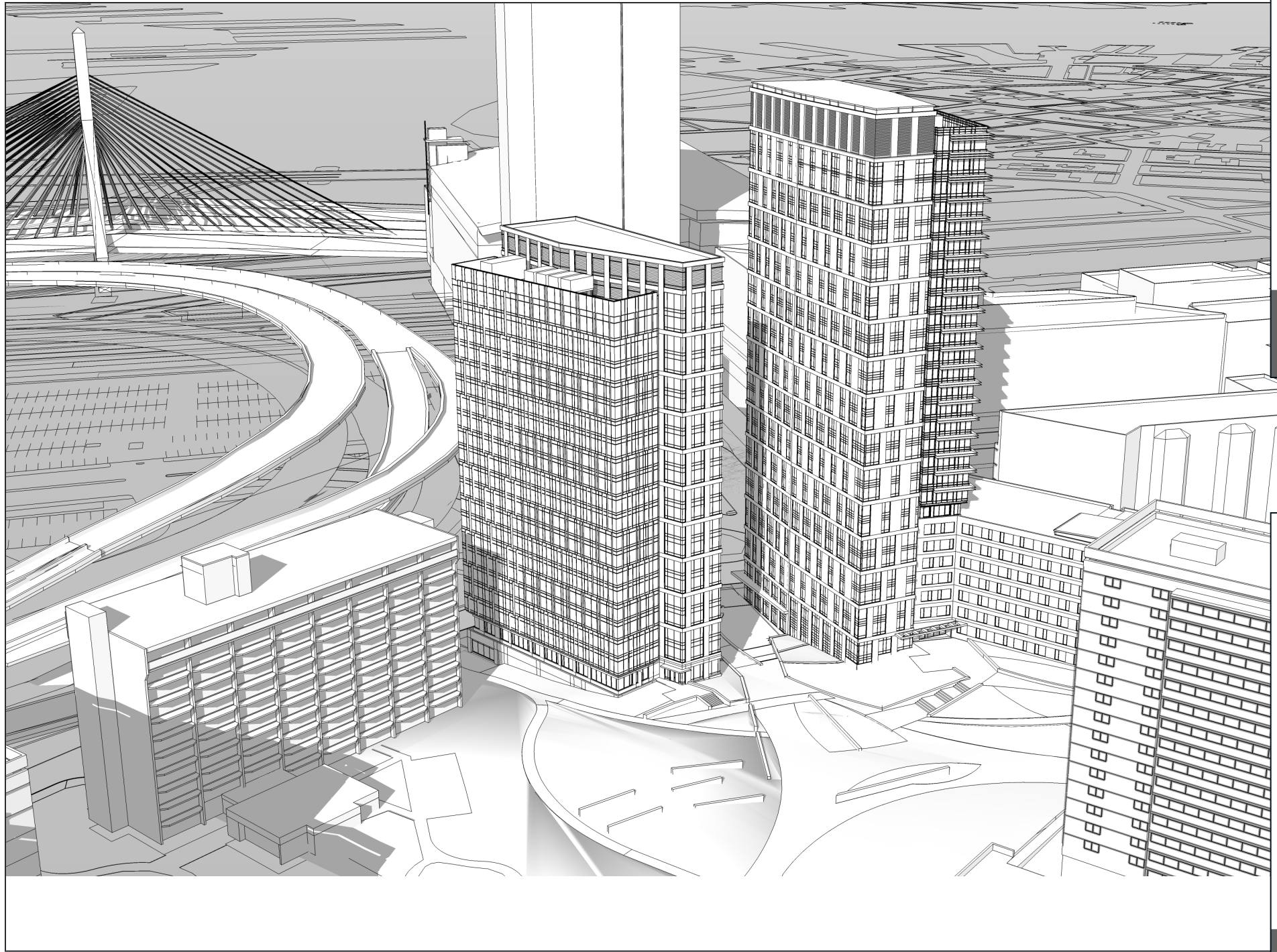


NORTH ELEVATION

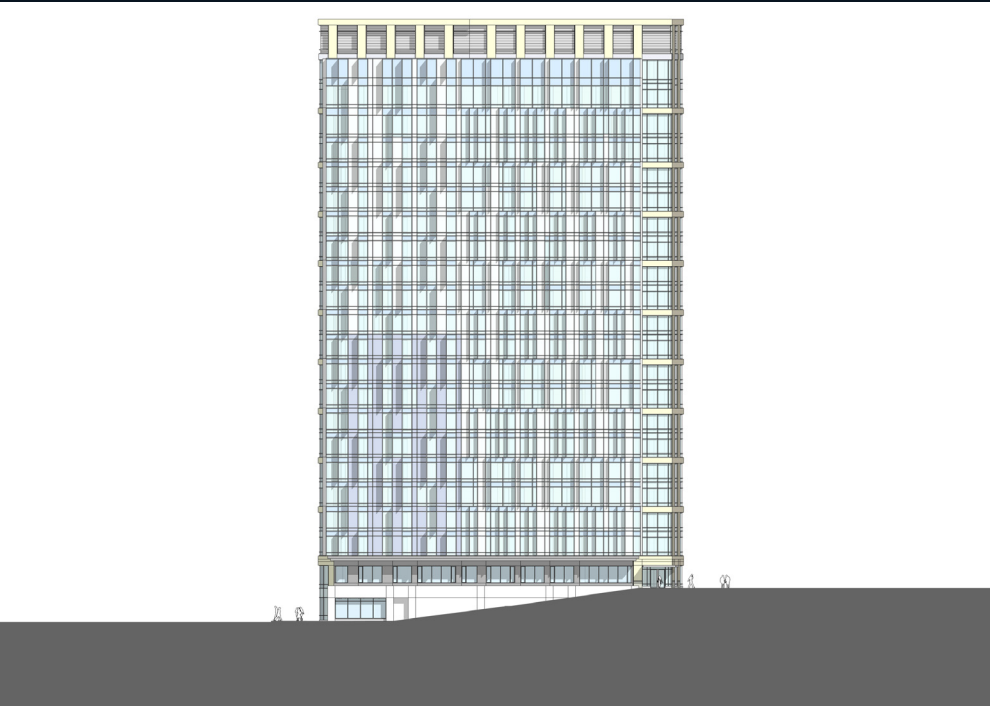


EAST ELEVATION





SOUTH ELEVATION



WEST ELEVATION



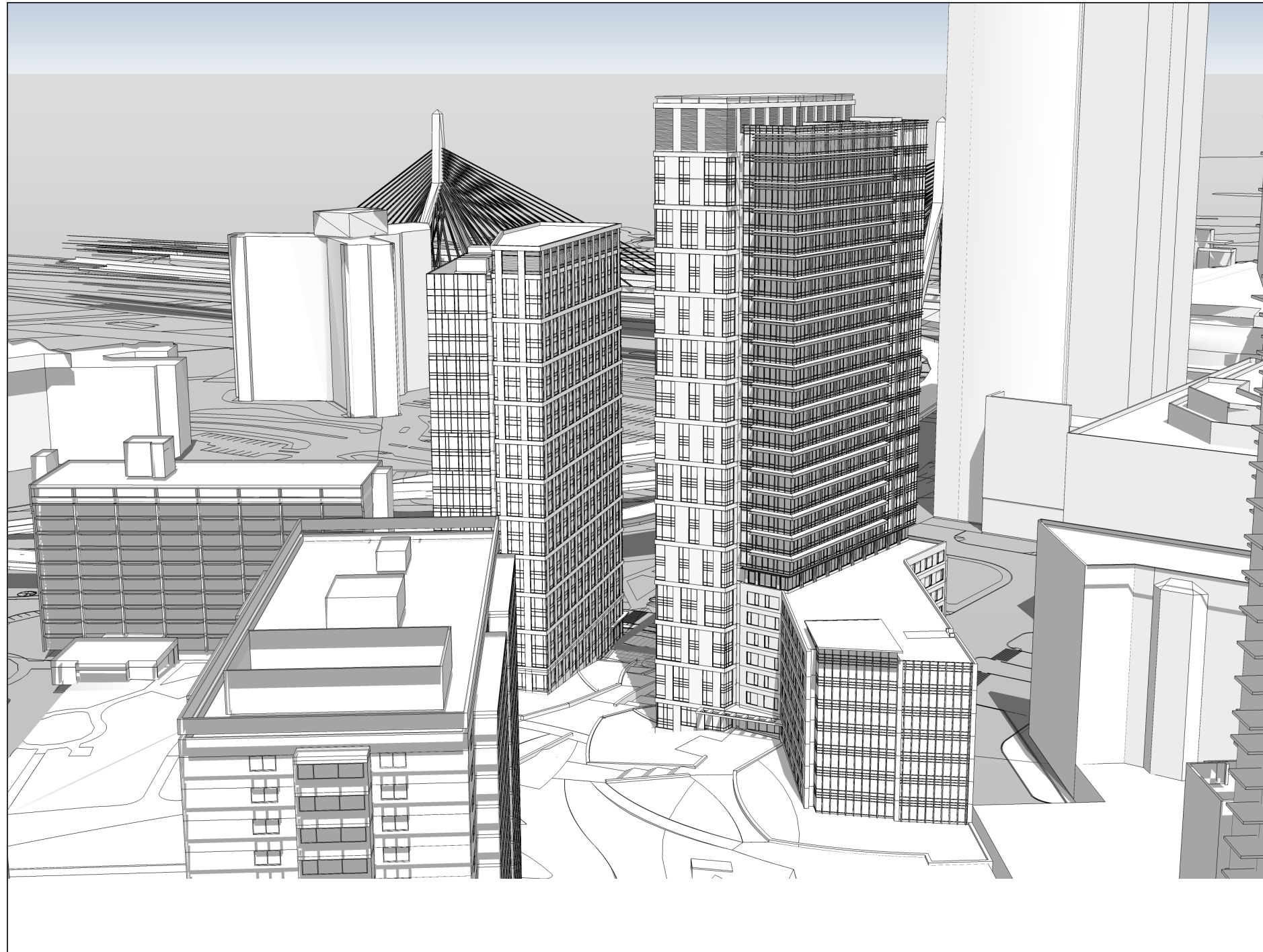


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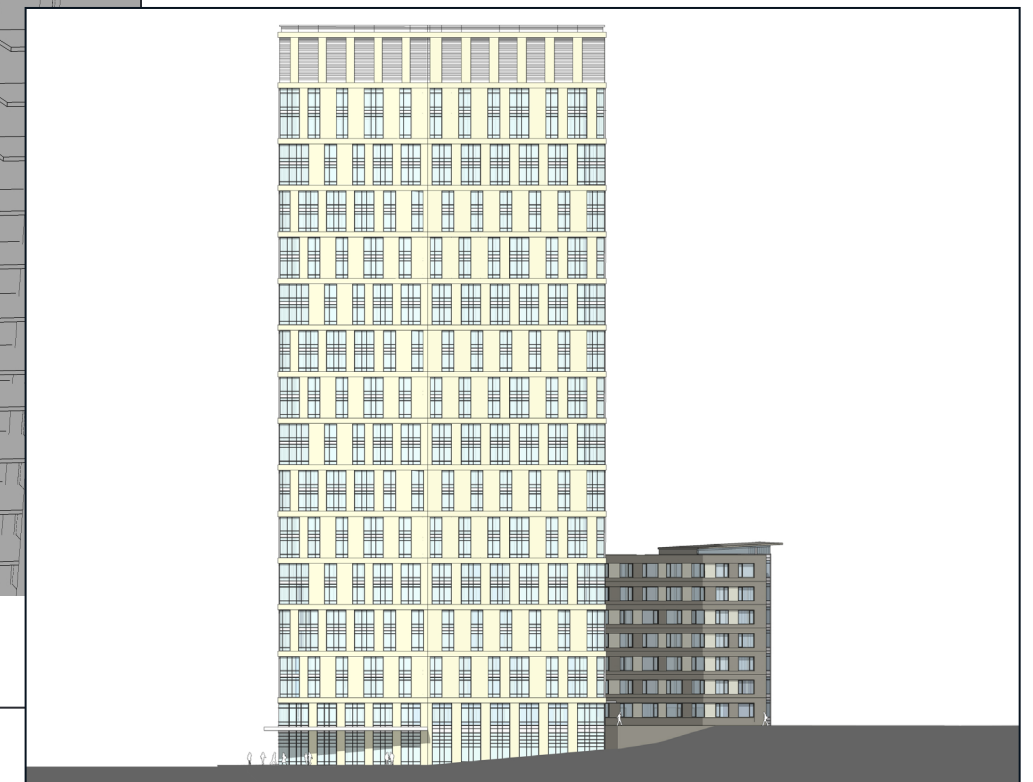


EAST ELEVATION



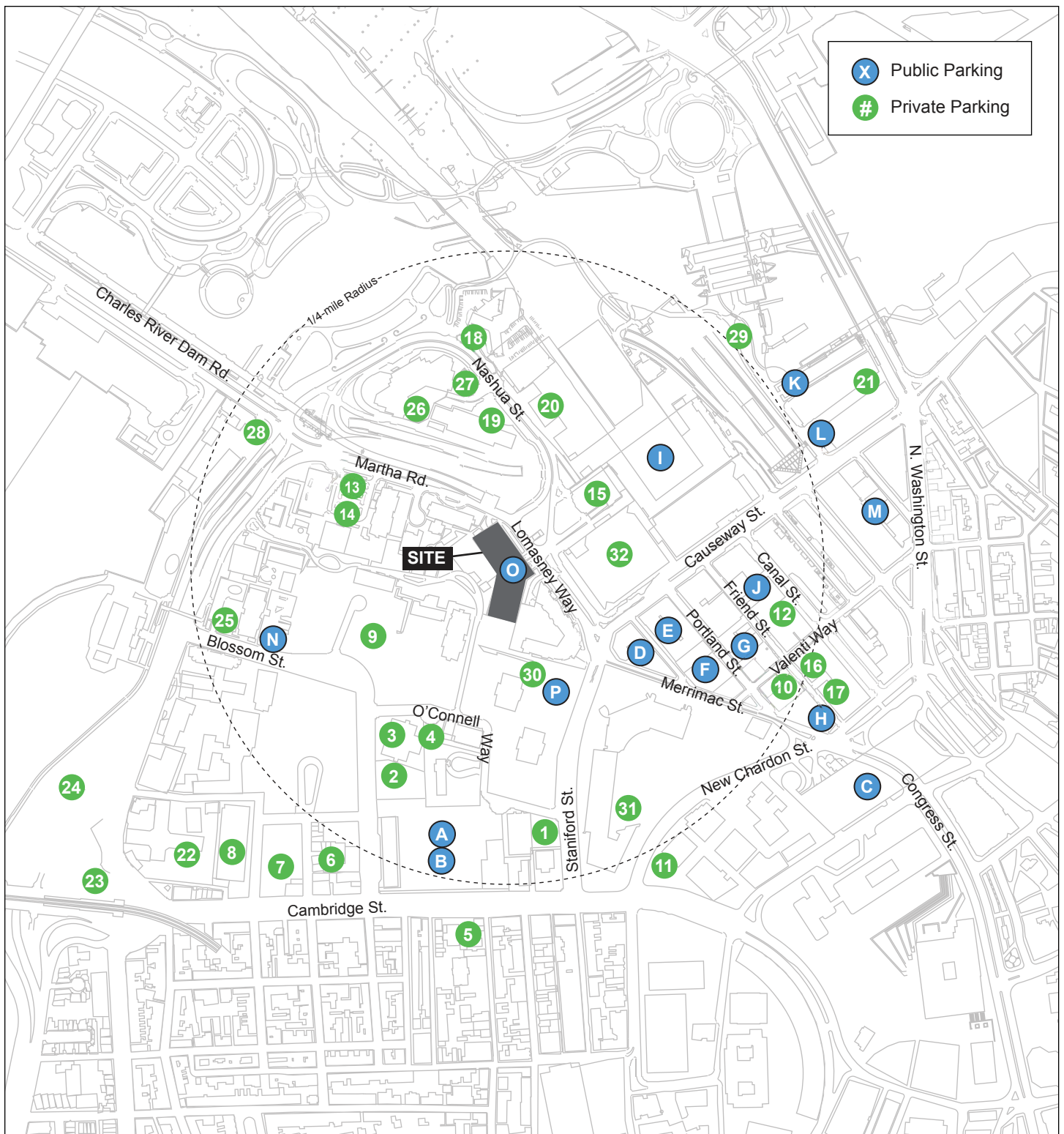


SOUTH ELEVATION



WEST ELEVATION





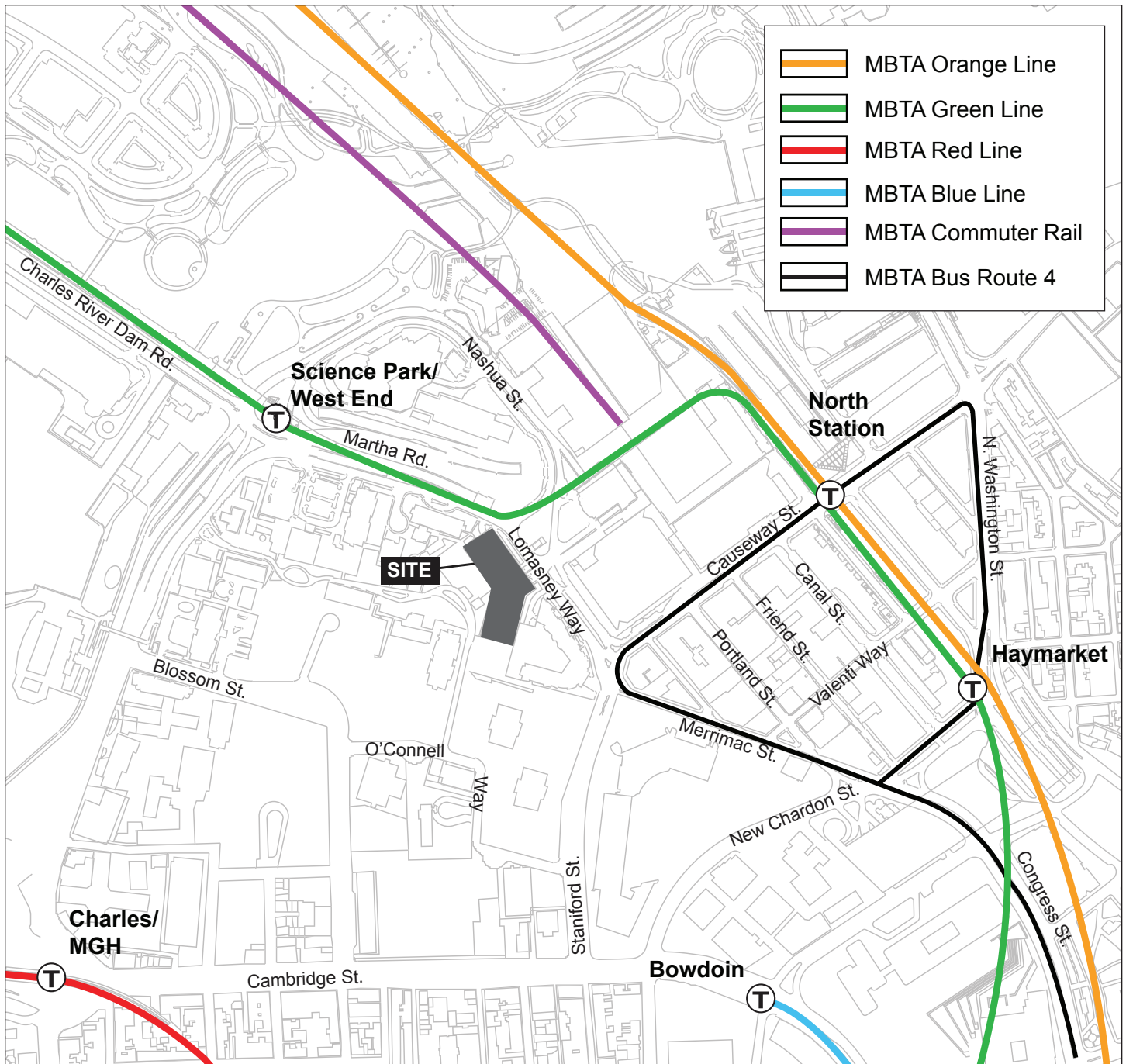
Not to scale.

## Garden Garage Redevelopment PNF Boston, Massachusetts



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**Figure A-38**  
Off-street Parking in the Study Area





Not to scale.

## Garden Garage Redevelopment PNF Boston, Massachusetts

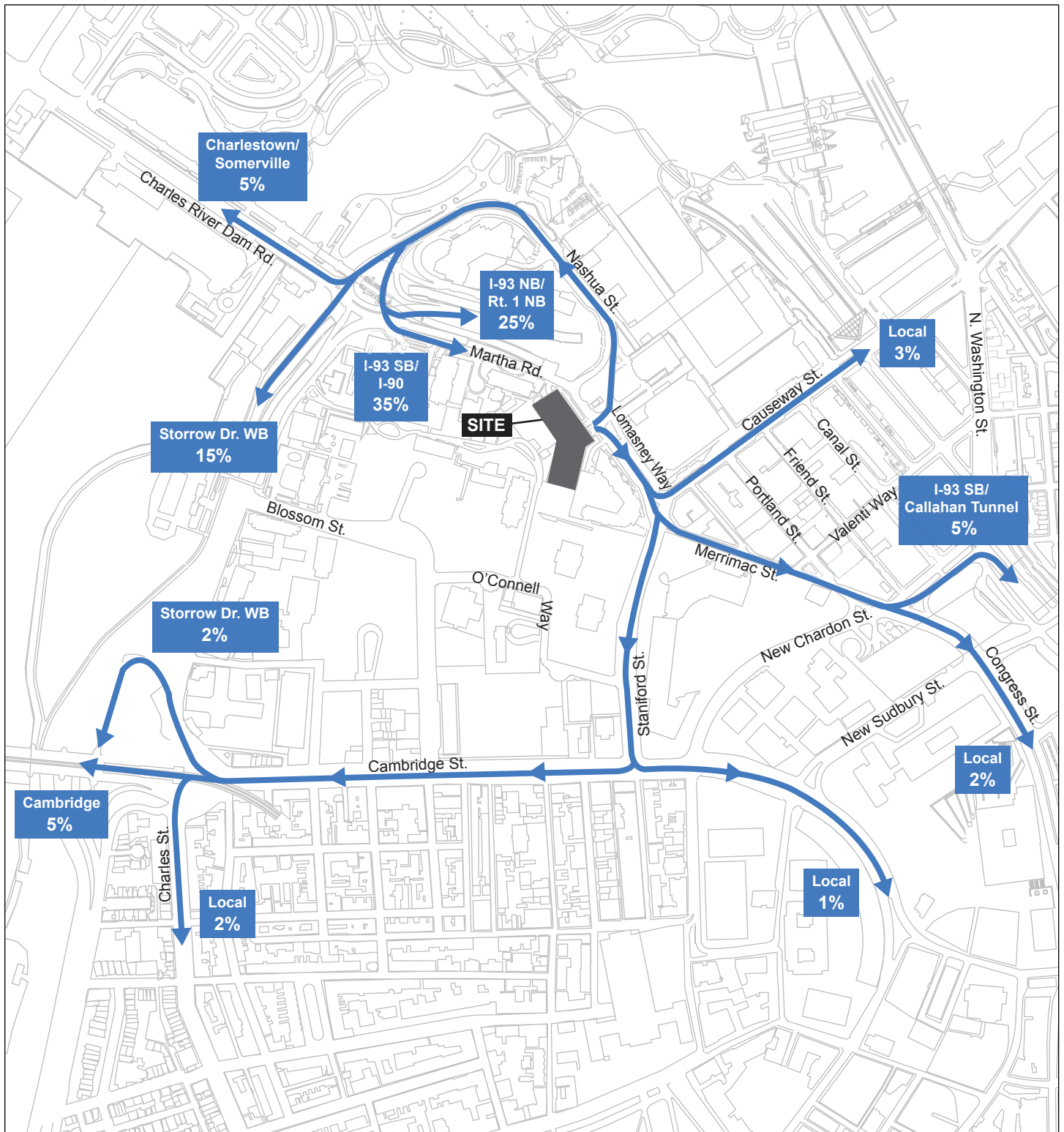


**Howard/Stein-Hudson Associates, Inc.**  
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**Figure A-40**

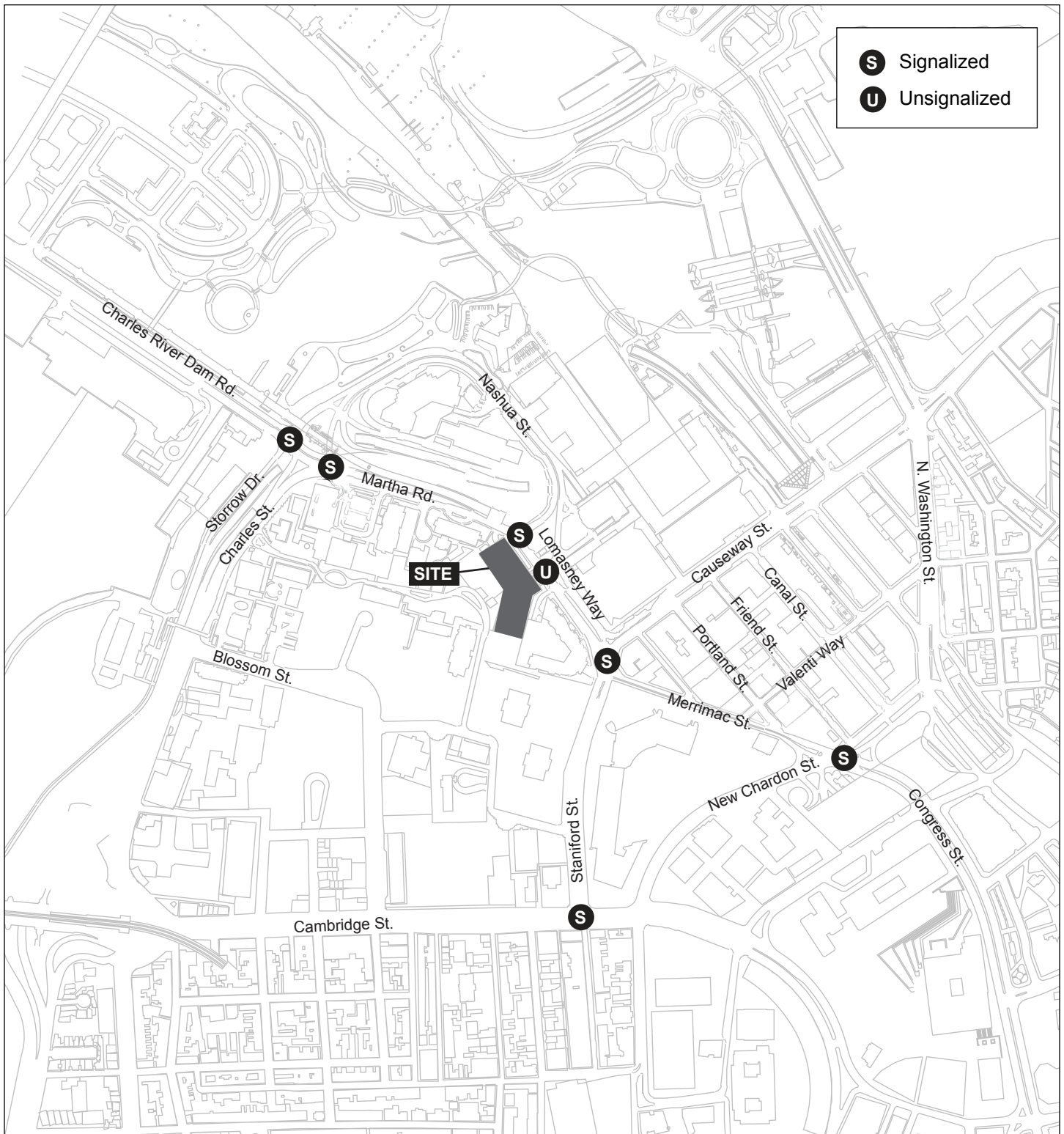
Vehicle Trip Distribution: Entering





Not to scale.





Not to scale.

## Garden Garage Redevelopment PNF Boston, Massachusetts



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**Figure A-42**

Proposed Study Area Intersections



# LEED 2009 for New Construction and Major Renovation

## Project Checklist

Project Name: Garden Garage Redevelopment, Boston MA

Date: November 2010

### 19 1 6 Sustainable Sites Possible Points: 26

Y	N	?			
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
1			Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
		3	Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
		1	Credit 5.1	Site Development—Protect or Restore Habitat	1
		1	Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
		1	Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
		1	Credit 8	Light Pollution Reduction	1

### 5 2 1 Water Efficiency Possible Points: 10

Y	N	?			
Y			Prereq 1	Water Use Reduction—20% Reduction	
2		1	Credit 1	Water Efficient Landscaping	2 to 4
		2	Credit 2	Innovative Wastewater Technologies	2
3			Credit 3	Water Use Reduction	2 to 4

### 12 3 7 Energy and Atmosphere Possible Points: 35

Y	N	?			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
8		4	Credit 1	Optimize Energy Performance	1 to 19
		1	Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
		3	Credit 5	Measurement and Verification	3
		2	Credit 6	Green Power	2

### 3 4 4 Materials and Resources Possible Points: 14

Y	N	?			
Y			Prereq 1	Storage and Collection of Recyclables	
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
		1	Credit 3	Materials Reuse	1 to 2

### Materials and Resources, Continued

Y	N	?			
			Credit 4	Recycled Content	1 to 2
1		1	Credit 5	Regional Materials	1 to 2
		1	Credit 6	Rapidly Renewable Materials	1
		1	Credit 7	Certified Wood	1

### 8 7 Indoor Environmental Quality Possible Points: 15

Y	N	?			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
		1	Credit 1	Outdoor Air Delivery Monitoring	1
		1	Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
		1	Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
		1	Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
		1	Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
		1	Credit 7.2	Thermal Comfort—Verification	1
		1	Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1

### 2 Innovation and Design Process Possible Points: 6

Y	N	?			
1			Credit 1.1	Innovation in Design: 100% Below Grade Parking	1
			Credit 1.2	Innovation in Design: Specific Title	1
			Credit 1.3	Innovation in Design: Specific Title	1
			Credit 1.4	Innovation in Design: Specific Title	1
			Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1

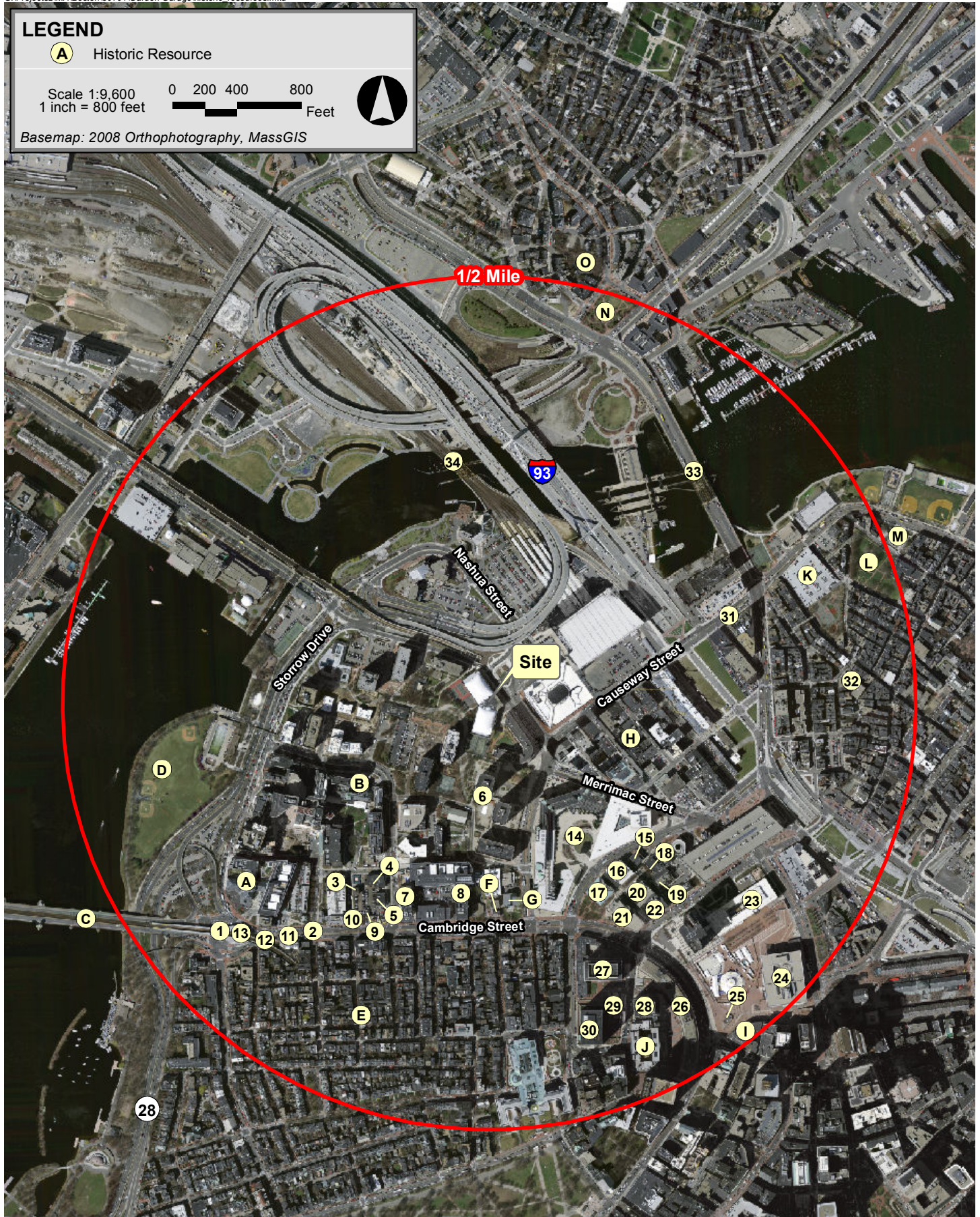
### Regional Priority Credits Possible Points: 4

Y	N	?			
			Credit 1.1	Regional Priority: Specific Credit	1
			Credit 1.2	Regional Priority: Specific Credit	1
			Credit 1.3	Regional Priority: Specific Credit	1
			Credit 1.4	Regional Priority: Specific Credit	1

### 49 10 25 Total Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

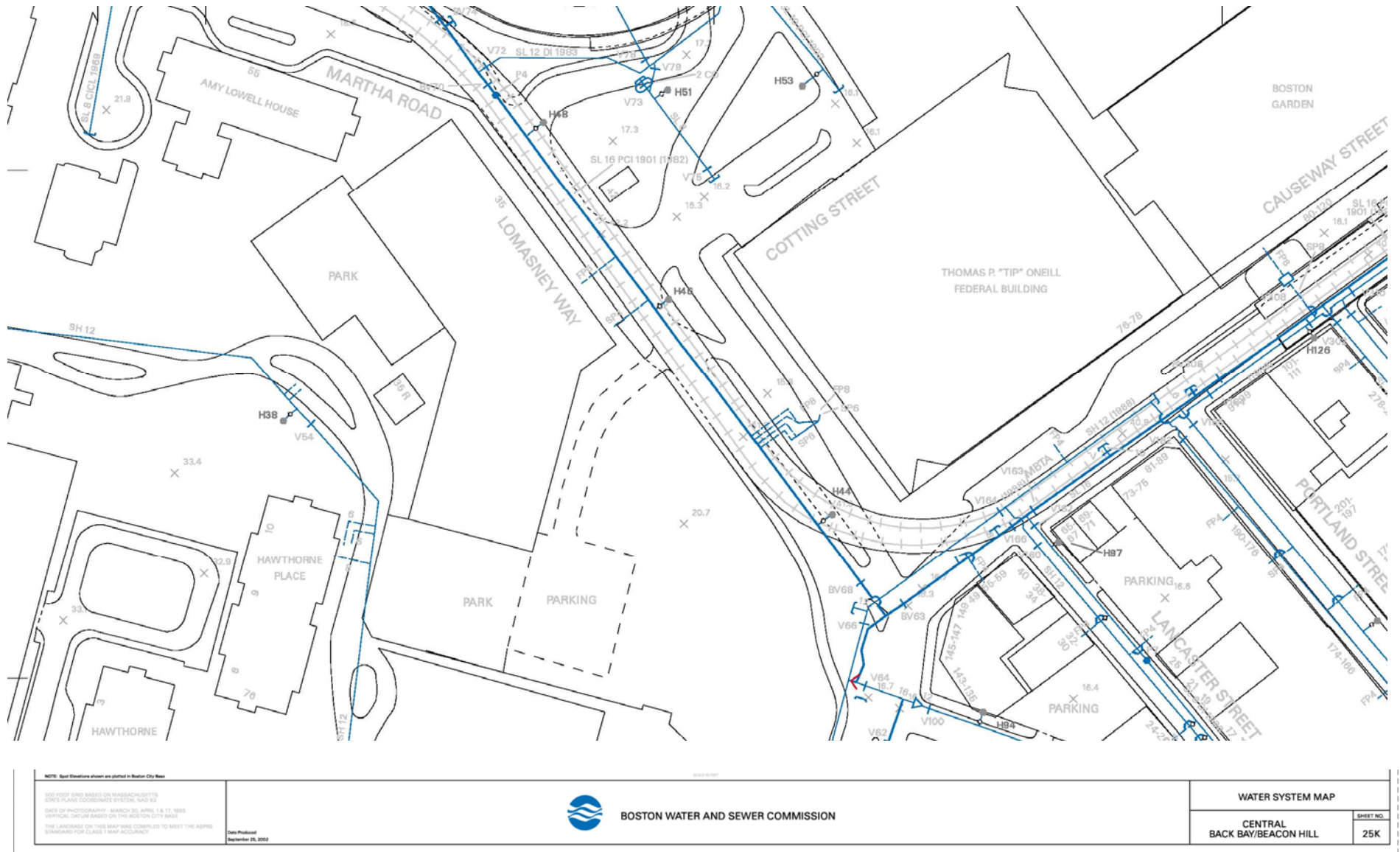




Garden Garage Redevelopment PNF Boston, Massachusetts









## Attachment B – Trip Generation Data

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## Garden Garage Redevelopment

### Detailed Trip Generation Estimation - Proposed Project

Howard/Stein-Hudson Associates

October 25, 2010

Equation-high rise apt

Daily Trip Generation																
Component	Size	Category	Trip Rates (Trips/ksf or unit)	Unadjusted Vehicle Trips	National vehicle occupancy rate <sup>1</sup>	Converted to Person trips	Capture Rate	Person Trips less Capture Rate	Transit Share <sup>2</sup>	Transit Trips	Walk/Bike/ Other Share <sup>2</sup>	Walk/ Bike/ Other Trips	Vehicle Share <sup>2</sup>	Vehicle Person Trips	Local vehicle occupancy rate <sup>3</sup>	Total Adjusted Vehicle Trips
Residential <sup>a</sup>	500 units	Total	4.24	2118	1.2	2,542	0%	2,542	14%	356	65%	1,652	21%	534	1.1	485
		In	2.12	1059	1.2	1,271	0%	1271	14%	178	65%	826	21%	267	1.1	243
		Out	2.12	1059	1.2	1,271	0%	1271	14%	178	65%	826	21%	267	1.1	243
Daily Total		Total		2,118		2,542		2,542		356		1,652				485
		In		1,059		1,271		1,271		178		826				243
		Out		1,059		1,271		1,271		178		826				243
AM Peak-hour Trip Generation																
Residential <sup>a</sup>	500 units	Total	0.30	150	1.2	180	0%	180		24		125		31	1.1	28
		In	0.08	38	1.2	46	0%	46	15%	7	68%	31	17%	8	1.1	7
		Out	0.22	112	1.2	134	0%	134	13%	17	70%	94	17%	23	1.1	21
AM Peak Total		Total		150		180		180		24		125				28
		In		38		46		46		7		31				7
		Out		112		134		134		17		94				21
PM Peak-hour Trip Generation																
Residential <sup>a</sup>	500 units	Total	0.34	172	1.2	206	0%	206		28		142		35	1.1	32
		In	0.21	105	1.2	126	0%	126	13%	16	70%	88	17%	21	1.1	19
		Out	0.13	67	1.2	80	0%	80	15%	12	68%	54	17%	14	1.1	13
PM Peak Total		Total		172		206		206		28		142				32
		In		105		126		126		16		88				19
		Out		67		80		80		12		54				13

Notes:

1. National vehicle occupancy rates based on the 2001 National Household Travel Survey
2. Mode shares based on BTD data for Area 1
3. Local vehicle occupancy rates based on 2000 Census
4. ITE Trip Generation, 8th Edition, LUC 222 (High-Rise Apartment)