PROJECT NOTIFICATION FORM

Fenway Hotel

Submitted to:
Boston Planning and Development Agency
One City Hall Square
Boston, MA 02201

Submitted by:
1241 Boylston, LLC
18 Kristen Court
Matawan, NJ 07747

Prepared by:
Epsilon Associates, Inc.
3 Mill & Main Place, Suite 250
Maynard, MA 01754

In Association with:
Group One Partners
Dain, Torpy, Le Ray, Wiest & Garner PC
Howard Stein Hudson
Nitsch Engineering
Vanderweil Engineers

December 22, 2107

Epsilon
ASSOCIATES INC.

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Chapter 1.0

Project Information

1.0 PROJECT INFORMATION

1.1 Introduction

1241 Boylston, LLC (the Proponent) proposes the construction of a new, 184-room hotel with ground-floor restaurant space and a below-grade garage (the Project) at the northeast corner of the intersection of Boylston Street and Ipswich Street in the Fenway neighborhood. The Project will contribute significantly to the ongoing revitalization of this central Boston district. Today, the site is underutilized: it contains a gas station surrounded by impervious paving, featuring four curb cuts and no landscaping. This use and configuration result in constant vehicular activity, making this corner of Boylston Street pedestrian-unfriendly. The Project includes the demolition of the existing buildings and removal of underground storage tanks, and will improve the underutilized site with a striking, first-class new hospitality facility that incorporates active street-level uses and landscaped sidewalks to enhance the pedestrian experience along Boylston and Ipswich streets. The Project has been designed to comply with the use, dimensional, and parking requirements of Article 66 of the Boston Zoning Code (the Zoning Code).

The Project's location on the eastern end of Boylston Street has been the focus of significant new development over the past decade. These projects have markedly improved the public realm by replacing surface parking lots and inactive uses with new, mixed-use buildings that create a consistent street wall and include numerous ground-level retail spaces. The Project will continue this transformation along Boylston Street by adding a restaurant space where there are currently no active uses, thus creating a vibrant corner that anchors its end of Boylston Street. In addition to improving the public realm, the Project will generate public benefits that include meeting the growing need for additional hotel space in the Fenway neighborhood, creating construction and permanent jobs, and increasing City of Boston tax revenues.

This Expanded Project Notification Form (PNF) is being submitted to the Boston Redevelopment Authority (BRA), doing business as Boston Planning and Development Agency (herein, the BPDA), to initiate review of the Project under Article 80B of the Zoning Code, Large Project Review. The PNF offers a description of the Project, its minimal impacts and proposed mitigation strategies, and its substantial benefits to the City of Boston.

1.2 Project Description

1.2.1 Project Site

The approximately 21,050 sf Project site is bounded by Boylston Street to the south, Ipswich Street to the west, and Private Alley 938 to the north (see Figure 1-1). The Project site currently contains a Shell gas station, service center and convenience store. The site is relatively flat and contains four curb cuts along Ipswich and Boylston streets, as well as a continuous flush curb condition along the private alley. Figure 1-2 presents existing conditions at the site.

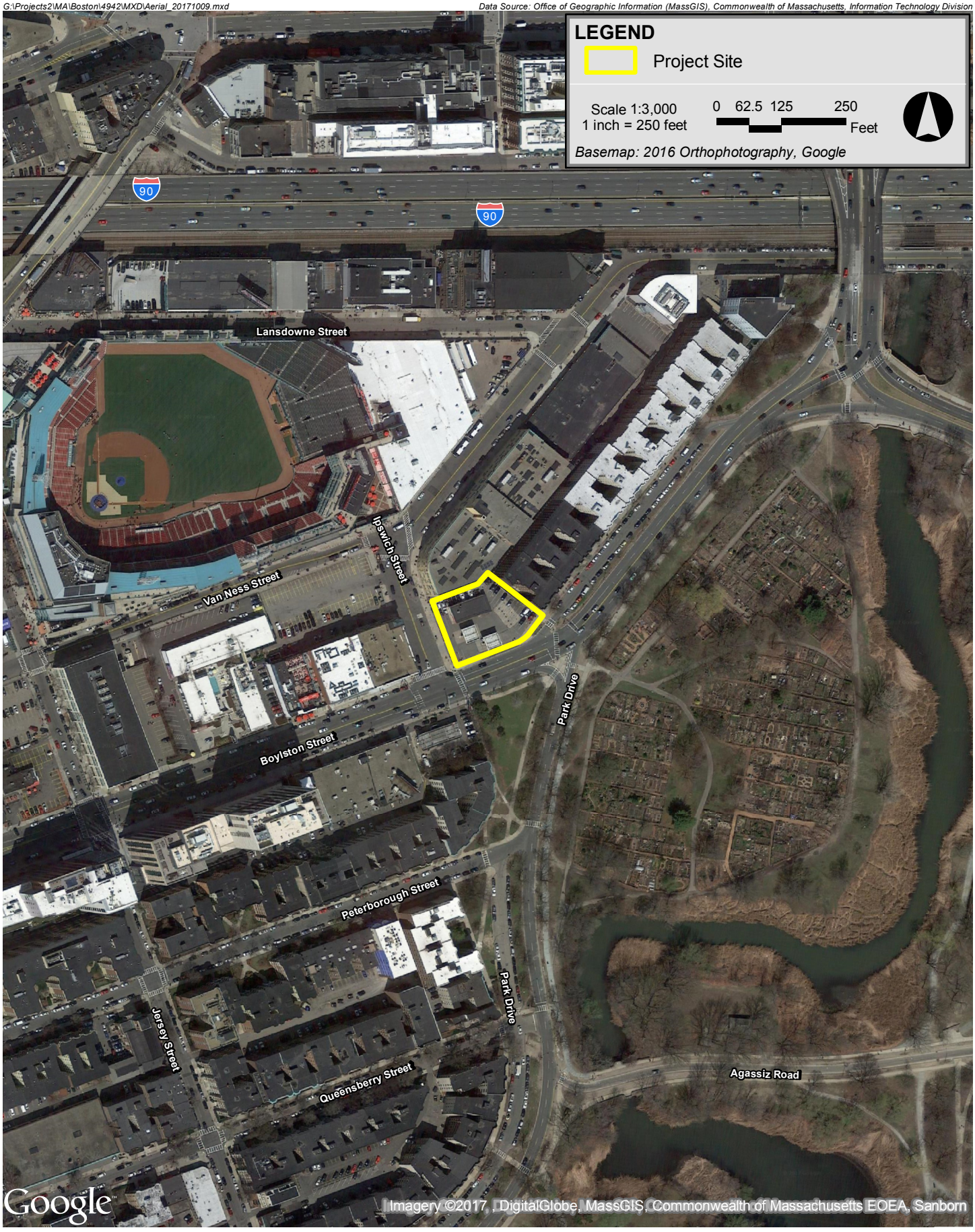
1.2.2 Area Context

The Project site is located in the Fenway neighborhood of Boston. To the southeast of the Project site is the Fenway Victory Gardens, which covers seven acres of the Back Bay Fens. Immediately adjacent to the northeastern edge of the site is a series of connected, five-story residential buildings fronting on Boylston Street, and to the north of the site is the Boston Arts Academy. As noted above, the section of Boylston Street to the west of the Project site has experienced significant new development in recent years, with multiple projects recently constructed or under construction. At 1282 Boylston Street is the Viridian, an approximately 348,000 sf mixed-use project that consists of residential and ground floor retail uses, as well as an underground parking garage. Also recently constructed is the Fenway Triangle, located at 1325 Boylston Street, which is an approximately 700,000 sf mixed use project consisting of residential, office and retail uses.

1.2.3 Proposed Project

The Project, as shown in Table 1-1, comprises approximately 105,000 sf consisting of approximately 184 hotel rooms and 4,600 sf of ground floor restaurant space. The retail space will be located at the corner of Boylston and Ipswich streets, with the main entrance on Ipswich Street. The hotel drop-off area and main entrance will be located on the relatively less trafficked Ipswich Street. The Project also includes one level of below-grade valet parking with approximately 82 parking spaces. Loading and deliveries have been designed to minimize impacts on the local road network, and will occur on Private Alley 938. The Project is designed to be an as-of-right development, and will be eight-stories in height.

Figures 1-3 and 1-4 present a site plan and landscape plan, and Figures 1-5 to 1-14 present floor plans, sections and elevations.



Fenway Hotel Boston, Massachusetts

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Figure 1-1
Aerial Locus Map

View from Ipswich Street

View from Boylston Street Looking West

Fenway Hotel Boston, Massachusetts

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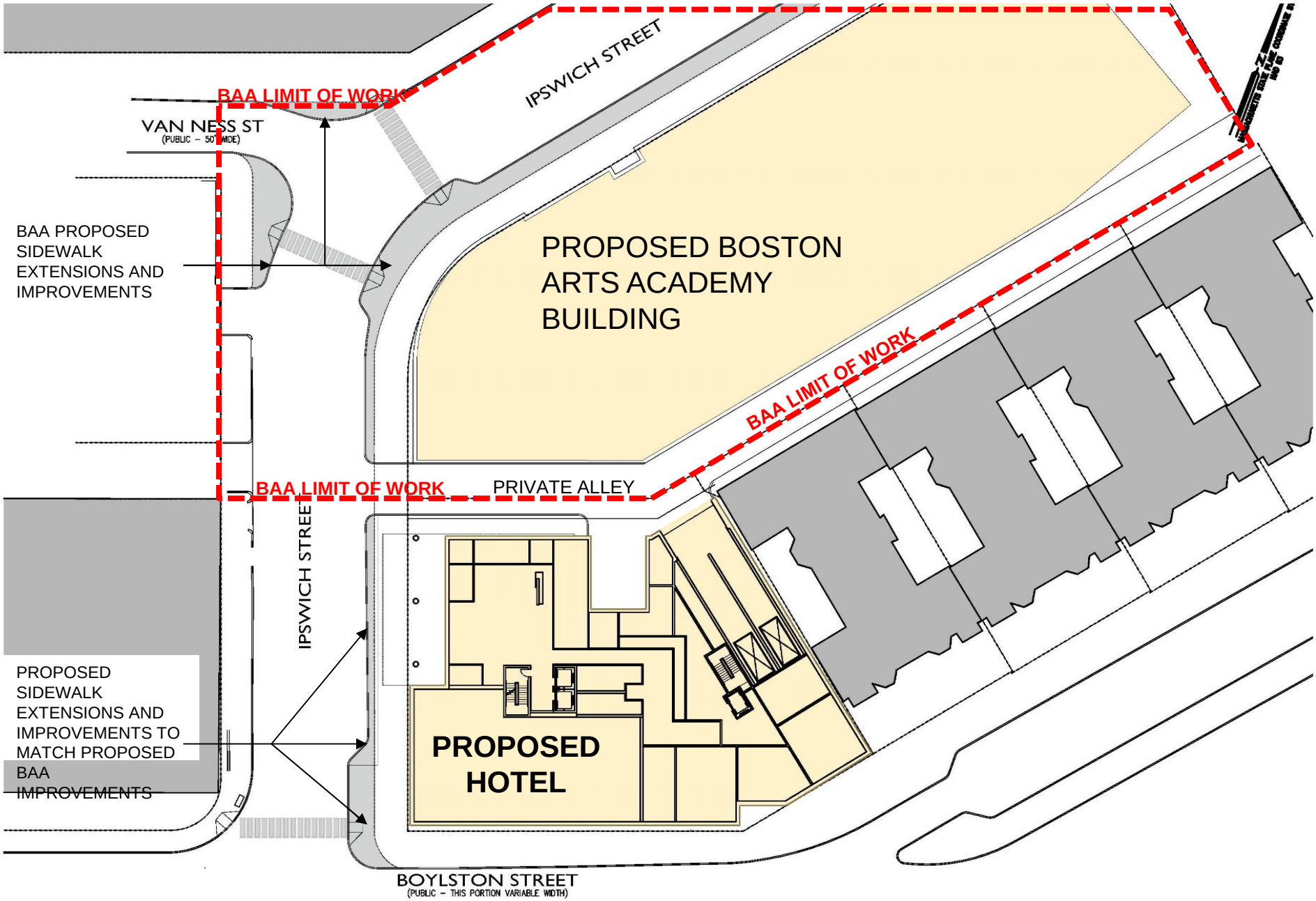
Figure 1-2
Existing Conditions



Fenway Hotel **Boston, Masachusetts**

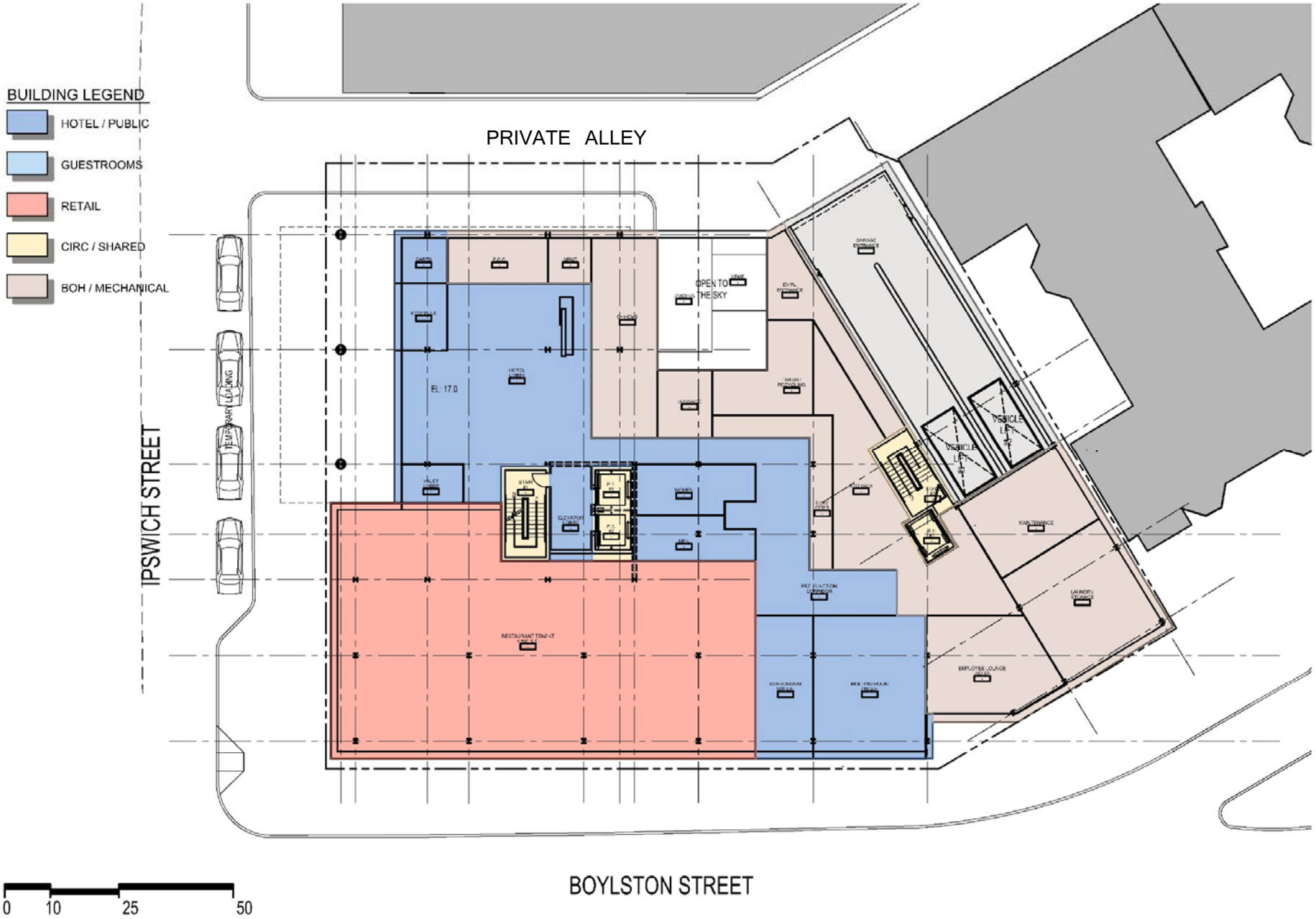
Group One PARTNERS

Figure 1-3
Site Plan

Fenway Hotel Boston, Masachusetts

Group One PARTNERS

Figure 1-4
Landscape Plan



Fenway Hotel **Boston, Masachusetts**

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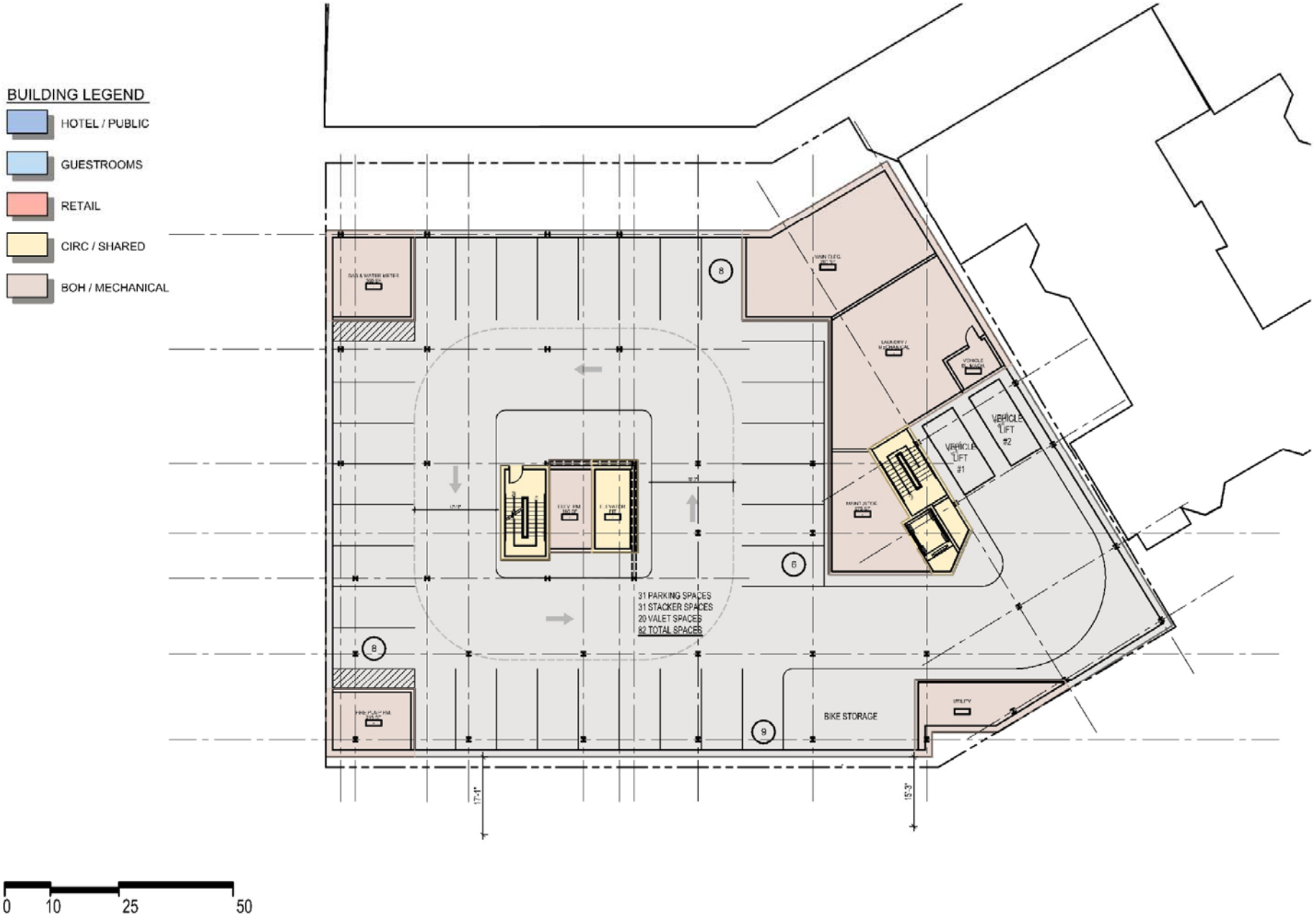
Figure 1-5
Ground Floor Plan



Fenway Hotel **Boston, Masachusetts**

Figure 1-6
Lower Level Floor Plan

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Figure 1-7
Second through Sixth Floor Plan

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Figure 1-8
Seventh Floor Plan

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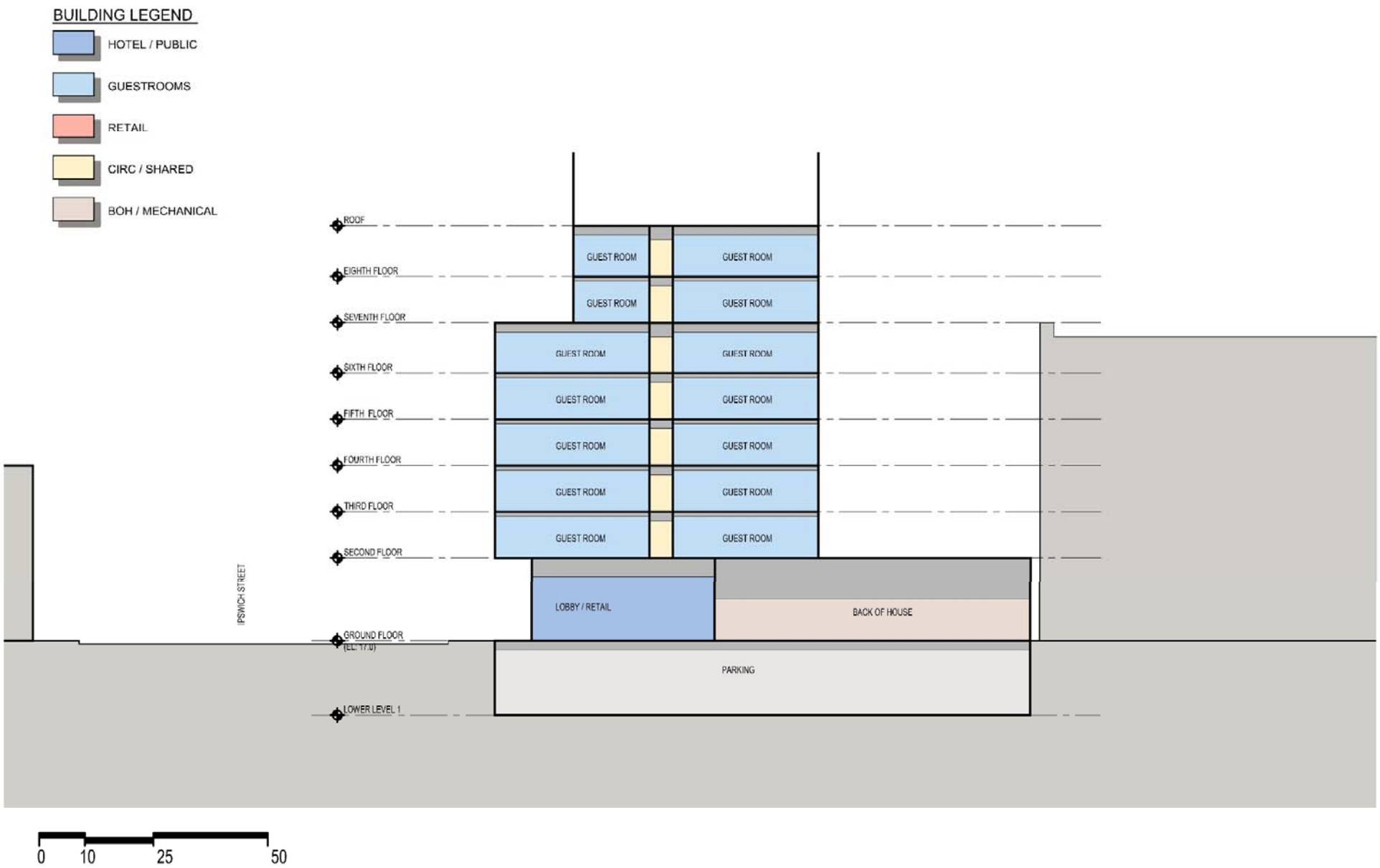
Figure 1-9
Eighth Floor Plan



Fenway Hotel Boston, Masachusetts

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Figure 1-10
Building Section

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Figure 1-11
South Elevation - Boylston Street

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Figure 1-12

West Elevation - Ipswich Street

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Figure 1-13
North Elevation - Public Alley

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Figure 1-14
East Elevation

Table 1-1 Project Program

Project Element	Approximate Dimension
Hotel	184 rooms
Restaurant	4,600 sf
Total Gross Square Footage	**105,000 sf**
Parking	82 spaces
Height	90 feet

As described above, the Project site currently contains a gas station, which has constant vehicular activity in and out of the four curb cuts onto the public streets along the site, making this corner of Boylston Street unusually pedestrian-unfriendly. The Project will improve the underutilized site with new, active street level uses that will enhance the pedestrian experience along Boylston and Ipswich streets. The ground floor of the building will be pulled back along Ipswich Street to not only allow for wider sidewalks with street trees, but also for a retreat space for the hotel entrance at what is known to be a very crowded corner, especially on the many Red Sox home game days.

The Project is designed to establish a dynamic blend of uses, creating a more vibrant corner that anchors its end of the increasingly transformed Boylston Street.

1.2.4 Evolution of Design

With the Project site, the Proponent saw an opportunity to improve an underutilized site in the Fenway neighborhood and create a new edge to a signature piece of the Emerald Necklace at the Victory Gardens. In looking at early design and building schemes, it was quickly determined that the building has an opportunity to respond to the multiple adjacent conditions and uses. by referencing and blending the residential, parkland, and vibrant commercial adjacencies, the building can become a strong corner that grounds the area while keeping within the parameters of the Fenway neighborhood zoning. The Project, with its zoning compliant height, will serve as a transition between the smaller residential buildings to the east of the site and the recent, taller developments to the west.

1.3 Public Benefits

The Project will generate numerous and varied public benefits for the surrounding neighborhood and the City of Boston as a whole, both during construction and on an ongoing basis upon its completion.

Improved Street and Pedestrian Environment

The Project will activate an underutilized site with street-level restaurant space and an improved public realm. The sidewalk will be widened on Ipswich Street, improving pedestrian circulation at a busy corner, especially on game days. New street trees will

soften the currently harsh and entirely impervious conditions at the site, and will connect the property visually to the extensively-landscaped Emerald Necklace elements across Boylston Street.

Sustainable Design/Green Building

The Proponent is committed to building a LEED certifiable project with a target of the Silver level, incorporating sustainable design features into the Project to preserve and protect the environment.

Increased Employment

The Project will create approximately 350 construction jobs and approximately 50 permanent jobs upon stabilization.

New Property Tax

The Project will result in increased tax revenues compared to the existing condition.

1.4 Legal Information

1.4.1 Legal Judgements Adverse to the Proposed Project

The Proponent is not aware of any legal judgments in effect or legal actions pending that would prevent the Proponents from undertaking the Project.

1.4.2 History of Tax Arrears on Property

No property owned in the City of Boston by the Proponent is in tax arrears to the City of Boston.

1.4.3 Site Control

The Proponent has control of and redevelopment rights to the site through a long-term ground lease with the record owner of the property.

1.4.4 Public Easements

A site survey is included as Appendix A. The Survey indicates that a portion of the rear of the site (i.e., within the area most directly opposite Boylston Street) is subject to an access easement. The southern half of this passageway is located on the site. The Survey notes that the property is benefited by "the right to use the northerly half to said passageway in common with others entitled thereto."

1.5 Zoning

Land use within Boston's Fenway neighborhood is governed by Article 66 of the Zoning Code, the Fenway Neighborhood District Article. Map 1Q of the series of Boston Zoning Maps indicates that the site is located within the North Boylston NS-2 subdistrict, one of several "Neighborhood Shopping" commercial subdistricts created by Article 66. The site is additionally located within a Greenbelt Protection Overlay District, or GPOD, the Restricted Parking Overlay District, and the Groundwater Conservation Overlay District, or GCOD.

As a development project within the Fenway neighborhood for a new building in excess of 50,000 square feet of gross floor area, the Project is subject to Large Project Review. It is further subject to Article 37 of the Zoning Code, Green Buildings.

A hotel of up to and including 200 rooms is an allowed use at the Project site. Restaurant use is also allowed within the applicable zoning subdistrict. The Project has been designed to comply with all dimensional and parking requirements of Article 66, and hotel parking is not subject to the limitations imposed by the Restricted Parking District on other types of accessory parking. Pursuant to Article 66, the Project's required loading facilities will be determined through Large Project Review.

Because the proposed Project is located within a GPOD, it is subject to the provisions of Article 80 Large Project Review pertaining to Site Plan Review within a GPOD. The Project's location within a GPOD does not require zoning relief. The Project will require a conditional use permit due to its location within the GCOD.

1.6 Anticipated Permits and Approvals

Table 1-2 presents a preliminary list of permits and approvals from governmental agencies that are expected to be required for the Project, based on currently available information. It is possible that only some of these permits or actions will be required, or that additional permits or actions will be required.

Table 1-2 Anticipated Permits and Approvals

Agency	Approval
Local	
Boston Civic Design Commission	Design Review
Boston Committee on Licenses	Parking Garage Permit and Fuel Storage License
Boston Employment Commission	Construction Employment Plan
Boston Fire Department	Approval of Fire Safety Equipment; Fuel Oil Storage Permit (if required)
Boston Inspectional Services Department	Building Permit; Other construction-related permits; Certificates of Occupancy
Boston Landmarks Commission	Article 85 Demolition Delay Review; Design Review
Boston Parks and Recreation	Approval of Construction Within 100 feet of a Park
Boston Public Works Department	Curb Cut Permit(s); Sidewalk Occupancy Permit (as required)
Boston Planning and Development Agency	Article 80B Large Project Review; Cooperation Agreement
Boston Transportation Department	Transportation Access Plan Agreement; Construction Management Agreement
Boston Water and Sewer Commission	Site Plan Review; Water and Sewer connection permits
Office of Jobs and Community Services	Permanent Employment Agreement (as required)
Public Improvement Commission	Widening and Relocation of an Existing Private Way; Specific Repair Plan
State	
Department of Environmental Protection	Notification of Demolition and Construction

1.7 Public Participation

The Proponent and its Project team have had preliminary meetings with area stakeholders to discuss the Project. The Project team will continue to meet with elected officials, the City of Boston, abutters, neighborhood groups, and other interested parties. The Project team will continue to meet with the community and others as the Project moves forward in the Article 80B review process.

1.8 Schedule

Construction is anticipated to commence in the third quarter of 2018, and will last approximately 24 months.

1.9 Project Identification and Team

Address/Location: 1241 Boylston Street

Proponent:	1241 Boylston, LLC 18 Kristen Court Matawan, NJ 07747 (201) 259-0068 Vincent Tiberi Taylor Callaham
Architect:	Group One Partners 21 West Third Street Boston, MA 02127 (617) 268-7000 Harry Wheeler, AIA
Legal Counsel:	Dain, Torpy, Le Ray, Wiest & Garner PC 745 Atlantic Avenue, 5th Floor Boston, MA 02111 (617) 542-4800 Don Wiest
Permitting and Historic Resources Consultants:	Epsilon Associates, Inc. 3 Mill & Main Place, Suite 250 Maynard, MA 01754 (978) 897-7100 Cindy Schlessinger Geoff Starsiak Talya Moked
Transportation Consultant:	Howard Stein Hudson 11 Beacon Street, Suite 1010 Boston, MA 02108 (617) 482-7080 Elizabeth Peart
Civil Engineer:	Nitsch Engineering 2 Center Plaza, Suite 430 Boston, MA 02108 (617) 338-0063 John Schmid Anna Valdez
MEP Engineer:	Vanderweil Engineers 274 Summer Street Boston, MA 02210 (617) 423-7423 Alex Vanderweil

Chapter 2.0

Transportation

2.0 TRANSPORTATION

The Proponent engaged Howard Stein Hudson (HSH) to conduct an evaluation of the transportation impacts of the Project in the Fenway neighborhood of Boston, Massachusetts. This transportation study adheres to the Boston Transportation Department (BTD) Transportation Access Plan Guidelines and BPDA Article 80 Large Project Review process. This study includes an evaluation of the existing condition, future conditions with and without the Project, projected parking demand, loading operations, transit services, pedestrian and bicycle activity, and construction-period impacts. As shown by this study, the Project will have minimal impact on the study area intersections and the pedestrian and public transportation facilities in the area.

2.1 Project Description

The Project site currently consists of a Shell gas station, service center, convenience store, and a public parking lot with capacity for approximately 78 spaces. The parking is also marketed to and used by patrons attending baseball games and other events at nearby Fenway Park. The Project includes the removal of the existing on-site structures, and the construction of approximately 184 hotel rooms and 4,600 square feet of restaurant space. The Project will include approximately 82 valet parking spaces in a below grade garage accessed from Private Alley 938.

2.1.1 Study Area

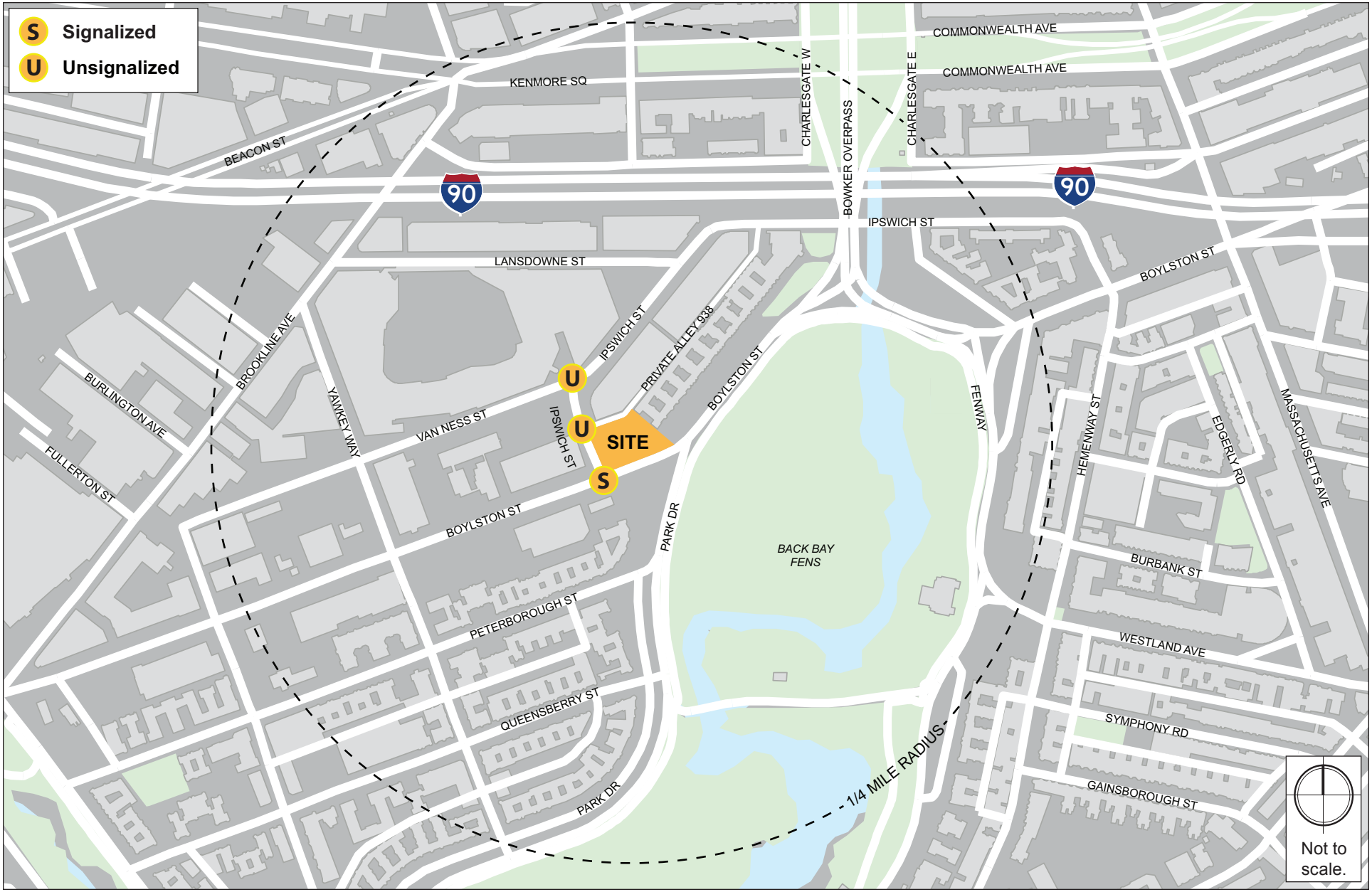
The study area consists of the following three intersections in the vicinity of the Project site, also shown on Figure 2-1:

- Ipswich Street/Boylston Street (signalized);
- Ipswich Street/Private Alley 938 (unsignalized); and
- Ipswich Street/Van Ness Street (unsignalized).

2.1.2 Study Methodology

This transportation study and its supporting analyses were conducted in accordance with BTD guidelines as described below.

The Existing (2017) Condition analysis includes an inventory of the existing transportation conditions such as traffic characteristics, parking, curb usage, transit, pedestrian circulation, bicycle facilities, loading, and site conditions. Existing counts for vehicles, bicycles, and pedestrians were collected at the study area intersections. A traffic data collection effort forms the basis for the transportation analysis conducted as part of this evaluation.



Fenway Hotel Boston, Massachusetts

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Figure 2-1
Study Area Intersections

The future transportation conditions analyses evaluate potential transportation impacts associated with the Project. The long-term transportation impacts are evaluated for the year 2024, based on a seven-year horizon from the year of the filing of this traffic study.

The No-Build (2024) Condition analysis includes general background traffic growth, traffic growth associated with specific developments (not including this Project), and transportation improvements that are planned in the vicinity of the Project site.

The Build (2024) Condition analysis includes the net change in traffic volume due to the Project. Expected roadway, parking, transit, pedestrian, and bicycle accommodations, as well as loading facilities, are identified.

The final sections of the transportation study identifies the transportation demand management measures to minimize automobile usage and Project-related impacts and outlines the requirements of the Transportation Access Plan Agreement. An evaluation of short-term traffic impacts associated with construction activities is also provided.

2.2 Existing Condition

This section includes a description of existing study area roadway geometry, intersection geometry, intersection traffic control, curb usage (parking), public transportation services, peak-hour traffic volumes for vehicles, bicycles, and pedestrians, and intersection traffic operations.

2.2.1 Existing Roadway Conditions

The study area includes the following major roadways, which are categorized according to the Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning functional classifications:

Ipswich Street is a two-way roadway classified as a local road under BTD jurisdiction that runs east-west from Boylston Street (west) to Boylston Street (east), where it terminates at Hemenway Street. In the vicinity of the site, on-street parking is prohibited and/or designated for the Boston Arts Academy School. Sidewalks are provided on both sides of the roadway.

Boylston Street is a two-way roadway classified as a principal artery under BTD jurisdiction to the west and an urban principal arterial under the Department of Conservation and Recreation (DCR) jurisdiction to the east. Boylston Street runs east-west from Brookline Avenue in the Fens to Washington Street, where it becomes Essex Street, terminating at Atlantic Avenue. Within the study area, the roadway is a two-way street with two lanes in each direction. In the vicinity of the site, a combination of metered parking, loading, and no parking is provided along both sides of Boylston Street. Sidewalks are provided on both sides of the roadway.

Van Ness Street is a two-way, two lane roadway classified as a local roadway under BTD jurisdiction that runs in a predominately east-west direction between Ipswich Street to the east and Kilmarnock Street to the west. In the vicinity of the site, limited metered-parking is available. Sidewalks are provided on both sides of the street within the study area.

Private Alley 938 is a two-way, one lane roadway classified as a local road under BTD jurisdiction that runs in a predominately north-south direction between Ipswich Street to the north and Boylston Street to the south. In the vicinity of the site, parking is restricted to commercial vehicles only. Sidewalks are not provided along this private alley.

2.2.2 Existing Intersection Conditions

Existing conditions at the study area intersections are described below.

Boylston Street/Ipswich Street is a three-leg, signalized intersection with three approaches. The Boylston Street eastbound approach consists of one shared left-turn/through lane and one through lane. The Boylston Street westbound approach consists of one through lane and one shared through/right-turn lane. The Ipswich Street southbound approach consists of a shared left-turn/right-turn lane. A Sunoco gas station driveway is located opposite Ipswich Street, but exiting traffic is not controlled by the signal. There is a MBTA Bus stop located on the northwest side of the intersection. Sidewalks are provided along all approaches. Crosswalks, wheelchair ramps, and pedestrian signal equipment are provided across all approaches to the intersection. On-street parking is permitted on the west side of Boylston Street. Parking is not permitted along the other two approaches.

Ipswich Street/Private Alley 938/Driveway is a four-leg, unsignalized intersection with four approaches. The Driveway approach is a one-way eastbound and consists of a shared left-turn/through/right-turn lane. The Private Alley 938 westbound approach consists of a shared left-turn/right-turn lane. The Ipswich Street northbound approach consists of a shared through/right-turn lane. The Ipswich Street southbound approach consists of a shared left-turn/through lane. There is a MBTA Bus stop located on the northeast side of the intersection. Sidewalks are provided along both sides of Ipswich Street. Crosswalks and wheelchair ramps are not provided across any of the approaches to the intersection. On-street parking is prohibited along all of the approaches.

Ipswich Street/Van Ness Street is a three-leg, unsignalized intersection with three approaches. The Van Ness Street eastbound approach consists of a shared left-turn/right-turn lane. The Ipswich Street northbound and southbound consists of a shared left-turn/right-turn lane. Sidewalks are provided along all approaches. Crosswalks and wheelchair ramps are provided across all three approaches to the intersection. Limited on-street parking is permitted on the east side of Ipswich Street northbound for school employees only.

2.2.3 Parking

An inventory of the existing on-street and off-street parking, as well as car sharing services in the vicinity of the Project, was collected. A description of each follows.

2.2.3.1 On-Street Parking and Curb Usage

On-street parking surrounding the Project site consists of predominately commercial parking and no-parking or metered parking. The on-street parking regulations within the study area are shown in Figure 2-2.

2.2.3.2 Off-Street Parking

There are more than 2,500 public parking spaces within about one-quarter mile, or a five-minute walk, from the Project site. Of these, approximately 802 are found in parking lots and 1,708 are in parking garages. Public surface lots and garages within a quarter-mile of the Project site are shown in Figure 2-3. A summary of all parking lots and garages are shown in Table 2-1.

Table 2-1 Off-Street Parking Lots and Garages within a Quarter-Mile of the Site

Map ID	Facility	Capacity	Map ID	Facility	Capacity
Parking Garages			**Parking Lots**		
A	Westland Avenue Garage	307	1	Fenway Shell Station Lot	78
B	Ipswich Street Garage	150	2	1081 Boylston Street Lot	28
C	Somerset Garage	500	3	Swan Lot	140
D	1330 Boylston Street	272	4	Stanhope Parking Lot	42
E	Lansdowne Street Garage	285	5	55 Yawkey Way Lot	175
F	Fenway Garage	94	6	Sunoco Station Lot	48
G	Patriot Haviland St. Garage	100	7	Kenmore Lot	250
			8	1301 Boylston Street Lot	41
Parking Garages Subtotal		**1,708**	**Parking Lots Subtotal**		**802**
Total Public Parking Spaces – 2,510					

2.2.3.3 Car Sharing Services

Car sharing services enable easy access to short-term vehicular transportation. Vehicles are rented on an hourly or daily basis, and all vehicle costs (gas, maintenance, insurance, and parking) are included in the rental fee. Vehicles are checked out for a specific time period and returned to their designated location. Pick-up/drop-off locations are typically in existing

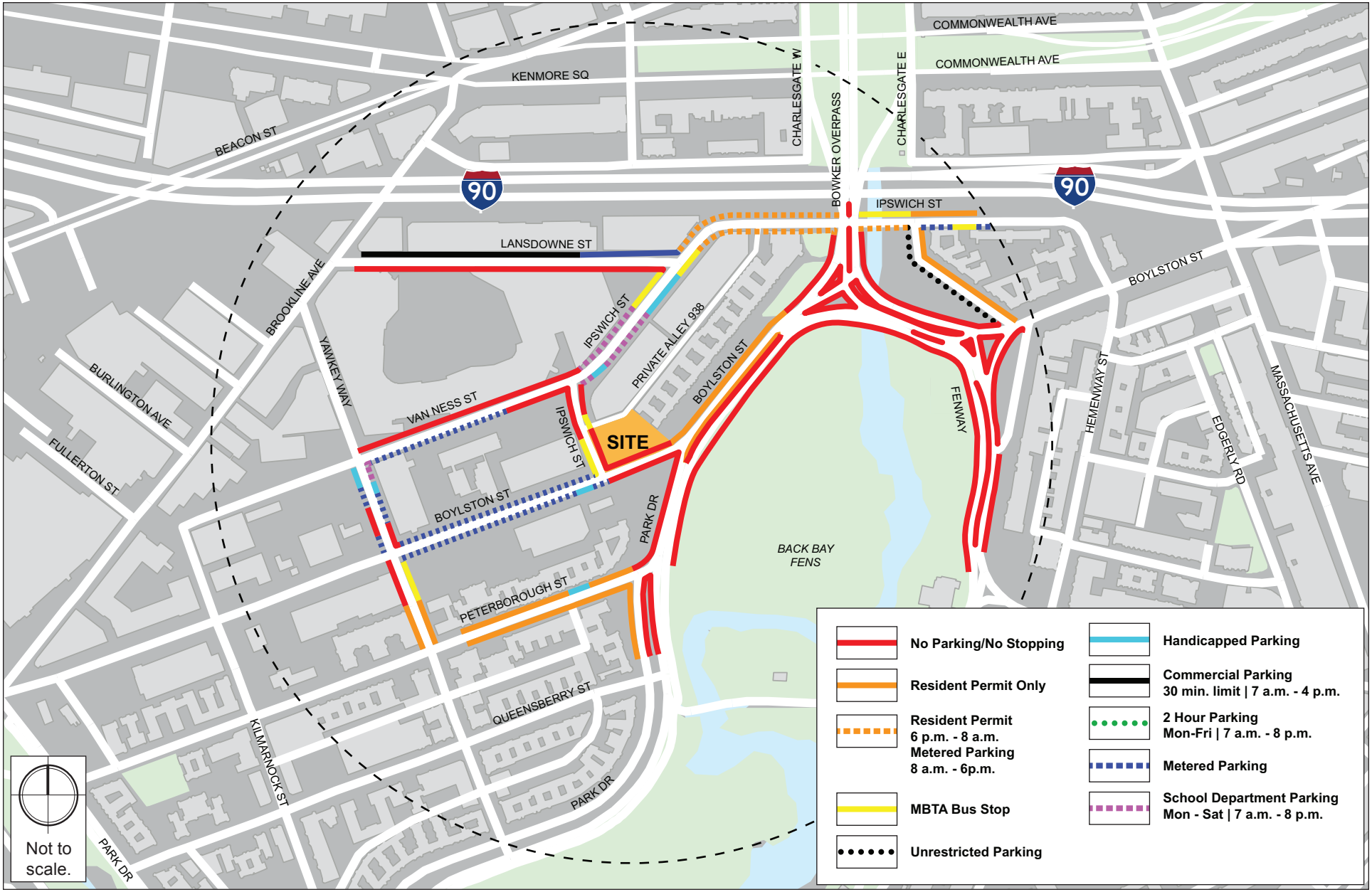

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Figure 2-2
On-street Parking

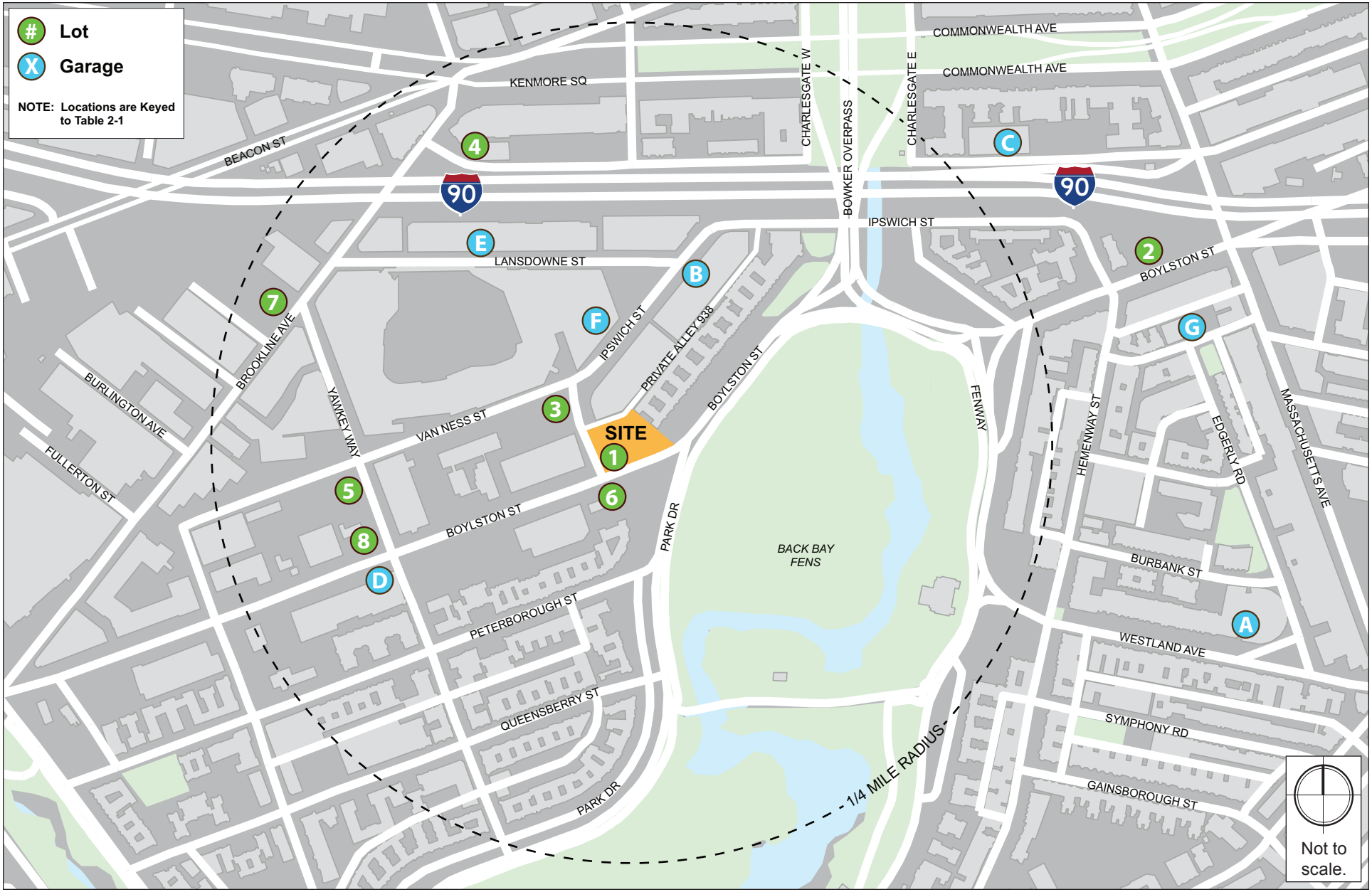

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Figure 2-3
Off-street Parking

parking lots or other parking areas throughout neighborhoods as a convenience to users of the services. Nearby car sharing services provide an important transportation option and reduce the need for private vehicle ownership. Zipcar is the primary company in the Boston car sharing market. There are currently six Zipcar locations within walking distance of the Project site. The nearby car sharing locations are shown in Figure 2-4.

2.2.4 Existing Public Transportation Services

The Project site is in the Fenway/Kenmore neighborhood of Boston with many public transportation options. The site is within one-quarter mile of the MBTA Green Line Station at Kenmore Square, and slightly over one-quarter mile to Hynes Station and the Blandford Street Station. The Yawkey Station on the Framingham/Worcester Commuter Rail Line is about one-quarter mile from the site. Additionally, the MBTA operates six bus routes in close proximity to the Project site.

Nearby public transportation services are mapped in Figure 2-5 and listed in Table 2-2 below.

Table 2-2 Existing Public Transportation Service Summary

Transit Service	Description	Peak-Hour Headway (minutes)[1]
Commuter Rail		
Commuter Rail	Framingham/Worcester Line – South Station – Worcester	30
Subway Lines		
Green Line	B Line – Government Center Station – Boston College Station C Line – North Station – Cleveland Circle Station D Line – Government Center Station – Riverside Station	6-7
Bus Routes		
8	Harbor Point/UMass – Kenmore Station	14-15
19	Fields Corner – Kenmore Station or Ruggles Station	14
55	Jersey & Queensberry Sts. – Copley Square or Park & Tremont Streets	15
57	Watertown Yard – Kenmore Sta. via Newton Corner & Brighton Ctr.	10-15
60	Chestnut Hill – Kenmore Station	20-30
65	Brighton Center – Kenmore Station	10-25

1 Headway is the scheduled time between trains or buses. Headways are approximate.
Source: www.mbta.com, September 2017.

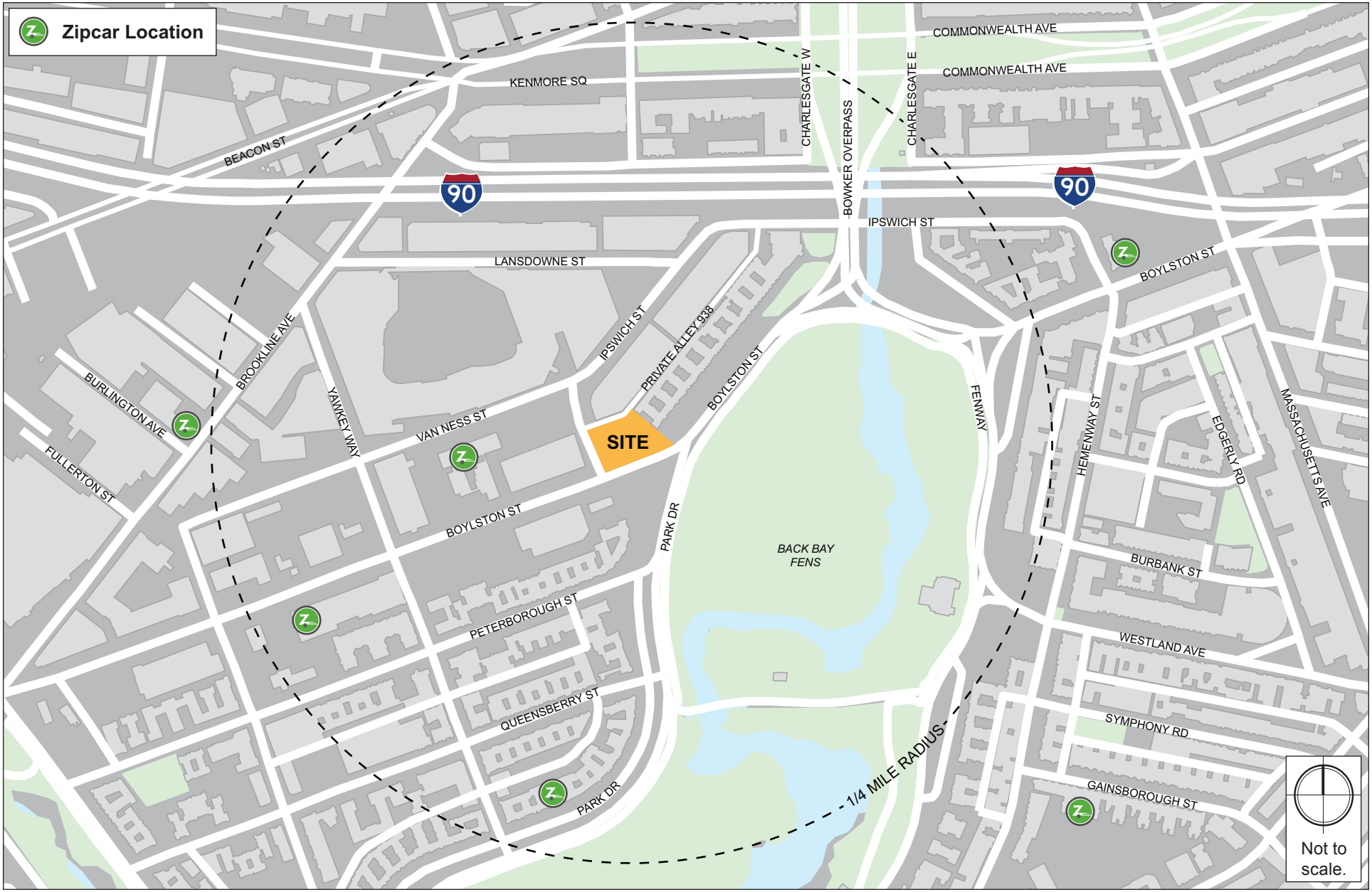

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Figure 2-4
Car Sharing Services

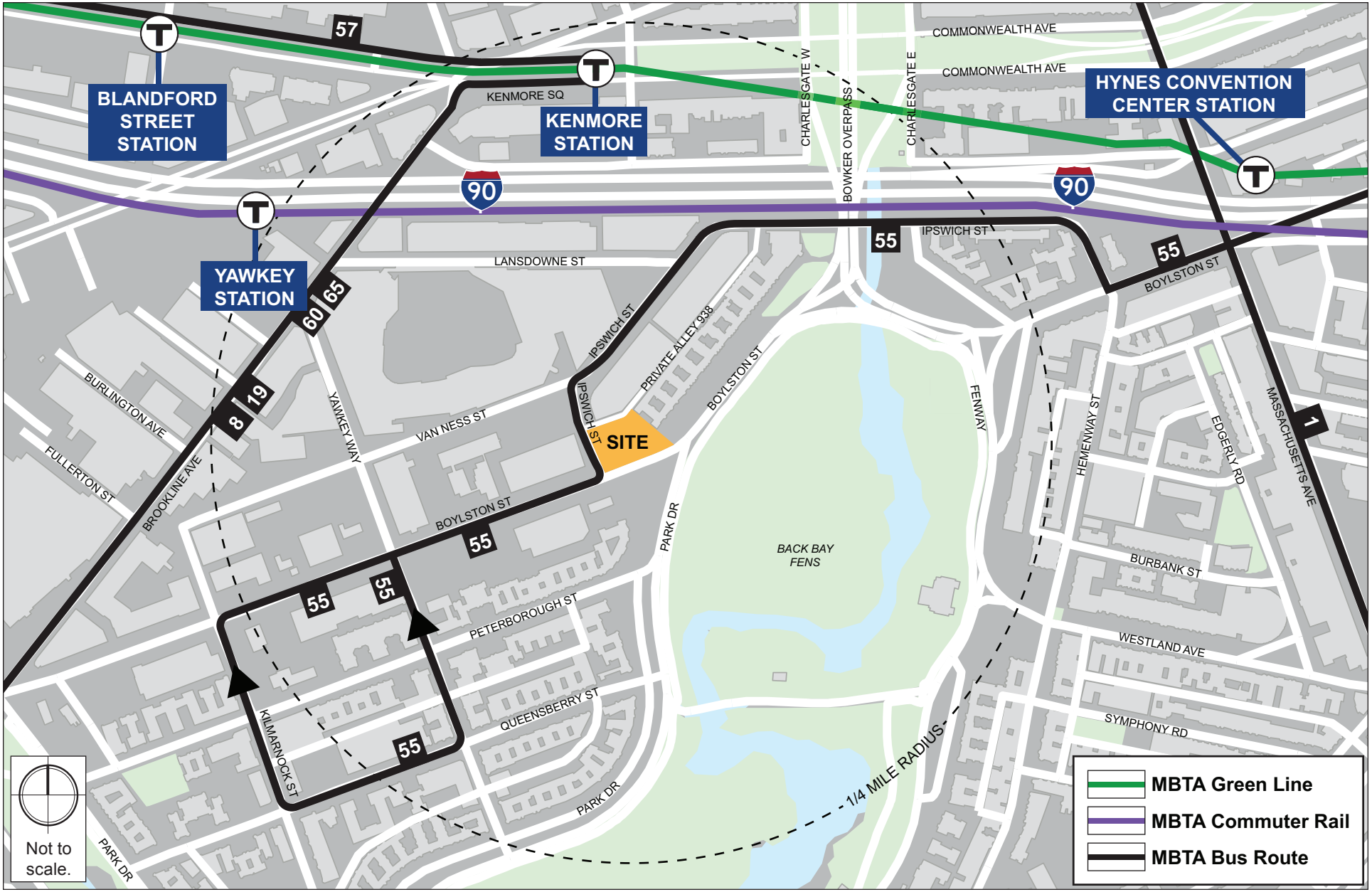

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Figure 2-5
Public Transportation

2.2.5 Existing Traffic Data

It is standard practice for traffic engineers to collect data when, to the extent possible, typical traffic conditions prevail, avoiding holiday periods and summer months. In this neighborhood, games or events at Fenway Park occur on about 20% of weekdays annually. During the hours prior to a game or event, increased pedestrian and vehicle activity does occur in the area. Streets adjoining the Park are closed to facilitate pedestrian travel, reduce conflicts between vehicles and pedestrians, and augment security operations. Police details are in place at key intersections to aid in the safe movement of pedestrians and vehicles. Also, activity at the Project site changes prior to events because the site is used for patron parking and there is a reduction in gas station customers. Conditions on these event days do not reflect typical activity and, therefore, it is not appropriate to collect data on these days to establish the Project's baseline traffic conditions.

Traffic volume data was collected at the three study area intersections on September 21, 2017, a date without a baseball game or event at Fenway Park. Additionally, counts were conducted at the four existing curb-cuts serving the gas station on the Project site and used to quantify the existing site trip generation, as presented in Section 2.4.6.

Turning Movement Counts (TMCs) and vehicle classification counts were conducted during the weekday a.m. and weekday p.m. peak periods (7:00 – 9:00 a.m. and 4:00 – 6:00 p.m., respectively). The traffic classification counts included car, heavy vehicle, pedestrian, and bicycle movements. The detailed traffic counts for the study area intersections are provided in Appendix B.

To account for seasonal variation in traffic volumes throughout the year, data provided by MassDOT was reviewed. The most recent (2011) MassDOT Weekday Seasonal Factors were used to determine the need for seasonal adjustments to the September 2017 TMCs. The seasonal adjustment factor for roadways similar to the study area (Group 6) in the month of September is 0.93. This indicates that average month traffic volumes are approximately seven percent less than the traffic volumes that were collected. Therefore, the traffic counts were not adjusted downward to reflect average month conditions in order to provide a conservatively high analysis consistent with the peak season traffic volumes. The MassDOT 2011 Weekday Seasonal Factors table is provided in Appendix B.

2.2.6 Existing Vehicular Traffic Volumes

The existing traffic volumes that were collected in September 2017 were used to develop the Existing (2017) Condition traffic volumes. The volumes were balanced where necessary across the roadway network within the study area.

The resulting Existing (2017) weekday a.m. Peak Hour and weekday p.m. Peak Hour traffic volumes are shown in Figure 2-6 and Figure 2-7, respectively.

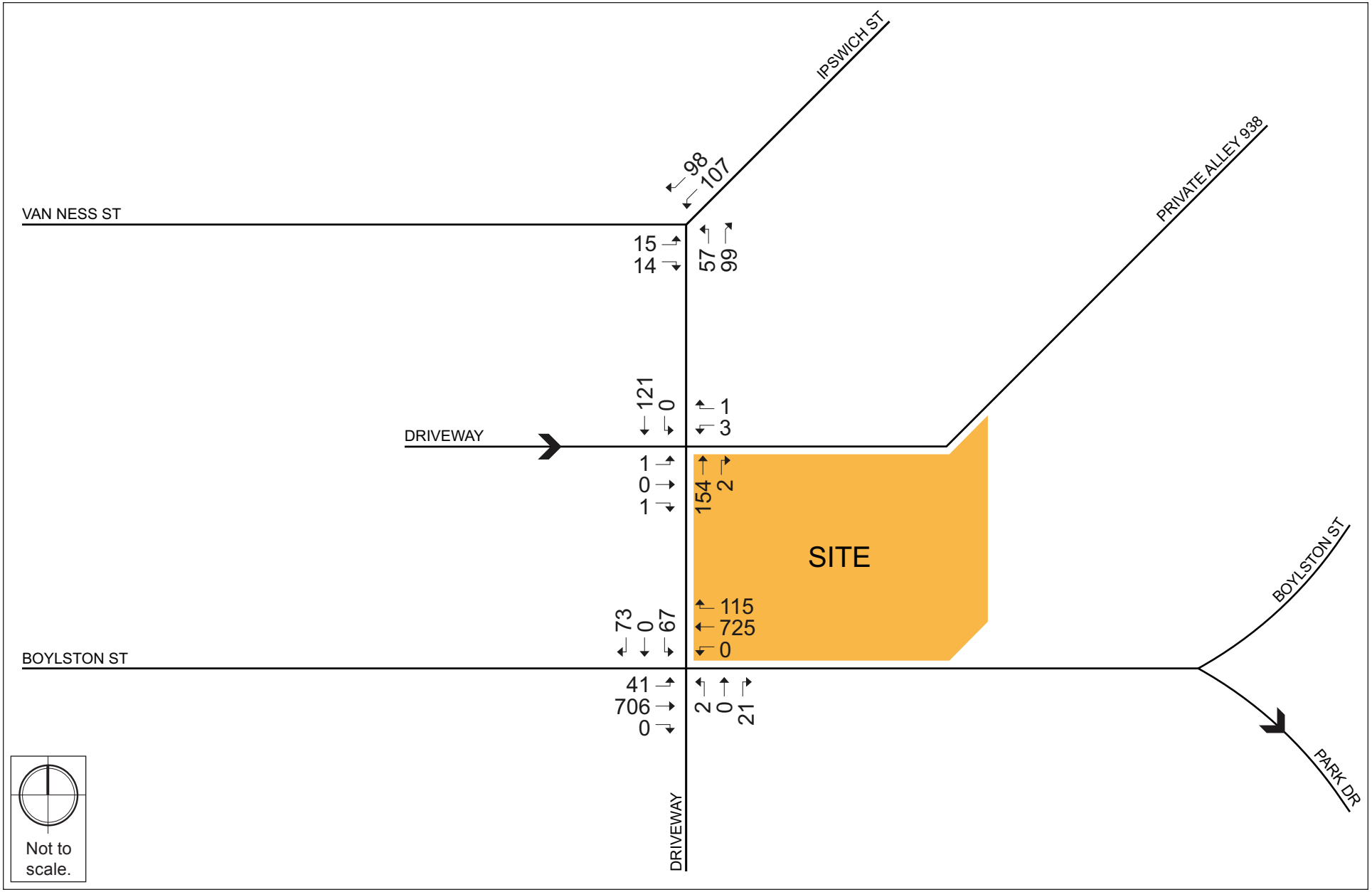

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Figure 2-6

Existing (2017) Condition Traffic Volumes, Weekday a.m. Peak Hour

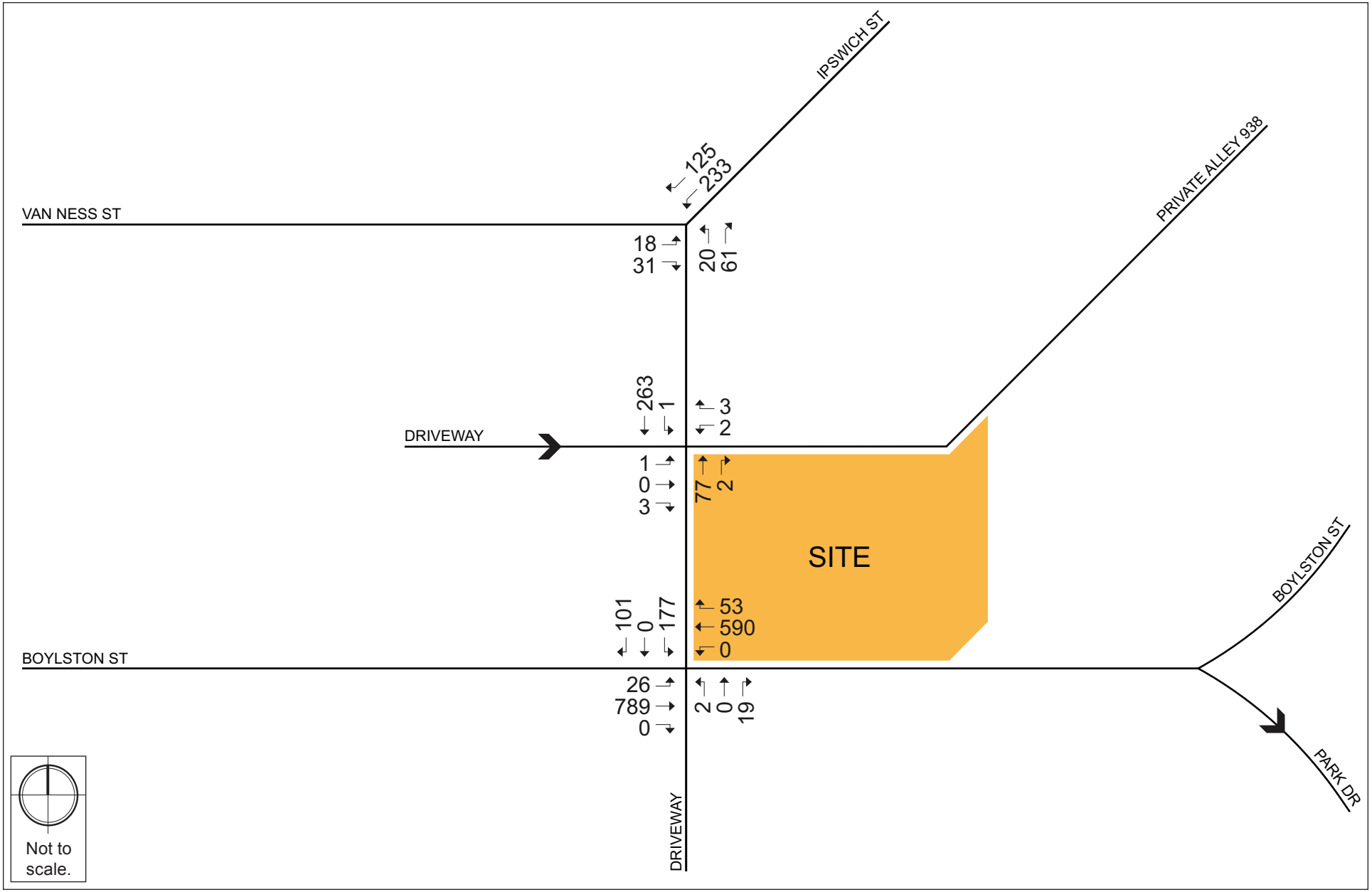

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Figure 2-7

Existing (2017) Condition Traffic Volumes, Weekday p.m. Peak Hour

2.2.7 Existing Bicycle Volumes and Accommodations

In recent years, bicycle use has increased dramatically throughout the City of Boston. The City's "Bike Routes of Boston" map assigns a level of difficulty to many Boston streets. Study area streets and their associated level are presented below:

- Ipswich Street is designated as a beginner route which is suitable for all riders including children, and people with no on-road experience.
- Boylston Street is designated as an advanced route which is suitable for experienced and traffic-confident cyclists. Traffic volumes and/or speeds can be high.

Bicycle counts were conducted concurrent with the vehicular TMCs and based on the counts, bicycle activity in the area was generally light during the data collection period.

The site is also located in proximity to bicycle sharing stations provided by Hubway. The Hubway system is a regional bicycle sharing system, owned by the municipalities of Boston, Brookline, Cambridge and Somerville. System wide, there are more than 180 stations offering 1,600 bicycles to more than 15,000 members. Since launching in July 2011, users have taken 5.3 million trips. As shown in Figure 2-8, there are two Hubway stations located within a quarter mile of the site, and four Hubway stations located just outside of a quarter-mile walk.

2.2.8 Existing Pedestrian Volumes and Accommodations

In general, sidewalks are provided along all roadways and are in good condition. Crosswalks are provided at all signalized study area intersections and one of the unsignalized intersections. Pedestrian signal equipment is provided at all of the signalized intersections.

To determine the amount of pedestrian activity within the study area, pedestrian counts were conducted concurrent with the TMCs at the study area intersections, and are presented in Figure 2-9.

2.2.9 Existing (2017) Condition Traffic Operations Analysis

The criterion for evaluating traffic operations is level of service (LOS), which is determined by assessing average delay experienced by vehicles at intersections and along intersection approaches. Trafficware's Synchro (version 9) software package was used to calculate average delay and associated LOS at the study area intersections. This software is based on the traffic operational analysis methodology of the Transportation Research Board's 2000 Highway Capacity Manual (HCM). Field observations were performed by HSH to collect intersection geometry such as number of turning lanes, lane length, and lane width that were then incorporated into the operations analysis.

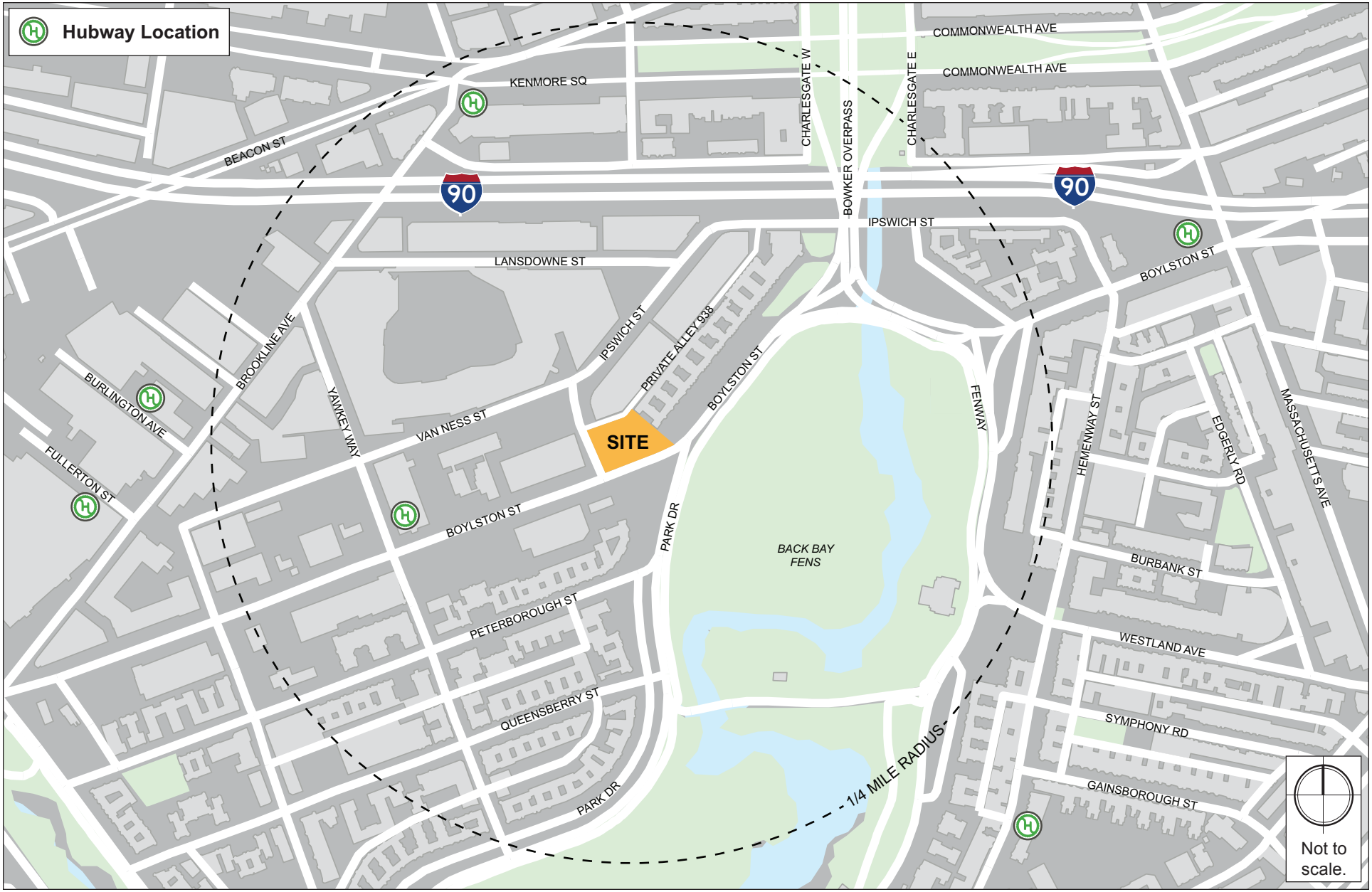

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Figure 2-8
Bicycle Sharing Locations

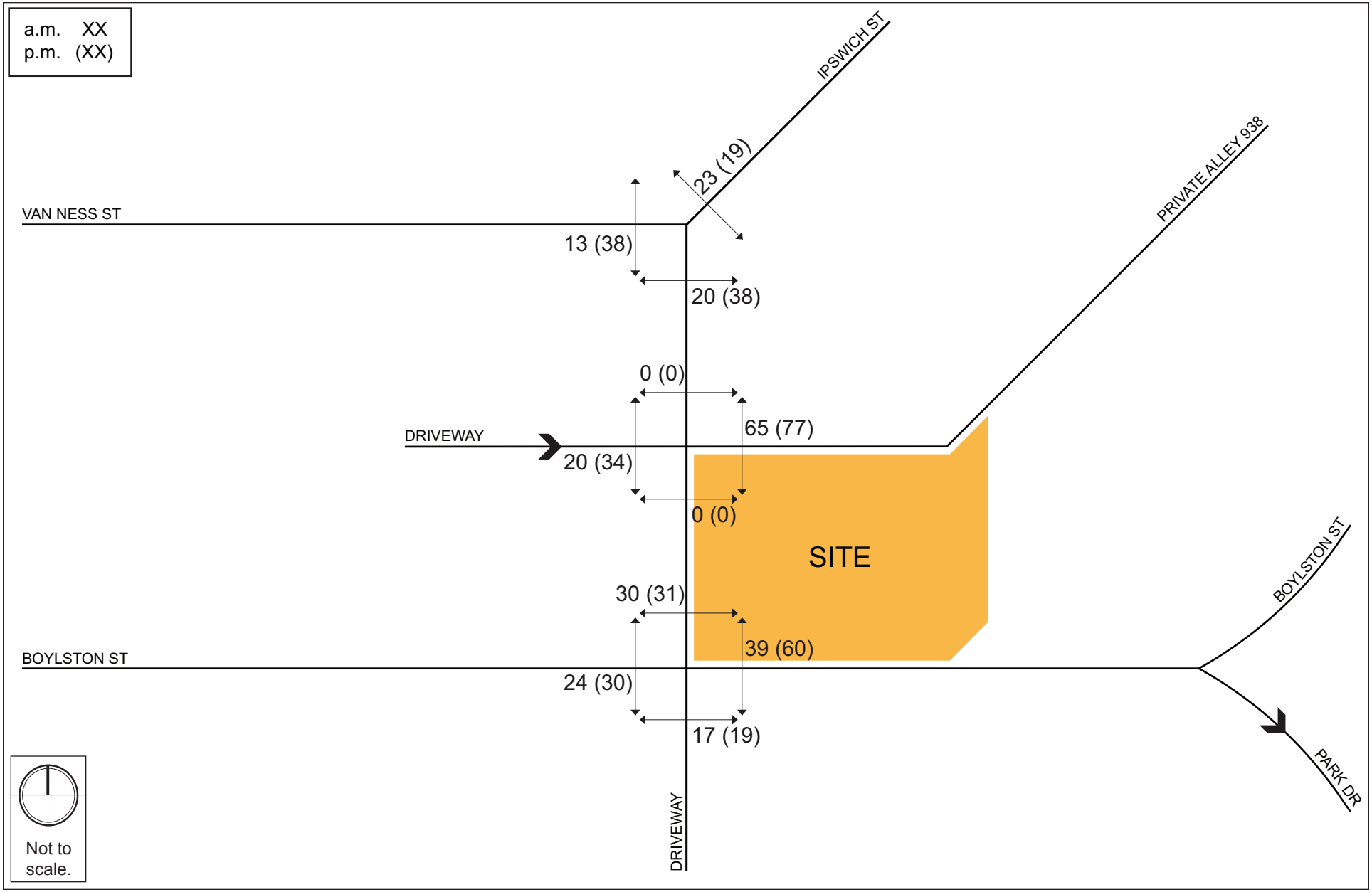

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Figure 2-9

Existing (2017) Condition Pedestrian Volumes, a.m. and p.m. Peak Hours

LOS designations are based on average delay per vehicle for all vehicles entering an intersection. Table 2-3 displays the intersection LOS criteria. LOS A indicates the most favorable condition, with minimum traffic delay, while LOS F represents the worst condition, with significant traffic delay. LOS D or better is typically considered desirable during the peak hours of traffic in urban and suburban settings. However, LOS E or F is often typical for a stop-controlled minor street that intersects a major roadway, and does not necessarily indicate that the operations at the intersection are poor or failing.

Table 2-3 Vehicle Level of Service Criteria

Level of Service	Average Stopped Delay (sec/veh)	
	Signalized Intersection	Unsignalized Intersection
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Source: 2000 Highway Capacity Manual, Transportation Research Board.

In addition to delay and LOS, the operational capacity and vehicular queues are calculated and used to further quantify traffic operations at intersections. The following describes these other calculated measures.

The volume-to-capacity ratio (v/c ratio) is a measure of congestion at an intersection approach. A v/c ratio below one indicates that the intersection approach has adequate capacity to process the arriving traffic volumes over the course of an hour. A v/c ratio of one or greater indicates that the traffic volume on the intersection approach exceeds capacity.

The 50th percentile queue length, measured in feet, represents the maximum queue length during a cycle of the traffic signal with typical (or median) entering traffic volumes.

The 95th percentile queue length, measured in feet, denotes the farthest extent of the vehicle queue (to the last stopped vehicle) upstream from the stop line. This maximum queue occurs five percent, or less, of the time during the peak hour, and typically does not develop during off-peak hours. Since volumes fluctuate throughout the hour, the 95th percentile queue represents what can be considered a "worst case" condition. Queues at an intersection are generally below the 95th percentile length throughout most of the peak hour. It is also unlikely that 95th percentile queues for each approach to an intersection occur simultaneously.

Table 2-4 and Table 2-5 summarize the Existing (2017) Condition capacity analysis for the study area intersection during the a.m. and p.m. peak hours, respectively. The detailed analysis sheets are provided in Appendix B.

Table 2-4 Existing (2017) Condition, Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized					
Boylston Street/Ipswich Street/Sunoco Driveway	**A**	**9.2**	-	-	-
Boylston Street EB left/thru | thru/right	A	9.5	0.41	113	152
Boylston Street WB left/thru | thru/right	A	8.7	0.38	113	150
Sunoco Driveway NB right	A	0.0	0.02	0	0
Ipswich Street SB left/thru/right	B	12.6	0.36	14	64
Unsignalized					
Ipswich Street/Private Alley 938/Driveway	-	-	-	-	-
Driveway EB left/thru/right	A	9.6	0.01	-	0
Private Alley WB left/right	B	10.1	0.01	-	1
Ipswich Street NB thru/right	A	0.0	0.09	-	0
Ipswich Street SB left/thru	A	0.0	0.00	-	0
Ipswich Street/Van Ness Street	-	-	-	-	-
Van Ness Street EB left/right	B	10.5	0.06	-	5
Ipswich Street SB left/right	A	0.0	0.12	-	0
Ipswich Street NWB left/right	A	3.1	0.04	-	3

95th percentile volume exceeds capacity.
~ 50th percentile volume exceeds capacity. Queue shown is the maximum after two cycles.
m = Queue is metered from upstream signal.

Table 2-5 Existing (2017) Condition, Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized					
Boylston Street/Ipswich Street/Sunoco Driveway	**B**	**13.9**	-	-	-
Boylston Street EB left/thru | thru/right	B	12.1	0.43	142	185
Boylston Street WB left/thru | thru/right	B	10.5	0.31	100	133
Sunoco Driveway NB right	A	0.0	0.01	0	0
Ipswich Street SB left/thru/right	C	27.9	0.60	109	198

Table 2-5 Existing (2017) Condition, Capacity Analysis Summary, p.m. Peak Hour (Continued)

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Unsignalized					
Ipswich Street/Private Alley 938/Driveway	**-**	**-**	**-**	**-**	**-**
Driveway EB left/thru/right	B	10.2	0.01	-	1
Private Alley WB left/right	A	9.7	0.01	-	1
Ipswich Street NB thru/right	A	0.0	0.05	-	0
Ipswich Street SB left/thru	A	0.0	0.00	-	0
Ipswich Street/Van Ness Street	**-**	**-**	**-**	**-**	**-**
Van Ness Street EB left/right	B	10.9	0.08	-	6
Ipswich Street SB left/right	A	0.0	0.22	-	0
Ipswich Street NWB left/right	A	2.1	0.02	-	1

95th percentile volume exceeds capacity.
~ 50th percentile volume exceeds capacity. Queue shown is the maximum after two cycles.
m = Queue is metered from upstream signal.

As shown in Table 2-4 and Table 2-5, the three study area intersections and individual movements operate at a LOS C or better during both the a.m. and p.m. peak hours.

The Project site is located near Fenway Park, home to the Boston Red Sox. Home games at Fenway Park occur on about 50 weekdays per year, or about 20% of weekdays. These are mostly evening games, although a few start in the afternoon. Before and after baseball games, pedestrian activity in the area increases and traffic delays can be longer than those presented above.

2.3 No-Build (2024) Condition

The No-Build (2024) Condition reflects a future scenario that incorporates anticipated traffic volume changes associated with background traffic growth independent of any specific project, traffic associated with other planned specific developments, and planned infrastructure improvements that will affect travel patterns throughout the study area. These infrastructure improvements include roadway, public transportation, pedestrian facility, and bicycle facility improvements.

2.3.1 Background Growth Traffic

The methodology to account for generic future background traffic growth is to evaluate how traffic volumes may be affected by changes in demographics, smaller scale development projects, or projects unforeseen at this time. Based on a review of recent and historic traffic

data collected recently and to account for any additional unforeseen traffic growth, a traffic growth rate of one-half percent (0.5%) per year, compounded annually through the horizon year seven years in the future, was used.

2.3.2 Specific Development Traffic Growth

Traffic volumes associated with known, larger or adjacent development projects can affect traffic patterns throughout the study area within the future analysis time horizon. Nearby development projects were identified in the vicinity of the Project site and are shown in Figure 2-10. Traffic volumes associated with the following projects were directly incorporated into the future conditions traffic volumes:

- **2 Charlesgate West** – This proposed project consists of a residential building with approximately 310 units and 10,000 square feet of retail. This project is currently under review by the BPDA.

- **Landmark Center NPC** – This Notice of Project Change (NPC) consists of changing the original development program of 600 residential units to instead adding a new 14-story, 506,000 square feet office/laboratory building. This project is currently under review by the BPDA.

- **Fenway Center, Phase 1** – Phase 1 of the Fenway Center consists of two buildings and includes 389,000 square feet and 313 residential units. This project has been approved by the BPDA Board.

- **1350 Boylston Street** – This project includes approximately 196,500 square feet anticipated to contain approximately 7,050 square feet of ground retail and restaurant space, and 200 residential units. All parking will be located in a below-grade garage with approximately 105 spaces. This project is currently under construction.

- **The Pierce** – This project consists of the construction of a 30-story building with 360 residential units and approximately 20,500 square feet of commercial space. This project is under construction.

Traffic volumes for two other nearby development projects, listed below, are included in the general background traffic growth.

- **Landmark Center Park** – This project consists of approximately 1.1 acres of publicly accessible space, a new public plaza, enhanced pedestrian connectivity, and improved access to the Fenway MBTA station. This project has been approved by the BPDA Board.

- **16-20 Peterborough** – This project consists of a five-story building with 20 residential units and 12 parking spaces. This project is under construction.

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Figure 2-10
Area Development Projects

2.3.3 Proposed Infrastructure Improvements

A review of planned improvements to roadway, transit, bicycle, and pedestrian facilities was conducted to determine if there are any nearby improvement projects in the vicinity of the study area. Based on this review, it was determined that there are not any planned infrastructure improvements in the immediate vicinity of the Project site.

2.3.4 N-Build Traffic Volumes

The one-half percent per year annual growth rate, compounded annually, was applied to the Existing (2017) Condition traffic volumes, then the traffic volumes associated with the background development projects listed above were added to develop the No-Build (2024) Condition traffic volumes. The No-Build (2024) weekday a.m. and p.m. peak hour traffic volumes are shown on Figure 2-11 and Figure 2-12, respectively.

2.3.5 No-Build (2024) Condition Traffic Operations Analysis

The No-Build (2024) Condition analysis uses the same methodology as the Existing (2017) Condition capacity analysis. Table 2-6 and Table 2-7 present the No-Build (2024) Condition operations analysis for the a.m. and p.m. peak hours, respectively. The detailed analysis sheets are provided in Appendix B.

Table 2-6 No-Build (2024) Condition, Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized					
Boylston Street/Ipswich Street/Sunoco Driveway	**B**	**10.1**	**-**	**-**	**-**
Boylston Street EB left/thru | thru/right	A	10.0	0.46	129	173
Boylston Street WB left/thru | thru/right	A	8.9	0.41	126	164
Sunoco Driveway NB right	A	0.0	0.02	0	0
Ipswich Street SB left/thru/right	B	17.9	0.47	35	95
Unsignalized					
Ipswich Street/Private Alley 938/Driveway	**-**	**-**	**-**	**-**	**-**
Driveway EB left/thru/right	A	9.9	0.01	-	0
Private Alley WB left/right	B	10.4	0.01	-	1
Ipswich Street NB thru/right	A	0.0	0.11	-	0
Ipswich Street SB left/thru	A	0.0	0.00	-	0
Ipswich Street/Van Ness Street	**-**	**-**	**-**	**-**	**-**
Van Ness Street EB left/right	B	10.8	0.10	-	8
Ipswich Street SB left/right	A	0.0	0.13	-	0
Ipswich Street NWB left/right	A	3.5	0.06	-	5

95th percentile volume exceeds capacity.
~ 50th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after two cycles.

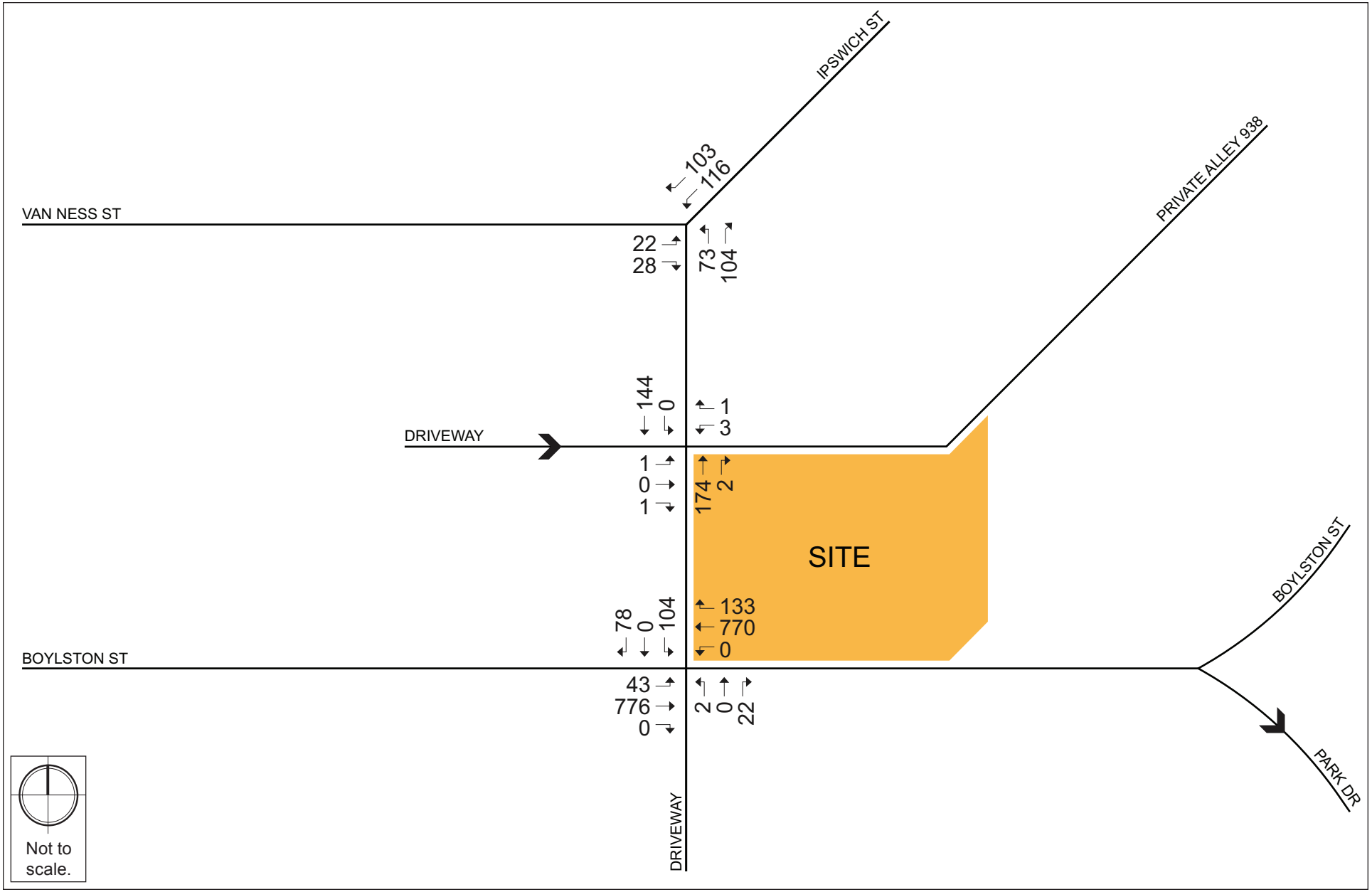

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Figure 2-11

No-Build (2024) Condition Traffic Volumes, Weekday a.m. Peak Hour

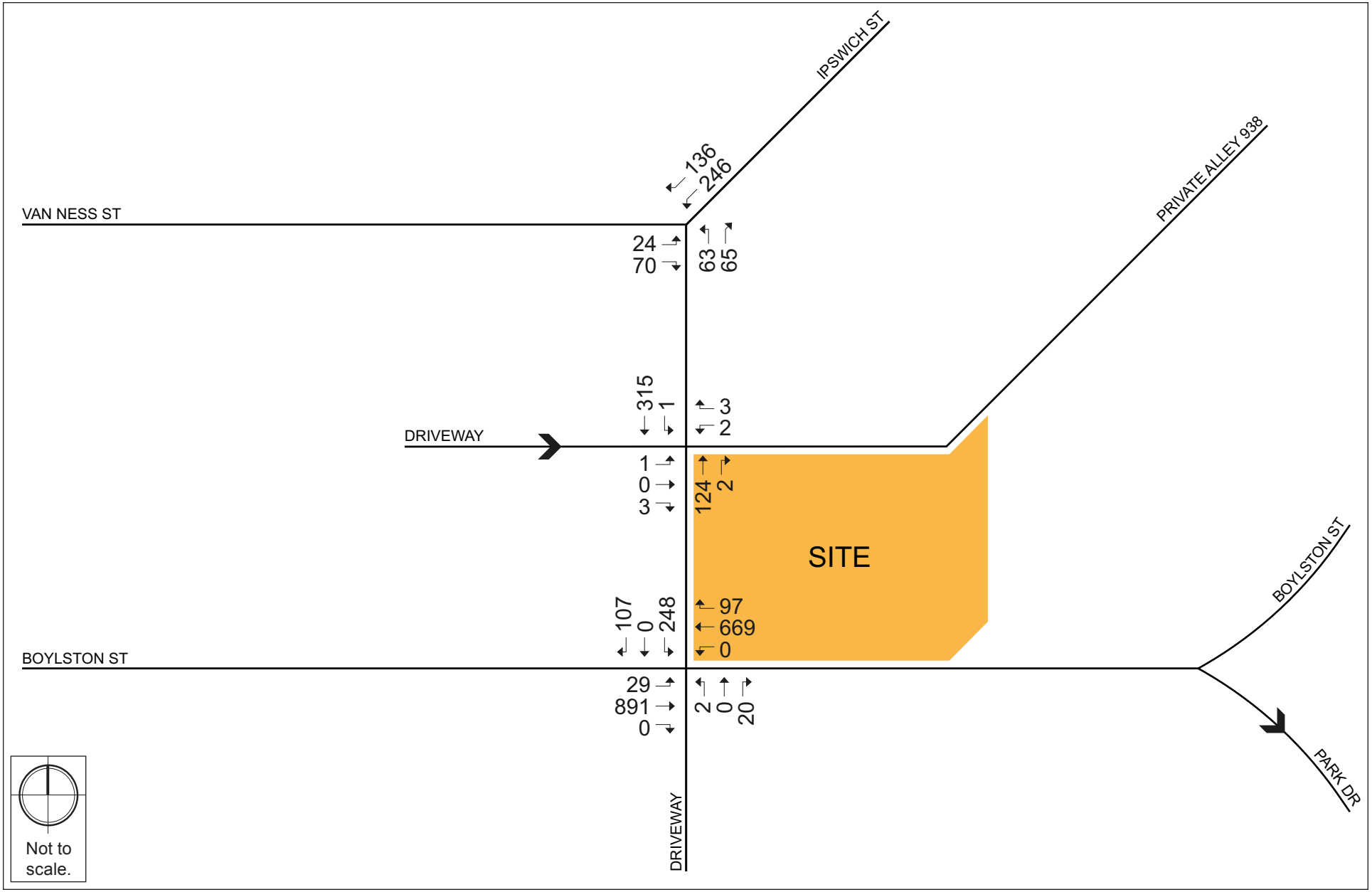

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Figure 2-12

No-Build (2024) Condition Traffic Volumes, Weekday p.m. Peak Hour

Table 2-7 No-Build (2024) Condition, Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized					
Boylston Street/Ipswich Street/Sunoco Driveway	**B**	**16.4**	**-**	**-**	**-**
Boylston Street EB left/thru | thru/right	B	12.9	0.49	169	218
Boylston Street WB left/thru | thru/right	B	11.0	0.37	123	161
Sunoco Driveway NB right	A	0.0	0.01	0	0
Ipswich Street SB left/thru/right	D	37.4	0.76	166	#301
Unsignalized					
Ipswich Street/Private Alley 938/Driveway	**-**	**-**	**-**	**-**	**-**
Driveway EB left/thru/right	B	10.7	0.01	-	1
Private Alley WB left/right	B	10.3	0.01	-	1
Ipswich Street NB thru/right	A	0.0	0.08	-	0
Ipswich Street SB left/thru	A	0.0	0.00	-	0
Ipswich Street/Van Ness Street	**-**	**-**	**-**	**-**	**-**
Van Ness Street EB left/right	B	11.8	0.16	-	14
Ipswich Street SB left/right	A	0.0	0.23	-	0
Ipswich Street NWB left/right	A	4.3	0.06	-	5

95th percentile volume exceeds capacity.
~ 50th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after two cycles.

As shown in Table 2-6 and Table 2-7, all the study area intersections continue to operate at the same LOS as the Existing (2017) Condition with the exception of the **Boylston Street/Ipswich Street/Sunoco Driveway**. This intersection changes from LOS A to LOS B during the a.m. peak hour, and continues to operate at the same LOS during the p.m. peak hour, and the Ipswich Street southbound movement changes from an LOS C to LOS D during the p.m. peak hour in the No-Build (2024) Condition, both of which are acceptable LOS.

2.4 Build Condition

The Project includes the demolition of the existing buildings and surface parking lot, and construction of an approximately 184-room hotel with approximately 4,600 square feet of restaurant space. Approximately 82 on-site valet parking spaces will be included in a below-grade garage.

2.4.1 Site Access and Vehicle Circulation

The site plan is shown in Figure 2-13. Hotel guests arriving by auto, including private vehicle, taxicab, and rideshare services (such as uber/Lyft), will use the valet curb on Ipswich Street. Guest's vehicles will be taken by valet to the parking garage. All activity into and out of the parking garage will be done by valets with no self-parking by guests. When

leaving, guests will request their vehicle from the valet, and the valet will move the vehicle from the garage to the valet curb. The valet curb will have capacity for approximately five to six vehicles.

Pedestrians will be able to enter/exit the hotel lobby via Ipswich Street, and the restaurant space via both Ipswich Street and Boylston Street.

2.4.2 Project Parking

The Project will provide approximately 82 parking spaces in a one-level below-grade parking garage accessed by valets only. The parking goals developed by the BTD for the Fenway/Kenmore neighborhood are a maximum of 0.4 hotel parking spaces per unit. With 184 rooms, the Project will have a parking ratio of 0.4 spaces per hotel unit.

2.4.3 Loading and Service Accommodations

The Project's loading and service area is shown on the site plan in Figure 2-13. One loading bay will be provided. Trucks will enter and exit the site via Ipswich Street.

Daily delivery trip estimates for the Project were developed based on Central Transportation Planning Staff (CTPS) data for the identified land uses. The Project is expected to generate approximately three deliveries per day. Note that trash trips are not included in the number of daily deliveries. Trash trips generally occur between 5:00 a.m. – 7:00 a.m. and do not coincide with regular delivery activity.

The proposed truck travel paths into and out of the loading bays have been assessed using AUTOTURN, software that allows engineers to model vehicular maneuvers, to ensure that all movements can be safely completed.

2.4.4 Trip-Generation Methodology

Determining the future trip generation of the Project is a complex, multi-step process that produces an estimate of vehicle trips, transit trips, and walk/bicycle trips associated with a proposed development and a specific land use program. A project's location and proximity to different travel modes determines how people will travel to and from a site.

To estimate the number of trips expected to be generated by the Project, data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*[1] were used. ITE provides data to estimate the total number of unadjusted vehicular trips associated with the Project. In an urban setting well-served by transit, adjustments are necessary to account for other travel modes such as walking, bicycling, and transit.

[1] Trip Generation Manual, 9th Edition; Institute of Transportation Engineers; Washington, D.C.; 2012.

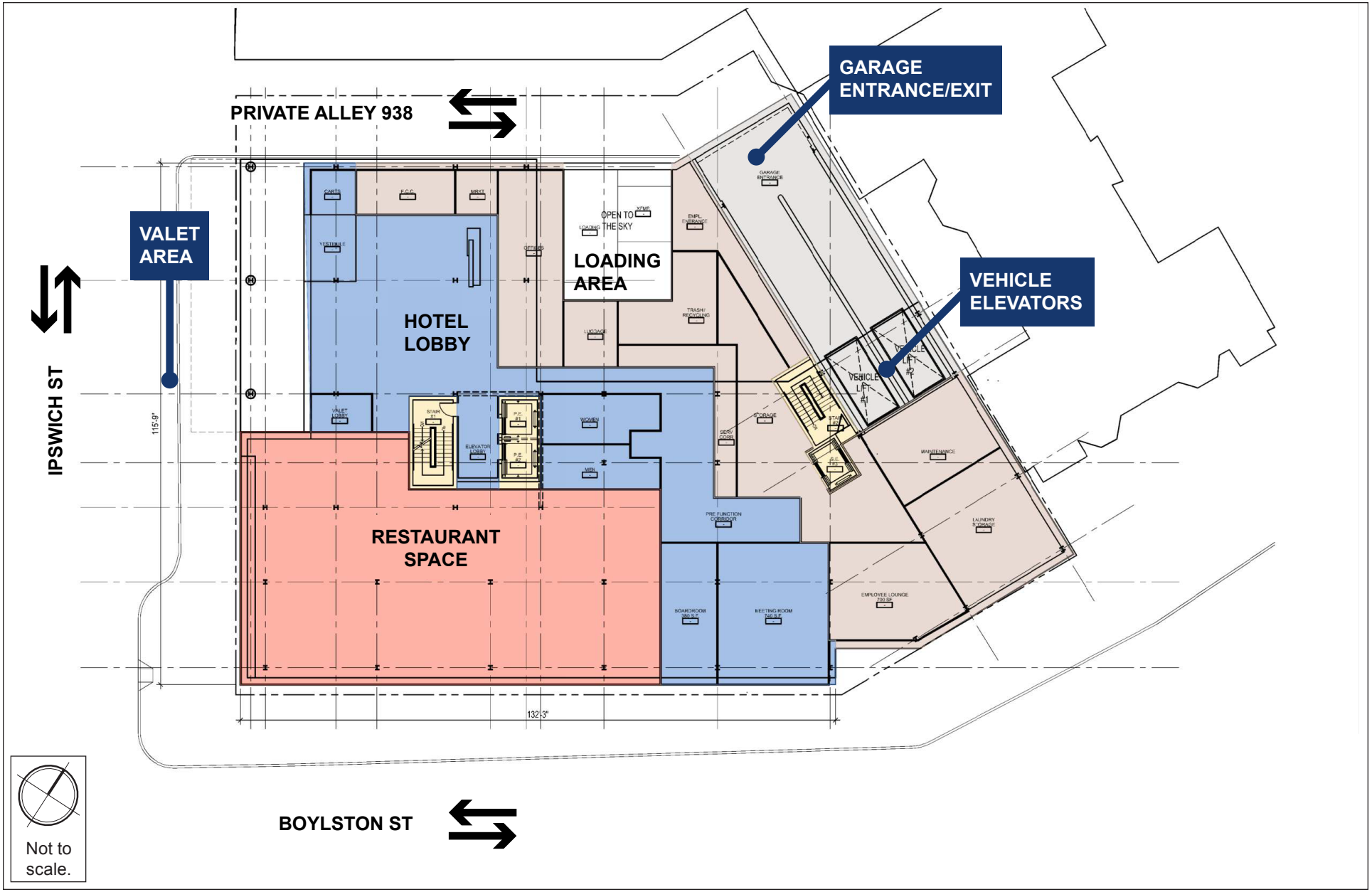

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Figure 2-13
Site Plan

To estimate the unadjusted number of vehicular trips for the Project, the following ITE land use code (LUC) was used:

Land Use Code 310 – Hotel. Hotels are places of lodging that provide sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (e.g., pool, fitness room), and/or other retail and service shops.

The Project also includes a small restaurant space (approximately 4,600 square feet) on the ground floor. The ITE trip rates for Hotel (LUC 310) already incorporate activity related to some in-house commercial services, and, therefore, adequately accounts for the level of trip generation expected for this ancillary, non-destination, restaurant space.

2.4.5 Travel Mode Share

BTD provides vehicle, transit, and walking mode share rates for different areas of Boston. The Project is located in the eastern portion of designated Area 4 – Fenway/Kenmore. The unadjusted vehicular trips were converted to person-trips by using vehicle occupancy rates published by the Federal Highway Administration (FHWA)[2]. The person-trips were then distributed to different modes according to the mode shares shown in Table 2-8.

Table 2-8 Travel Mode Shares

Land Use		Walk/Bicycle Share	Transit Share	Vehicle Share	Vehicle Occupancy Rate
Daily					
Hotel	In	55%	16%	29%	1.84
	Out	55%	16%	29%	1.84
Weekday a.m. Peak Hour					
Hotel	In	57%	19%	24%	1.84
	Out	61%	13%	26%	1.84
Weekday p.m. Peak Hour					
Hotel	In	61%	13%	26%	1.84
	Out	57%	19%	24%	1.84

[2] Summary of Travel Trends: 2009 National Household Travel Survey; FHWA; Washington, D.C.; June 2011.

2.4.6 Existing Trip Generation

When assessing a site with existing, active land uses, it is standard practice to estimate existing trips and subtract those trips from the projected new future trips. The result of this process yields "net new" trips that become the basis for traffic analysis.

The existing site presently generates trips associated with the Shell gas station and parking lot. Currently, there are four driveways at the gas station. Traffic counts were conducted concurrent with the vehicular TMCs at each of the driveways. For the Build (2024) Condition, the trips associated with the existing gas station and parking lot has been subtracted from the study area roadway network.

2.4.7 Project Trip Generation

The mode share percentages shown in Table 2-8 were applied to the number of person trips to develop walk/bicycle, transit, and vehicle trip generation estimates for the Project. It was assumed that 30% of vehicle trips will occur via taxicab/rideshare (such as uber or Lyft). The trip generation for the Project by travel mode is shown in Table 2-9. The detailed trip generation information is provided in Appendix B.

Table 2-9 Project Trip Generation

Land Use		Walk/Bicycle Trips	Transit Trips	Vehicle Trips	
				Private Vehicle	Taxicab/ Rideshare
Daily					
Hotel[1]	In	762	221	153	65
	Out	762	221	153	65
	Total	**1,524**	**442**	**306**	**130**
a.m. Peak Hour					
Hotel[1]	In	61	20	10	4
	Out	45	10	7	4
	Total	**106**	**30**	**17**	**8**
p.m. Peak Hour					
Hotel[1]	In	63	13	10	4
	Out	56	19	9	4
	Total	**119**	**32**	**19**	**8**

1. Based on 184 keys.

The net peak-hour vehicle trip generation for the Project was determined by adjusting the Project-generated vehicle trips to account for the removal of the trips associated with the existing gas station and parking lot on the Project site. The existing trips were determined by conducting vehicular counts at the four existing driveways. The net vehicle trip generation for the Project during the weekday a.m. and p.m. peak hours is shown in Table 2-10.

Table 2-10 Net Vehicle Trip Generation

Time Period/Direction		Project-Generated Vehicle Trips[1]	Existing Vehicle Trips[2] (removed)	Net New Vehicle Trips
a.m. Peak Hour	In	14	-40	-26
	Out	11	-47	-36
	Total	**25**	**-87**	**-62**
p.m. Peak Hour	In	14	-41	-27
	Out	13	-55	-42
	Total	**27**	**-96**	**-69**

1. Based on ITE Trip Generation
2. Based on September 2017 driveway counts at the Site (Shell gas station and parking lot)

As shown in Table 2-10, the Project is expected to generate approximately 62 fewer vehicle trips during the weekday a.m. peak hour and 69 fewer vehicle trips during the weekday p.m. peak hour. Even without the reduction of existing trips, the level of traffic volume increase associated with the proposed Project is minimal when compared to the existing traffic volumes within the study area.

As presented in Section 2.4.5, the average walk mode share for the neighborhood (as shown in Table 2-8) was applied to the Project's program to estimate the number of walk trips. However, the Proponent anticipates that the new hotel will serve many guests who will attend Red Sox games and have a short walk (about 300 feet) to Fenway Park. This synergy will likely result in a higher number of walk trips and lower number of vehicle trips than presented in Table 2-9, further reducing the net new vehicle trips presented in Table 2-10.

2.4.8 Trip Distribution

The trip distribution identifies the various travel paths for vehicles associated with the Project. Trip distribution patterns for the Project were based on BTD's origin-destination data for Area 4 and trip distribution patterns presented in traffic studies for nearby projects. The trip distribution patterns for the Project are illustrated in Figure 2-14 and Figure 2-15.

2.4.9 Build Traffic Volumes

The net trip generation associated with the removal of the Shell gas station trips and the Project-generated vehicle trips were distributed throughout the study area according to the trip distribution patterns. The Project-generated trips at study area intersections are shown for the weekday a.m. peak hour and the weekday p.m. peak hour in Figure 2-16 and Figure 2-17, respectively. The trip assignments were added to the No-Build (2024) Condition vehicular traffic volumes to produce the Build (2024) Condition vehicular traffic volumes.

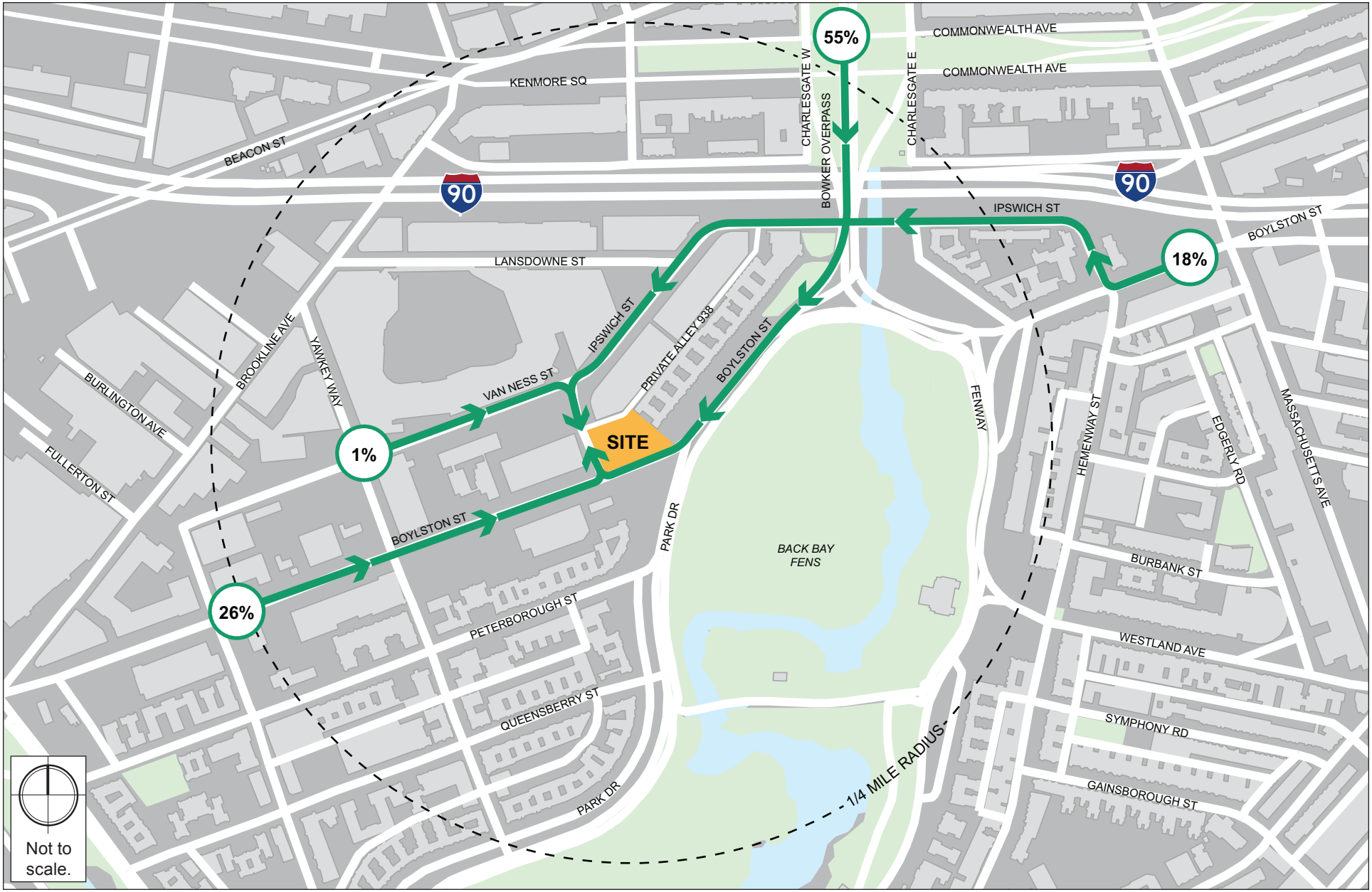

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Figure 2-14
Entering Vehicle Distribution

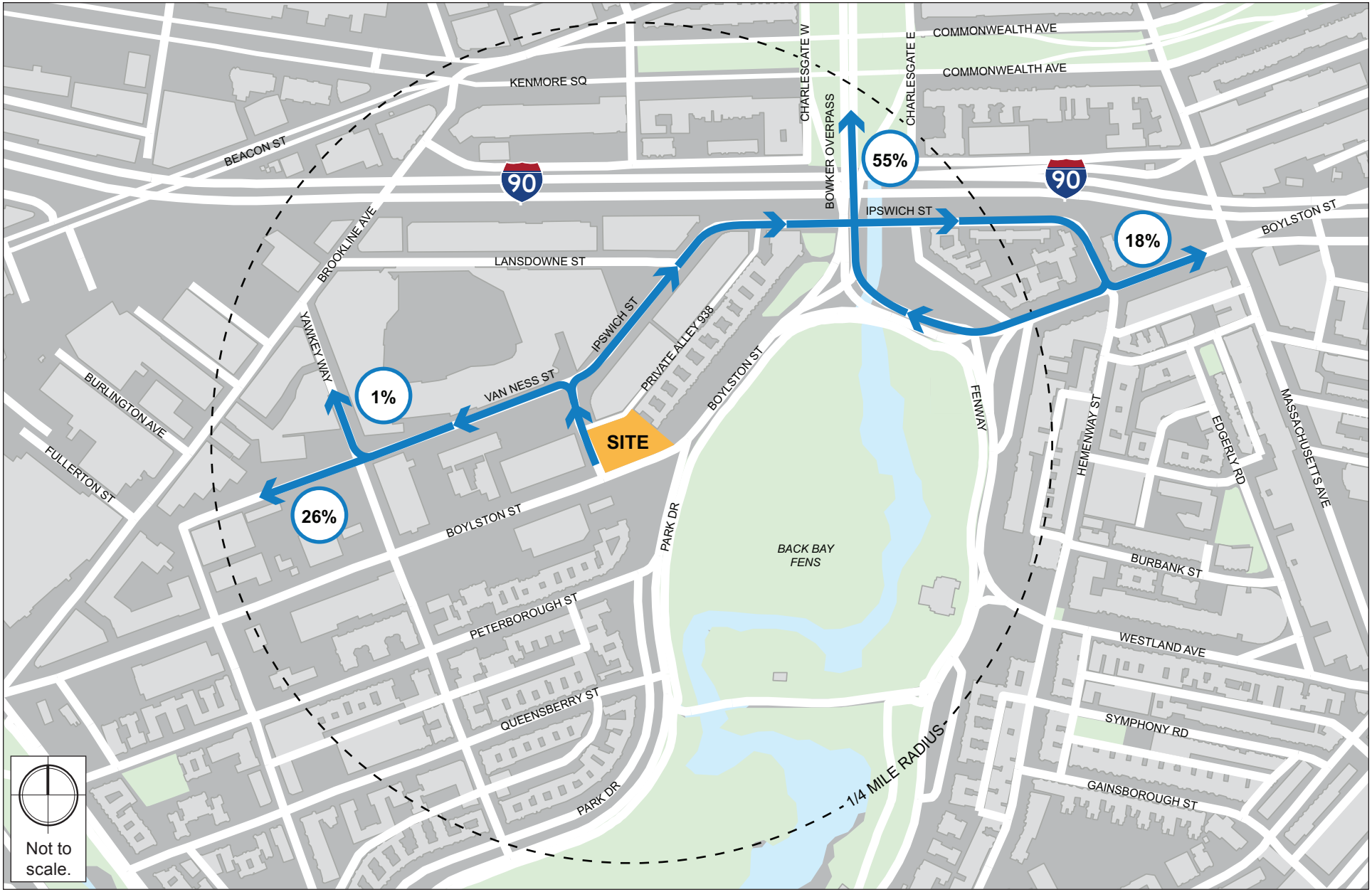

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Figure 2-15
Exiting Vehicle Distribution

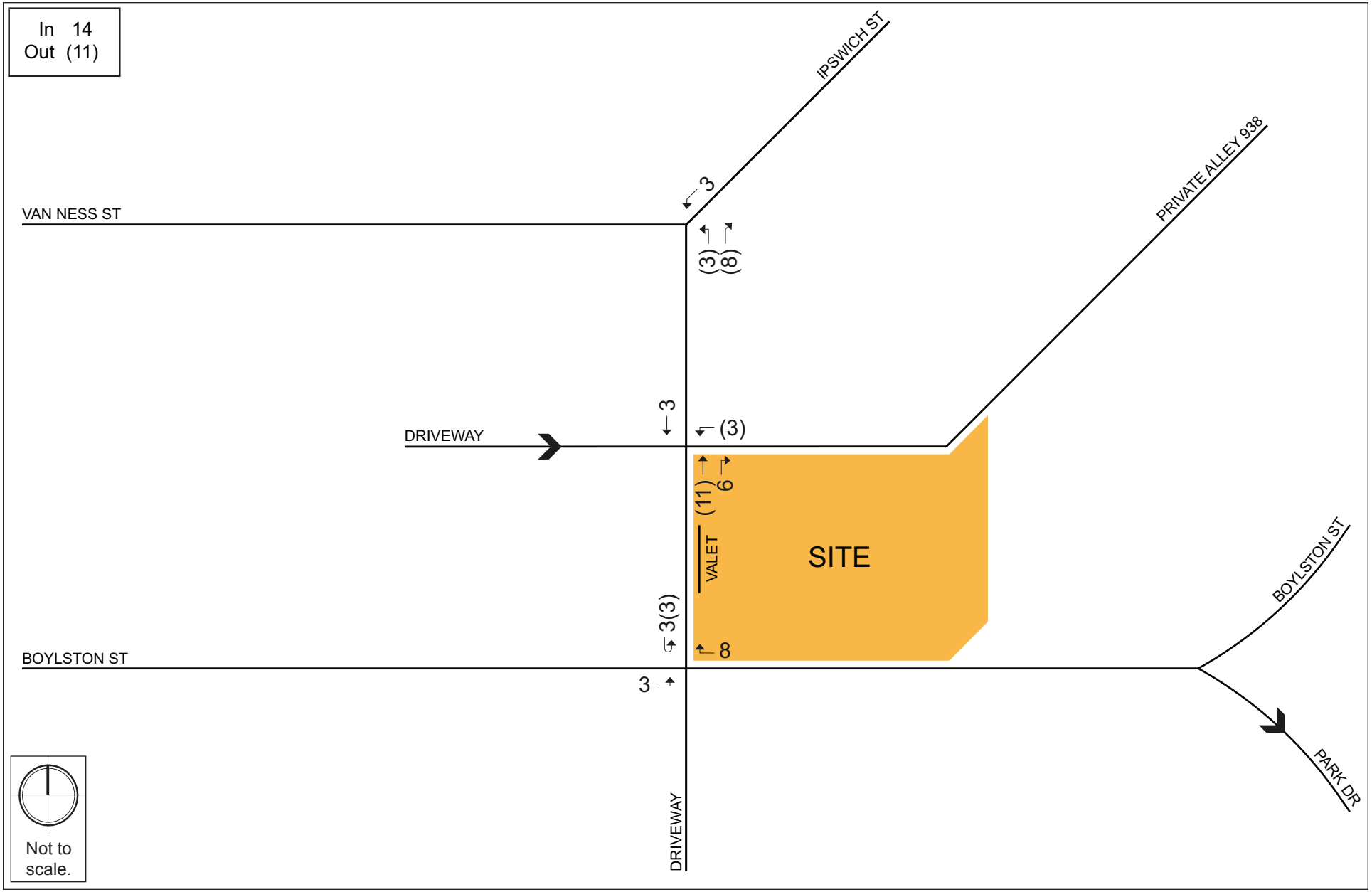

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Figure 2-16

Project Generated Vehicle Trips, Weekday a.m. Peak Hour

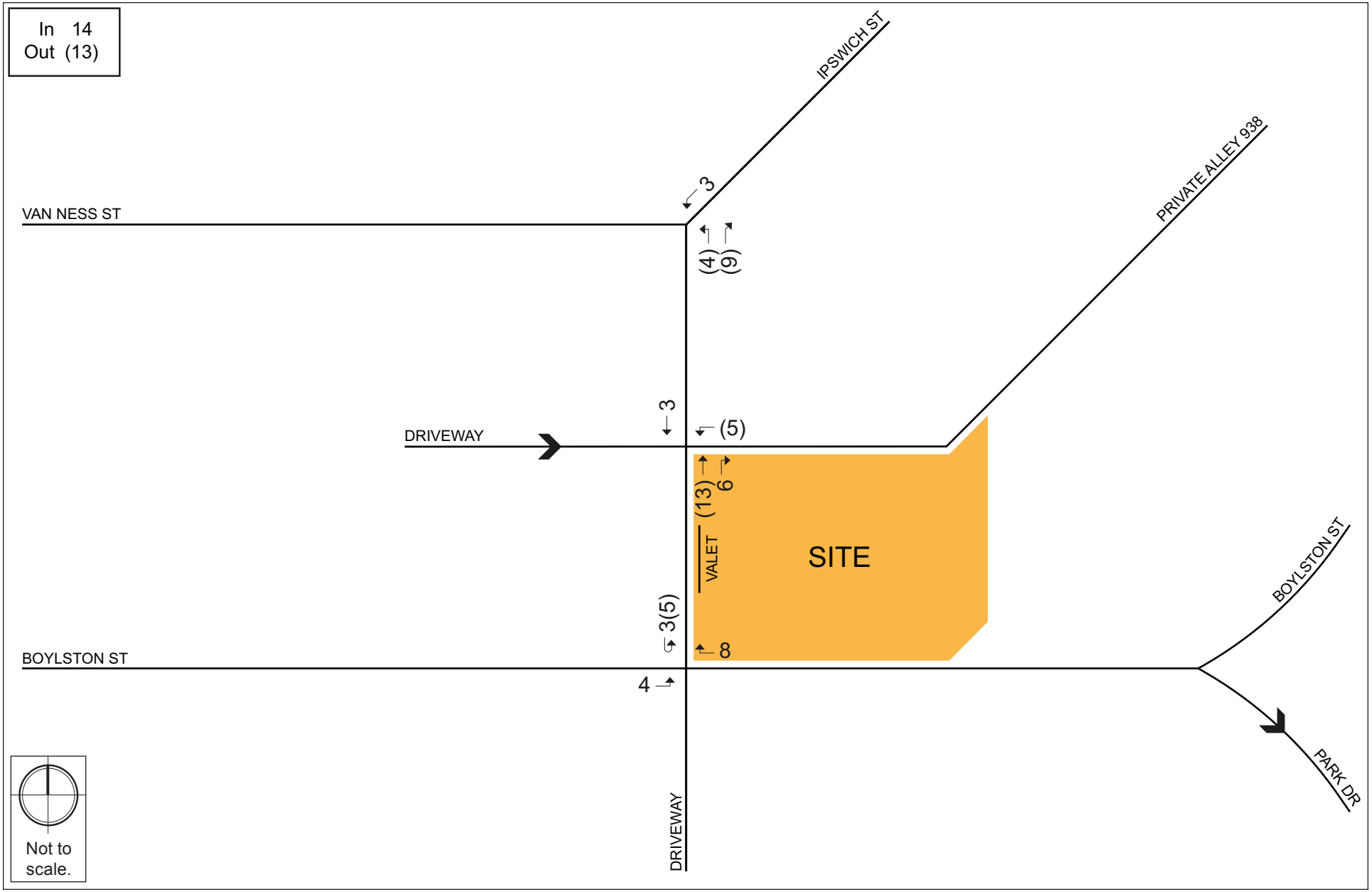

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Figure 2-17

Project Generated Vehicle Trips, Weekday p.m. Peak Hour

The Build (2024) Condition a.m. and p.m. peak hour traffic volumes are shown in Figure 2-18 and Figure 2-19, respectively.

2.4.10 Bicycle Accommodations

Secure bicycle parking for employees will be provided in the garage and employees will have access to shower/locker rooms. To accommodate visitor bicycle use, the Proponent will locate some bicycle parking near the valet curb. Note that a Hubway bicycle station is located one block (about 700 feet) from the site. (see Figure 2-8).

2.4.11 Build Condition Traffic Operations Analysis

The Build (2024) Condition analysis uses the same methodology as the Existing (2017) Condition and No-Build (2024) Condition analyses. Table 2-11 and Table 2-12 present the Build (2024) Condition capacity analysis for the a.m. and p.m. peak hours, respectively. The detailed analysis sheets are provided in Appendix B.

Table 2-11 Build (2023) Condition, Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized					
Boylston Street/Ipswich Street/Sunoco Driveway	**A**	**9.8**	**-**	**-**	**-**
Boylston Street EB left/thru | thru/right	A	9.9	0.45	126	170
Boylston Street WB left/thru | thru/right	A	8.9	0.41	124	164
Sunoco Driveway NB right	A	0.0	0.02	0	0
Ipswich Street SB left/thru/right	B	16.2	0.43	29	85
Unsignalized					
Ipswich Street/Private Alley 938/Driveway	**-**	**-**	**-**	**-**	**-**
Driveway EB left/thru/right	A	9.8	0.01	-	0
Private Alley WB left/right	B	10.6	0.02	-	2
Ipswich Street NB thru/right	A	0.0	0.10	-	0
Ipswich Street SB left/thru	A	0.0	0.00	-	0
Ipswich Street/Van Ness Street	**-**	**-**	**-**	**-**	**-**
Van Ness Street EB left/right	B	10.8	0.10	-	8
Ipswich Street SB left/right	A	0.0	0.13	-	0
Ipswich Street NWB left/right	A	3.5	0.06	-	4

95th percentile volume exceeds capacity.

~ 50th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after two cycles.

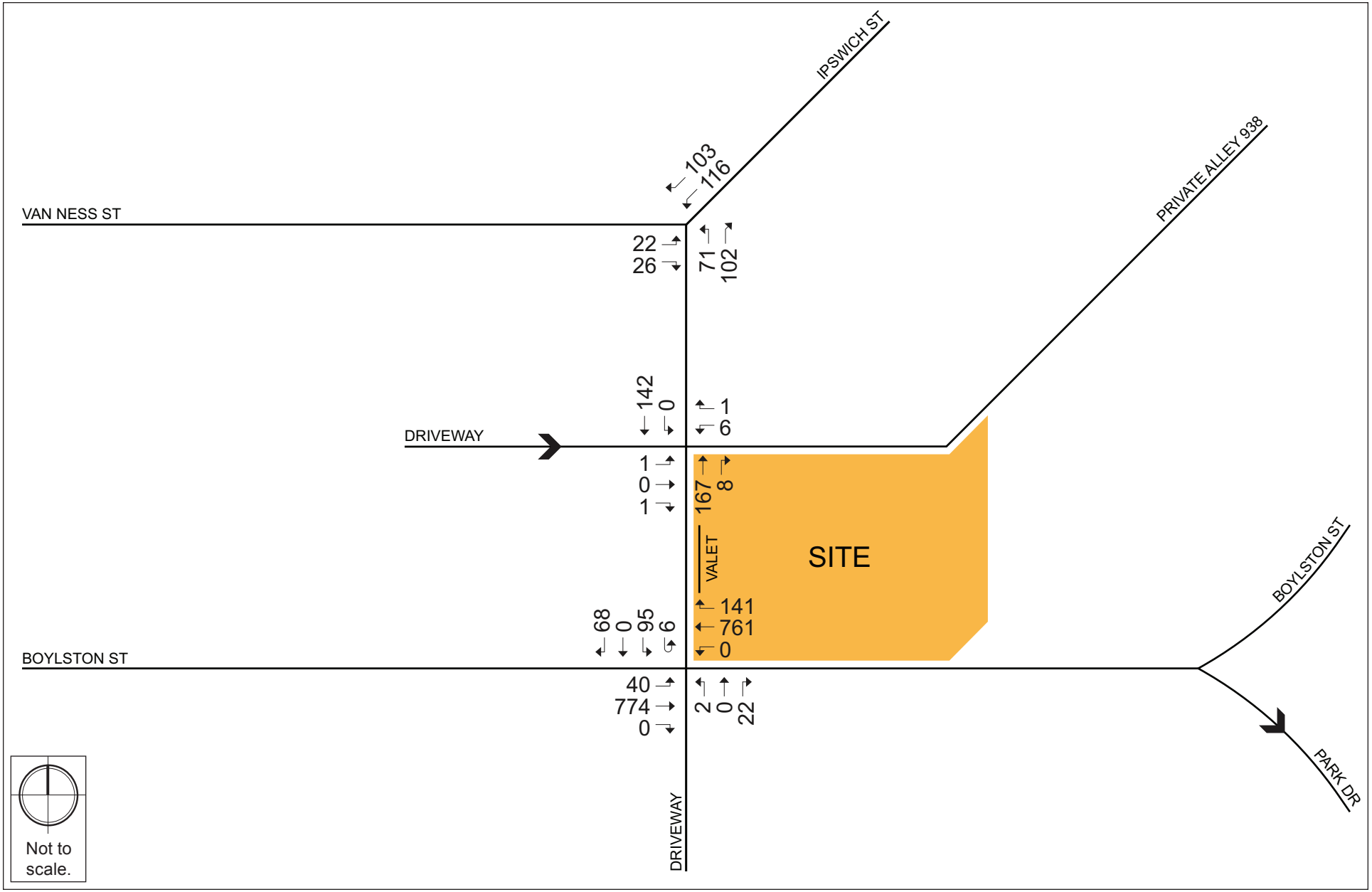

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Figure 2-18

Build (2024) Condition Traffic Volumes, Weekday a.m. Peak hour

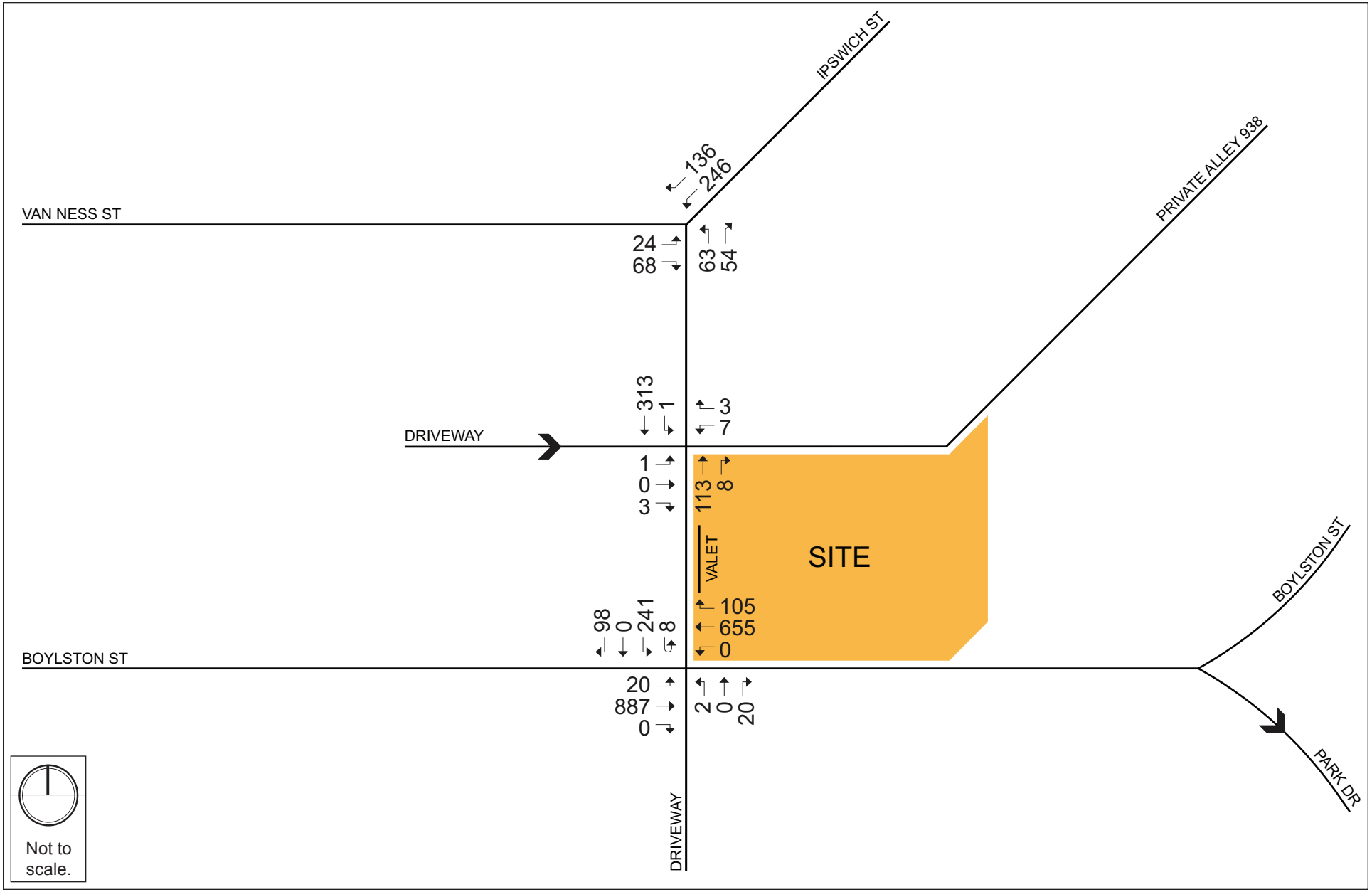

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Figure 2-19

Build (2024) Condition Traffic Volumes, Weekday p.m. Peak hour

Table 2-12 Build (2023) Condition, Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentile Queue (ft)	95th Percentile Queue (ft)
Signalized					
Boylston Street/Ipswich Street/Sunoco Driveway	**B**	**15.9**	**-**	**-**	**-**
Boylston Street EB left/thru | thru/right	B	12.68	0.47	164	211
Boylston Street WB left/thru | thru/right	B	10.9	0.37	121	158
Sunoco Driveway NB right	A	0.0	0.01	0	0
Ipswich Street SB left/thru/right	D	36.0	0.74	160	#277
Unsignalized					
Ipswich Street/Private Alley 938/Driveway	**-**	**-**	**-**	**-**	**-**
Driveway EB left/thru/right	B	10.7	0.01	-	1
Private Alley WB left/right	B	11.4	0.03	-	2
Ipswich Street NB thru/right	A	0.0	0.08	-	0
Ipswich Street SB left/thru	A	0.0	0.00	-	0
Ipswich Street/Van Ness Street	**-**	**-**	**-**	**-**	**-**
Van Ness Street EB left/right	B	11.8	0.16	-	14
Ipswich Street SB left/right	A	0.0	0.23	-	0
Ipswich Street NWB left/right	A	4.7	0.06	-	5

95th percentile volume exceeds capacity.
~ 50th percentile volume exceeds capacity. Queue may be longer. Queue shown is the maximum after two cycles.

As shown in Table 2-11 and Table 2-12, all of the study area intersections and movements continue to operate at the same, or better, LOS as the No-Build (2024) Condition.

2.5 Transportation Demand Management

While the Project itself will reduce the vehicle trips generated by the site (with the change in use from gas station to hotel), the Proponent is committed to implementing Transportation Demand Management (TDM) measures to minimize automobile usage and Project-generated traffic impacts.

The TDM measures for the Project may include, but are not limited, to the following:

- The Proponent will require the hotel operator to designate a transportation coordinator, who can be part of the Project's management staff, to oversee transportation issues, including service and loading, and valet management, and will work with guests and employees to raise awareness of public transportation, bicycling, and walking opportunities;

- The Proponent will require that the hotel operator provide packets to new employees containing information on available transportation choices, including transit routes/schedules and nearby vehicle sharing and bicycle sharing locations;
- The Proponent will provide an annual (or more frequent) newsletter or bulletin summarizing transit, ridesharing, bicycling, alternative work schedules, and other travel options;
- The Project will provide secure bicycle parking for hotel guests and employees.
- Posting information in the lobby about public transportation;
- Provide transit access information on the Project website including information on bus and subway routes and schedules; and
- Provide bicycle and pedestrian access information on the Project website.

2.6 Transportation Mitigation Measures

Although the number of vehicle trips generated by the Project will be fewer than the current gas station use, the Proponent will continue to work with the City of Boston to ensure that the Project efficiently serves vehicle trips, improves the pedestrian environment, and encourages transit and bicycle use.

The Proponent is responsible for preparation of the Transportation Access Plan Agreement (TAPA), a formal legal agreement between the Proponent and the BTD. The TAPA formalizes the findings of the transportation study, mitigation commitments, elements of access and physical design, travel demand management measures, and any other responsibilities that are agreed to by both the Proponent and the BTD. Because the TAPA must incorporate the results of the technical analysis, it must be executed after these other processes have been completed. The proposed measures listed above and any additional transportation improvements to be undertaken as part of this Project will be defined and documented in the TAPA.

The Proponent will also produce a Construction Management Plan (CMP) for review and approval by BTD. The CMP will detail the schedule, staging, parking, delivery, and other associated impacts of the construction of the Project.

2.7 Evaluation of Short-term Construction Impacts

Most construction activities will be accommodated within the current Project site boundaries. Details of the overall construction schedule, working hours, number of construction workers, worker transportation and parking, number of construction vehicles, and routes will be addressed in detail in the CMP to be filed with BTD in accordance with the City's transportation maintenance plan requirements.

To minimize transportation impacts during the construction period, the following measures will be considered for the CMP:

- Limited construction worker parking on-site;
- Encouragement of worker carpooling;
- Consideration of a subsidy for MBTA passes for full-time employees; and
- Providing secure spaces on-site for workers' supplies and tools so they do not have to be brought to the site each day.

The CMP to be executed with the City prior to commencement of construction will document all committed measures.

Chapter 3.0

Environmental Review Component

3.0 ENVIRONMENTAL REVIEW COMPONENT

3.1 Wind

Because the Project is proposed to be similar in height to the surrounding buildings, it is not anticipated to bring upper level winds to the street. In addition, the area to the north, west and southwest are developed with buildings of similar height or taller, and they are therefore expected to shield the Project site from upper level winds. Thus, due to the Project's height in relation to its surroundings, the Project is not anticipated to have a significant impact on pedestrian level winds.

3.2 Shadow

3.2.1 Introduction and Methodology

As is typically required by the BPDA, a shadow impact analysis was conducted to investigate shadow impacts from the Project during three time periods (9:00 a.m., 12:00 noon, and 3:00 p.m.) during the vernal equinox (March 21), summer solstice (June 21), autumnal equinox (September 21), and the winter solstice (December 21). In addition, shadow studies were conducted for the 6:00 p.m. period during the summer solstice and autumnal equinox.

The shadow analysis presents net new shadow from the building, as well as the existing shadow, and illustrates the incremental impact of the Project. The analysis focuses on public open spaces, major pedestrian areas, bus and subway stops, and the sidewalks adjacent to and in the vicinity of the Project site. Shadows have been determined using the applicable Altitude and Azimuth data for Boston. Figures showing the net new shadow from the Project are provided in Figures 3.2-1 to 3.2-14 at the end of this section.

The results of the analysis show that new shadow from the Project will generally be limited to nearby streets and sidewalks, as well as the Fenway Victory Gardens during the two 6:00 p.m. time periods studied. The Project will not cast new shadow on Fenway Park, or onto nearby bus stops during any of the time periods studied.

3.2.2 Vernal Equinox (March 21)

At 9:00 a.m. during the vernal equinox, new shadow from the Project will be cast to the northwest across Ipswich Street and its sidewalks, onto a portion of Van Ness Street's southern sidewalk, and onto Private Alley 938. No new shadow will be cast onto nearby bus stops or public open spaces.

At 12:00 p.m., new shadow from the Project will be cast to the north and limited to Private Alley 938. No new shadow will be cast onto nearby bus stops or open spaces.

At 3:00 p.m., new shadow from the Project will be cast to the northeast onto Private Alley 938 and onto a portion of Boylston Street's northern sidewalk. No new shadow will be cast onto nearby bus stops or open spaces.

3.2.3 Summer Solstice (June 21)

At 9:00 a.m. during the summer solstice, new shadow from the Project will be cast to the west across Ipswich Street and its sidewalks, and onto Private Alley 938. No new shadow will be cast onto nearby bus stops or open spaces.

At 12:00 p.m., new shadow from the Project will be cast to the north and will be limited to Private Alley 938. No new shadow will be cast onto nearby bus stops or open spaces.

At 3:00 p.m., new shadow from the Project will be cast to the east onto a portion of Boylston Street's northern sidewalk. No new shadow will be cast onto nearby bus stops or open spaces.

At 6:00 p.m., new shadow from the Project will be cast to the southeast across Boylston Street and its sidewalks, and onto a small portion of Park Drive and its sidewalks. New shadow will be cast onto a small portion of the Fenway Victory Gardens. No new shadow will be cast onto nearby bus stops or other open spaces.

3.2.4 Autumnal Equinox (September 21)

At 9:00 a.m., during the autumnal equinox, new shadow from the Project will be cast to the northwest across Ipswich Street and its sidewalks, and onto Private Alley 938. No new shadow will be cast onto nearby bus stops or public open spaces.

At 12:00 p.m., new shadow from the Project will be cast to the north onto Private Alley 938. No new shadow will be cast onto nearby bus stops or open spaces.

At 3:00 p.m., new shadow from the Project will be cast to the northeast onto Private Alley 938 and onto a portion of Boylston Street's northern sidewalk. No new shadow will be cast onto nearby bus stops or open spaces.

At 6:00 p.m., new shadow from the Project will be cast to the east onto a small portion of Boylston Street's southern sidewalk. New shadow will be cast across a portion of the Fenway Victory Gardens. No new shadow will be cast onto nearby bus stops or other open spaces.

3.2.5 Winter Solstice (December 21)

The winter solstice creates the least favorable conditions for sunlight in New England. The sun angle during the winter is lower than in any other season, causing the shadows in urban areas to elongate and be cast onto large portions of the surrounding area.

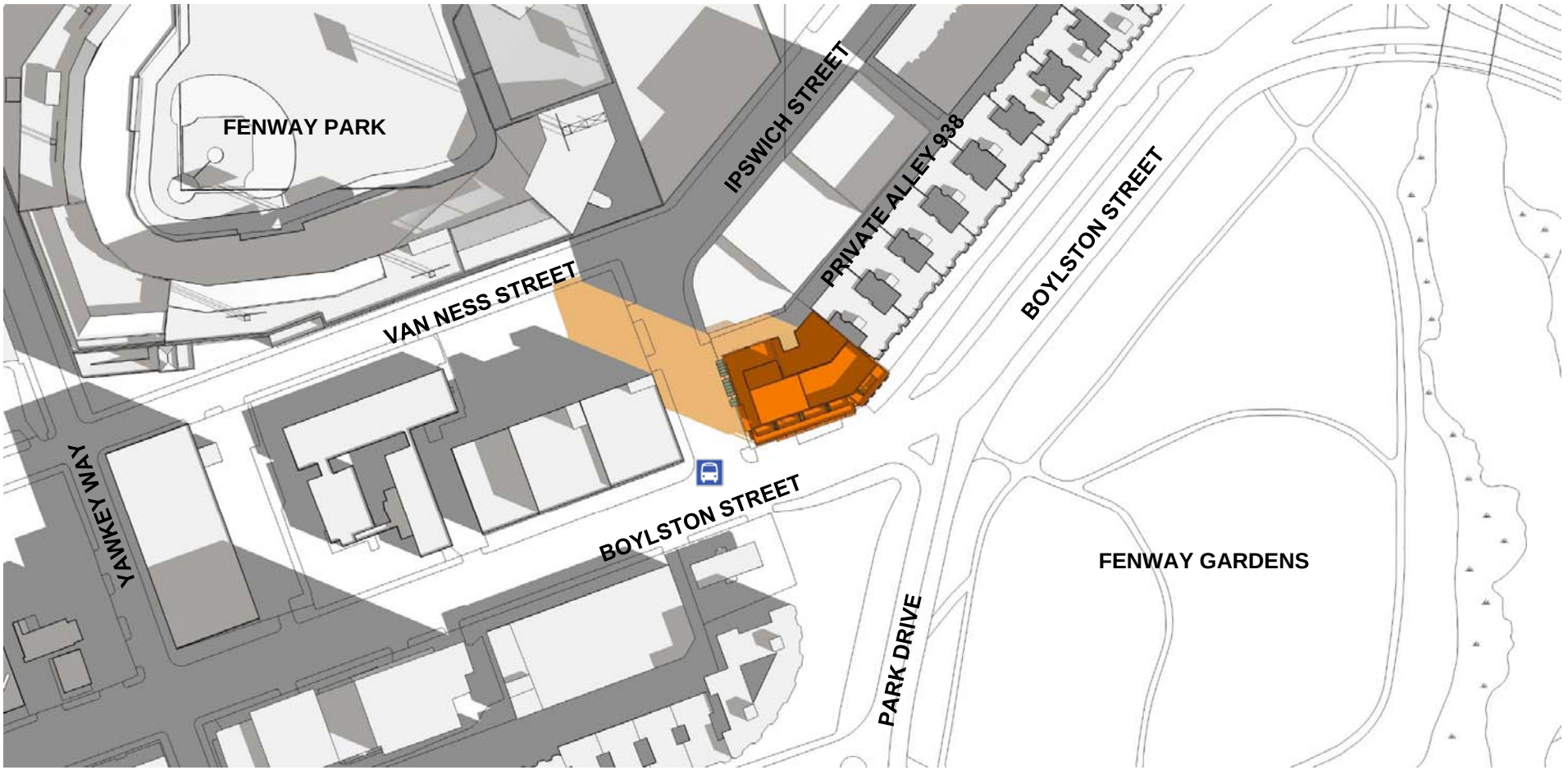
At 9:00 a.m., during the winter solstice, new shadow from the Project will be cast to the northwest across Ipswich Street and its sidewalks, across Van Ness Street and its sidewalks, and onto Private Alley 938. No new shadow will be cast onto nearby bus stops or open spaces.

At 12:00 p.m., new shadow from the Project will be cast to the northeast onto Private Alley 938. No new shadow will be cast onto nearby bus stops or open spaces.

At 3:00 p.m., new shadow from the Project will be cast to the northeast onto Boylston Street and its northern sidewalk. No new shadow will be cast onto nearby bus stops and open spaces.

3.2.6 Conclusions

The shadow impact analysis looked at net new shadow created by the Project during fourteen time periods. During twelve of the time periods studied, the Project will not cast new shadow on public open spaces. New shadow will be cast onto the Fenway Victory Gardens during only two of the time periods studied (June 21 at 6:00 p.m., and September 21 at 6:00 p.m.). No new shadow will be cast onto other open spaces, including Fenway Park. No new shadow will be cast onto nearby bus stops.

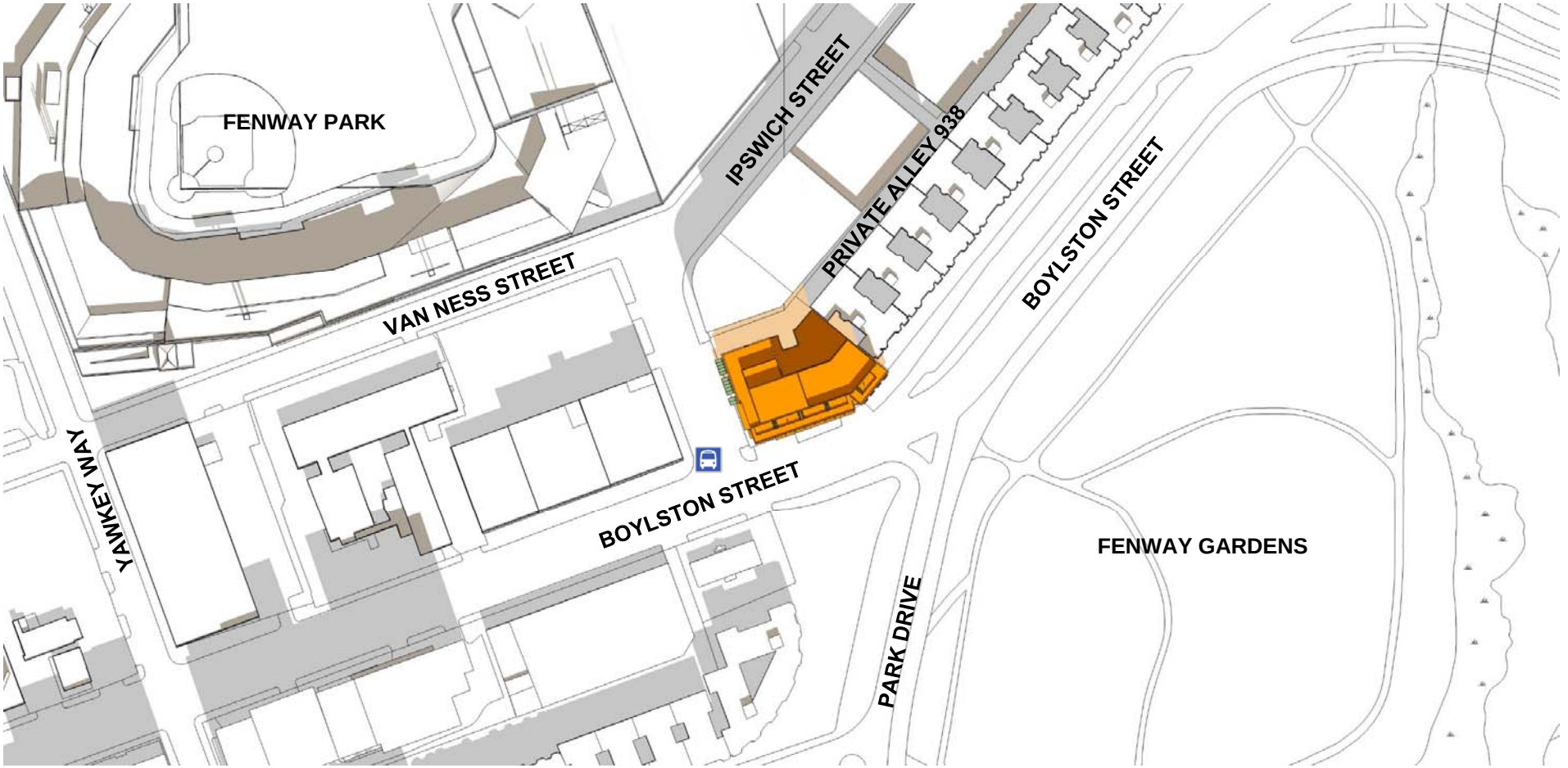


Fenway Hotel **Boston, Masachusetts**

Group One PARTNERS

Figure 3.2-1

Shadow Study: March 21, 9:00 a.m.



Fenway Hotel **Boston, Masachusetts**

Group One PARTNERS

Figure 3.2-2

Shadow Study: March 21, 12:00 p.m.

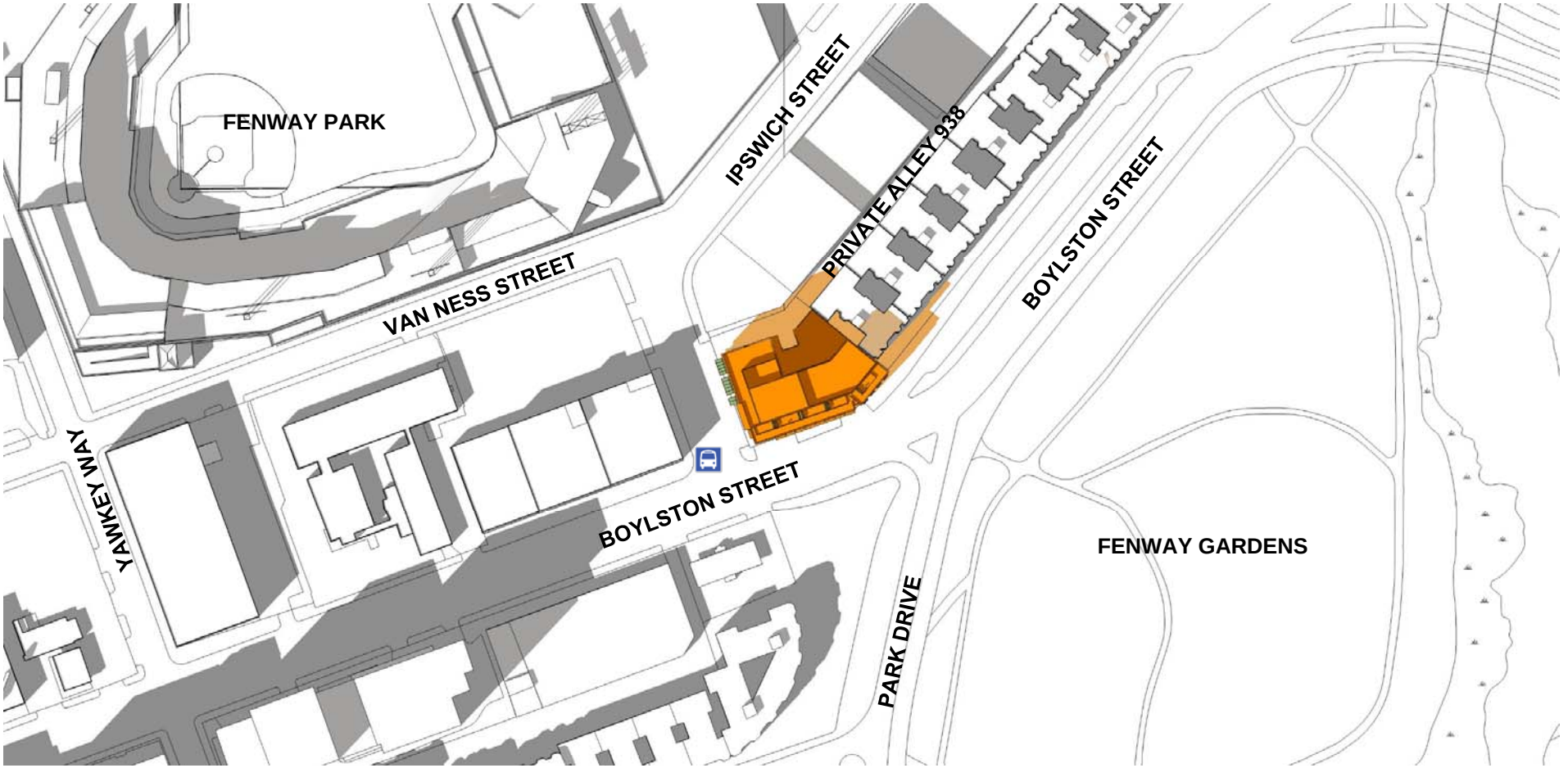


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Figure 3.2-3

Shadow Study: March 21, 3:00 p.m.

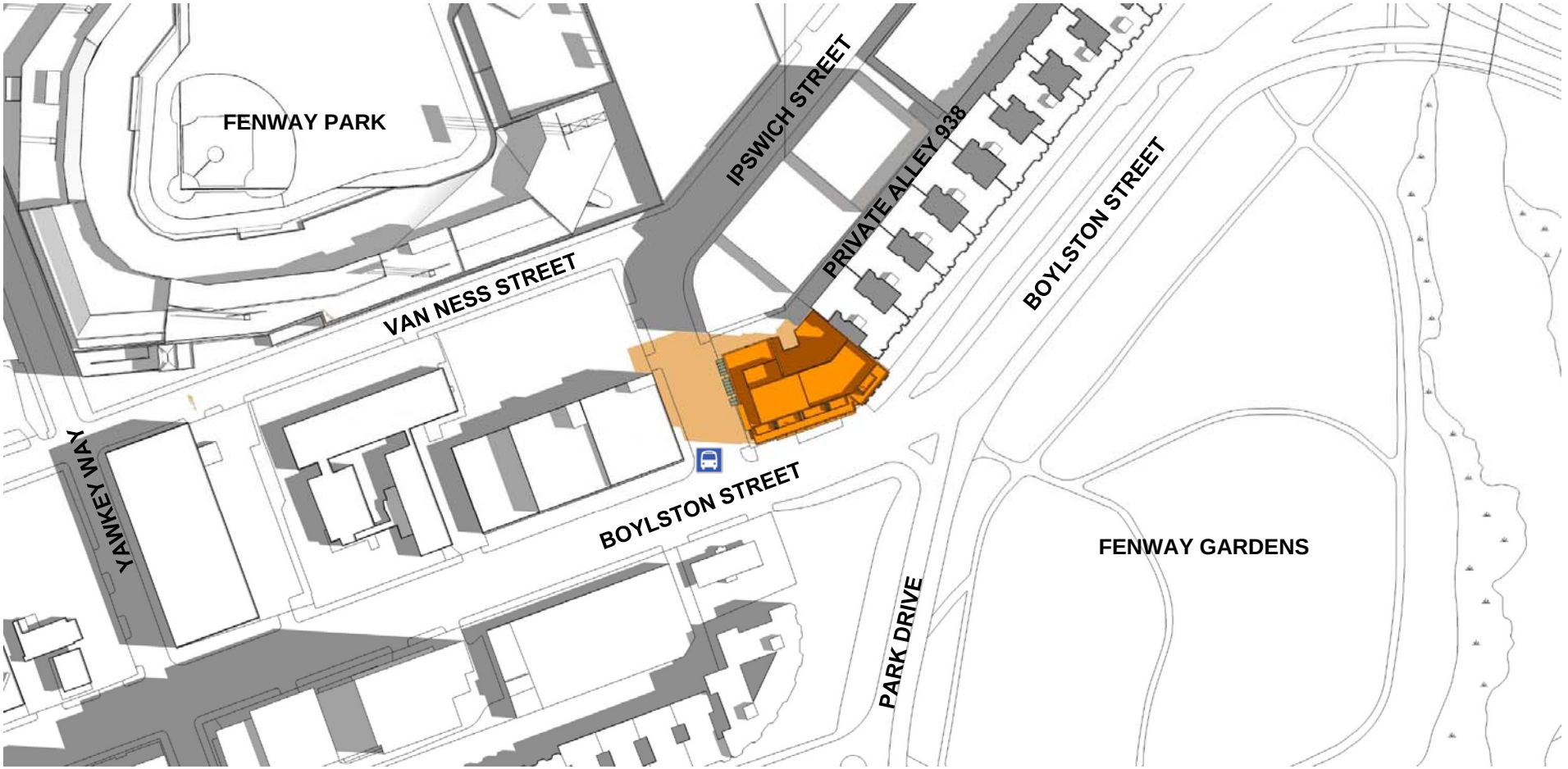

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Figure 3.2-4

Shadow Study: June 21, 9:00 a.m.

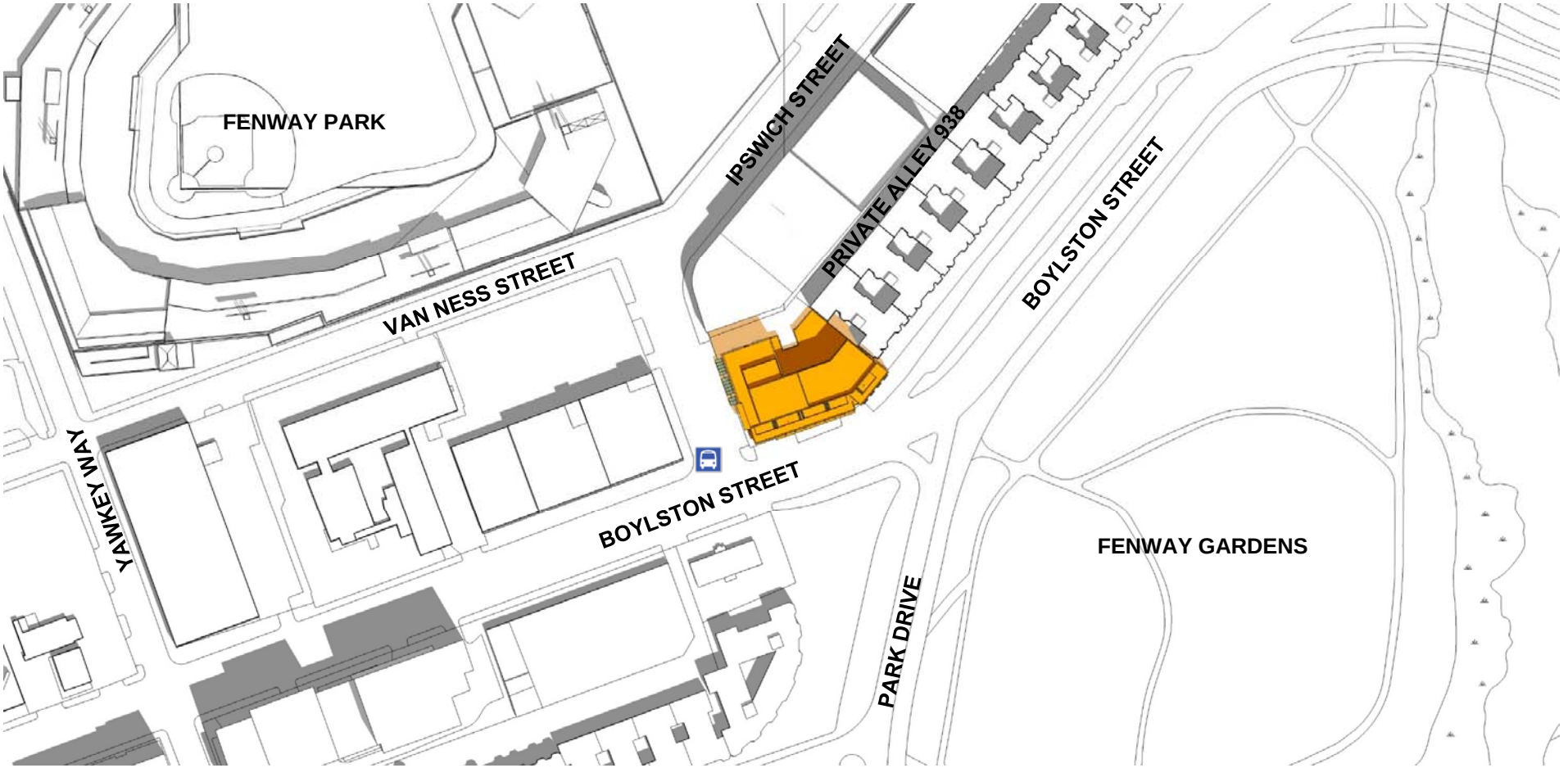

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Figure 3.2-5

Shadow Study: June 21, 12:00 p.m.

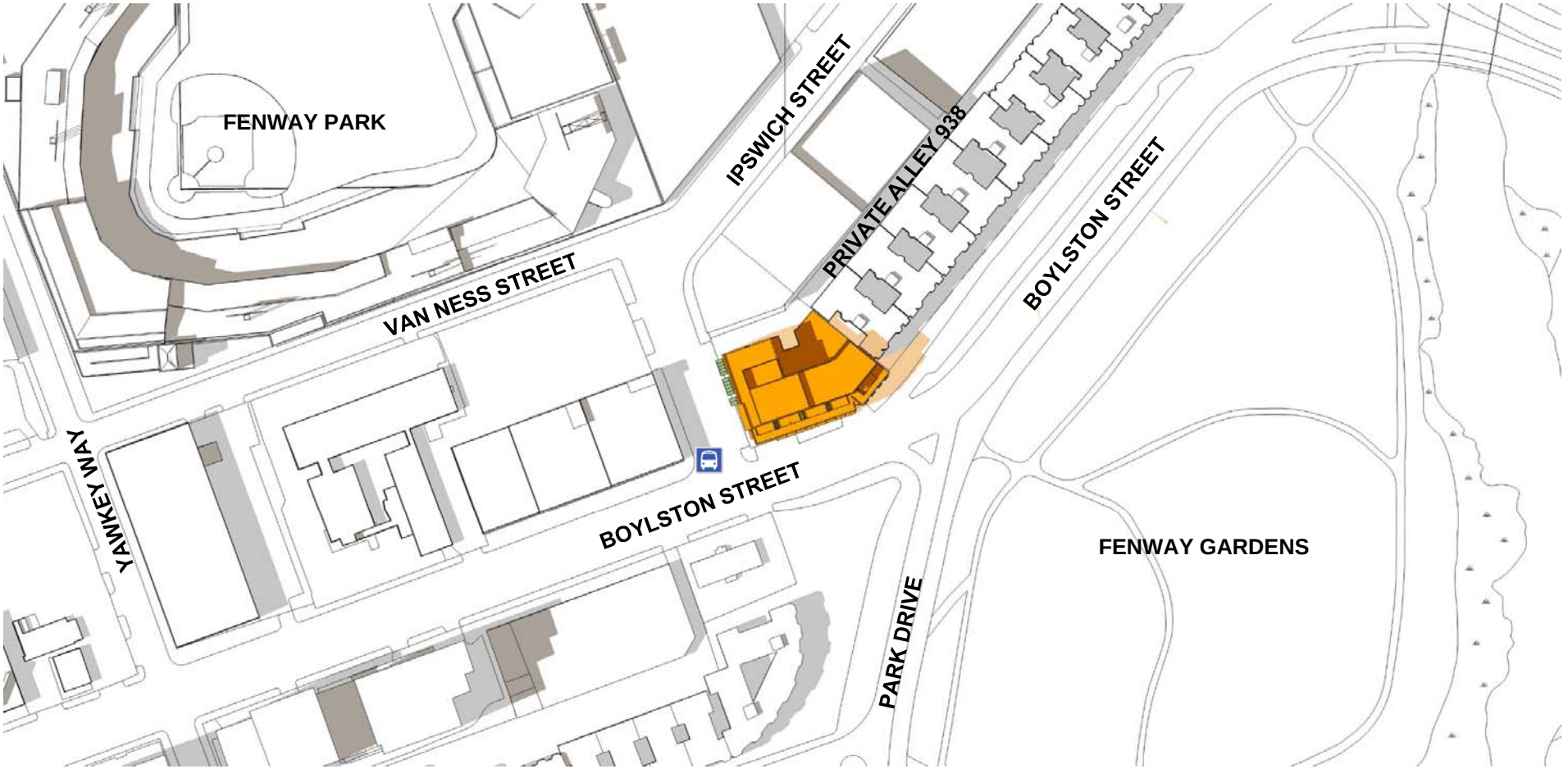

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Figure 3.2-6

Shadow Study: June 21, 3:00 p.m.

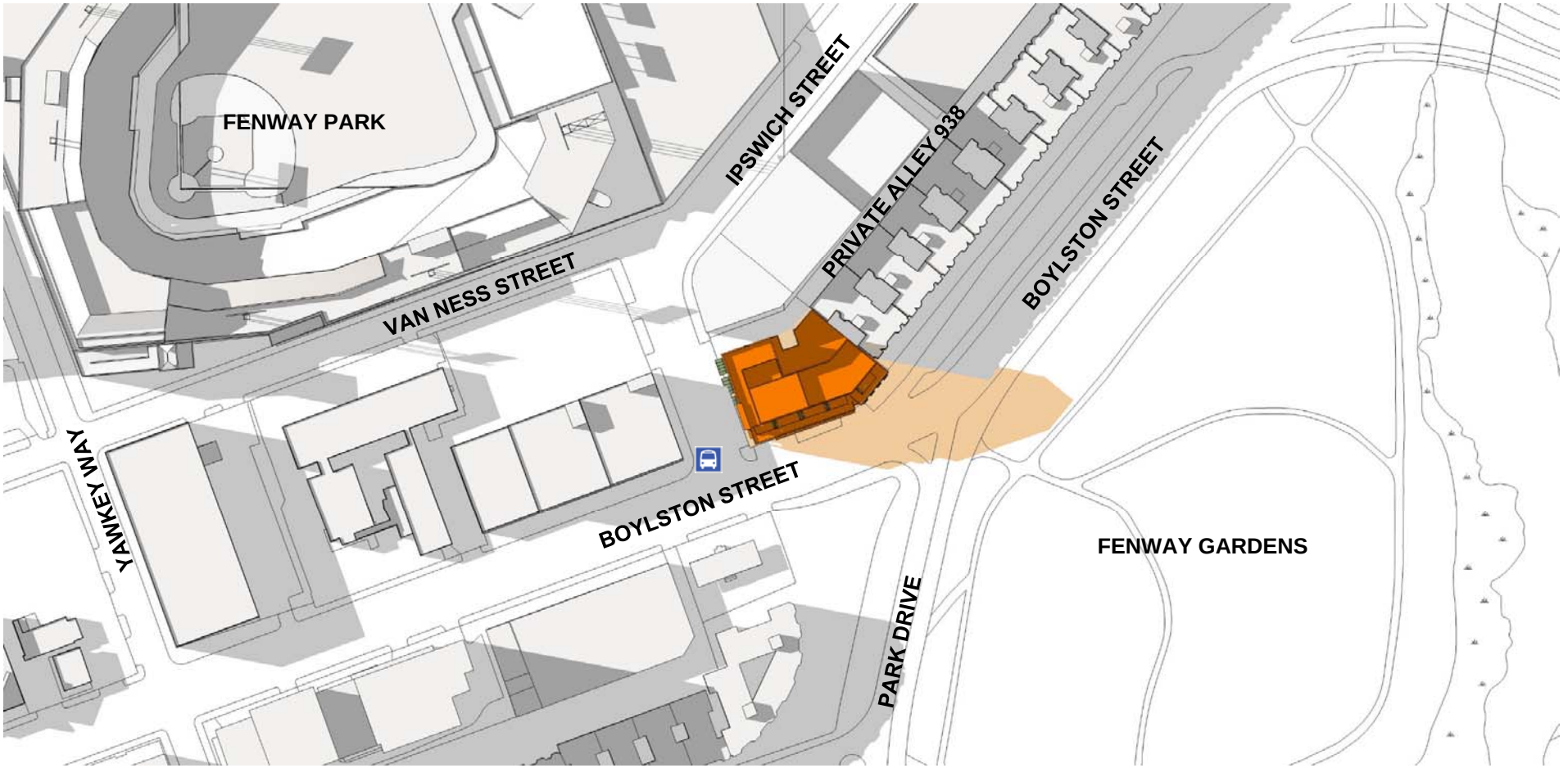

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Figure 3.2-7

Shadow Study: June 21, 6:00 p.m.

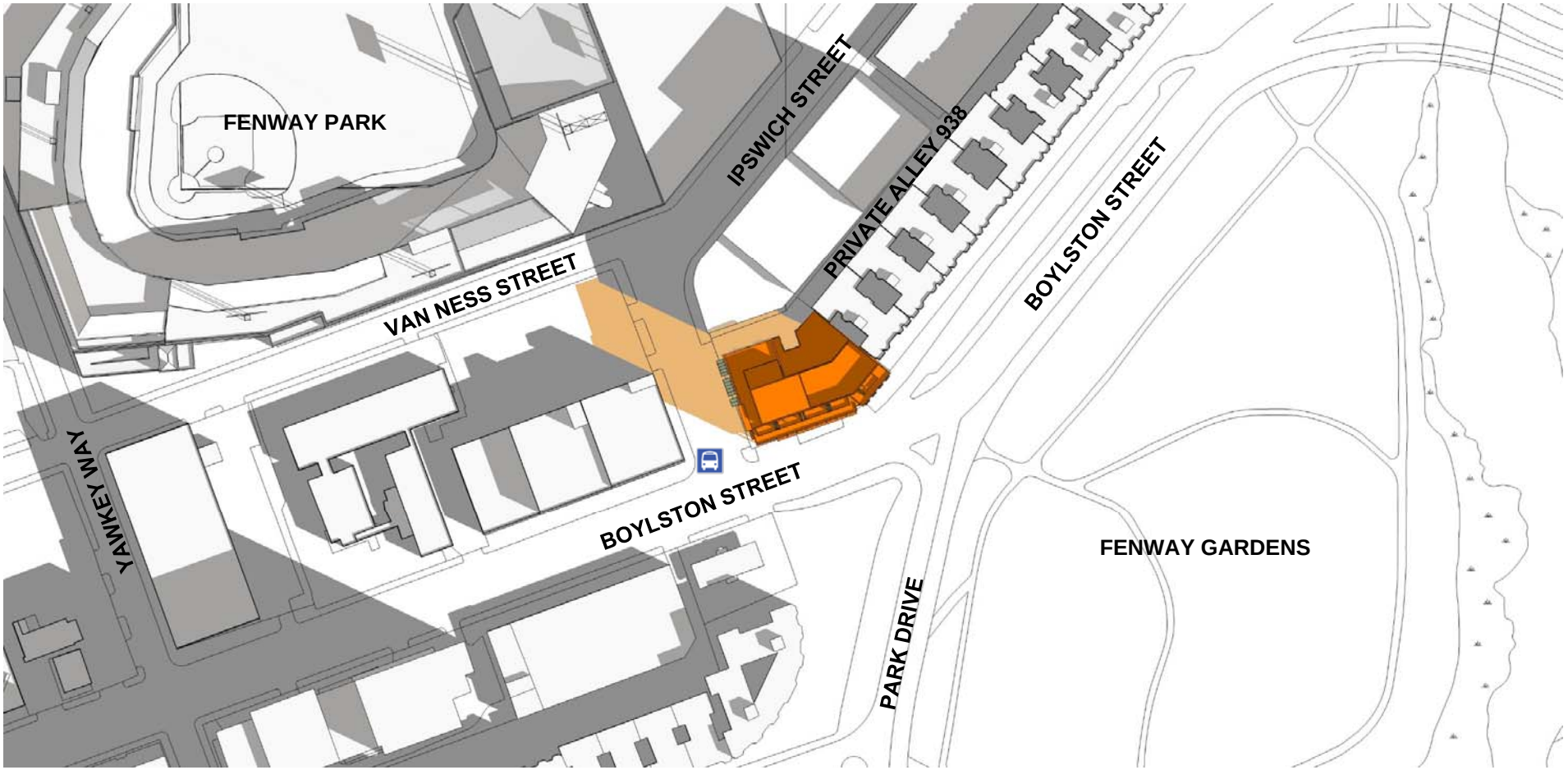

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Figure 3.2-8

Shadow Study: September 21, 9:00 a.m.

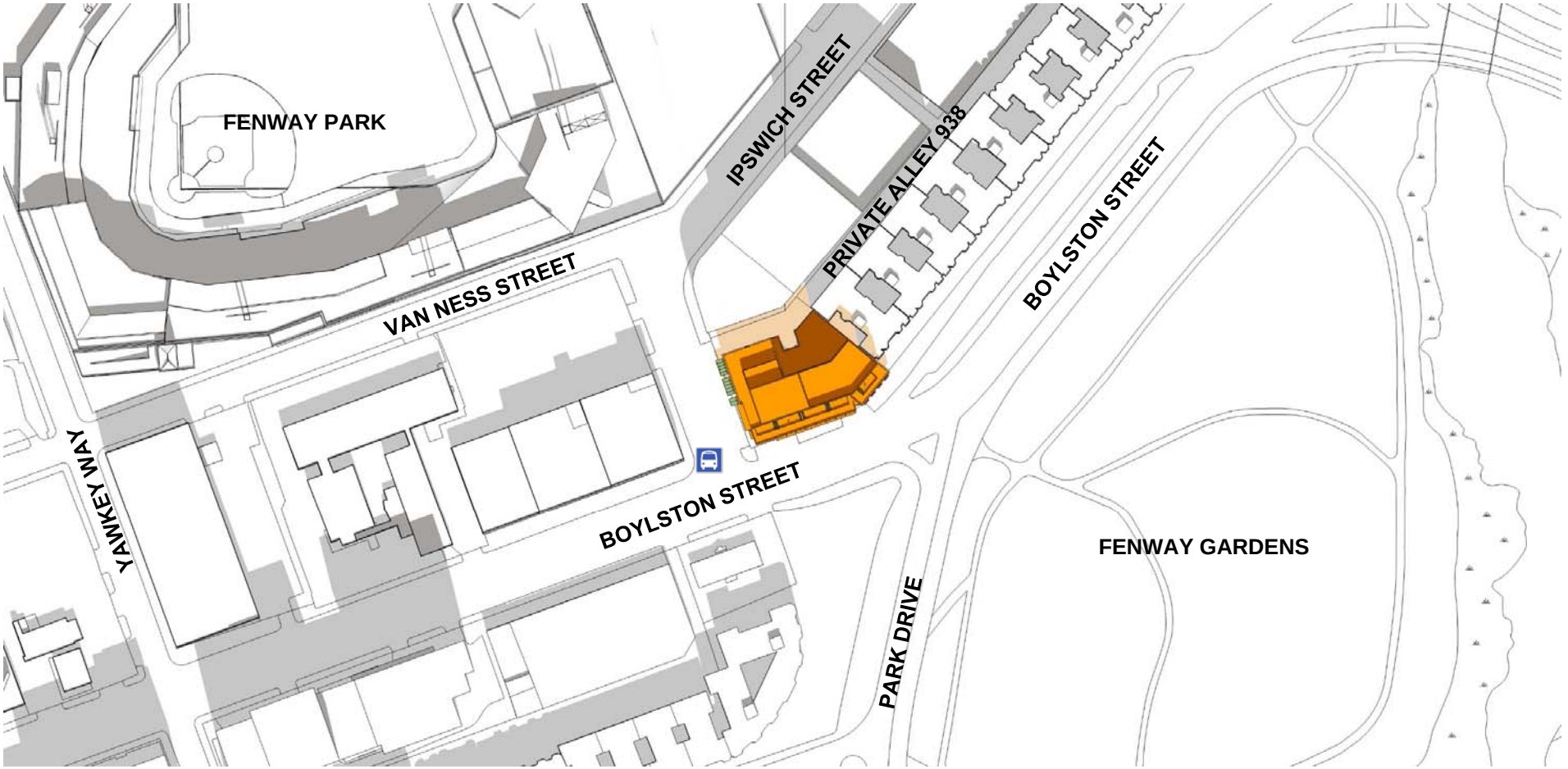

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Figure 3.2-9

Shadow Study: September 21, 12:00 p.m.

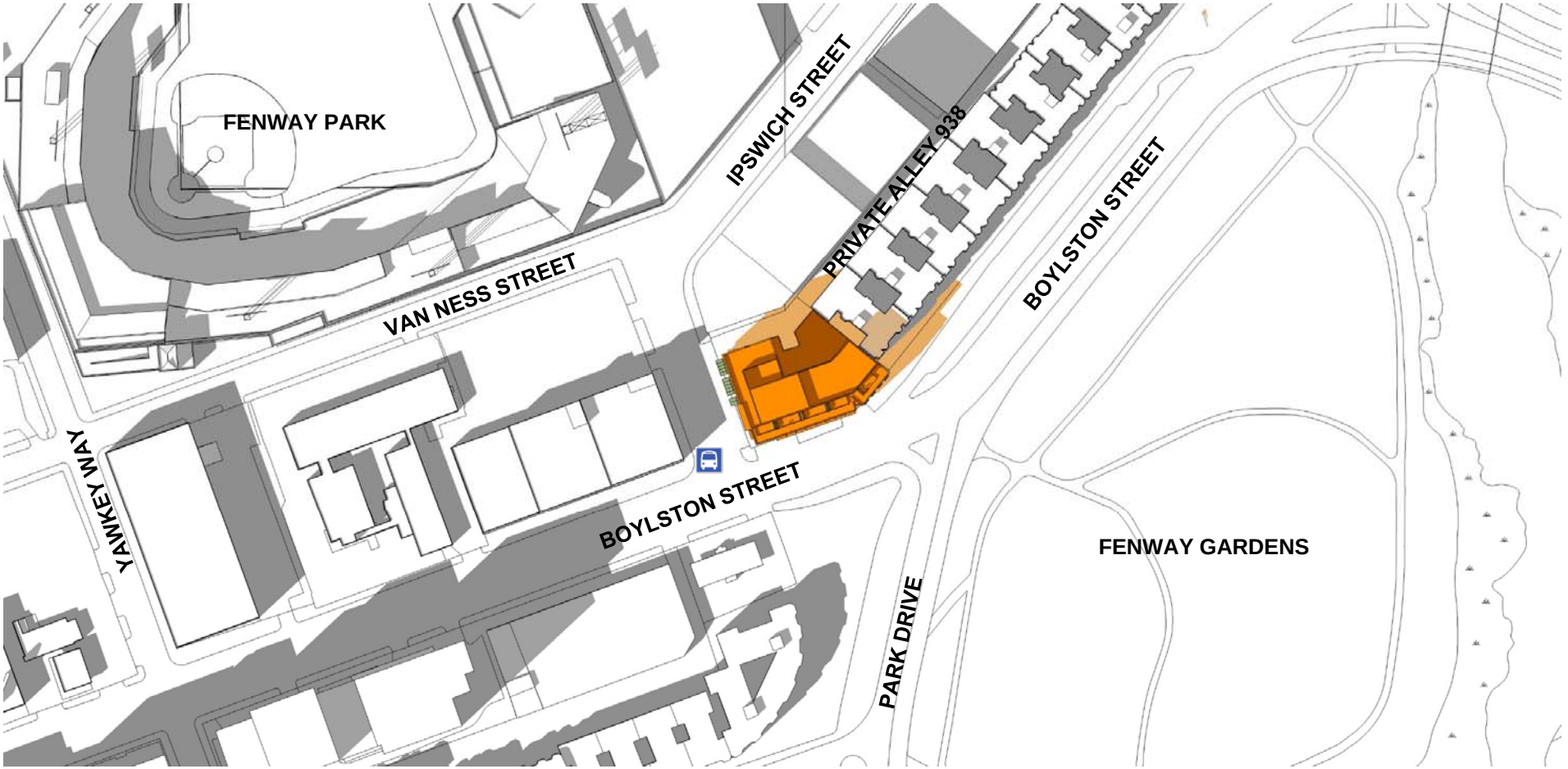

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Figure 3.2-10

Shadow Study: September 21, 3:00 p.m.

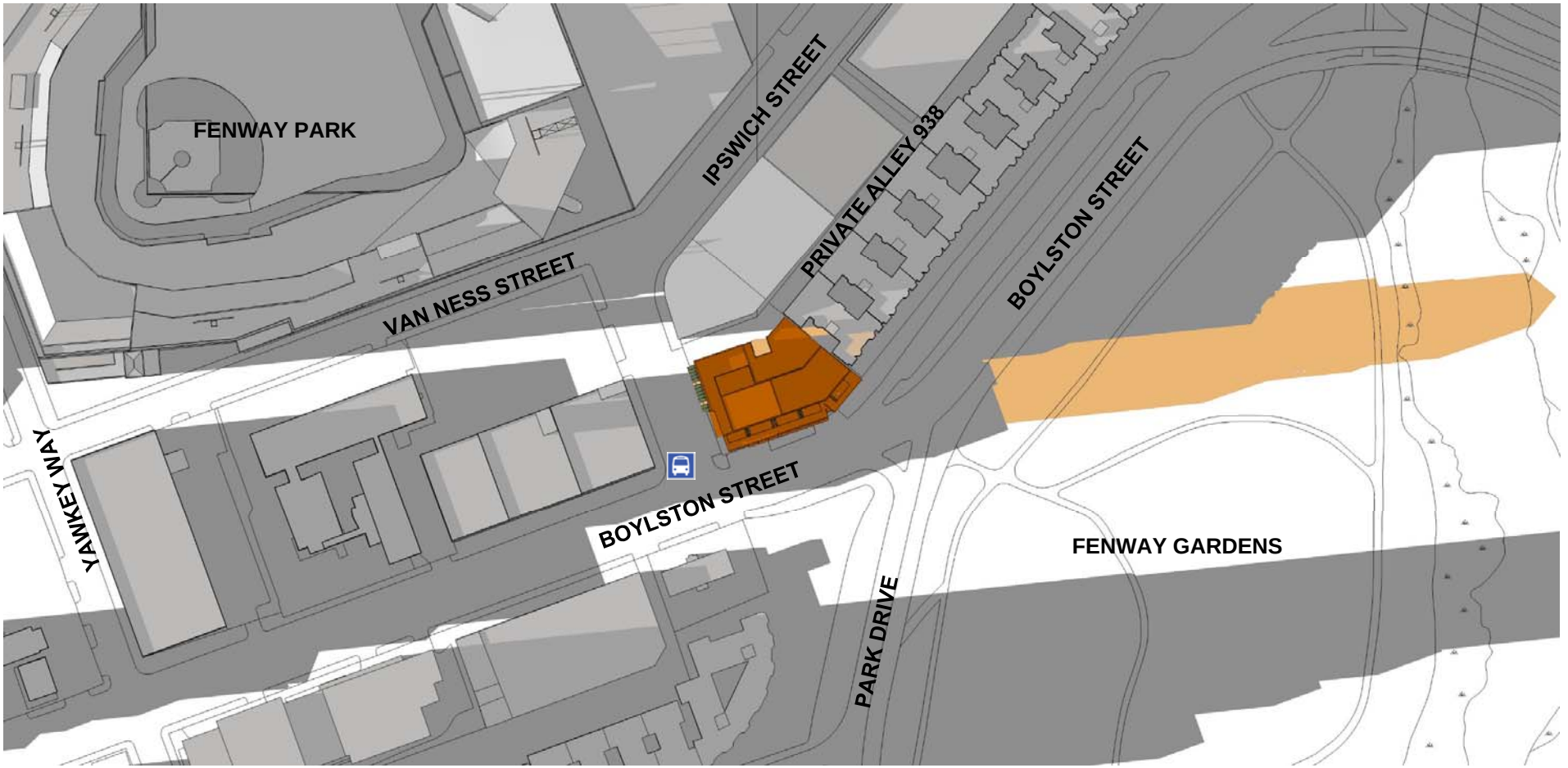

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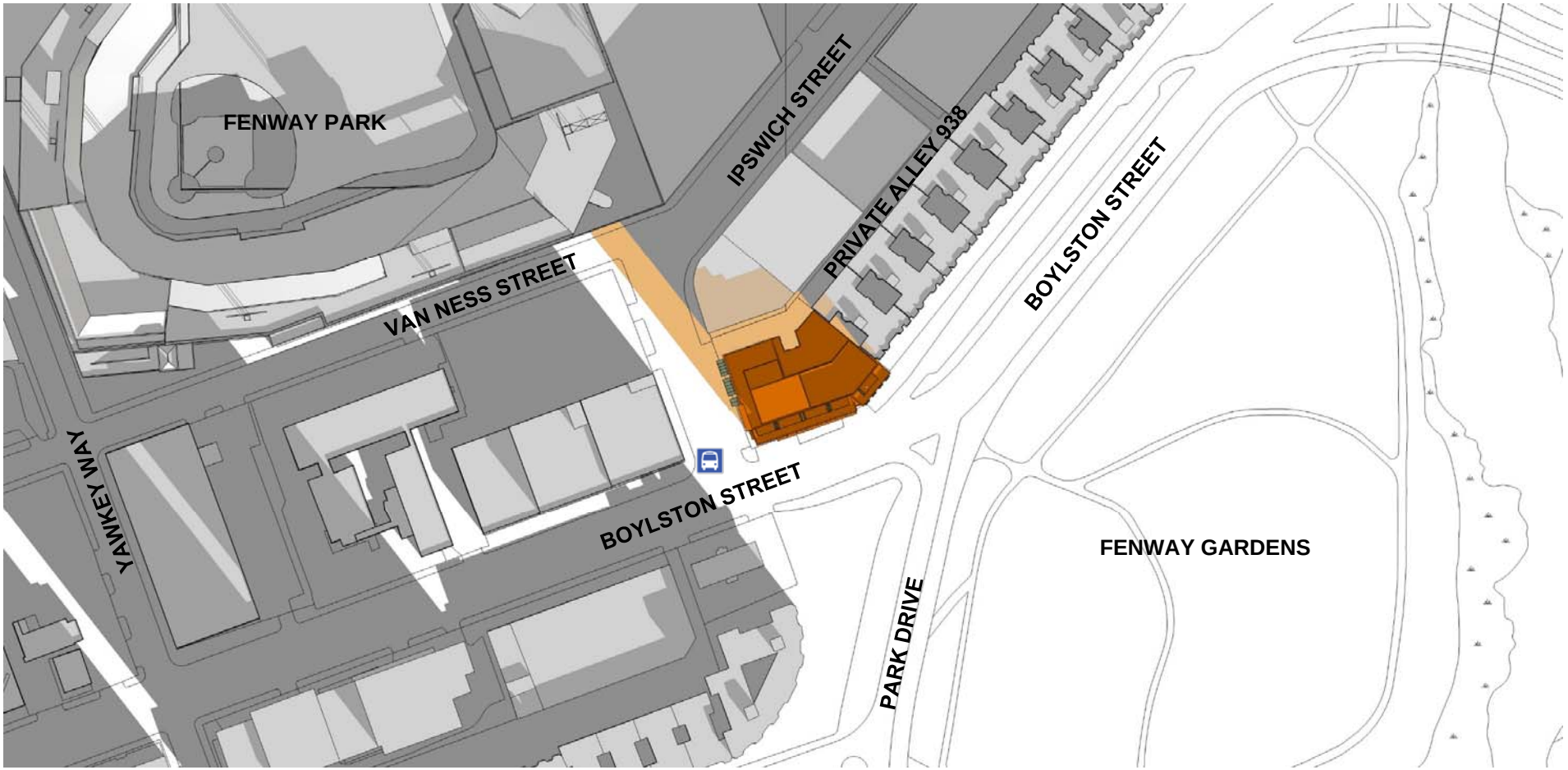
Figure 3.2-11

Shadow Study: September 21, 6:00 p.m.



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Group One PARTNERS

Figure 3.2-12

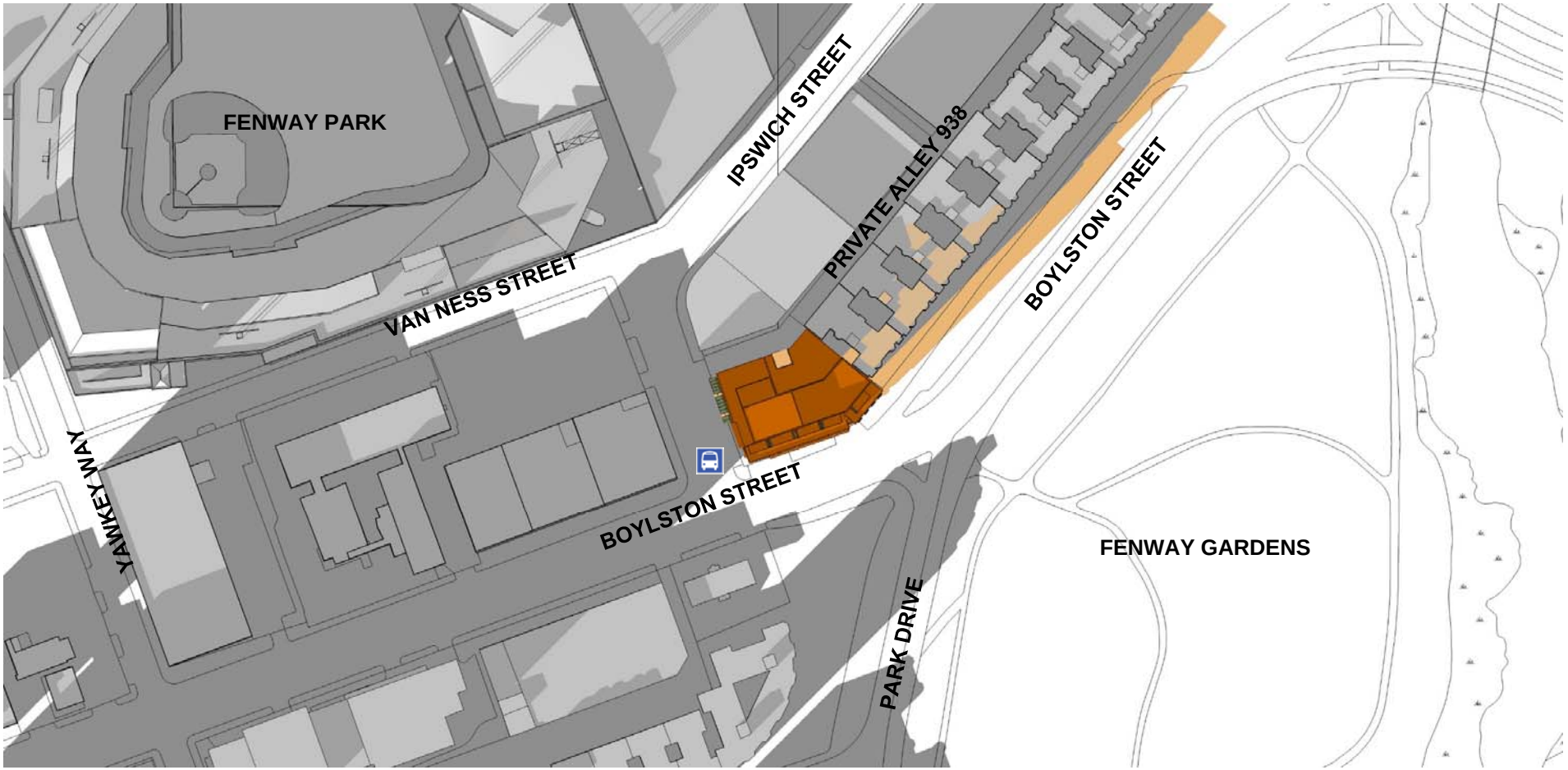
Shadow Study: December 21, 9:00 a.m.

Fenway Hotel **Boston, Masachusetts**

Group One PARTNERS

Figure 3.2-13

Shadow Study: December 21, 12:00 p.m.



Fenway Hotel **Boston, Masachusetts**

Group One PARTNERS

Figure 3.2-14

Shadow Study: December 21, 3:00 p.m.

3.3 Daylight

3.3.1 Introduction

The purpose of the daylight analysis is to estimate the extent to which a proposed project will affect the amount of daylight reaching the streets and the sidewalks in the immediate vicinity of a project site.

Because the Project site currently consists of several small buildings and surface parking, the proposed Project will inherently increase daylight obstruction; however, because of the limited height, the resulting conditions will be similar to or slightly lower than what is typical of the area and other urban areas.

3.3.2 Methodology

The daylight analysis was performed using the Boston Redevelopment Authority Daylight Analysis (BRADA) computer program[1]. This program measures the percentage of sky-dome that is obstructed by a project and is a useful tool in evaluating the net change in obstruction from existing to build conditions at a specific site.

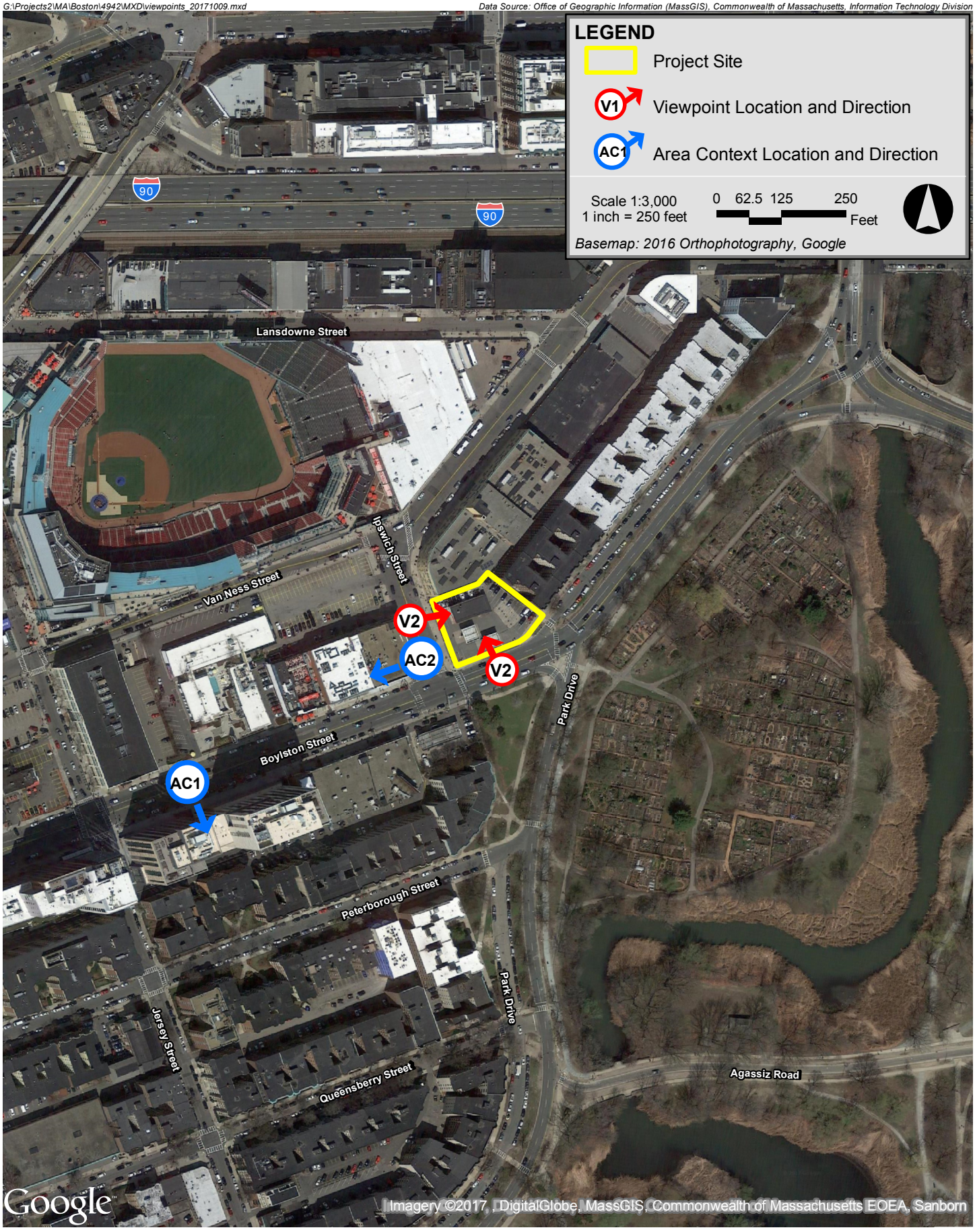
Using BRADA, a silhouette view of the building is taken at ground level from the middle of the adjacent city streets or pedestrian ways centered on the proposed building. The façade of the building facing the viewpoint, including heights, setbacks, corners and other features, is plotted onto a base map using lateral and elevation angles. The two-dimensional base map generated by BRADA represents a figure of the building in the "sky dome" from the viewpoint chosen. The BRADA program calculates the percentage of daylight that will be obstructed on a scale of zero to 100 percent based on the width of the view, the distance between the viewpoint and the building, and the massing and setbacks incorporated into the design of the building; the lower the number, the lower the percentage of obstruction of daylight from any given viewpoint.

Since the Project site currently contains a structure that has a negligible impact on daylight obstruction, for simplicity, this analysis assumes a 0% daylight obstruction for the existing conditions, and the analysis compares the proposed conditions to the context of the area.

Two viewpoints were chosen to evaluate the daylight obstruction for the proposed conditions, one from Boylston Street, and one from Ipswich Street. Two area context points were considered in order to provide a basis of comparison to existing conditions in the surrounding area. The viewpoint and area context viewpoints were taken in the following locations and are shown on Figure 3.3-1.

---

[1] Method developed by Harvey Bryan and Susan Stuebing, computer program developed by Ronald Fergle, Massachusetts Institute of Technology, Cambridge, MA, September 1984.



Fenway Hotel Boston, Massachusetts

Epsilon Associates Inc.

Figure 3.3-1

Viewpoint and Area Context Locations

- **Viewpoint 1:** View from Boylston Street facing north toward the Project site.
- **Viewpoint 2:** View from Ipswich Street facing east toward the Project site.
- **Area Context Viewpoint AC1:** View from Boylston Street facing south toward 1282 Boylston Street.
- **Area Context Viewpoint AC2:** View from Ipswich Street facing west toward 1249 Boylston Street.

3.3.3 Results

The results for each viewpoint are described in Table 3.3-1. Figures 3.3-2 and 3.3-3 illustrate the BRADA results for each analysis.

Table 3.3-1 Daylight Analysis Results

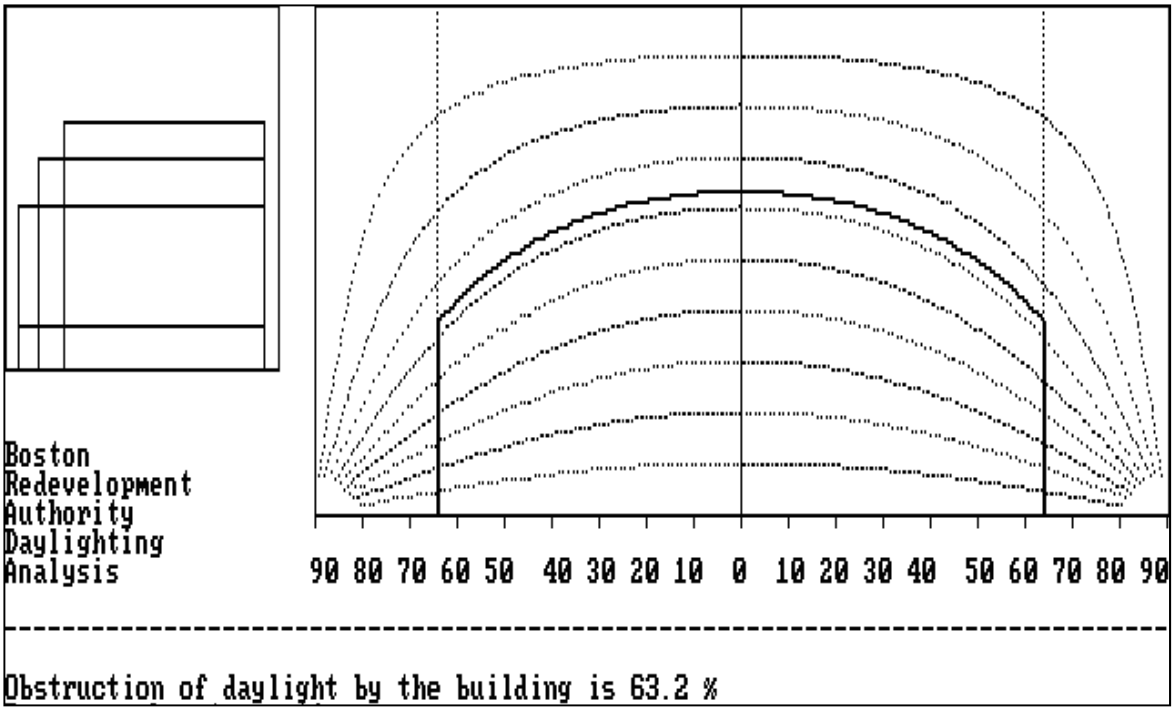
Viewpoint Locations		Existing Conditions	Proposed Conditions
Viewpoint 1	View from Boylston Street facing north toward the Project site	0%[1]	63.2%
Viewpoint 2	View from Ipswich Street facing east toward the Project site	0%[1]	62.7%
Area Context Points			
AC1	View from Boylston Street facing south toward 1282 Boylston Street	79.2%	N/A
AC2	View from Ipswich Street facing west toward 1249 Boylston Street	54.2%	N/A

[1]The Project site includes a structure that has a negligible impact on daylight obstruction; therefore, for simplicity, this analysis assumes a 0% daylight obstruction for the existing conditions.

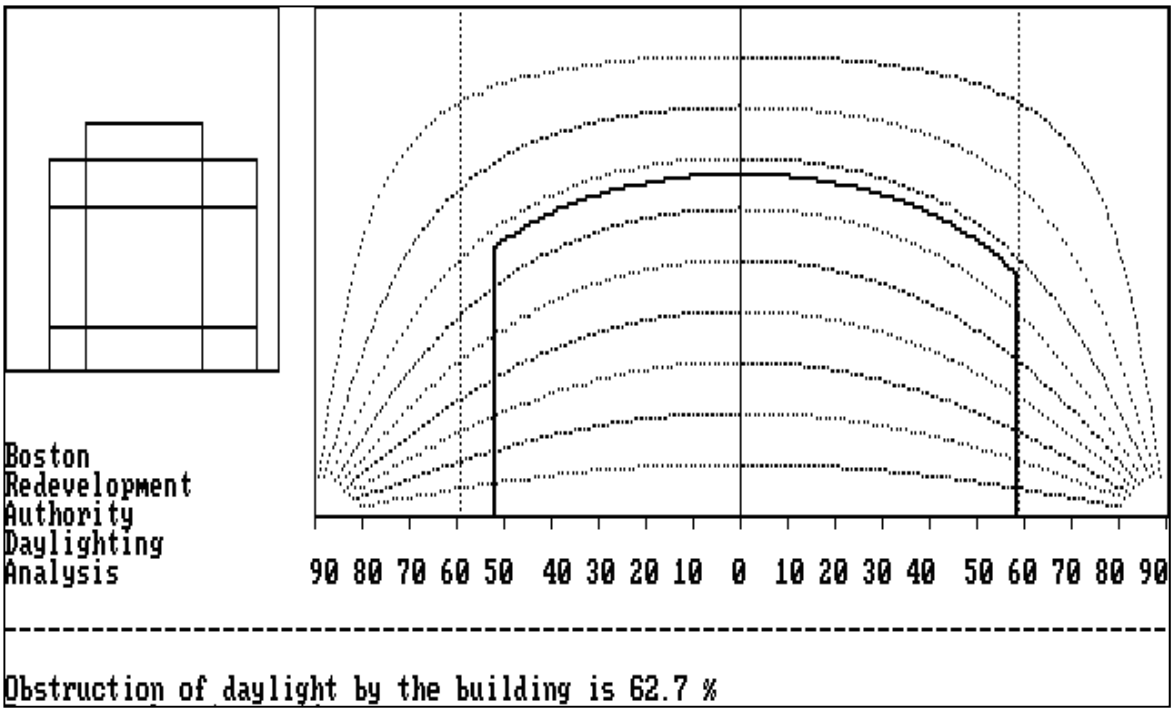
Boylston Street – Viewpoint 1

Boylston Street runs along the southern edge of the Project site. Viewpoint 1 was taken from the center of Boylston Street facing north toward the Project site. The development of the proposed Project would result in a daylight obstruction value of 63.2%. Since the Project site is currently occupied by only a one-story Shell gas station and parking lot, this is an increase over existing conditions. However, the daylight obstruction value is similar to other buildings in the area, including the Area Context buildings.

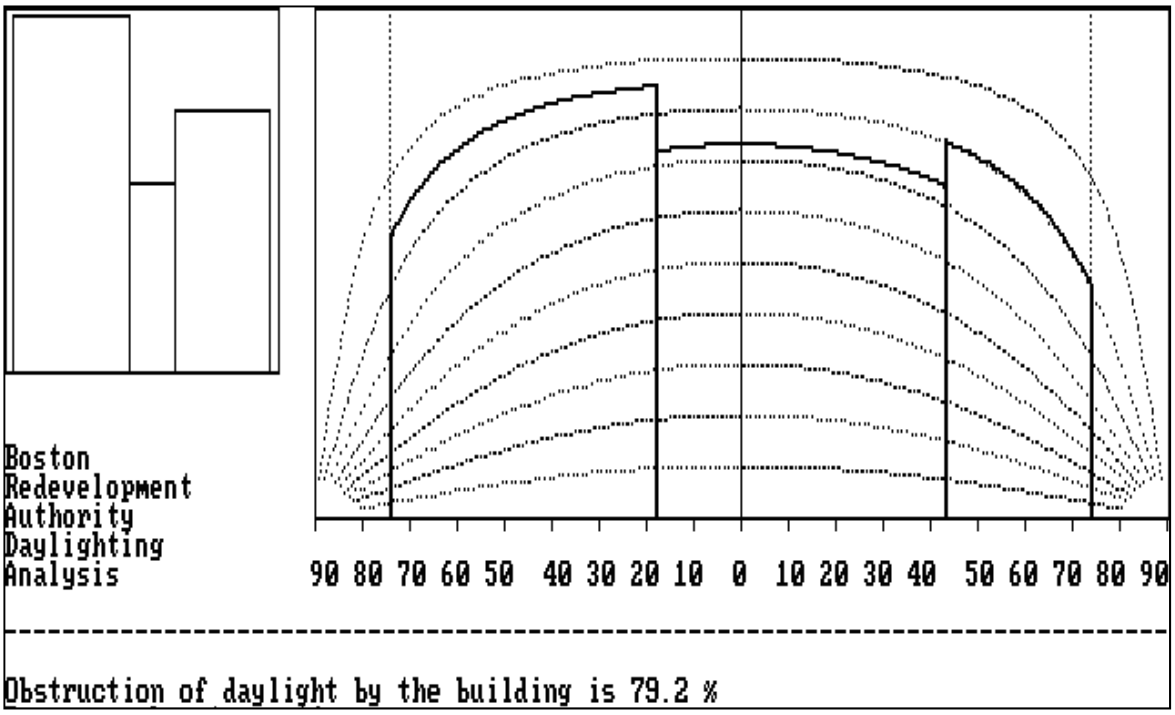
Viewpoint 1: View from Boylston Street facing north toward the Project site



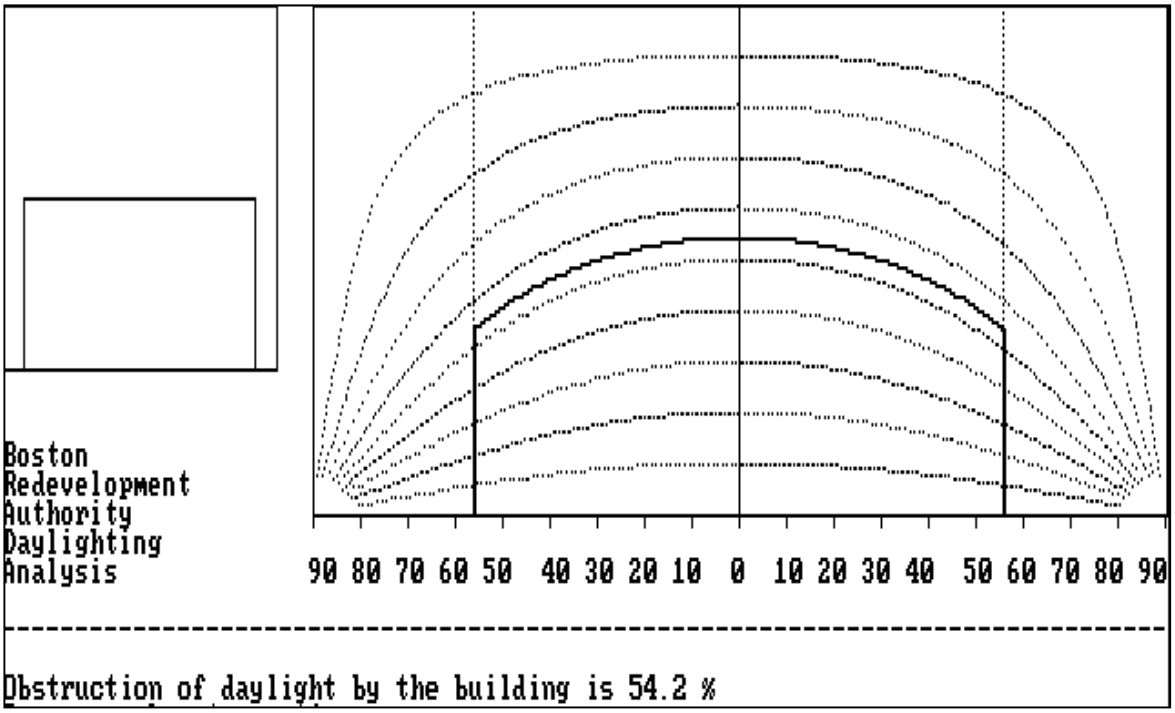
Viewpoint 2: View from Ipswich Street facing east toward the Project site



Area Context Viewpoint AC1: View from Boylston Street facing south toward 1282 Boylston Street



Area Context Viewpoint (AC2): View from Ipswich Street facing west toward 1249 Boylston Street



Ipswich Street – Viewpoint 2

Ipswich Street runs along the western edge of the Project site. Viewpoint 2 was taken from the center of Ipswich Street facing east toward the Project site. The development of the Project will result in a daylight obstruction value of 62.7%. While this is an increase over the existing conditions, the daylight obstruction value is consistent with other buildings in the area, including the Area Context buildings, and is typical of dense urban areas.

Area Context Views

The Project area currently consists of a mix of mid- and high-rise commercial and residential buildings. To provide a larger context for comparison of daylight conditions, obstruction values were calculated for the two Area Context Viewpoints described above and shown on Figure 3.3-1. The daylight obstruction values ranged from 54.2% for AC2 to 79.2% for AC1. Daylight obstruction values for the Project are consistent with the Area Context values.

3.3.4 Conclusion

The daylight analysis conducted for the Project describes proposed daylight obstruction conditions at the Project site and existing conditions in the surrounding area. The results of the BRADA analysis indicate that while the development of the Project will result in increased daylight obstruction over existing conditions, the resulting conditions will be consistent with the daylight obstruction values within the surrounding area and typical of densely built urban areas. The increased daylight obstruction is a natural consequence of redeveloping a central urban parcel that happens to be under-utilized, as it is currently occupied by only a one-story building surrounded by surface parking.

3.4 Solar Glare

The Project materials are still being studied and glazing of the windows will be determined as the design progresses. Due to the type of potential glass and glazing currently proposed, solar glare impacts are not currently anticipated.

3.5 Air Quality

3.5.1 Introduction

BPDA requires that proposed projects evaluate the air quality in the local area, and assess any adverse air quality impacts attributable to the project. The following analysis indicates that all stationary sources are expected to be small, and any impacts from these sources would be insignificant.

All intersections evaluated in the transportation analysis in Chapter 2 are either below the BPDA thresholds requiring a microscale analysis of carbon monoxide, or are unsignalized. Additionally, the Project does not generate enough traffic to require a mesoscale vehicle emissions quantification analysis.

Any new stationary sources will be reviewed by the Massachusetts Department of Environmental Protection during permitting under the Environmental Results Program, as required.

Therefore, an analysis of existing air quality in the area is presented.

3.5.2 National Ambient Air Quality Standards and Background Concentrations

Background air quality concentrations and federal air quality standards were utilized to conduct the above air quality impact analyses. Federal National Ambient Air Quality Standards (NAAQS) were developed by the U.S. Environmental Protection Agency (EPA) to protect the human health against adverse health effects with a margin of safety. The modeling methodologies were developed in accordance with the latest Massachusetts Department of Environmental Protection (MassDEP) modeling policies and Federal modeling guidelines.[2] The following sections outline the NAAQS standards and detail the sources of background air quality data.

The 1970 Clean Air Act was enacted by the U.S. Congress to protect the health and welfare of the public from the adverse effects of air pollution. As required by the Clean Air Act, EPA promulgated NAAQS for the following criteria pollutants: nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM) (PM-10 and PM-2.5), carbon monoxide (CO), ozone (O_3), and lead (Pb). The NAAQS are listed in Table 4.5-1. Massachusetts Ambient Air Quality Standards (MAAQS) are typically identical to NAAQS (differences are highlighted in **bold** in Table 3.5-1).

NAAQS specify concentration levels for various averaging times and include both "primary" and "secondary" standards. Primary standards are intended to protect human health, whereas secondary standards are intended to protect public welfare from any known or anticipated adverse effects associated with the presence of air pollutants, such as damage to vegetation. The more stringent of the primary or secondary standards were applied when comparing to the modeling results for this Project.

The NAAQS also reflect various durations of exposure. The non-probabilistic short-term periods (24 hours or less) refer to exposure levels not to be exceeded more than once a year. Long-term periods refer to limits that cannot be exceeded for exposure averaged over three months or longer.

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[2] 40 CFR 51 Appendix W, Guideline on Air Quality Models, 70 FR 68228, Nov. 9, 2005

Table 3.5-1 National (NAAQS) and Massachusetts (MAAQS) Ambient Air Quality Standards

Pollutant	Averaging Period	NAAQS ($\mu g/m^3$) Primary	NAAQS ($\mu g/m^3$) Secondary	MAAQS ($\mu g/m^3$) Primary	MAAQS ($\mu g/m^3$) Secondary
NO_2	Annual (1)	100	Same	100	Same
	1-hour (2)	**188**	None	**None**	None
SO_2	Annual (1)(9)	80	None	80	None
	24-hour (3)(9)	365	None	365	None
	3-hour (3)	None	1300	None	1300
	1-hour (4)	**196**	None	**None**	None
PM-2.5	Annual (1)	**12**	**15**	**None**	**None**
	24-hour (5)	**35**	**Same**	**None**	**None**
PM-10	Annual (1)(6)	**None**	None	**50**	Same
	24-hour (3)(7)	150	Same	150	Same
CO	8-hour (3)	10,000	Same	10,000	Same
	1-hour (3)	40,000	Same	40,000	Same
Ozone	8-hour (8)	**147**	Same	**235**	Same
Pb	3-month (1)	1.5	Same	1.5	Same

(1) Not to be exceeded.
(2) 98th percentile of one-hour daily maximum concentrations, averaged over three years.
(3) Not to be exceeded more than once per year.
(4) 99th percentile of one-hour daily maximum concentrations, averaged over three years.
(5) 98th percentile, averaged over three years.
(6) EPA revoked the annual PM-10 NAAQS in 2006.
(7) Not to be exceeded more than once per year on average over three years.
(8) Annual fourth-highest daily maximum eight-hour concentration, averaged over three years.
(9) EPA revoked the annual and 24-hour SO_2 NAAQS in 2010. However, they remain in effect until one year after the area's initial attainment designation, unless designated as "nontattinment".

Source: http://www.epa.gov/ttn/naaqs/criteria.html and 310 CMR 6.04

3.5.2.1 Background Concentrations

To estimate background pollutant levels representative of the area, the most recent air quality monitor data reported by the MassDEP to EPA was obtained for 2014 to 2016. Data for the pollutant and averaging time combinations were obtained from the EPA's AirData website.

The Clean Air Act allows for one exceedance per year of the CO and SO_2 short-term NAAQS per year. The highest second-high accounts for the one exceedance. Annual NAAQS are never to be exceeded. The 24-hour PM-10 standard is not to be exceeded more than once per year on average over three years. To attain the 24-hour PM-2.5 standard, the three-year average of the 98th percentile of 24-hour concentrations must not exceed 35 $\mu g/m^3$. For annual PM-2.5 averages, the average of the highest yearly observations was used as the background concentration. To attain the one-hour NO_2 standard, the three-year average of the 98^{th} percentile of the maximum daily one-hour concentrations must not exceed 188 $\mu g/m^3$.

Background concentrations were determined from the closest available monitoring stations to the proposed development. The closest monitor is at Kenmore Square, roughly 0.25 miles north of the Project site. This monitor samples only SO_2, PM-10, PM-2.5, and NO_2. A monitor on Harrison Avenue in Boston, roughly 1.2 miles southeast of the Project site, samples for all pollutants. A summary of the background air quality concentrations are presented in Table 3.5-2.

Table 3.5-2 Observed Ambient Air Quality Concentrations and Selected Background Levels

Pollutant	Averaging Time	2014	2015	2016	Background Concentration ($\mu g/m^3$)	NAAQS	Percent of NAAQS
SO_2 (1)(6)	1-Hour (5)	25.4	14.4	10.7	16.9	196.0	9%
	3-Hour	24.6	11.5	10.0	24.6	1300.0	2%
	24-Hour	13.1	7.6	5.2	13.1	365.0	4%
	Annual	2.5	1.4	1.1	2.5	80.0	3%
PM-10	24-Hour	53.0	30.0	30.0	53.0	150.0	35%
	Annual	15.0	14.2	14.1	15.0	50.0	30%
PM-2.5	24-Hour (5)	14.6	14.5	13.0	14.0	35.0	40%
	Annual (5)	6.1	6.5	6.2	6.3	12.0	52%
NO_2 (3)	1-Hour (5)	92.1	105.3	88.4	95.3	188.0	51%
	Annual	32.3	32.5	28.3	32.5	100.0	33%
CO (2)	1-Hour	1489.8	1560.9	2760.7	2760.7	40000.0	7%
	8-Hour	1260.6	1031.4	2062.8	2062.8	10000.0	21%
Ozone (4)	8-Hour	106.0	109.9	113.9	113.9	147.0	77%
Lead	Rolling 3-Month	0.014	0.016	0.017	0.017	0.15	12%

Notes:
From 2014-2016 EPA's AirData Website
(1) SO_2 reported ppb. Converted to $\mu g/m^3$ using factor of 1 ppm = 2.62 $\mu g/m^3$.
(2) CO reported in ppm. Converted to $\mu g/m^3$ using factor of 1 ppm = 1146 $\mu g/m^3$.
(3) NO_2 reported in ppb. Converted to $\mu g/m^3$ using factor of 1 ppm = 1.88 $\mu g/m^3$.
(4) O_3 reported in ppm. Converted to $\mu g/m^3$ using factor of 1 ppm = 1963 $\mu g/m^3$.
(5) Background level is the average concentration of the three years.
(6) The 24-hour and Annual standards were revoked by EPA on June 22, 2010, Federal Register 75-119, p. 35520.

Air quality in the vicinity of the Project site is generally good, with all local background concentrations found to be well below the NAAQS.

3.5.3 Stationary Sources

Stationary sources of air pollution are typically units that combust fuel. In this case, these sources consist of heating and hot water units and emergency electrical generators. Cooling towers, although not a combustion source, are a source of particulate emissions.

It is expected that the majority of stationary sources (boilers, engines, etc) may be subject to the MassDEP's Environmental Results Program (ERP). The Proponent will complete the required applications and submittals for the equipment, as necessary.

3.5.4 Mobile Sources

Mobile sources of air pollution include gasoline, diesel, and natural gas fueled vehicles. Emissions from mobile sources have continually decreased as engine technology and efficiency have been improved.

3.5.5 Conclusions

Given that the Project does not increase vehicle volumes, and does not affect any already poorly functioning intersections, it can be reasonably assumed that the vehicle trips generated by the Project will not cause adverse air quality impacts in the area.

3.6 Stormwater/Water Quality

Please refer to Section 7.3.

3.7 Flood Hazard Zones/Wetlands

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the site located in the City of Boston - Community Panel Number 25025C0076G, effective September 25, 2009, indicates the FEMA Flood Zone Designations for the site area. The map shows that the Project is located in a Zone X, "Areas determined to be outside the 0.2% annual chance floodplain."

The site does not contain wetlands.

3.8 Geotechnical Impacts

3.8.1 Soil and Groundwater Conditions

Beginning at the ground surface and proceeding downward, the major soil layers encountered in borings performed at the site included a 14- to 17-foot-thick layer of granular fill, a 5- to 9-foot-thick layer of organic soil extending to a depth of approximately 23 feet, a 7- to 11-foot thick layer of sand extending to a depth of approximately 34 feet, an approximately 90-foot-thick layer of clay extending to a depth of approximately 124 feet, and glacial till. Bedrock is estimated to be at a depth of approximately 130 feet to 140 feet.

Groundwater was measured at depths of 10.7 feet and 10.4 feet in the wells installed at the site. These measured groundwater levels are consistent with groundwater levels reported in nearby Boston Groundwater Trust (BGwT) wells.

3.8.2 Groundwater

The Project site is located within the Groundwater Conservation Overlay District (GCOD), which makes the Project subject to the requirements of Article 32. Under Article 32 Section 32-6, the Project will need to demonstrate that: 1) the Project includes provisions to capture and infiltrate a volume of rainfall equal to 1-inch times the area of the Project, and 2) the Project will not have a negative effect on groundwater levels on the site or on abutting properties.

To satisfy the requirements of Item 1, infiltration of rainfall back into the ground will be accomplished by installing a series of groundwater recharge wells or systems around the site.

To satisfy the requirements of Item 2, the floor slab and foundation walls will be membrane waterproofed to prevent any negative effects (i.e. lowering) of the surrounding groundwater levels. In meeting the requirements of Article 32, the Proponent will coordinate with the BGwT.

3.8.3 Foundation Considerations

The below grade parking level is expected to extend up to 15 feet below existing grade, and will bottom out within the fill and/or organic soil layers. The fill and highly compressible organic soil layers are unsuitable for supporting the proposed building on conventional spread footings.

The weight of soil that will be removed to construct the building will be greater than the weight of the proposed building itself; consequently, there will be no net increase in the effective stress in the underlying thick clay layer. Therefore, the proposed building can be supported on foundations that bear in the natural sand above the clay or on foundations bearing on top of the clay.

Based on the subsurface conditions and on the proposed construction, the following are possible foundation options for the Project:

- Spread Footings or Mat Foundation on Improved Ground;
- Over-excavation of Organic Soils with Spread Footings or Mat Foundation Bearing on Sand;
- Pressure-Injected Footings Bearing in Sand; or
- Drilled Shafts Bearing on Clay Crust.

3.8.4 Foundation Waterproofing and Damp-proofing

The bottom floor slab/structural mat and foundation walls will be membrane waterproofed up to about a depth of approximately two feet below existing grade and damp-proofed from two feet below existing grade to the ground surface.

An underdrain and sump system will not be installed beneath the bottom floor slab to relieve hydrostatic pressures because the Project is in the GCOD and adjacent to structures that are supported on timber piles.

3.8.5 Excavation Support and Construction Dewatering

An excavation support system and groundwater cutoff likely consisting of interlocking sheetpiles will be installed to construct the below-grade garage space. The sheetpiles will extend into the impervious clay to provide groundwater cutoff, which will significantly reduce the amount of construction dewatering and potential for lowering the surrounding groundwater levels.

3.9 Solid and Hazardous Waste

3.9.1 Hazardous Waste

The Project site has been used as a gasoline service station since at least the 1950s. Eight underground storage tanks (USTs) are currently located at the site. Several historic subsurface investigations have been performed that identified soil and groundwater contamination consistent with a gasoline service station. Various soil and groundwater remediation activities have been performed, and each has been closed under the Massachusetts Contingency Plan (MCP; 310 CMR 40) environmental regulations.

Recently, Phase I and II Environmental Site Assessments (ESAs) were performed at the site. Subsurface investigations were performed including advancing borings, installing monitoring wells, and sampling soil and groundwater. Residual contamination consistent with the historic use of the site as a gasoline service station was identified.

As part of the redevelopment, the USTs will be removed in accordance with fire prevention regulations (527 CMR 9). This will include recycling or disposal of the USTs and their contents, field screening of soil during UST removal, and confirmatory soil sampling.

Excess excavated soil generated during construction for building foundations and subsurface utilities will require off-site reuse, recycling, or disposal. Excess soil will require comprehensive laboratory testing to identify a suitable receiving facility. Soil leaving the site will be required to be transported in accordance with local, state, and federal requirements. Regulated soil conditions related to oil and hazardous materials will be managed in accordance with appropriate MassDEP regulatory requirements.

The residual gasoline contamination in groundwater at the site will require mitigation of the potential vapor intrusion pathway into the future occupied building. If an underground parking garage is constructed, the vapor mitigation system may include a vapor barrier or solely rely on the mechanically vented space. For the underground parking garage, a sub-slab venting system will likely be installed consisting of vapor barrier, sub slab vent pipes, and vertical exhaust pipes. The system will likely be designed as a passive system that could be upgraded to an active system by installing a blower if necessary.

3.9.2 Operational Solid Waste and Recycling

The Project will generate solid waste typical of hotel uses. Solid waste is expected to include wastepaper, cardboard, glass bottles, and food. Recyclable materials will be recycled through a program implemented by building management. The Project will generate approximately 160 tons of solid waste per year.

With the exception of hazardous wastes typical of hotel developments (e.g., cleaning fluids and paint), the Project will not involve the generation, use, transportation, storage, release, or disposal of potentially hazardous materials. Typical waste generated by the uses will be handled in compliance with all local, state, and federal regulations.

The Project will include recycling areas for items such as paper, plastic, glass, and cans.

3.10 Noise Impacts

3.10.1 Introduction

A sound level assessment was conducted that included a baseline sound monitoring program to measure existing sound levels in the vicinity of the Project, computer modeling to predict operational sound levels from proposed mechanical equipment, and a comparison of future Project sound levels to applicable City of Boston Zoning District Noise Standards.

This analysis, which is consistent with BPDA requirements for noise studies, indicates that with appropriate noise controls, predicted sound levels from the Project will comply with local noise regulations.

3.10.2 Noise Terminology

There are several ways in which sound (noise) levels are measured and quantified. All of them use the logarithmic decibel (dB) scale. The following information defines the sound level measurement terminology used in this analysis.

The decibel scale is logarithmic to accommodate the wide range of sound intensities found in the environment. A property of the decibel scale is that the sound pressure levels of two or more separate sounds are not directly additive. For example, if a sound of 50 dB is

added to another sound of 50 dB, the total is only a three-dB increase (53 dB), which is equal to doubling in sound energy but not equal to a doubling in quantity (100 dB). Thus, every three-dB change in sound level represents a doubling or halving of sound energy. Relative to this characteristic, a change in sound levels of less than three dB is imperceptible to the human ear.

Another property of decibels is that if one source of noise is 10 dB (or more) louder than another source, then the total sound level is simply the sound level of the higher-level source. For example, a sound source at 60 dB plus another sound source at 47 dB is equal to 60 dB.

A sound level meter (SLM) that is used to measure noise is a standardized instrument.[3] It contains "weighting networks" to adjust the frequency response of the instrument to approximate that of the human ear under various circumstances. The most commonly used weighting network is the A-weighting (there are also C-, and Z-weighting networks) because it most closely approximates how the human ear responds to sound at various frequencies, described in Hertz (Hz). The A-weighting network is the accepted scale used for community sound level measurements, and sounds are frequently reported as detected with a sound level meter with this weighting. A-weighted sound levels emphasize middle frequency sounds (i.e., middle pitched – around 1,000 Hz), and de-emphasize low and high frequency sounds. A-weighted sound levels are reported in decibels designated as "dBA".

Because the sounds in the environment vary with time, many different sound metrics may be used to quantify them. There are two typical methods used for describing variable sounds. These are exceedance levels and equivalent levels, both of which are derived from a large number of moment-to-moment A-weighted sound pressure level measurements. Exceedance levels are values from the cumulative amplitude distribution of all of the sound levels observed during a measurement period. Exceedance levels are designated L_n, where "n" can have a value between 0 and 100 in terms of percentage. Equivalent levels are designated L_{eq} and quantify a hypothetical steady sound that would have the same energy as the actual fluctuating sound observed. The several sound level metrics that are commonly reported in community noise monitoring and are presented in this report are described below.

- L_{90} is the sound level in dBA exceeded 90 percent of the time during a measurement period. The L_{90} is close to the lowest sound level observed. It is essentially the same as the residual sound level, which is the sound level observed when there are no obvious nearby intermittent noise sources.

[3] *American National Standard Specification for Sound Level Meters*, ANSI S1.4-1983, published by the Standards Secretariat of the Acoustical Society of America, Melville, NY.

- L_{50} is the median sound level, the sound level in dBA exceeded 50 percent of the time during the measurement period.

- L_{10} is the sound level in dBA exceeded only 10 percent of the time. It is close to the maximum level observed during the measurement period. The L_{10} is sometimes called the intrusive sound level because it is caused by occasional louder noises like those from passing motor vehicles.

- L_{max} is the maximum instantaneous sound level observed over a given period.

- L_{eq} is a sound pressure level commonly A-weighted and presented in dBA. The equivalent level represents the time average of the fluctuating sound pressure, but because sound is represented on a logarithmic scale and the averaging is done with time-averaged mean square sound pressure values, the L_{eq} is primarily controlled by loud noises if there are fluctuating sound levels.

- In the design of noise controls, which do not function quite like the human ear, it is important to understand the frequency spectrum of the noise source of interest. The spectra of noises are usually stated in terms of octave-band sound pressure levels, in dB, with the frequency bands being those established by standard (American National Standards Institute [ANSI] S1.11, 1986). To facilitate the noise control design process, the estimates of noise levels in this analysis are also presented in terms of octave-band sound pressure levels. Octave-band measurements and modeling are used in assessing compliance with the City of Boston noise regulations.

3.10.3 Noise Regulations and Criteria

The City of Boston has both a noise ordinance and noise regulations. Chapter 16 §26 of the Boston Municipal Code sets the general standard for noise that is unreasonable or excessive: louder than 50 decibels between the hours of 11:00 p.m. and 7:00 a.m., or louder than 70 decibels at all other hours. The Boston Air Pollution Control Commission (BAPCC) has adopted regulations based on the city's ordinance - "Regulations for the Control of Noise in the City of Boston", which distinguish among residential, business, and industrial districts in the City. In particular, BAPCC Regulation 2 is applicable to the sounds from the Project and is considered in this noise study.

Table 3.10-1 below presents the "Zoning District Noise Standards" contained in Regulation 2.5 of the BAPCC "Regulations for the Control of Noise in the City of Boston," adopted December 17, 1976. These maximum allowable sound pressure levels apply at the property line of the receiving property. The "Residential Zoning District" limits apply to

any lot located within a residential zoning district or to any residential use located in another zone except an Industrial Zoning District, according to Regulation 2.2. Similarly, per Regulation 2.3, business limits apply to any lot located within a business zoning district not in residential or institutional use.

Table 3.10-1 City Noise Standards, Maximum Allowable Sound Pressure Levels

Octave-band Center	Residential Zoning District		Residential Industrial Zoning District		Business Zoning District	Industrial Zoning District
Frequency (Hz)	Daytime (dB)	All Other Times (dB)	Daytime (dB)	All Other Times (dB)	Anytime (dB)	Anytime (dB)
32	76	68	79	72	79	83
63	75	67	78	71	78	82
125	69	61	73	65	73	77
250	62	52	68	57	68	73
500	56	46	62	51	62	67
1000	50	40	56	45	56	61
2000	45	33	51	39	51	57
4000	40	28	47	34	47	53
8000	38	26	44	32	44	50
A-Weighted (dBA)	**60**	**50**	**65**	**55**	**65**	**70**

Notes:
1. Noise standards from Regulation 2.5 "Zoning District Noise Standards", City of Boston Air Pollution Control Commission, "Regulations for the Control of Noise in the City of Boston", adopted December 17, 1976.
2. All standards apply at the property line of the receiving property.
3. dB and dBA based on a reference pressure of 20 micropascals.
4. Daytime refers to the period between 7:00 a.m. and 6:00 p.m. daily, except Sunday.

3.10.4 Existing Conditions

A background noise level survey was conducted to characterize the existing "baseline" acoustical environment in the vicinity of the Project. Existing noise sources around the site include: vehicular and truck traffic along local streets, pedestrian traffic, distant mechanical noise, construction activity and equipment operation, birds, wind, rustling vegetation, and the general city soundscape.

3.10.5 Noise Monitoring Methodology

Since noise impacts from the Project on the community will be highest when background noise levels are the lowest, the study was designed to measure community noise levels under conditions typical of a "quiet period" for the area. Therefore, daytime measurements were scheduled to avoid peak traffic conditions. Sound level measurements were made on Wednesday, October 4, 2017 during the daytime (12:30 p.m. to 2:00 p.m.) and on Thursday, October 5, 2017 during nighttime hours (12:00 a.m. to 1:30 a.m.). All measurements were 20 minutes in duration.

Sound levels were measured at publicly accessible locations at a height of five feet (1.5 meters) above ground level, under low wind conditions, and with dry roadway surfaces. Wind speed measurements were made with a Davis Instruments TurboMeter electronic wind speed indicator, and temperature and humidity measurements were made using a General Tools digital psychrometer. Unofficial observations about meteorology or land use in the community were made solely to characterize the existing sound levels in the area and to estimate the noise sensitivity at properties near the Project site.

3.10.6 Noise Monitoring Locations

The selection of the noise monitoring locations was based upon a review of zoning and land use in the Project area. Three noise monitoring locations were selected as representative sites to obtain a sampling of the ambient baseline noise environment. These measurement locations are depicted on Figure 3.10-1 and described below.

- **Location 1** is located on the northwest corner of the Project parcel along the eastern side of Ipswich Street. The location is adjacent to the Boston Arts Academy and across from a CVS pharmacy. This location is representative of the closest receptors to the north of the Project.

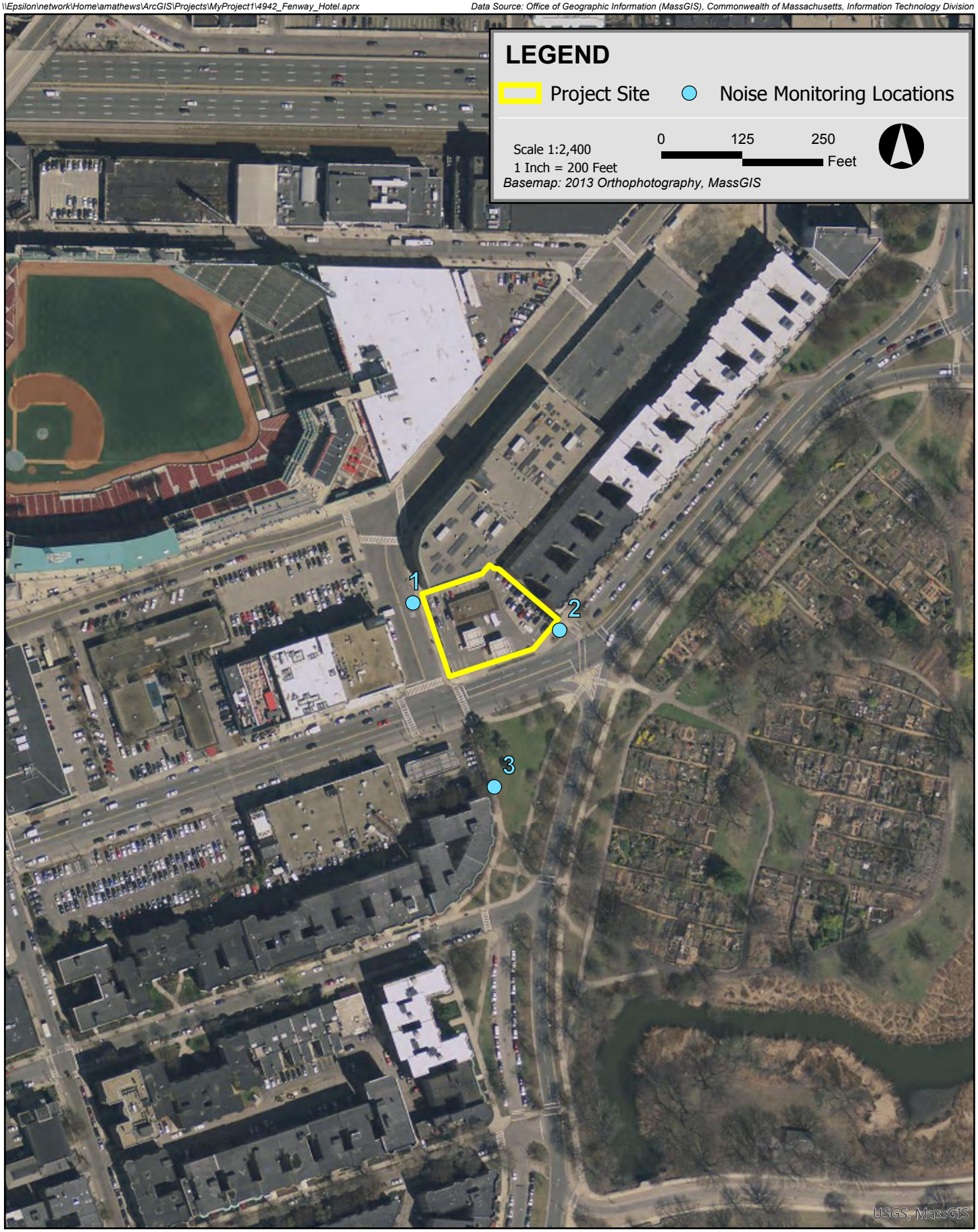
- **Location 2** is located on the north side of the Boylston Street and Park Drive intersection which is at the southeast corner of the parcel. This location is between the Shell station and 1209 Boylston Street and represents the closest residential receptors to the east of the Project.

- **Location 3** is located along the grassy area outside of 11 Park Drive, Lincoln Halls, and on the south side of Boylston Street. This location is representative of the closest residential receptors to the south of the Project.

3.10.7 Noise Monitoring Equipment

A Larson Davis Model 831 sound level meter equipped with a PCB PRM831 preamplifier, a PCB 377B20 half-inch microphone, and manufacturer-provided windscreen was used to collect background sound pressure level data. This instrumentation meets the "Type 1 - Precision" requirements set forth in ANSI S1.4 for acoustical measuring devices. The measurement equipment was calibrated in the field before and after the surveys with a Larson Davis CAL200 acoustical calibrator which meets the standards of IEC 942 Class 1L and ANSI S1.40-1984. Statistical descriptors (e.g., L_{eq}, L_{90}, etc.) were measured for each 20-minute sampling period, with octave-band sound levels corresponding to the same data set processed for the broadband levels.

Data Source: Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, Information Technology Division



Fenway Hotel Boston, Massachusetts

Epsilon ASSOCIATES INC.

Figure 3.10-1
Noise Monitoring Locations

Table 3.10-2 Summary of Measured Background Noise Levels – October 4, 2017 (Daytime) & October 5, 2017 (Nighttime)

Location	Period	Start Time	L_{eq}	L_{max}	L_{10}	L_{50}	L_{90}	L_{90} Sound Pressure Level by Octave-Band Center Frequency (Hz)									
								31.5	63	125	250	500	1000	2000	4000	8000	16000
			dBA	dBA	dBA	dBA	dBA	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
1	Day	12:37 PM	62	75	65	60	56	68	63	60	55	52	51	47	40	30	18
2	Day	1:03 PM	66	86	68	64	59	70	66	62	57	54	54	50	45	38	27
3	Day	1:30 PM	58	66	60	57	54	65	63	60	54	49	50	45	38	31	19
1	Night	12:05 AM	59	69	62	57	53	60	59	58	53	50	48	44	36	27	15
2	Night	12:39 AM	61	73	66	57	53	58	58	57	52	49	48	43	37	28	17
3	Night	1:16 AM	52	63	55	51	49	57	57	55	48	44	42	38	39	25	16

Note: Sound pressure levels are rounded to the nearest whole decibel.

Weather Conditions:

	Date	Temp	RH	Sky	Wind
Daytime	Wednesday, October 04, 2017	82 °F	28%	Clear	S @ 0-2 m/s
Nighttime	Thursday, October 05, 2017	64 °F	74%	Mostly Cloudy	calm

Monitoring Equipment Used:

	Manufacturer	Model	S/N
Sound Level Meter	Larson Davis	LD831	2155
Microphone	Larson Davis	377B20	112256
Preamp	Larson Davis	PRM831	16478
Calibrator	Larson Davis	Cal200	7146

3.10.8 Measured Background Sound Levels

Baseline noise monitoring results are presented in Table 3.10-2 and summarized below:

- The daytime residual background (L_{90}) measurements ranged from 54 to 59 dBA;
- The nighttime residual background (L_{90}) measurements ranged from 49 to 53 dBA;
- The daytime equivalent level (L_{eq}) measurements ranged from 58 to 66 dBA;
- The nighttime equivalent level (L_{eq}) measurements ranged from 52 to 61 dBA.

3.10.9 Future Conditions – Overview of Potential Project Noise Sources

The primary sources of continuous sound exterior to the Project will consist of ventilation, heating, cooling, and emergency power noise sources. Multiple noise sources will be located on the rooftop, and garage exhaust louvers will be located on the façades of the building between the first and second floors.

Table 3.10-3 provides an anticipated list of the major sources of sound. Sound power levels used in the acoustical modeling of each piece of equipment are presented in Table 3.10-4. Sound power level data were provided by the respective manufacturer of each piece of equipment.

The Project includes select noise-control measures that are necessary to achieve compliance with the applicable noise regulations. As the design progresses, specifications for mechanical equipment may change; however, appropriate measures will be taken to ensure compliance with the City Noise Standards. Parking garage fans located within lower level building facades will be attenuated through acoustical louvers. The emergency generator sound levels will be controlled using an enclosure and an exhaust silencer. To further limit impacts from the standby generator, required periodic, routine testing will be conducted during daytime hours, when background sound levels are highest. A summary of the noise mitigation proposed for the Project is presented in Table 3.10-5.

Table 3.10-3 Modeled Noise Sources

Noise Source	Quantity	Approximate Location & Elevation	Size/Capacity
Cooling Tower	2	Screened Roof Area, 100 ft	125 tons
Hotel Ventilation Fans/ERUs	2	Screened Roof Area, 100 ft	9,000 CFM
Hotel Backup Exhaust	2	Screened Roof Area, 100 ft	7,200 CFM
Below grade parking makeup fans	2	Low Roof, 28 ft	8,300 CFM
Garage Exhaust Fans	6	Facades of 1st Floor Level, 18 ft	8,300 CFM
Cummins DQDAC 300	1	Screened Roof Area, 100 ft	300 kW

Table 3.10-4 Modeled Sound Power Levels per Noise Source

Noise Source	Broad-band (dBA)	Sound Level (dB) per Octave-Band Center Frequency (Hz)								
		31.5	63	125	250	500	1k	2k	4k	8k
Cooling Tower NC8401KLN2	88	95[1]	95	91	79	72	72	74	70	62
Horizon N420 Hotel Ventilation/ERU	93	97	84	96	91	89	87	86	83	76
Greenheck CSW24 Exhaust Fan	90	96[1]	96	94	94	85	83	78	73	69
Greenheck IGX120 Makeup Air Fan	82	88[1]	88	87	82	80	74	73	69	59
Greenheck QEI24 Garage Exhaust Fan	81	84[1]	84	82	78	79	77	72	65	58
Cummins 300DQDAC Engine[2]	93	94	81	85	92	89	88	85	81	84
Cummins 300DQDAC Exhaust	133	138	125	126	128	125	125	126	126	127

Notes: Sound power levels do not include mitigation identified in Table 3.7-5.

1. No data provided by manufacturer. Octave-band sound level assumed to be equal to the 63 Hz band level.
2. Assumes Genset is in standard enclosure that achieves minimum 25 dBA sound level reduction

Table 3.10-5 Attenuation Values Applied to Mitigate Each Noise Source

Noise Source	Form of Mitigation	Sound Level (dB) per Octave-Band Center Frequency (Hz)								
		31.5	63	125	250	500	1k	2k	4k	8k
Garage Fans	Louver[1]	3	6	6	8	10	14	18	16	15
Generator Exhausts	Silencer[2]	11	11	27	30	33	37	43	45	42

Notes:

1. Slimshield Louver SL-6 acoustical louver transmission loss.
2. Silex model HP-SCI-5 Super Critical Grade Silencer

3.10.10 Noise Modeling Methodology

The noise impacts associated with the Project were predicted at the nearest and most representative receptors using the CadnaA noise calculation software developed by DataKustik GmbH. This software uses the ISO 9613-2 international standard for sound propagation (Acoustics - Attenuation of sound during propagation outdoors - Part 2: General method of calculation). The benefits of this software are a refined set of computations due to the inclusion of topography, ground attenuation, multiple building reflections, drop-off with distance, and atmospheric absorption. The CadnaA software allows for octave-band calculation of noise from multiple noise sources, as well as computation of diffraction around building edges.

3.10.11 Future Sound Levels – Nighttime

The analysis of sound levels at night included all the mechanical equipment operating at max loads except the emergency generator to simulate worst-case nighttime operation conditions at nearby receptors. Five modeling locations were included in the analysis. Modeling locations A through C are identical to measurement locations 1, 2, and 3

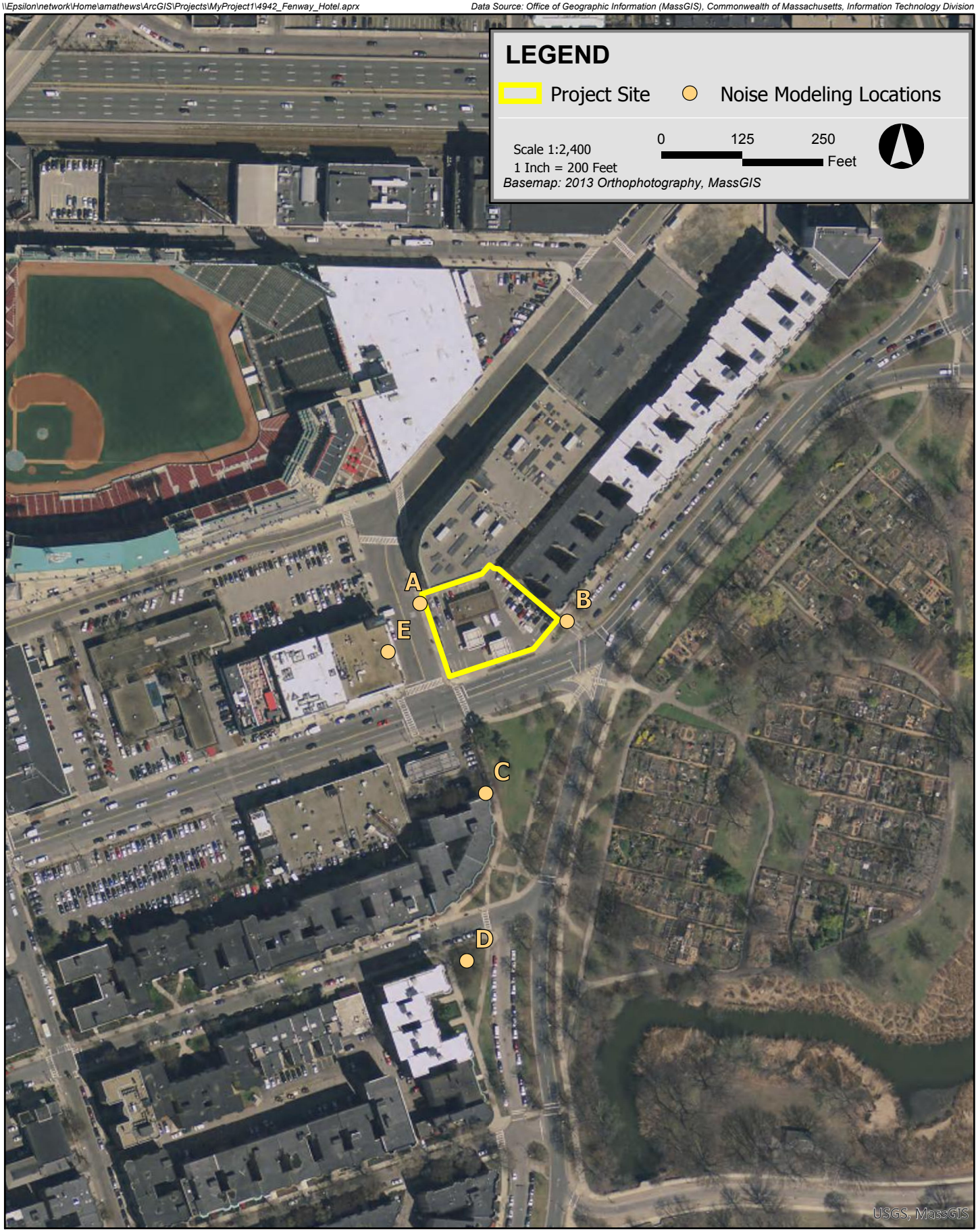
respectively. Two additional modeling locations, D and E, were added for more residential and commercial uses in the vicinity of the Project. The modeling receptors, which correspond to institutional, residential, and commercial uses in the community, are depicted in Figure 3.10-2. The predicted exterior Project-only sound levels range from 30 to 40 dBA at nearby receptors. The City of Boston Residential and Business limits have been applied to the appropriate locations. Institutional locations are subject to the same limits as residential areas. Predicted sound levels from Project-related equipment are within the broadband and octave-band nighttime limits under the City Noise Standards at the modeling locations. The evaluation is presented in Table 3.10-6.

Table 3.10-6 Comparison of Future Predicted Project-Only Nighttime Sound Levels to the City of Boston Limits

Modeling Location ID	Zoning / Land Use	Broadband (dBA)	Sound Level (dB) per Octave-Band Center Frequency (Hz)								
			31.5	63	125	250	500	1k	2k	4k	8k
A	Institutional	40	53	48	47	42	38	33	29	24	14
B	Residential	36	53	48	45	39	32	28	25	20	10
C	Residential	38	50	47	45	40	37	31	24	17	4
D	Residential	30	43	38	38	34	27	22	15	7	0
E	Commercial	39	52	48	46	41	38	32	21	21	11
City of Boston Limits	**Residential/Institutional**	**50**	**68**	**67**	**61**	**52**	**46**	**40**	**33**	**28**	**26**
	Business	**65**	**79**	**78**	**73**	**68**	**62**	**56**	**51**	**47**	**44**

3.10.12 Future Sound Levels – Daytime

As previously noted, the emergency generator will only operate during the day for brief, routine testing when the background sound levels are high, or during an interruption of power from the electrical grid. A second analysis combined noise from the Project's mechanical equipment and its emergency generator to reflect worst-case conditions during a period of equipment testing. The sound levels were calculated at the same receptors as in the nighttime analysis and then evaluated against daytime limits. The predicted exterior Project-only daytime sound levels range from 35 to 42 dBA at nearby receptors. Predicted sound levels from Project-related equipment are within the daytime broadband and octave-band limits under the City Noise Standards at each of the modeled locations. This evaluation is presented in Table 3.10-7.



Fenway Hotel Boston, Massachusetts

Epsilon ASSOCIATES INC.

Figure 3.10-2
Noise Modeling Locations

Table 3.10-7 Comparison of Future Predicted Project-Only Daytime Sound Levels to City Noise Standards

Modeling Location ID	Zoning / Land Use	Broadband (dBA)	Sound Level (dB) per Octave-Band Center Frequency (Hz)								
			31.5	63	125	250	500	1k	2k	4k	8k
A	Institutional	42	73	57	47	42	39	34	29	24	16
B	Residential	41	76	59	46	41	34	30	26	21	17
C	Residential	40	72	57	46	42	38	32	25	18	9
D	Residential	35	68	54	41	37	30	24	17	9	0
E	Institutional	41	72	55	47	41	38	33	27	22	13
City of Boston Limits	**Residential/Institutional**	**60**	**76**	**75**	**69**	**62**	**56**	**50**	**45**	**40**	**38**
	Business	**65**	**79**	**78**	**73**	**68**	**62**	**56**	**51**	**47**	**44**

3.10.13 Conclusions

Baseline noise levels were measured in the vicinity of the Project during the day and at night. At these and additional locations, future Project-only sound levels were calculated based on information provided on the expected mechanical equipment. Project-only sound levels were compared to applicable limits.

Predicted mechanical equipment noise levels from the proposed Project at each receptor location, taking into account attenuation due to distance, structures, and noise-control measures, will be at or below the octave-band requirements of the City Noise Standards. The predicted sound levels from Project-related equipment, as modeled, are expected to remain below 50 dBA at residences; therefore, within the nighttime residential zoning limits for the City of Boston at the nearest residential receptors. The results indicate that the Project can operate without substantial impact on the existing acoustical environment.

At this time, while the mechanical equipment and noise controls have been refined, they are still conceptual in nature. During the final design phase of the Project, mechanical equipment and noise controls will be specified and designed to meet the applicable broadband limit and the corresponding octave-band limits of the City Noise Standards.

3.11 Construction

3.11.1 Introduction

A Construction Management Plan (CMP) in compliance with the City's Construction Management Program will be submitted to BTD once final plans are developed and the construction schedule is fixed. The construction manager will be required to comply with the details and conditions of the approved CMP.

Proper pre-planning with the City and neighborhood will be essential to the successful construction of the Project. Construction methodologies that will ensure public safety and protect nearby businesses will be employed. Techniques such as barricades, walkways and signage will also be used. The CMP will include routing plans for trucking and deliveries, plans for the protection of existing utilities, and methods for the control of noise and dust.

During the construction phase of the Project, the Proponent will provide the name, telephone number, and address of a contact person to communicate with on issues related to the construction.

3.11.2 Construction Methodology / Public Safety

Construction methodologies that ensure public safety and protect nearby pedestrians, bicyclists, and vehicles will be employed. Techniques such as barricades and signage will be used. Construction management and scheduling will minimize impacts on the surrounding environment and will include plans for construction worker commuting and parking, routing plans for trucking and deliveries, and the control of noise and dust.

As the design of the Project progresses, the Proponent will meet with BTD to discuss the specific location of barricades, the need for lane closures, pedestrian walkways, and truck queuing areas. Secure fencing, signage, and covered walkways may be employed to ensure the safety and efficiency of all pedestrian and vehicular traffic flows. In addition, sidewalk areas and walkways near construction activities will be well marked and lighted to protect pedestrians and ensure their safety. Public safety for pedestrians on abutting sidewalks will also include covered pedestrian walkways when appropriate. If required by BTD and the Boston Police Department, police details will be provided to facilitate traffic flow. These measures will be incorporated into the CMP which will be submitted to BTD for approval prior to the commencement of construction work.

3.11.3 Construction Schedule

Construction is anticipated to commence in the third quarter of 2018, and will last approximately 24 months.

Typical construction hours will be from 7:00 a.m. to 6:00 p.m., Monday through Friday, with most shifts ordinarily ending at 3:30 p.m. No substantial sound-generating activity will occur before 7:00 a.m. If longer hours, additional shifts, or Saturday work is required, the construction manager will place a work permit request to the Boston Air Pollution Control Commission and BTD in advance. Some activities such as finishing activities could run beyond 6:00 p.m. to ensure the structural integrity of the finished product; for example, certain components must be completed in a single pour, and placement of concrete cannot be interrupted.

3.11.4 Construction Staging / Access

Access to the Project site and construction staging areas will be as provided in the CMP approved by BTD.

Although specific construction and staging details have not been finalized, the Proponent and its construction manager will work to ensure that staging areas will be located to minimize impacts to pedestrian and vehicular flow in the area. Secure fencing and barricades will be used as appropriate, to isolate construction areas from pedestrian traffic adjacent to the Project site. Construction procedures will be designed to meet all Occupational Safety and Health Administration (OSHA) safety standards for specific site construction activities.

3.11.5 Construction Mitigation

The Proponent will follow City of Boson and MassDEP guidelines which will direct the evaluation and mitigation of construction impacts.

A CMP will be submitted to BTD for review and approval prior to issuance of a Building Permit. The CMP will include detailed information on specific construction mitigation measures and construction methodologies to minimize impacts to abutters and the local community. The CMP will also define truck routes which will help in minimizing the impact of trucks on City and neighborhood streets.

"Don't Dump - Drains to Charles River" plaques will be installed at storm drains that are replaced or installed as part of the Project.

3.11.6 Construction Employment and Worker Transportation

The number of workers required during the construction period will vary. It is anticipated that approximately 350 construction jobs will be created over the length of the construction period. The Proponent will make reasonable good-faith efforts to have at least 51% of the total employee work hours be for Boston residents, at least 40% of total employee work hours be for minorities and at least 12% of the total employee work hours be for women. The Proponent will enter into a Boston Residents Construction Employment Plan with the BPDA with respect to the Project.

To reduce vehicle trips to and from the Project site, minimal construction worker parking will be available on-site and all workers will be strongly encouraged to use public transportation and ridesharing options. The construction manager will work aggressively to ensure that construction workers are well informed of the public transportation options serving the area. Space on-site will be made available for workers' supplies and tools so they do not have to be brought to the Project site each day.

3.11.7 Construction Truck Routes and Deliveries

Truck traffic will vary throughout the construction period, depending on the activity. The construction team will manage deliveries to the Project site during morning and afternoon peak hours in a manner that minimizes disruption to traffic flow on adjacent streets. Construction truck routes to and from the Project site for contractor personnel, supplies, materials, and removal of excavations required for the development will be coordinated with BTD, and traffic logistics and routing will be planned to minimize community impacts. Truck access during construction will be determined by the BTD as part of the CMP. These routes will be mandated as a part of all subcontractors' contracts for the Project. The construction team will provide subcontractors and vendors with Construction Vehicle & Delivery Truck Route Brochures in advance of construction activity.

"No Idling" signs will be included at the loading, delivery, pick-up and drop-off areas.

3.11.8 Construction Air Quality

Plans for controlling fugitive dust during demolition, excavation, and construction will include mechanical street sweeping, wetting portions of the 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:

- Using wetting agents on areas of exposed soil on a scheduled basis;
- Using covered trucks;
- Minimizing spoils on the construction site;
- Monitoring of actual construction practices to ensure that unnecessary transfers and mechanical disturbances of loose materials are minimized;
- Minimizing storage of debris on site; and
- Periodic street and sidewalk cleaning with water to minimize dust accumulations.

3.11.9 Construction Noise

The Proponent is committed to mitigating noise impacts from the construction of the Project. Construction work at the Project will comply with the requirements of the City of Boston Noise Ordinance, and reasonable efforts will be made to minimize the noise impact of all construction activities.

Mitigation measures are expected to include:

- Instituting a proactive program to ensure compliance with the City of Boston Noise Ordinance;
- Using appropriate mufflers on all equipment and ongoing maintenance of intake and exhaust mufflers;
- Muffling enclosures on continuously running equipment, such as air compressors and welding generators;
- Replacing specific construction operations and techniques by less noisy ones where feasible;
- Selecting the quietest of alternative items of equipment where feasible;
- Scheduling equipment operations to keep average noise levels low, to synchronize the noisiest operations with times of highest ambient levels in the area, and to maintain relatively uniform noise levels;
- Turning off idling equipment; and
- Locating noisy equipment at locations that protect sensitive locations by shielding or distance.

3.11.10 Construction Waste

The Proponent will take an active role with regard to the reprocessing and recycling of waste products generated by the construction of the Project. The disposal contract will include specific requirements that will ensure that construction procedures allow for the necessary segregation, reprocessing, reuse and recycling of materials when possible. For those materials that cannot be recycled, solid waste will be transported in covered trucks to an approved solid waste facility, per MassDEP Regulations for Solid Waste Facilities, 310 CMR 16.00. This requirement will be specified in the disposal contract. Construction will be conducted so that materials that may be recycled are segregated from those materials not recyclable to enable disposal at an approved solid waste facility.

3.11.11 Protection of Utilities

Existing public and private infrastructure located within nearby public rights-of-way will be protected during construction of the Project. The installation of proposed utilities within the public way will be in accordance with all MWRA, BWSC, Boston Public Works, Dig Safe, and applicable utility company requirements. All necessary permits will be obtained before

the commencement of specific utility installations. Specific methods for constructing proposed utilities where they are near to, or connect with, existing water, sewer and drain facilities will be reviewed by the BWSC as part of its Site Plan Review process.

3.12 Rodent Control

A rodent extermination certificate will be filed with the building permit application for the Project. Rodent inspection monitoring and treatment will be carried out before, during and at the completion of all construction work for each phase of the Project, in compliance with the City's requirements.

3.13 Wildlife Habitat

The Project is located in an established neighborhood. There are no wildlife habitats on or adjacent to the Project.

Chapter 4.0

Sustainable Design and Climate Change Resiliency

4.0 SUSTAINABLE DESIGN AND CLIMATE CHANGE RESILIENCE

4.1 Green Building

The Project team is committed to developing a building that is sustainably designed, energy efficient, environmentally conscious and healthy for occupants. As required under Article 37 of the Boston Zoning Code, projects that are subject to Article 80B, Large Project Review, shall be U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) certifiable. The Project will use LEED for New Construction (LEED v4 for BD+C) as the rating system to demonstrate compliance with Article 37 for both buildings. The LEED rating system tracks the sustainable features of a project by achieving points in the following categories: Location and Transportation, Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, Innovation and Design Process, and Regional Priority Credits.

A LEED checklist is included at the end of this section, and details the credits the Project anticipates achieving. This is a preliminary evaluation of the LEED checklists, and applicable credits may change as the building designs advance.

The following is a detailed credit-by-credit analysis of the Project team's approach to achieving LEED certifiability at the Silver level for each Component. Points that are still being studied and marked as "maybe" on the LEED checklist are italicized below.

4.1.1 Integrative Process (IP)

IP Integrative Process: In compliance with credit requirements, the Project team will complete the following tasks:

1. A preliminary "Box" Energy Model: during the schematic design phase, the Project team will model the building's design and assess potential strategies associated with the limited site conditions, the extensive massing and required building orientation, the basic envelope design, lighting levels within the regularly occupied spaces, the thermal comfort ranges of the occupants, the plug and process load needs, and the programmatic and operational parameters of the building. All iterations and results will be documented and shared with the design team prior to final design decisions.

2. A preliminary Water-Use Systems Analysis: during the schematic design phase, the Project team will also explore methods of reducing potable water loads within the building as well as any potable water required for irrigation of the building site and process water necessary for equipment within the building.

4.1.2 Location and Transportation (LT)

LT Sensitive Land Protection: The Project site is located on a previously developed lot on Boylston Street in downtown Boston, satisfying the credit conditions.

LT High Priority Site: The Project site is in a documented HUD qualified census tract.

LT Surrounding Density and Diverse Uses: The Project will meet the criteria for both Option 1 and Option 2. The Project is a hotel development, and the surrounding ¼-mile radius will meet, and exceed, the credit threshold for Option 1 – Surrounding Density. The Project site is located in the Fenway/Kenmore area of Boston, and has significant access to community resources. The Project easily meets the credit requirement of eight uses within a ½-mile walking distance of the main entrance.

LT Access to Quality Transit: The Project site is in the Fenway/Kenmore neighborhood of Boston with many public transportation options. The site is within one-half mile of the MBTA Green Line Stations at Hynes and Kenmore Square, and the Yawkey Station on the Framingham/Worcester Commuter Rail Line. Additionally, the MBTA operates six bus routes in close proximity to the Project site. Combined, these stations provide at least 360 weekday trips and 216 weekend trips.

LT Bicycle Facilities: The Project team will ensure that the LEED requirements for protected and covered bike storage are supplied within the building.

4.1.3 Sustainable Sites (SS)

SS Prerequisite – Construction Activity Pollution Prevention: The construction documents will include a Soil Erosion and Sedimentation Control Plan to be developed in accordance with the EPA Construction General Permit of the NPDES. A Stormwater Pollution Prevention Plan (SWPPP) will also be developed for the building in accordance with the requirements for the U.S. EPA's National Pollutant Discharge Elimination System Construction General Permit. These documents will be used to document compliance with this prerequisite.

SS Site Assessment: The Project team will complete and document an assessment of the following information:

1. Topography – contours and sloping,
2. Hydrology – flood hazards and existing water bodies,
3. Climate – solar exposure and sun angles,
4. Vegetation – vegetation types and greenfield spaces,
5. Soils – soils delineation, prime farmland, and disturbed soils,
6. Human Use – enhanced views, availability of transportation, and future building potential, and

7. Human Health Effects – population assessment, physical fitness, and existing air pollution sources.

SS Rainwater Management: The Project will provide an extensive network of stormwater storage and infiltration equipment below the ground surface. This system will hold up to 1-inch of rainfall, which meets the 85% rainfall event threshold for a zero lot line development.

SS Heat Island Reduction: The Project will utilize high albedo materials for all hardscapes, including both nonroof and roof installations. All installed materials will meet LEED requirements for either initial or three-year Solar Reflectance Index values.

4.1.4 Water Efficiency (WE)

WE Prerequisite – Outdoor Water Use Reduction: Due to the small building area, the design will not include a permanent irrigation system, thereby satisfying the requirements of this credit.

WE Prerequisite – Indoor Water Use Reduction: The Project will reduce demand for potable water through high efficiency fixtures within the hotel rooms – this design will surpass the prerequisite requirement for 20% reduction with a goal of 35% reduction. The design will specify WaterSense labeled fixtures and the following flow rates:

- Shower: 1.75 GPM;
- Bath Lavatory: 1.0 GPM;
- Toilet: 1.28 GPF; and
- Energy Star Certified clothes washers.

WE Prerequisite – Building Level Water Metering: A water meter will be installed for the building.

WE Indoor Water Use: The Project will reduce demand for potable water through high efficiency fixtures within the hotel rooms. – this design will surpass the prerequisite requirement for 20% reduction with a goal of 35% reduction. The design will specify WaterSense labeled fixtures and the following flow rates:

- Shower: 1.75 GPM;
- Bath Lavatory: 1.0 GPM;
- Toilet: 1.28 GPF; and
- Energy Star Certified clothes washers.

4.1.5 Energy and Atmosphere (EA)

EA Prerequisite – Fundamental Commissioning and Verification: The Project team will include an experienced Commissioning (Cx) Agent - this person will be hired before the end of the design development phase and will provide review services for the project Basis of Design and Owner's Project Requirements as well as a thorough review of both the Design Development and Construction Documents plan and specification set, observation of all start-up testing and balancing procedures, and confirmation of installation and operation according to the design parameters.

EA Prerequisite – Minimum Energy Performance: The Project will meet this prerequisite, as well as the Massachusetts Stretch Energy Code, through the following design approaches, resulting in an ASHRAE 90.1 Appendix G model demonstrating a minimum Energy Use Reduction of at least 6% by cost, below ASHRAE 90.1-2010 (LEED) and at least 10% by energy use, below ASHRAE 90.1-2013 (Stretch Code):

1. Above code levels of insulation within the cavity as well as continuous exterior of the sheathing;
2. Very high efficiency equipment mechanical systems;
3. LED lighting and sophisticated, automated controls;
4. Energy Star appliances; and
5. Energy Recovery for all ventilation.

EA Prerequisite – Building Level Metering: The Project will include a building-level energy meter for all energy consumption including electricity and natural gas.

EA Prerequisite – Fundamental Refrigerant Management: The Project's HVAC systems will not include any chlorofluorocarbon (CFC)-based refrigerants.

EA Enhanced Commissioning: The Project team will include an experienced Commissioning (Cx) Agent. This person will be hired before the end of the design development phase and will provide review services for the project Basis of Design and Owner's Project Requirements as well as a thorough review of both the Design Development and Construction Documents plan and specification set, observation of all start-up testing and balancing procedures, and confirmation of installation and operation according to the design parameters.

EA Optimize Energy Use: The Project will meet this credit, as well as the Massachusetts Stretch Energy Code, through the following design approaches, resulting in an ASHRAE 90.1 Appendix G model demonstrating a minimum Energy Use Reduction of at least 6% by cost, below ASHRAE 90.1-2010 (LEED) and at least 10% by energy use, below ASHRAE 90.1-2013 (Stretch Code):

1. Above code levels of insulation within the cavity as well as continuous exterior of the sheathing;
2. Very high efficiency equipment mechanical systems;
3. LED lighting and sophisticated, automated controls;
4. Energy Star appliances; and
5. Energy Recovery for all ventilation.

4.1.6 Materials and Resources (MR)

MR Prerequisite – Storage and Collection of Recyclables: The Project will provide a designated storage point for recyclable materials; management will then move all refuse to the street for city collection. Collected materials will include the following:

- Mixed paper;
- Corrugated cardboard;
- Glass;
- Plastics;
- Metals;
- Batteries; and
- Mercury Containing Lamps.

MR Building Product Disclosure and Optimization – Environmental Product Declarations: The Project team will implement a construction waste management plan with a diversion goal of 75% of the site-generated waste from the landfill. The construction team will provide monthly reports of waste diversion.

MR Building Product Disclosure and Optimization – Sourcing of Raw Materials: The Project team will document the use of at least 20 different permanently installed products, sourced from at least five different manufacturers that include confirmed environmental product declaration documents.

MR Building Product Disclosure and Optimization – Material Ingredients: The Project team will document the use of at least 20 different permanently installed products, sourced from at least five different manufacturers that include manufacturer's inventory of all contents, Health Product Declarations, and/or Cradle-to-Cradle certification.

MR Construction and Demolition Waste Management: The Project team is committed to reducing construction waste through at least 50% diversion of three material streams; if possible, the team will strive to increase the reduction to 75% diversion and four material streams.

4.1.7 Indoor Environmental Quality (IEQ)

IEQ Prerequisite – Minimum Indoor Air Quality Performance: The Project team will ensure that all ventilation systems meet the minimum requirements of Sections 4 through 7 of the ASHRAE 62.1-2007 standard for Acceptable Indoor Air Quality. Each unit will have kitchen and bath exhaust as required by the Standard. In addition, fresh air will be mechanically supplied directly to each unit.

IEQ Prerequisite – Environmental Tobacco Smoke Control: Smoking will be prohibited inside the building and within 25 feet of all entries, outdoor air intakes, and operable windows; these prohibitions will be incited in all leasing agreements and will be displayed via on-site signage.

IEQ Enhanced Indoor Air Quality Strategies: The Project team will implement the following:

- A permanent entryway system at least 10 feet long in the primary direction of travel;
- Direct exhaust of all housekeeping and laundry areas to prevent cross-contamination; and
- MERV 13 filtration on all ventilation systems.

IEQ Low Emitting Materials: The Project team will specify paints, coatings, flooring, adhesives, and sealants that comply with California Department of Public Health Standard Method V1.1–2010, using CA Section 01350, Appendix B, New Single-Family Residence Scenario.

IEQ Construction Indoor Air Quality Management Plan: The general contractor will ensure that all installed ductwork is adequately protected throughout the construction phase. This protection will be verified by site inspections.

IEQ Thermal Comfort: The Project will provide individual thermal controls for all hotel rooms. Additionally, all shared spaces will include controls for adjustment per group needs.

IEQ Interior Lighting: The Project will meet the criteria for both Option 1 and Option 2:

Option 1 – Lighting Control. The Project will provide individual lighting controls for all building occupants within all hotel rooms. Additionally, all shared spaces will include controls for adjustment per group needs.

Option 2 – Lighting Quality. The Project will include the following lighting strategies:

1. All light sources will have a CRI of 80, or higher,
2. At least 75% of the total connected lighting load will use lights with a rated light of at least 24,000 hours,

3. All regularly occupied spaces will use light fixtures with a luminance of less than 2,500 cd/m2, and
4. 90% of the regularly occupied floor area will meet the thresholds for LEED requirements for area-weighted average surface reflectance.

IEQ Daylight: The Project team will complete a computer simulation demonstrating that at least 55% daylight autonomy is achieved throughout the building. Additionally, the simulation will confirm an annual sunlight exposure of no more than 10%.

IEQ Quality Views: The Project team will seek to maximize the views available to occupants in all regularly occupied spaces. At least 75% of the applicable floor area will achieve a direct line of sight to the outdoors.

4.1.8 Innovation and Design Process (IN)

The Project team will seek to achieve at least five innovation points; potential credits include: Exemplary Performance for Heat Island Reduction, Green Education, Reduction of Mercury Lighting, and Local Purchasing.

At least one LEED AP accredited professional is part of the Project team.

4.1.9 Regional Priority (RP)

Regional Priority Credits (RPCs) are established LEED credits designated by the USGBC to have priority for a particular area of the country. When a project team achieves one of the designated RPCs, an additional credit is awarded to the project. RPCs applicable to the site include: SS Rainwater Management.

4.2 Climate Change Resilience

4.2.1 Introduction

Climate change conditions considered by the Project team include higher maximum and mean temperatures, more frequent and longer extreme heat events, more frequent and longer droughts, more severe freezing rain and heavy rainfall events, and increased wind gusts.

The expected life of the Project is anticipated to be approximately 50 years. Therefore, the Proponents planned for climate-related conditions projected 50 years into the future. A copy of a completed Checklist for each building is included in Appendix C. Given the preliminary level of design, the responses are also preliminary and may be updated as the Project design progresses.

4.2.2 Extreme Heat Events

The *Climate Ready Boston* report predicts that in Boston, there may be between 25 to 90 days over 90 degrees by 2070, compared to an average of 11 days per year over 90 degrees between 1971 to 2000. The Project design will include measures to adapt to these conditions, including installing high performance HVAC equipment, high performance building envelope, energy recovery ventilation systems, and new landscaping to reduce the urban heat island effect.

4.2.3 Rain Events

As a result of climate change, the Northeast is expected to experience more frequent and intense storms. To mitigate this, the Proponents will take measures to minimize stormwater runoff and protect the Project's mechanical equipment, as necessary. The Project will be designed to reduce the existing peak rates and volumes of stormwater runoff from the site, and promote runoff recharge to the greatest extent practicable.

4.2.4 Drought Conditions

Although more intense rain storms are predicted, extended periods of drought are also predicted due to climate change. Under the high emissions scenario, the occurrence of droughts lasting one to three months could go up by as much as 75% over existing conditions by the end of the century. To minimize the Project's susceptibility to drought conditions, the landscape design is anticipated to incorporate native and adaptive plant materials. Aeration fixtures and appliances will be chosen for water conservation qualities, conserving potable water supplies.

LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name: Fenway Hotel
Date: 18-Dec-17

Y	?	N			
1			Credit	Integrative Process	1

13	0	3	**Location and Transportation**		16
			Credit	LEED for Neighborhood Development Location	16
1			Credit	Sensitive Land Protection	1
1		1	Credit	High Priority Site	2
5			Credit	Surrounding Density and Diverse Uses	5
5			Credit	Access to Quality Transit	5
1			Credit	Bicycle Facilities	1
		1	Credit	Reduced Parking Footprint	1
		1	Credit	Green Vehicles	1

6	1	3	**Sustainable Sites**		10
Y			Prereq	Construction Activity Pollution Prevention	Required
1			Credit	Site Assessment	1
		2	Credit	Site Development - Protect or Restore Habitat	2
		1	Credit	Open Space	1
3			Credit	Rainwater Management	3
2			Credit	Heat Island Reduction	2
	1		Credit	Light Pollution Reduction	1

3	2	6	**Water Efficiency**		11
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
		2	Credit	Outdoor Water Use Reduction	2
3		3	Credit	Indoor Water Use Reduction	6
	1	1	Credit	Cooling Tower Water Use	2
	1		Credit	Water Metering	1

4	7	22	**Energy and Atmosphere**		33
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
3		3	Credit	Enhanced Commissioning	6
1	4	13	Credit	Optimize Energy Performance	18
		1	Credit	Advanced Energy Metering	1
		2	Credit	Demand Response	2
		3	Credit	Renewable Energy Production	3
	1		Credit	Enhanced Refrigerant Management	1
	2		Credit	Green Power and Carbon Offsets	2

5	0	8	**Materials and Resources**		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
		5	Credit	Building Life-Cycle Impact Reduction	5
1		1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
1		1	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1		1	Credit	Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2

11	1	4	**Indoor Environmental Quality**		16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
2		1	Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
		2	Credit	Indoor Air Quality Assessment	2
1			Credit	Thermal Comfort	1
2			Credit	Interior Lighting	2
2		1	Credit	Daylight	3
1			Credit	Quality Views	1
	1		Credit	Acoustic Performance	1

6	0	0	**Innovation**		6
5			Credit	Innovation	5
1			Credit	LEED Accredited Professional	1

1	0	3	**Regional Priority**		4
		1	Credit	EA Optimize Energy Performance; Threshold = 8 pts	1
1			Credit	SS Rainwater Management; Threshold = 2 pts	1
		1	Credit	WE Indoor Water Use Reduction; Threshold = 4 pts	1
		1	Credit	LT High Priority Site; Threshold = 2 points	1

50	11	49	**TOTALS**	Possible Points:	110

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

Chapter 5.0

Urban Design

5.0 URBAN DESIGN

5.1 Urban Context

The urban context of the Project is a determining factor in the overall design approach to the building. The existing street language is varied with classical residential brownstones to the west, and an industrial context to the north. The Emerald Necklace is across the street to the south, and there are a variety of new dense high rise contemporary structures to the east. Within this context, the Project has an opportunity to blend these elements and improve a currently underutilized site.

The architecture plays within these parameters and is deliberately contemporary in nature, creating a certain dynamic tension between the traditional and the new by setting the language with its roots in the existing context and translating it into the new modern language for the neighborhood. The combination of glazing, spandrel panels, window accents and colors is designed to create distinctive shadow patterns and texture that will help animate the facades. The Project will send a message that something new and different is happening at this corner, contributing to the ongoing renaissance of the neighborhood.

5.2 Design and Massing

The Project has been designed to reflect both its context and its intended use. The building's facades are organized in a rhythm pattern derived from the neighboring buildings but expressed in a contemporary manner. Within this rhythm, the design evokes a more contemporary look, one that speaks to the use of the building. By both "fitting in and standing out" at the same time, the Project will contribute to the transformation of the neighborhood.

Due to the Project site's proximity to Fenway Park, improving sidewalk pedestrian circulation is important. The ground floor of the building will be pulled in along Ipswich Street to not only allow for wider sidewalks but also for a retreat space for the hotel entrance at what is known to be a busy corner, especially on a game day. In addition to pulling the building in to enhance the entrance experience, there will be a canopy that overhangs the sidewalk which will introduce light and bring the hotel experience out into the public realm (see Figure 5-1).

The elevations and massing are organized by a strong base element to ground the building and identify the Project from its pedestrian and vehicular approaches. As the massing moves around the site from the west to the eastern corner, the language of the façade adjusts from an organized grouping of bays relating to the brownstones to a more contemporary treatment of stacked floor to ceiling glazing that varies in location to provide dramatic views to the gardens and also add interest and a strong backdrop to the street. As

the Project turns the corner on Ipswich street there is a slight change in the rhythm to a larger scale, more industrial pattern, while keeping the materials in the same masonry character. The corner also provides an opportunity to have a unique moment at the upper floors that holds the corner, defines the upper floor setback, and adds a directionality to the building as it looks down Boylston Street. Figured 5-2 to 5-4 present street vignettes of the building.

Fenway Hotel Boston, Masachusetts

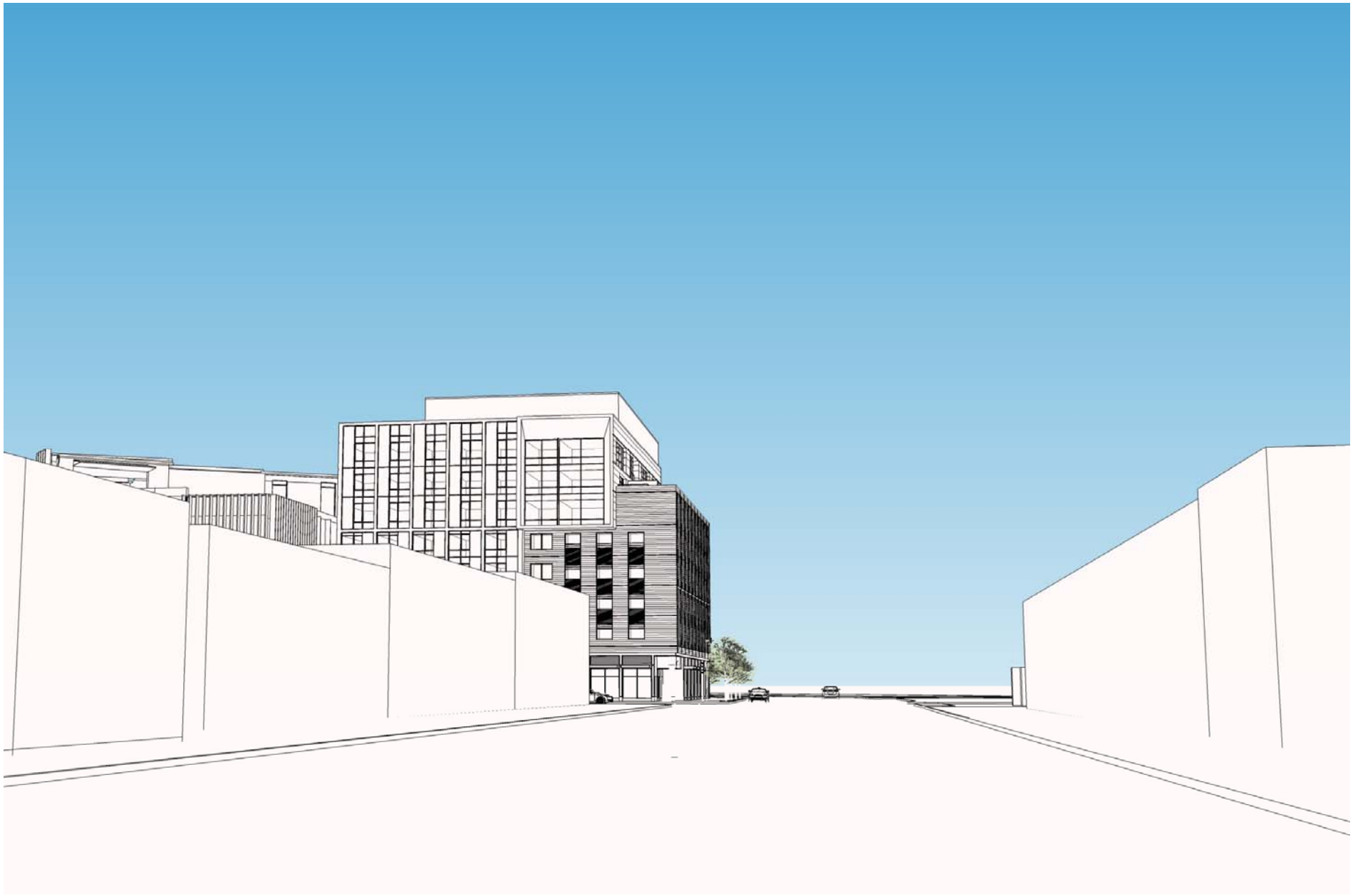
Group One PARTNERS

Figure 5-1
Boylston and Ipswich Street Rendering

Fenway Hotel Boston, Masachusetts

Group One PARTNERS

Figure 5-2
Street Vignette – West Boylston Street



Fenway Hotel Boston, Masachusetts

Group One PARTNERS

Figure 5-3
Street Vignette – East Boylston Street

Fenway Hotel Boston, Masachusetts

Group One PARTNERS

Figure 5-4
Street Vignette – South Ipswich Street

Chapter 6.0

Historic and Archaeological Resources

6.0 HISTORIC AND ARCHAEOLOGICAL RESOURCES

This section describes the historic and archaeological resources within and in the vicinity of the Project and describes the potential Project-related impacts to these resources.

6.1 Introduction

No historic resources listed in the State and National Registers of Historic Places or included in the Inventory of Historic and Archaeological Assets of the Commonwealth are within the Project site.

The approximately 21,050 sf Project site is bounded by Boylston Street to the south, Ipswich Street to the west, and Private Alley 938 to the north. The Project site currently contains a Shell gas station, service center and convenience store constructed ca 1950 with the pump island being constructed in 1995. The site is relatively flat and contains four curb cuts along Ipswich and Boylston streets, as well as a continuous flush curb condition along the private alley.

6.2 Historic Resources in the Project Vicinity

The Project site is located in the vicinity of several historic resources listed in the State and National Registers of Historic Places or included in the Inventory of Historic and Archaeological Assets of the Commonwealth. Table 6-1 identifies these resources within one-quarter mile of the Project Site and corresponds to resources depicted in Figure 6-1.

Table 6-1 Historic Resources in the Vicinity of the Project Site

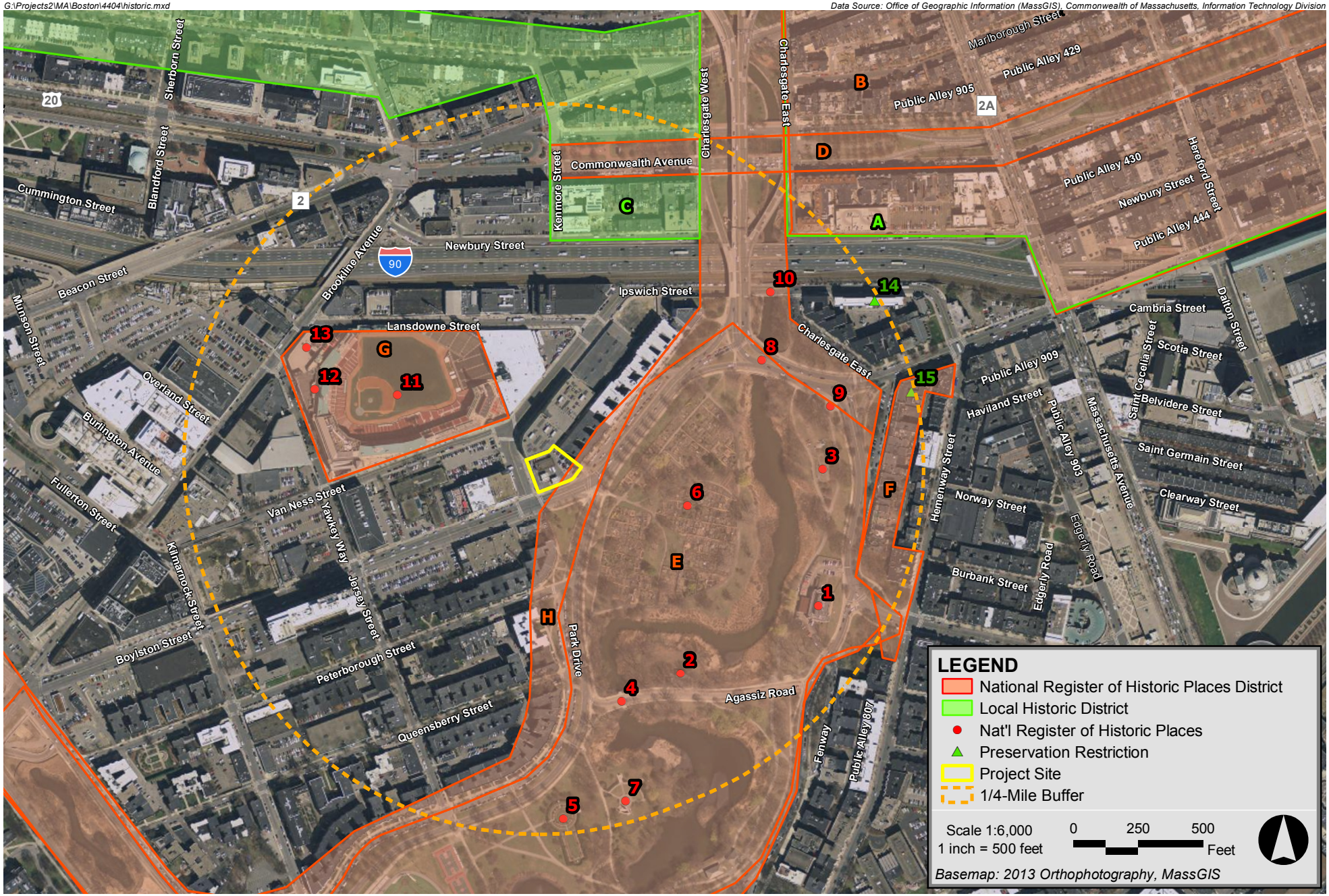
No.	Historic Resource	Address	Designation*
A	Back Bay Architectural District	Roughly bounded by Back St., Embankment Rd. and Arlington St., Boylston St. and Charlesgate East	LHD
B	Back Bay Historic District	Roughly bounded by Arlington, Providence, St. James, Exeter, and Boylston Streets, Charlesgate East, and the Charles River	NRDIS
C	Bay State Road Back Bay Architectural Conservation District	Following Bay State Road and roughly bounded by Back Street, Charlesgate West, Newbury Street, and Grant Street	LHD
D	Commonwealth Avenue Mall	Extends ten blocks from Arlington Street to Kenmore Square connecting the Public Garden to the Fens	NRDIS, LHD, LL

Table 6-1 Historic Resources in the Vicinity of the Project Site (Continued)

No.	Historic Resource	Address	Designation*
E	Back Bay Fens	Roughly bound by Brookline Avenue, Park Drive, Boylston Street, and Fenway	NRDIS, LL
F	Fenway-Boylston Street Historic District	Roughly bound by Boylston Street, Fenway, Westland Avenue, and Hemenway St.	NRDIS
G	Fenway Park	Roughly bounded by Brookline Avenue, Yawkey Way, Van Ness Street and Lansdowne St.	NRIND
H	Olmstead Park	Roughly bound by Brookline Avenue, Park Drive, Boylston Street, and Fenway	NRDIS
1	Boston Fire Alarm Headquarters Building	The Fenway	NRDIS, LL
2	Agassiz Road Gate House	Agassiz Road	NRDIS, LL
3	Mother's Rest Childrens Playground	Boylston Street	NRDIS, LL
4	Agassiz Road Bridge	Agassiz Road	NRDIS, LL
5	Back Bay Fens Rose Garden	Park Drive	NRIND, LL
6	Back Bay Fens Victory Garden	Park Drive	NRIND, LL
7	Back Bay Fens World War II Memorial	Park Drive	NRIND, LL
8	Boylston Street Bridge	Boylston Street	NRIND, LL
9	John Boyle O'Reily Memorial	Boylston Street	NRIND, LL
10	Ipswich Street Bridge over Muddy River	Ipswich Street	NRDIS
11	Fenway Park	Roughly bounded by Brookline Avenue, Yawkey Way, Van Ness Street and Lansdowne St.	NRIND
12	Fenway Park Rooftop Structures	416-426 Boylston St.	NRDIS, LL
13	John R. Smith Building	64-78 Brookline Ave.	NRIND
14	Fenway Studios Building	30 Ipswich St.	NRIND, NHL
15	Massachusetts Historical Society Building	1154 Boylston Street	NRDIS, NRIND, NHL

*Designation Legend

NRIND	Individually listed on the National Register of Historic Places
NRDIS	National Register of Historic Places historic district
NHL	National Historic Landmark
LHD	Local Historic District
LL	Local Landmark



Fenway Hotel Boston, Massachusetts

Epsilon Associates Inc.

Figure 6-1
Historic Resources

6.3 Archaeological Resources Within the Project Site

A review of Massachusetts Historical Commission's online archaeological base maps was conducted on October 10, 2017. It found no known archeological sites within the Project site or the immediate vicinity.

6.4 Potential Impacts to Historic Resources

6.4.1 Demolition of Existing Buildings

The proposed Project will require the demolition of the existing building; a shell gas station, service center and convenience store constructed ca 1950 as well as the two fuel pump islands constructed in 1995 located within the Project site. Neither the building nor the fuel pump islands have been found to be eligible for listing on the National Register of Historic Places. Additionally, the building has had some level of alteration, including the installation of porcelain enamel siding and reinforced fiberglass panels on the exterior walls in 1970. The Boston Landmarks Commission (BLC) will be afforded the opportunity to review the proposed demolition through the Article 85 Demolition Delay review process.

6.4.2 Urban Design

As described previously in Chapter 5, The Project has been designed to reflect both its context and its intended use. The Project has been designed to take into consideration the historic characteristics of the surrounding buildings and neighborhoods, but is executed in a manner that clearly reads as new. The proposed design evokes a more contemporary look, one that speaks to the use of the building. By both "fitting in and standing out" at the same time, the Project will contribute to the transformation of the neighborhood.

Due to the Project site's proximity to Fenway Park, improving pedestrian circulation on the sidewalk is important. The ground floor of the building will be pulled in along Ipswich Street to not only allow for wider sidewalks but also for a retreat space for the hotel entrance at what is known to be a very crowded corner, especially on a game day. In addition to pulling the building in to enhance the entrance experience, there will be a canopy that overhangs the sidewalk which will introduce light and bring the hotel experience out into the public realm, enhancing the pedestrian experience.

The elevations and massing are organized by a strong base element to ground the building and identify the Project from its pedestrian and vehicular approaches. As the massing moves around the site from the west to the eastern corner, the language of the façade adjusts from an organized grouping of bays relating to the brownstones to a more contemporary treatment of stacked floor to ceiling glazing that varies in location to provide dramatic views to the gardens and also add interest and a strong backdrop to the street. As the Project turns the corner on Ipswich street there is a slight change in the rhythm to a larger scale, more industrial pattern, while keeping the materials in the same masonry

character. The corner also provides an opportunity to have a unique moment at the upper floors that holds the corner, defines the upper floor setback, and adds a directionality to the building as it looks down Boylston Street.

6.4.3 Shadow Impacts to Historic Resources

A shadow impact analysis was conducted to investigate shadow impacts from the Project during three time periods (9:00 a.m., 12:00 noon, and 3:00 p.m.) during the vernal equinox (March 21), summer solstice (June 21), autumnal equinox (September 21), and the winter solstice (December 21). In addition, shadow studies were conducted for the 6:00 p.m. period during the summer solstice and autumnal equinox. The shadow analysis presents net new shadow from the building, as well as the existing shadow, and illustrates the incremental impact of the Project.

As illustrated in the shadow study diagrams (Figures 3.2-1 to 3.2-14), during isolated time periods the Project will cast minimal net new shadow on areas within the Olmstead Park System and Back Bay Fens along a portion of Boylston Street. New shadow on historic resources is limited to new shadow at 6:00 p.m. on June 21 and 6:00 p.m. on September 21. The Project will not cast new shadow on Fenway Park. Net new shadow created by the Project will have no significant impacts on historic resources.

6.5 Consistency with Other Historic Reviews

6.5.1 Boston Landmarks Commission Article 80 Review

The submission of this PNF initiates review of the Project by the BLC under the City's Article 80 Review process.

6.5.2 Boston Landmarks Commission Article 85 Review

The proposed demolition of the building on the Project site will be subject to review by the Boston Landmarks Commission under Article 85 of the Boston Zoning Code. An Article 85 Application for each property will be submitted to the BLC.

6.5.3 Massachusetts Historical Commission

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. If a state permit is required for the Project, the MHC review process will be initiated through the filing of an MHC Project Notification Form as prescribed in MHC's governing regulations.

Chapter 7.0

Infrastructure

7.0 INFRASTRUCTURE

7.1 Introduction

The Infrastructure Systems Component outlines the existing utilities surrounding the Project site, the connections required to provide service to the Project, and any impacts on the existing utility systems that may result from the construction of the Project. The following utility systems are discussed herein:

- Sewer
- Domestic water
- Fire protection
- Drainage
- Natural gas
- Electricity
- Telecommunications

The Project includes the demolition of an existing gas station with two service bays. The Project will comprise of the construction of a hotel with 8 floors with proposed parking underground and an approximately 150 seat restaurant on the ground floor.

7.2 Wastewater

7.2.1 Sewer Infrastructure

The Boston Water and Sewer Commission (BWSC) owns and maintains the sewer system that services the City of Boston. The BWSC sewer system connects to the Massachusetts Water Resources Authority (MWRA) interceptors for conveyance, treatment, and disposal through the MWRA Deer Island Wastewater Treatment Plant. Existing BWSC combined sewer mains are located in Ipswich Street, Private Alley 938, and Boylston Street adjacent to the Project site.

Private Alley 938

There is an 18-inch by 20-inch BWSC combined sewer main in Private Alley 938 which flows in an westerly direction, joining with another combined sewer main to a 30-inch by 36-inch BWSC combined sewer main in Ipswich Street. The 30-inch by 36-inch BWSC combined sewer main then flows into a 32-inch by 42-inch combined sewer main which ultimately flows to the MWRA Deer Island Waste Water Treatment Plant for treatment and disposal.

Ipswich Street

There is a 30-inch by 36-inch BWSC combined sewer main which flows in a southerly direction in Ipswich Street, which then combines with a 32-inch by 42-inch BWSC combined sewer main in Boylston Street. The 32-inch by 42-inch BWSC combined sewer main ultimately flows to the MWRA Deer Island Waste Water Treatment Plant for treatment and disposal.

Boylston Street

There is a 32-inch by 42-inch BWSC combined sewer main in Boylston Street which flows in a westerly direction, joined with 30-inch by 36-inch BWSC combined sewer main as a 32-inch by 42-inch BWSC sewer main. That flow ultimately ends up at the MWRA Deer Island Waste Water Treatment Plant for treatment and disposal.

The existing sewer system is illustrated in Figure 7-1.

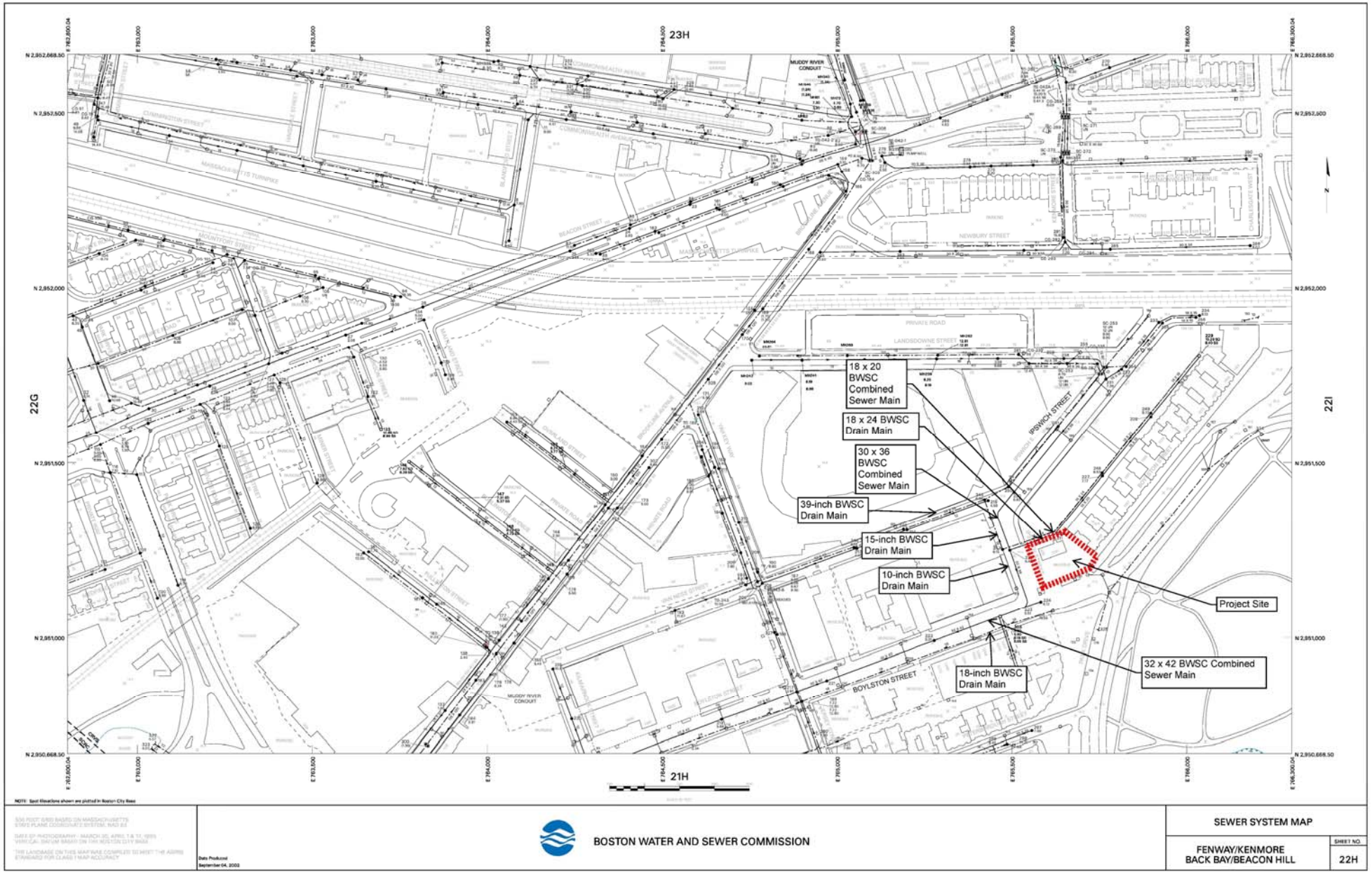
The Proponent will work with BWSC to determine where existing sewer connections to the Project site are located.

The Project's existing sanitary flows were estimated using 310 CMR 15.203 for gas station uses. 310 CMR 15.203 lists typical sewage generation values by the site use and are conservative values for estimating the sewage flows from sites. The 310 CMR 15.203 values are used to evaluate new sewage flows, or to estimate existing sewer flows to determine the approximate increase in sewer flows due to the Project.

There is a gas station with two service bays, and nine islands on-site as well as a convenience store. The existing average daily sewage generation is estimated to be approximately 1050 gallons per day (gpd). The existing building program is summarized in Table 7-1.

7.2.2 Wastewater Generation

The Project's sewage generation rates were estimated using 314 CMR 15.00 and the proposed building program. 314 CMR 15.00 lists typical sewage generation values for the proposed building use, as shown in Table 7-1. Typical generation values are conservative values for estimating the sewage flows from new construction.



Fenway Hotel Boston, Massachusetts

Nitsch Engineering

Figure 7-1

Existing Sewer System

Table 7-1 Proposed Project Wastewater Generation

Use	Size/Unit	310 CMR Value (gpd/unit)	Total Flow (gpd)
Existing Restaurant (from existing water billing data)			
Gas Station	8 islands	75/island	600
	2 bays	125/bay	250
Retail	1 store	Min. 200	200
		Total Existing Sewer Flow	**1,050**
Proposed Hotel Building (using average 314 CMR values)			
Hotel Rooms	184 bedrooms	110/bedroom	20,240
restaurant/dining	150 seats	35/seat	5,250
		Total Proposed sewer flows	**25,490**
Increase in sewer flows (gpd):			**24,440**

7.2.3 Proposed Conditions

The proposed buildings will require new sanitary sewer connections to the BWSC sewer system. Improvements to and connections to BWSC infrastructure will be reviewed as part of the BWSC's Site Plan Review process for the Project. This process will include a comprehensive design review of the proposed service connections, an assessment of Project demands and system capacity, and the establishment of service accounts. Coordination with BWSC will include review and approval of the design, capacity, connections, and flow increase resulting from the proposed discharges to the sanitary sewer system. In total, the complete Project sewer generation is expected to increase wastewater flows by approximately 24,440 gpd for the Project. Approval for the increase in sanitary flow will come from BWSC.

New sewer services resulting from the Project will connect to the existing sanitary sewer mains in Ipswich Street and/or Boylston Street.

7.2.4 Sewage Capacity and Impacts

The adjacent roadway sewer systems in Ipswich Street, Private Alley 938 and Boylston Street and potential building service connections to the sewer system were analyzed.

Table 7-2 indicates the hydraulic capacity of the existing 30-inch by 36-inch sewer main in Ipswich Street, 18-inch by 20-inch sewer main in Private Alley 938, and the 32-inch by 42-inch sewer main in Boylston Street. The minimum hydraulic capacity is 35.74 million gallons per day (MGD) or 55.29 cubic feet per second (CFS) for the 30-inch by 36-inch

sewer main in Ipswich Street, 3.28 MGD or 5.07 CFS for the 18-inch by 20-inch sewer main in Private Alley 938, and 21.95 MGD 33.96 CFS for the 32-inch by 42-inch sewer main in Boylston Street.

Based on an average daily flow estimate for the Project of 25,490 gpd or .0254 MGD, an increase of 24,440 gpd or .0244 MGD from the existing buildings; and with a factor of safety estimate of 10 (total estimate = 0.0244 MGD x 10 = 0.24 MGD), no capacity problems are expected within the BWSC sewer systems in Ipswich Street, Private Alley 938, or Boylston Street.

Table 7-2 Sewer Hydraulic Capacity Analysis

Manhole (BWSC Number)	Distance (feet)	Invert Elevation (up)	Invert Elevation (down)	Slope (%)	Dia. (in)	Manning's Number	Flow Capacity (cfs)	Flow Capacity (MGD)
Ipswich Street								
225 to 203	258	6.45	5.8	0.3%	30x36	0.015	55.29	35.74
						Minimum Flow Analyzed:	55.29	35.74
Private Alley 938								
226 to 225	138	6.72	6.45	0.2%	18x20	0.015	5.07	3.28
						Minimum Flow Analyzed	5.07	3.28
Boylston Street								
224 to 203	125	6.12	5.80	0.3%	32x42	0.015	33.96	21.95
						Minimum Flow Analyzed:	33.96	21.95

Notes:
1. Manhole numbers and Inverts taken from BWSC Sewer system GIS Map received on Wednesday, September 20, 2017.
2. Flow Calculations based on Manning Equation

7.3 Water Supply

7.3.1 Water Infrastructure

Water for the Project site will be provided by the BWSC. There are five water systems within the City, and these provide service to portions of the City based on ground surface elevation. The five systems are southern low (commonly known as low service), southern high (commonly known as high service), southern extra high, northern low, and northern high. Water mains are labeled by their pipe size, year installed, pipe material, and year cement lined (CL), if applicable. There are existing BWSC water mains in Ipswich Street and in Boylston Street.

There is a 12-inch southern low main in Ipswich Street, and a 12-inch southern low main to a 16-inch southern low main in Boylston Street. Record Drawings indicate that the existing building shares an 8-inch water service and fire protection service which connects to the 12-inch water main in Boylston Street. The existing BWSC water system is shown in Figure 7-2.

The existing water system is illustrated in Figure 7-2.

7.3.2 Anticipated Water Consumption

The Project's water demand estimate for domestic services is based on the Project's estimated sewage generation, described above. A conservative factor of 1.1 (10%) is applied to the estimated average daily wastewater flows calculated with 314 CMR 15.00 values to account for consumption, system losses and other usages to estimate an average daily water demand. The Project's estimated domestic water demand is 28,039 gpd. The water for the Project will be supplied by the BWSC systems in Ipswich Street and/or in Boylston Street.

7.3.3 Existing Water Capacity and Impacts

BWSC record flow test data containing actual flow and pressure for hydrants within the vicinity of the Project site was requested by the Proponent. Hydrant flow data was available for one hydrant located on the northwest corner of the intersection of Ipswich Street and Boylston Street. The existing hydrant flow data is shown in Table 7-3.

Table 7-3 Existing Hydrant Flow Data

Flow Hydrant Number	Date of Test	Static Pressure (psi)	Residual Pressure (psi)	Total Flow (gpm)
H98	10/04/2017	75	72	1736

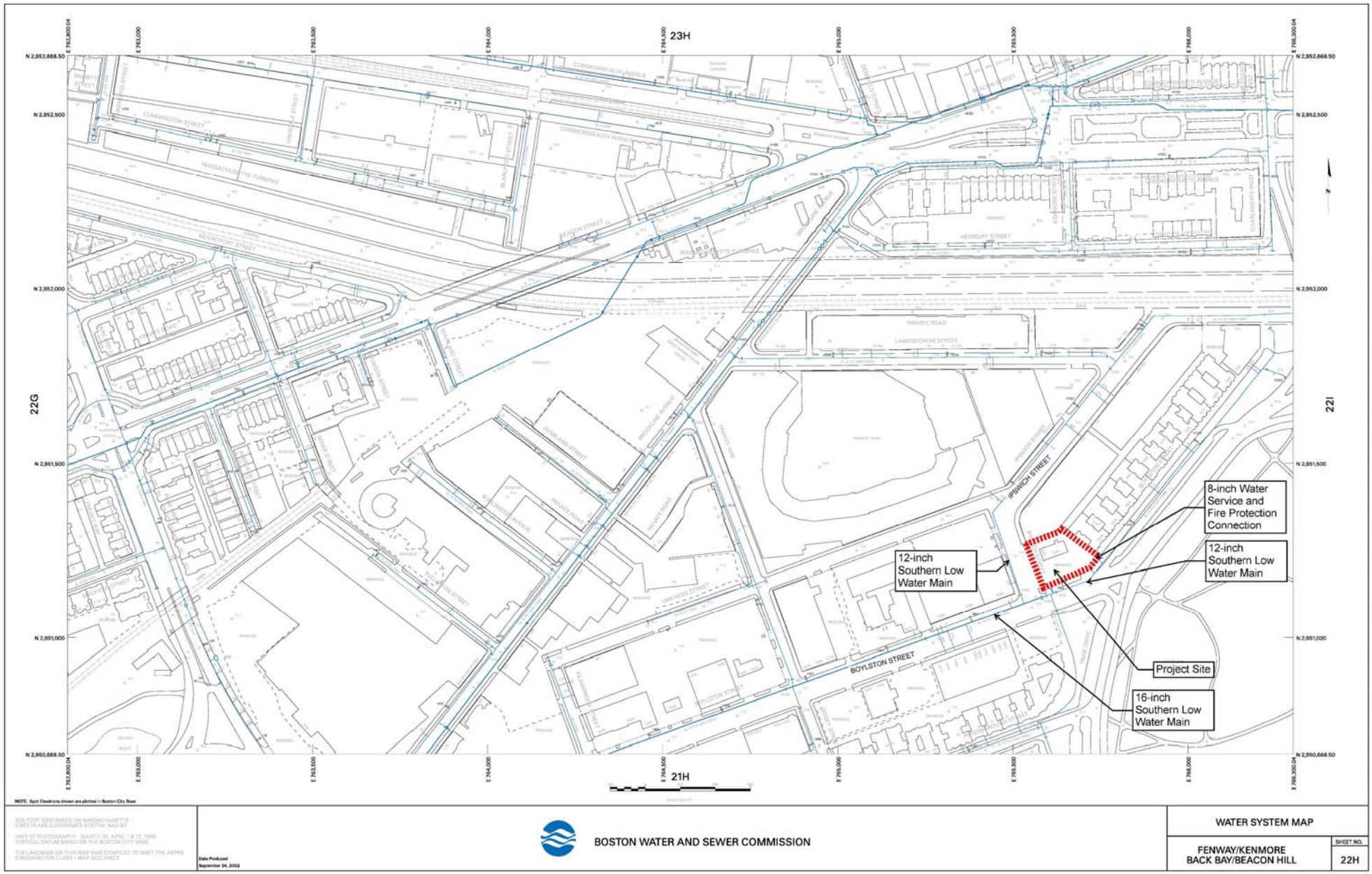
Note: Data provided by BWSC on October 10, 2017.

7.3.4 Proposed Project

The domestic and fire protection water services for the Project will connect to the existing BWSC water mains in Ipswich Street and/or in Boylston Street.

The proposed Project's impacts to the existing water system will be reviewed as part of the BWSC's Site Plan Review process.

The domestic and fire protection water service connections required for the Project will meet the applicable City and State codes and standards, including cross-connection backflow prevention. Compliance with the standards for the domestic water system service connection will be reviewed as part of BWSC's Site Plan Review Process. This review will include sizing of domestic water and fire protection services, calculation of meter sizing, backflow prevention design, and location of hydrants and siamese connections that conform to BWSC and Boston Fire Department requirements.



Fenway Hotel Boston, Massachusetts

Nitsch Engineering

Figure 7-2

Existing Water System

7.3.5 Proposed Impacts

Water capacity problems are not anticipated within this system as a result of the Project's construction.

Efforts to reduce water consumption will be made. Aeration fixtures and appliances will be chosen for water conservation qualities. In public areas, sensor operated faucets and toilets will be installed.

New water services will be installed in accordance with the latest local, state, and federal codes and standards. Backflow preventers will be installed for the fire protection service connections. New meters will be installed with Meter Transmitter Units (MTU's) as part of the BWSC's Automatic Meter Reading (AMR) system.

7.4 Stormwater

7.4.1 Existing Stormwater Infrastructure

There are existing BWSC combined sewer mains in Ipswich Street, Private Alley 938, and Boylston Street adjacent to the Project site, as previously described in Section 7.2.1. The existing drainage follows a similar path as the sanitary sewer through combined sewer mains in Private Alley 938, Ipswich Street and Boylston Street before ultimately flowing to the MWRA Deer Island Waste Water Treatment Plant for treatment and disposal.

Private Alley 938

There is an 18-inch by 24-inch BWSC drain main in Private Alley 938 which flows in a westerly direction, converting to a 20-inch BWSC drain main in Ipswich Street. The 20-inch BWSC drain main flows into a 15-inch then a 39-inch BWSC combined sewer main, respectively, before ultimately flowing to the MWRA Deer Island Waste Water Treatment Plant for treatment and disposal.

Ipswich Street

There is an existing 10-inch BWSC drain line which flows from a catch basin which connects to a 15-inch BWSC drain main which flows in a northerly direction in Ipswich Street. An existing 20-inch BWSC drain main connects with the afore mentioned 15-inch BWSC drain as well. The 15-inch BWSC drain then combines with a 39-inch BWSC combined sewer main which ultimately flows to the MWRA Deer Island Waste Water Treatment Plant for treatment and disposal.

Boylston Street

There is a 12-inch BWSC drain line in Boylston Street which flows in a westerly direction, increasing to an 18-inch BWSC drain main in Boylston Street. Three catch basins connect to the 32-inch by 42-inch BWSC combined sewer main in Boylston Street. The 32-inch by 42-inch combined main ultimately flows to the MWRA Deer Island Waste Water Treatment Plant for treatment and disposal.

The existing BWSC storm drain system is illustrated in Figure 7-1.

Existing stormwater is currently captured by existing closed drainage systems incorporated into the existing building. Stormwater in the roadways is captured by existing catch basins, which flow to the existing BWSC combined sewer mains in Boylston Street and Ipswich Street.

7.4.2 Proposed Project

The existing site is 97-percent (97%) impervious area comprised of one building and associated paving. The Project site will consist of mostly building roof and paved pedestrian sidewalks. The Project will meet or reduce the existing peak rates of stormwater discharge and volumes of stormwater runoff from the site, and promote runoff recharge to the greatest extent possible.

The Project will infiltrate one-inch of stormwater runoff from impervious areas into the ground to the greatest extent possible. Different approaches to stormwater recharge will be assessed. It is anticipated that the stormwater recharge systems will work to passively infiltrate runoff into the ground with recharge wells, a gravity recharge system, or a combination of storage tanks in the building and pumps. The underground recharge system, and any required site closed drainage systems, will be designed so that there will be no increase in the peak rate of stormwater discharge from the Project site in the developed condition compared to the existing condition.

Improvements and connections to BWSC infrastructure will be reviewed as part of BWSC's Site Plan Review process. The process will include a comprehensive design review of the proposed service connections, and assessment of Project demands and system capacity.

7.4.3 Water Quality

The Project will not affect the water quality of nearby water bodies. Erosion and sediment control measures will be implemented during construction to minimize the transport of site soils to off-site areas and BWSC storm drain systems. During construction, existing catch basins will be protected with filter fabric, straw bales and/or crushed stone, to provide for sediment removal from runoff. These controls will be inspected and maintained throughout the construction phase until the areas of disturbance have been stabilized through the placement of pavement, structure, or vegetative cover.

All necessary dewatering will be conducted in accordance with applicable MWRA and BWSC discharge permits. Once construction is complete, the Project will be in compliance with local and state stormwater management policies, as described below.

The BPDA oversees proposed projects within the Groundwater Conservation Overlay District under Article 32. The Project parcel is located within the City of Boston's Groundwater Conservation Overlay District (GCOD). The purpose of the article is to prevent deterioration of and, where necessary, promote the restoration of, groundwater levels in the city of Boston, to protect and enhance the city's historic neighborhoods and structures, reduce surface water runoff and water pollution, and maintain public safety.

In compliance with Article 32, the Project will promote infiltration of rainwater into the ground by capturing within a suitably-designed system a volume of rainfall on the lot equivalent to no less than 1.0 inch across that portion of the surface area of the lot to be occupied by the Project. The Project will result in no negative impacts on groundwater levels within the lot in question or adjacent lots, subject to the terms of any (i) dewatering permit or (ii) cooperation agreement entered into by the Proponent and the BPDA, to the extent that such agreement provides standards for groundwater protection during construction.

7.4.4 MassDEP Stormwater Management Standards

In March 1997, MassDEP adopted a Stormwater Management Policy to address non-point source pollution. In 1997, MassDEP published the Massachusetts Stormwater Handbook as guidance on the Stormwater Policy, which was revised in February 2008. The Policy prescribes specific stormwater management standards for development projects, including urban pollutant removal criteria for projects that may impact environmental resource areas. Compliance is achieved through the implementation of Best Management Practices (BMPs) in the stormwater management design. The Policy is administered locally pursuant to MGL Ch. 131, s. 40.

A brief explanation of each Policy Standard and the system compliance is provided below.

Standard #1: *No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.*

Compliance: The proposed design will comply with this Standard. The design will incorporate the appropriate stormwater treatment, and no new untreated stormwater will be directly discharged to, nor will erosion be caused to wetlands or waters of the Commonwealth as a result of stormwater discharges related to the Project.

Standard #2: *Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR.*

Compliance: The proposed design will comply with this Standard. The existing discharge rate will be met or decreased as a result of the improvements associated with the Project.

Standard #3: *Loss of annual recharge to groundwater shall be eliminated or minimized through the use of infiltration measures including environmental sensitive site design, low impact development techniques, stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.*

Compliance: The Project will comply with this Standard to the maximum extent practicable.

Standard #4: *Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). This Standard is met when:*

a. *Suitable practices for source control and pollution prevention are identified in a long-term pollution prevention plan, and thereafter are implemented and maintained;*

b. *Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and*

c. *Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook.*

Compliance: The proposed design will comply with this Standard. Within the Project's limit of work, there will be mostly building roof, paved sidewalk, and roadway areas. Runoff from paved areas that would contribute unwanted sediments or pollutants to the existing storm drain system will be collected by deep sump, hooded catch basins, and conveyed through water quality units before discharging into the BWSC system.

Standard #5: *For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution*

prevention all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

Compliance: The proposed design will comply with this Standard. The Project is not associated with Higher Potential Pollutant Loads (per the Policy, Volume I, page 1-6).

Standard #6: *Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site-specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A "storm water discharge" as defined in 314 CMR 3.04(2)(a)1 or (b) to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.*

Compliance: The proposed design will comply with this Standard. The Project will not discharge untreated stormwater to a sensitive area or any other area.

Standard #7: *A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural stormwater best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.*

Compliance: The proposed design will meet this Standard to the fullest extent possible.

Standard #8: *A plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented.*

Compliance: The Project will comply with this Standard. Sedimentation and erosion controls will be incorporated as part of the design of these projects and employed during construction.

Standard 9: *A Long-Term Operation and Maintenance (O&M) Plan shall be developed and implemented to ensure that stormwater management systems function as designed.*

Compliance: The Project will comply with this standard. An O&M Plan, including long-term BMP operation requirements, will be prepared for the proposed Project and will assure proper maintenance and functioning of the stormwater management system.

Standard 10: *All illicit discharges to the stormwater management system are prohibited.*

Compliance: The Project will comply with this Standard. There will be no illicit connections associated with the Proposed Project.

7.5 Electrical Service

Eversource owns and maintains the electrical infrastructure in the vicinity of the Project site. Final service and appropriate connection points will be coordinated with the private utility providers as the Project design progresses.

7.6 Telecommunications System

Verizon, Comcast and RCN provide cable and telephone services in the vicinity of the Project site. All telecommunications connections with be coordinated with the appropriate telecommunications provider as the Project design progresses.

7.7 Gas Systems

National Grid provides natural gas service in the vicinity of the Project site. Final service and appropriate connection points will be coordinated with National Grid as the Project design progresses.

7.8 Utility Protection During Construction

Existing public and private infrastructure located within nearby public rights-of-way will be protected during Project construction. The installation of proposed utility connections within public ways will be undertaken in accordance with BWSC, Boston Public Works Department, the Dig-Safe Program, and applicable utility company requirements. Specific methods for constructing proposed utilities where they are near to, or connect with, existing water, sewer, and drain facilities will be reviewed by the BWSC as part of its Site Plan Review process. All necessary permits will be obtained before the commencement of work.

The Proponent will continue to work and coordinate with the BWSC and the utility companies to ensure safe and coordinated utility operations in connection with the Project.

7.9 Conservation of Resources

The State Building Code requires the use of water-conserving fixtures. Water conservation measures such as low-flow toilets and restricted flow faucets will help reduce the domestic water demand on the existing distribution system. The installation of sensor-operated sinks with water conserving aerators and sensor-operated toilets in all non-residential restrooms will be incorporated into the design plans for the Project.

Chapter 8.0

Coordination with other Governmental Agencies

8.0 COORDINATION WITH OTHER GOVERNMENTAL AGENCIES

8.1 Architectural Access Board Requirements

The Project will comply with the requirements of the Massachusetts Architectural Access Board and will be designed to comply with the standards of the Americans with Disabilities Act. The Accessibility Checklist is included as Appendix D.

8.2 Massachusetts Environmental Policy Act

The Proponent does not expect that the Project will require review by the Massachusetts Environmental Policy Act (MEPA) Office of the Massachusetts Executive Office of Energy and Environmental Affairs. The Project does not exceed any of the review thresholds for the filing of an Environmental Notification Form under MEPA.

8.3 Massachusetts Historical Commission

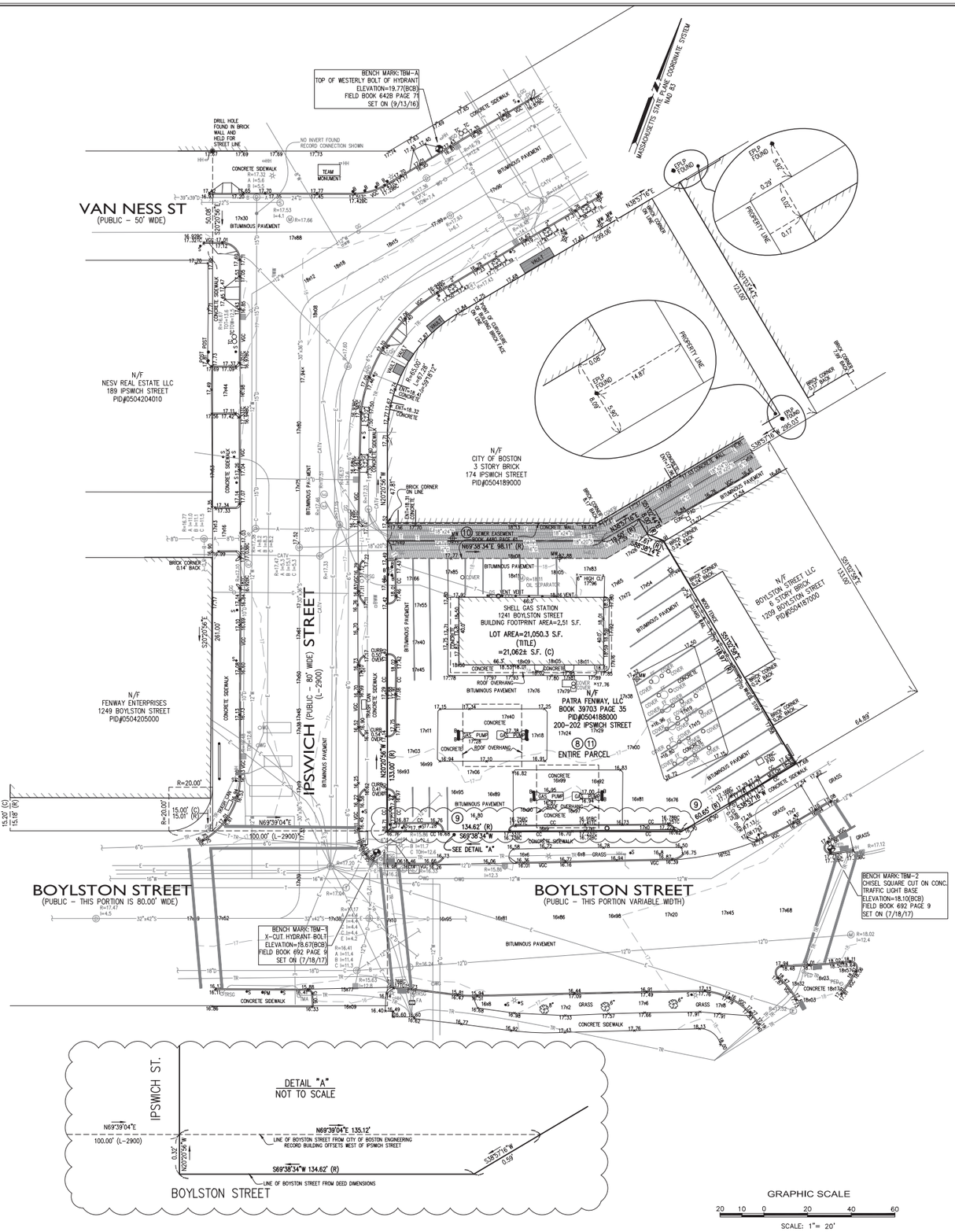
The MHC has review authority over projects requiring state funding, licensing, permitting and/or approvals that may have direct or indirect impacts to properties listed in the State Register of Historic Places. If a state permit is required for the Project, the MHC review process will be initiated through the filing of an MHC Project Notification Form as prescribed in MHC's governing regulations.

8.4 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 BPDA as part of the Article 80 process.

Appendix A

Site Survey



FIRST AMERICAN TITLE INSURANCE COMPANY
SCHEDULE B - SECTION II
EXCEPTIONS FROM COVERAGE

COMMITMENT NUMBER: NCN-855696-DC72 EFFECTIVE DATE: JULY 6, 2017 AT 7:30 A.M.

SCHEDULE B OF THE POLICY OR POLICIES TO BE ISSUED WILL CONTAIN EXCEPTIONS TO THE FOLLOWING MATTERS UNLESS THE SAME ARE DISPOSED OF TO THE SATISFACTION OF THE COMPANY:

1. ANY FACTS, RIGHTS, INTERESTS, OR CLAIMS THAT ARE NOT SHOWN BY THE PUBLIC RECORDS BUT THAT COULD BE ASCERTAINED BY AN INSPECTION OF THE LAND OR THAT MAY BE ASSERTED BY PERSONS IN POSSESSION OF THE LAND.
2. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND AND NOT SHOWN BY THE PUBLIC RECORDS.
3. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR OR MATERIAL THERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW AND NOT SHOWN IN THE PUBLIC RECORDS.
4. REAL ESTATE TAXES AND MUNICIPAL CHARGES WHICH MAY CONSTITUTE LIENS.
5. TITLE TO AND RIGHTS OF THE PUBLIC AND OTHERS ENTITLED THERETO IN AND TO THOSE PORTIONS OF THE INSURED PREMISES LYING WITHIN THE BOUNDS OF ADJACENT STREETS, ROADS, AND WAYS.
6. THE EXACT ACREAGE OR SQUARE FOOTAGE BEING OTHER THAN AS STATED IN SCHEDULE A OR THE PLAN(S) THEREIN REFERRED TO.
7. MORTGAGE AND SECURITY AGREEMENT FROM PATRA FENWAY, LLC TO PEOPLES FEDERAL SAVINGS BANK IN THE ORIGINAL PRINCIPAL AMOUNT OF $3,500,000 DATED MAY 31, 2006, RECORDED IN BOOK 39703, PAGE 40. (NOT A SURVEY MATTER)
8. CONDITIONAL ASSIGNMENT OF LEASES AND RENTS FROM PATRA FENWAY, LLC TO PEOPLES FEDERAL SAVINGS BANK DATED MAY 31, 2006, RECORDED IN BOOK 39703, PAGE 51. (NOT A SURVEY MATTER)
9. RIGHT OF THE CITY OF BOSTON TO SLOPE AND BANK THE FILLING OF BOYLSTON STREET AS SET FORTH IN AN INSTRUMENT OF TAKING, RECORDED WITH SAID DEEDS, BOOK 2472, PAGE 130. (AS SHOWN ON SURVEY)
10. RIGHT AND EASEMENT OF THE CITY OF BOSTON IN SAID PASSAGEWAY FOR THE PURPOSE OF LAYING AND MAINTAINING SEWAGE WORKS AS SET FORTH IN AN INSTRUMENT RECORDED WITH SAID DEEDS, BOOK 4480, PAGE 61. (AS SHOWN ON SURVEY)
11. NOTICE OF OPTION TO LEASE BY AND BETWEEN PATRA FENWAY, LLC AND 1241 BOYLSTON STREET, LLC, DATED JUNE 28, 2017 RECORDED IN BOOK 58183, PAGE 104. (NOT A SURVEY MATTER)

LEGAL DESCRIPTION
(TITLE COMMITMENT NO. NCS-855696-DC72)

A CERTAIN PARCEL OF LAND SITUATED IN CITY OF BOSTON, COUNTY OF SUFFOLK, STATE OF MASSACHUSETTS BEING ONE OF THREE PARCELS OF LAND SHOWN ON A PLAN ENTITLED, "PLAN SHOWING LAND IN BOSTON, MASS., A.C. PETERS, CIVIL ENGINEER," DATED JULY 26, 1929 AND RECORDED WITH SUFFOLK COUNTY DEEDS, BOOK 5121, PAGE 126, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

SOUTHERLY: BY BOYLSTON STREET, 134.62';
WESTERLY: BY IPSWICH STREET, 133.00';
NORTHERLY: BY CENTER LINE OF A 16' PASSAGEWAY, 98.11';
NORTHWESTERLY: BY THE CENTER OF SAID PASSAGEWAY, 19.50';
NORTHEASTERLY: BY SAID PASSAGEWAY, 8';
NORTHEASTERLY: AGAIN BY LAND, NOW OR FORMERLY OF CHARLES H. CONNOLLY, 7.61';
NORTHEASTERLY: AGAIN BY SAID LAND, NOW OR FORMERLY OF SAID CHARLES H. CONNOLLY, 118.97';
SOUTHEASTERLY: BY BOYLSTON ROAD, 60.65'

CONTAINING 21,050.3 SQUARE FEET OF LAND ACCORDING TO SAID PLAN OR HOWEVER OTHERWISE SAID PREMISES MAY BE BOUNDED, MEASURED OR DESCRIBED.
TOGETHER WITH ALL THE RIGHT TO USE THE NORTHERLY HALF TO SAID PASSAGEWAY IN COMMON WITH OTHERS ENTITLED THERETO.

UTILITY INFORMATION STATEMENT

1. THE SUB-SURFACE UTILITY INFORMATION SHOWN HEREON IS COMPILED BASED ON FIELD SURVEY INFORMATION, RECORD INFORMATION AS SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES, AND PLAN INFORMATION SUPPLIED BY THE CLIENT, IF ANY; THEREFORE WE CANNOT GUARANTEE THE ACCURACY OF SAID COMPILED SUB-SURFACE INFORMATION TO ANY CERTAIN DEGREE OF STATED TOLERANCE. ONLY PHYSICALLY LOCATED SUB-SURFACE UTILITY FEATURES FALL WITHIN NORMAL STANDARD OF CARE ACCURACIES.
2. THE LOCATIONS OF UNDERGROUND PIPES, CONDUITS, AND STRUCTURES HAVE BEEN DETERMINED FROM SAID INFORMATION, AND ARE APPROXIMATE ONLY. THE LOCATIONS OF ANY UNDERGROUND STRUCTURES, NOT VISIBLY OBSERVED AND LOCATED, CAN VARY FROM THEIR ACTUAL LOCATIONS.
3. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED.
4. THE STATUS OF UTILITIES, WHETHER ACTIVE, ABANDONED, OR REMOVED, IS AN UNKNOWN CONDITION AS FAR AS OUR COMPILATION OF THIS INFORMATION.
5. IT IS INCUMBENT UPON INDIVIDUALS USING THIS INFORMATION TO UNDERSTAND THAT COMPILING UTILITY INFORMATION IS NOT EXACT, AND IS SUBJECT TO CHANGE BASED UPON VARYING PLAN INFORMATION RECEIVED AND ACTUAL LOCATIONS.
6. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES IS SUBJECT TO FIELD CONDITIONS, THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS AND OTHER MATTERS.
7. THE PROPER UTILITY ENGINEERING/COMPANY SHOULD BE CONSULTED AND THE ACTUAL LOCATIONS OF SUBSURFACE STRUCTURES SHOULD BE VERIFIED IN THE FIELD (V.I.F.) BEFORE PLANNING FUTURE CONNECTIONS. CONTACT THE DIG SAFE CALL CENTER AT 1-888-344-7233, SEVENTY-TWO HOURS PRIOR TO EXCAVATION, BLASTING, GRADING, AND/OR PAVING.
8. AS OF THE DATE OF THIS PLAN RECORD INFORMATION HAS NOT BEEN RECEIVED BY NITSCH ENGINEERING FOR THE FOLLOWING UTILITIES:

COMCAST

NOTES

1. THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF NITSCH ENGINEERING. IT IS ISSUED TO OTO DEVELOPMENT, LLC FOR PURPOSES RELATED DIRECTLY AND SOLELY TO NITSCH ENGINEERING'S SCOPE OF SERVICES UNDER CONTRACT WITH OTO DEVELOPMENT, LLC FOR SHELL GAS STATION. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT AND PROJECT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN AUTHORIZATION IS GIVEN THEREFOR BY NITSCH ENGINEERING.
2. THE PURPOSE OF THIS PLAN IS TO SHOW EXISTING CONDITIONS SURVEY AS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY WHICH OCCURRED JULY 19, 2017.
3. HORIZONTAL COORDINATES REFER TO NORTH AMERICAN DATUM 1983
4. ELEVATION REFERS TO BOSTON CITY DATUM BASED ON CITY PUBLISHED BENMARK.
5. THE INFORMATION CONTAINED ON THE DISK OR ELECTRONIC DRAWING FILE ACCOMPANYING THIS PLAN MUST BE COMPARED TO THE SEALED AND SIGNED HARD COPY OF THE PLAN TO ENSURE THE ACCURACY OF ALL INFORMATION AND TO ENSURE NO CHANGES, ALTERATIONS, OR MODIFICATIONS HAVE BEEN MADE. RELIANCE SHALL NOT BE MADE ON A DOCUMENT TRANSMITTED BY COMPUTER OR OTHER ELECTRONIC MEANS UNLESS FIRST COMPARED TO THE ORIGINAL SEALED DOCUMENT ISSUED AT THE TIME OF THE SURVEY. DUE TO THE CRITICAL NATURE OF SURVEYING, DATA ACQUISITION, AND AUTOCAD PLAN DEVELOPMENT, IF CRITICAL DIMENSIONAL INFORMATION IS NEEDED AND IS NOT SPECIFICALLY SHOWN ON THE ELECTRONIC DRAWING FILE, PLEASE CONTACT NITSCH ENGINEERING.

LEGEND

■	CATCH BASIN
C	CABLE TELEVISION MANHOLE
D	DRAIN MANHOLE
E	ELECTRIC MANHOLE
M	MISCELLANEOUS MANHOLE
S	SEWER MANHOLE
T	TELEPHONE MANHOLE
GSO ○	GAS SHUT-OFF
WSO ○	WATER SHUT-OFF
GG ○	GAS GATE
WG ○	WATER GATE
CLEANOUT ○	CLEANOUT
BWW ○	BOSTON WATER WORKS
	FIRE HYDRANT
DS	DOWN SPOUT
	LIGHT POLE
HH ⊙	HAND HOLE
TC ○	TRASH CAN
FACB ■	FIRE ALARM CALL BOX
MP ●	METAL POST
CP ●	CONCRETE POST
PM ●	PARKING METER
S ●	SIGN POST
12"	DECIDUOUS TREE WITH TRUNK DIAMETER
21x43	SPOT ELEVATION
CLF	CHAIN LINK FENCE
VGC	VERTICAL GRANITE CURB
VCC	VERTICAL CONCRETE CURB
WCR	WHEELCHAIR RAMP
R=	RIM ELEVATION EQUALS
I=	INVERT ELEVATION EQUALS
TOH=	TOP OF HOOD ELEVATION EQUALS
NPV	NO PIPES VISIBLE
TOW=	TOP OF WATER
TW	TOP OF WALL ELEVATION
(R)	RECORD
(C)	CALCULATED
CATV	UNDERGROUND CABLE TELEVISION LINE
D	UNDERGROUND DRAIN LINE
E	UNDERGROUND ELECTRIC LINE
G	UNDERGROUND GAS LINE
S	UNDERGROUND SEWER LINE
T	UNDERGROUND TELEPHONE LINE
W	UNDERGROUND WATER LINE
MW	MONITORING WELL
	BENCH MARK

PLAN REFERENCES:
LCP 21757A

CITY OF BOSTON
L-2900
L-2620 PART 1
L-3246
L-4369
L-7928

SUFFOLK COUNTY REGISTRY OF DEEDS
PLAN BOOK 7768 PLAN 190
PLAN BOOK 6602 PLAN 241
PLAN BOOK 5121 PLAN 126
PLAN BOOK 4619 PLAN 305

CITY OF BOSTON ENGINEERING SURVEY FIELD NOTES
BOOK 788 PAGE 72
BOOK 840 PAGE 74

PLAN OF LAND IN BOSTON, MASS
SCALE 1"=40' DATED 2/11/1928
BY ASPINWALL & LINCOLN, CIVIL ENGINEERS

PLAN OF LAND BY WILLIAM H. WHITNEY
CIVIL ENGINEER & SURVEYOR
DATED NOVEMBER 20, 1901

PLAN SHOWING LAND IN BOSTON, MASS.
SCALE 1"=40' DATED 7/26/1929
BY A.C. PETERS CIVIL ENGINEER

NOTE

THE MAILING ADDRESS OF THE LOCUS IS 1241 BOYLSTON STREET.
THE CITY OF BOSTON ASSESSOR ADDRESS OF THE LOCUS IS 200-202 IPSWICH STREET.

TO: PATRA FENWAY, LLC;
1241 BOYLSTON STREET, LLC;
FIRST AMERICAN TITLE INSURANCE COMPANY;
AND EACH OF THEIR RESPECTIVE AFFILIATES, SUCCESSORS AND/OR ASSIGNS.

THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS AND INCLUDES ITEMS 2, 3, 4, 5, 6a, 7a, 7b1, 8, 9, 11, 13, 14, AND 16 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JULY 19, 2017. THE PROPERTY IS LOCATED WITHIN AN AREA HAVING A ZONE DESIGNATION X, AREA DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOOD, BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 25025C0076G WITH A DATE OF IDENTIFICATION OF SEPTEMBER 25, 2009 FOR COMMUNITY NO. 250286 IN SUFFOLK COUNTY, COMMONWEALTH OF MASSACHUSETTS.

ALEXANDER D. DIOTTE, PLS DATE
MASSACHUSETTS REG. NO. 38708
REGISTERED PROFESSIONAL LAND SURVEYOR

Nitsch Engineering
www.nitsch.com
2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472

- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

ALTA/NSPS LAND TITLE INSURANCE SURVEY
SHELL GAS STATION
200-202 IPSWICH STREET, BOSTON, MA

PREPARED FOR:
OTO DEVELOPMENT, LLC
100 DUNBAR STREET, SUITE 402, STARTANBURG, SC 29306

REV.	COMMENTS	DATE
	REVISIONS	

PROJECT #	12413
FILE:	12413_TOP01.dwg
SCALE:	1"= 20'
DATE:	JULY 26, 2017
DES./COMP:	ADD
FIELD BOOK:	692
DRAFTED BY:	TI
CHECKED BY:	

SHEET:
ALTA-1
OF 1 REV.

8/4/2017 11:32 AM
X:\12413_200 Ipswich st\Survey\12413_TOP01.dwg

Appendix B

Transportation

Available Upon Request

Appendix C

Climate Change Preparedness Checklist

Boston Planning & Development Agency
Climate Resiliency Report Summary

boston planning & development agency

Submitted: 12/20/2017 11:16:49

A.1 - Project Information

Project Name:	Fenway Hotel			
Project Address:	1241 Boylston Street			
Filing Type:	Initial (PNF, EPNF, NPC or other substantial filing)			
Filing Contact:	Talya Moked	Epsilon Associates	tmoked@epsilonassociates.com	978 461-6223
Is MEPA approval required?	No	MEPA date:		

A.2 - Project Team

Owner / Developer:	1241 Boylston, LLC
Architect:	Group One Partners
Engineer:	Vanderweil Engineers
Sustainability / LEED:	Epsilon Associates, Inc.
Permitting:	Epsilon Associates, Inc.
Construction Management:	TBD

A.3 - Project Description and Design Conditions

List the principal Building Uses:	Hotel
List the First Floor Uses:	Hotel lobby, restaurant
List any Critical Site Infrastructure and or Building Uses:	

Site and Building:

Site Area (SF):	21,050	Building Area (SF):	106,000
Building Height (Ft):	90	Building Height (Stories):	8
Existing Site Elevation – Low (Ft BCB):	16.71	Existing Site Elevation – High (Ft BCB):	17.89
Proposed Site Elevation – Low (Ft BCB):	16.71	Proposed Site Elevation – High (Ft BCB):	17.68
Proposed First Floor Elevation (Ft BCB):	17	Below grade spaces/levels (#):	1

Article 37 Green Building:

LEED Version - Rating System:	LEED v4 BD+C : New Construction	LEED Certification:	No

Boston Planning & Development Agency
Climate Resiliency Report Summary

boston planning & development agency

Proposed LEED rating:	Silver	Proposed LEED point score (Pts.):	50

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined	Energy Model		
Annual Electric (kWh):	1244862	Peak Electric (kW):	878
Annual Heating (MMbtu/hr):	291	Peak Heating (MMbtu):	6,800
Annual Cooling (Tons/hr):	81.025	Peak Cooling (Tons):	342
Energy Use - Below ASHRAE 90.1 - 2013 (%):	24.8	Have the local utilities reviewed the building energy performance?:	No
Energy Use - Below Mass. Code (%):		Energy Use Intensity (kBtu/SF):	52

Back-up / Emergency Power System

Electrical Generation Output (kW):	350	Number of Power Units:	
System Type (kW):	Combustion Engine	Fuel Source:	Diesel

Emergency and Critical System Loads (in the event of a service interruption)

Electric (kW):	328	Heating (MMbtu/hr):	2,000
		Cooling (Tons/hr):	125

B – Greenhouse Gas Reduction and Net Zero / Net Positive Carbon Building Performance

Reducing greenhouse gas emissions is critical to avoiding more extreme climate change conditions. To achieve the City's goal of carbon-neutrality by 2050 the performance of new buildings will need to progressively improve to carbon net zero and net positive.

B.1 – GHG Emissions - Design Conditions

For this filing - Annual Building GHG Emissions (Tons):

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

A preliminary energy model has been conducted to evaluate energy performance for the building.

Describe building specific passive energy efficiency measures including orientation, massing, building envelop, and systems:

The Project includes a high-performance building envelope.

Describe building specific active energy efficiency measures including high performance equipment, controls, fixtures, and systems:

The Project includes high-performance HVAC equipment, lighting and controls. The Project also includes energy recovery ventilation and EnergyStar equipment.

Describe building specific load reduction strategies including on-site renewable energy, clean energy, and storage systems:

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

Describe any energy efficiency assistance or support provided or to be provided to the project:

The Project team will meet with the utilities to discuss energy efficiency incentives as the design progresses.

B.2 - GHG Reduction - Adaptation Strategies

Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal (by 2050):

Based on the Project's latest energy model, the current design is anticipated to achieve an approximately 33% reduction in GHG emissions, which exceeds the 2020 goal by approximately 8%. In order to evolve in the future, the building will be PV ready.

C - Extreme Heat Events

Annual average temperature in Boston increased by about 2˚F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could be 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90.

C.1 – Extreme Heat - Design Conditions

Temperature Range - Low (Deg.):	8	Temperature Range - High (Deg.):	91
Annual Heating Degree Days:		Annual Cooling Degree Days	

What Extreme Heat Event characteristics will be / have been used for project planning

Days - Above 90° (#):	60	Days - Above 100° (#):	30
Number of Heatwaves / Year (#):	6	Average Duration of Heatwave (Days):	5

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

The Project will use high reflective paving materials and a high-albedo roof.

C.2 - Extreme Heat – Adaptation Strategies

Describe how the building and its systems will be adapted to efficiently manage future higher average temperatures, higher extreme temperatures, additional annual heatwaves, and longer heatwaves:

The building will include high performance HVAC equipment, energy recovery ventilation systems, and new landscaping to reduce the heat island effect.

Describe all mechanical and non-mechanical strategies that will support building functionality and use during extended interruptions of utility services and infrastructure including proposed and future adaptations:

The building will include a generator for life safety systems.

D - Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.

D.1 – Extreme Precipitation - Design Conditions

What is the project design precipitation level? (In. / 24 Hours)	6

Describe all building and site measures for reducing storm water run-off:

The building will include an infiltration system for the first one inch of run-off.

D.2 - Extreme Precipitation - Adaptation Strategies

Describe how site and building systems will be adapted to efficiently accommodate future more significant rain events (e.g. rainwater harvesting, on-site storm water retention, bio swales, green roofs):

Boston Planning & Development Agency
Climate Resiliency Report Summary

boston planning & development agency

E – Sea Level Rise and Storms

Under any plausible greenhouse gas emissions scenario, the sea level in Boston will continue to rise throughout the century. This will increase the number of buildings in Boston susceptible to coastal flooding and the likely frequency of flooding for those already in the floodplain.

Is any portion of the site in a FEMA Special Flood Hazard Area?	No	What Zone:	
What is the current FEMA SFHA Zone Base Flood Elevation for the site (Ft BCB)?			
Is any portion of the site in the BPDA Sea Level Rise Flood Hazard Area (see SLR-FHA online map)?	No		

If you answered YES to either of the above questions, please complete the following questions.
Otherwise you have completed the questionnaire; thank you!

E.1 – Sea Level Rise and Storms – Design Conditions

Proposed projects should identify immediate and future adaptation strategies for managing the flooding scenario represented by the Sea Level Rise Flood Hazard Area (SLR-FHA), which includes 3.2' of sea level rise above 2013 tide levels, an additional 2.5" to account for subsidence, and the 1% Annual Chance Flood. After using the SLR-FHA to identify a project's Sea Level Rise Base Flood Elevation, proponents should calculate the Sea Level Rise Design Flood Elevation by adding 12" of freeboard for buildings, and 24" of freeboard for critical facilities and infrastructure and any ground floor residential units.

What is the Sea Level Rise - Base Flood Elevation for the site (Ft BCB)?			
What is the Sea Level Rise - Design Flood Elevation for the site (Ft BCB)?		First Floor Elevation (Ft BCB):	
What are the Site Elevations at Building (Ft BCB)?		What is the Accessible Route Elevation (Ft BCB)?	

Describe site design strategies for adapting to sea level rise including building access during flood events, elevated site areas, hard and soft barriers, wave / velocity breaks, storm water systems, utility services, etc.:

Describe how the proposed Building Design Flood Elevation will be achieved including dry / wet flood proofing, critical systems protection, utility service protection, temporary flood barriers, waste and drain water back flow prevention, etc.:

Describe how occupants might shelter in place during a flooding event including any emergency power, water, and waste water provisions and the expected availability of any such measures:

Describe any strategies that would support rapid recovery after a weather event:

E.2 – Sea Level Rise and Storms – Adaptation Strategies

Describe future site design and or infrastructure adaptation strategies for responding to sea level rise including future elevating of site areas and access routes, barriers, wave / velocity breaks, storm water systems, utility services, etc.:

Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

Thank you for completing the Boston Climate Change Checklist!

For questions or comments about this checklist or Climate Change best practices, please contact:
John.Dalzell@boston.gov

Appendix D

Accessibility Checklist

Article 80 – Accessibility Checklist

A requirement of the Boston Planning & Development Agency (BPDA)
Article 80 Development Review Process

The Mayor's Commission for Persons with Disabilities strives to reduce architectural, procedural, attitudinal, and communication barriers that affect persons with disabilities in the City of Boston. In 2009, a Disability Advisory Board was appointed by the Mayor to work alongside the Commission in creating universal access throughout the city's built environment. The Disability Advisory Board is made up of 13 volunteer Boston residents with disabilities who have been tasked with representing the accessibility needs of their neighborhoods and increasing inclusion of people with disabilities.

In conformance with this directive, the BDPA has instituted this Accessibility Checklist as a tool to encourage developers to begin thinking about access and inclusion at the beginning of development projects, and strive to go beyond meeting only minimum MAAB / ADAAG compliance requirements. Instead, our goal is for developers to create ideal design for accessibility which will ensure that the built environment provides equitable experiences for all people, regardless of their abilities. As such, any project subject to Boston Zoning Article 80 Small or Large Project Review, including Institutional Master Plan modifications and updates, must complete this Accessibility Checklist thoroughly to provide specific detail about accessibility and inclusion, including descriptions, diagrams, and data.

For more information on compliance requirements, advancing best practices, and learning about progressive approaches to expand accessibility throughout Boston's built environment. Proponents are highly encouraged to meet with Commission staff, prior to filing.

Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design
   http://www.ada.gov/2010ADAstandards_index.htm
2. Massachusetts Architectural Access Board 521 CMR
   http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations-pdf.html
3. Massachusetts State Building Code 780 CMR
   http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/csl/building-codebbrs.html
4. Massachusetts Office of Disability – Disabled Parking Regulations
   http://www.mass.gov/anf/docs/mod/hp-parking-regulations-summary-mod.pdf
5. MBTA Fixed Route Accessible Transit Stations
   http://www.mbta.com/riding_the_t/accessible_services/
6. City of Boston – Complete Street Guidelines
   http://bostoncompletestreets.org/
7. City of Boston – Mayor's Commission for Persons with Disabilities Advisory Board
   www.boston.gov/disability
8. City of Boston – Public Works Sidewalk Reconstruction Policy
   http://www.cityofboston.gov/images_documents/sidewalk%20policy%200114_tcm3-41668.pdf
9. City of Boston – Public Improvement Commission Sidewalk Café Policy
   http://www.cityofboston.gov/images_documents/Sidewalk_cafes_tcm3-1845.pdf

Glossary of Terms:

1. ***Accessible Route*** – A continuous and unobstructed path of travel that meets or exceeds the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 20
2. ***Accessible Group 2 Units*** – Residential units with additional floor space that meet or exceed the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 9.4
3. ***Accessible Guestrooms*** – Guestrooms with additional floor space, that meet or exceed the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 8.4
4. ***Inclusionary Development Policy (IDP)*** – Program run by the BPDA that preserves access to affordable housing opportunities, in the City. For more information visit: http://www.bostonplans.org/housing/overview
5. ***Public Improvement Commission (PIC)*** – The regulatory body in charge of managing the public right of way. For more information visit: https://www.boston.gov/pic
6. ***Visitability*** – A place's ability to be accessed and visited by persons with disabilities that cause functional limitations; where architectural barriers do not inhibit access to entrances/doors and bathrooms.

1. Project Information:

If this is a multi-phased or multi-building project, fill out a separate Checklist for each phase/building.

Project Name:	Fenway Hotel
Primary Project Address:	1241 Boylston Street
Total Number of Phases/Buildings:	One
Primary Contact (Name / Title / Company / Email / Phone):	Taylor Callaham / Senior Regional Director of Real Estate / OTO Development / tcallaham@otodevelopment.com
Owner / Developer:	1241 Boylston, LLC
Architect:	Group One Partners, Inc.
Civil Engineer:	Nitsch Engineering
Landscape Architect:	Halvorson Design Partnership
Permitting:	Epsilon Associates, Inc.
Construction Management:	

At what stage is the project at time of this questionnaire? Select below:

☑PNF / Expanded PNF Submitted	Draft / Final Project Impact Report Submitted	BPDA Board Approved
BPDA Design Approved	Under Construction	Construction Completed:

Do you anticipate filing for any variances with the Massachusetts Architectural Access Board (MAAB)? ***If yes,*** identify and explain.	

2. Building Classification and Description:

This section identifies preliminary construction information about the project including size and uses.

What are the dimensions of the project?

Site Area:	*21,050 SF*	Building Area:	*106,000 GSF*
Building Height:	*90 FT.*	Number of Stories:	*8 Flrs.*
First Floor Elevation:	17' BCB	Is there below grade space:	*Yes*

What is the Construction Type? (Select most appropriate type)

	Wood Frame	Masonry	☑Steel Frame	Concrete

What are the principal building uses? (IBC definitions are below – select all appropriate that apply)

	Residential – One - Three Unit	Residential - Multi-unit, Four +	Institutional	Educational
	☑Business	Mercantile	Factory	☑Hospitality

	Laboratory / Medical	Storage, Utility and Other	
List street-level uses of the building:			

3. Assessment of Existing Infrastructure for Accessibility:

This section explores the proximity to accessible transit lines and institutions, such as (but not limited to) hospitals, elderly & disabled housing, and general neighborhood resources. Identify how the area surrounding the development is accessible for people with mobility impairments and analyze the existing condition of the accessible routes through sidewalk and pedestrian ramp reports.

Provide a description of the neighborhood where this development is located and its identifying topographical characteristics:	The Project site is located in the Fenway neighborhood of Boston. The area surrounding the site is comprised of a mix of low, mid, and high-rise buildings with residential and commercial uses. The area is generally flat with an incline on the bridges over the Massachusetts Turnpike.
List the surrounding accessible MBTA transit lines and their proximity to development site: commuter rail / subway stations, bus stops:	Bus stop for Route 55 is across the street, 164 feet away on the northwest corner intersection of Ipswich and Boylston Street. Bus Stop for Route 8, 9 ,19, 57, 57A, 60, and 65 is a 0.5 miles away. Kenmore Subway stop is 0 .5 miles away and Fenway Subway stop is a 0.6 miles away. Yawkey Commuter Rail is a 0.4 miles away.
List the surrounding institutions: hospitals, public housing, elderly and disabled housing developments, educational facilities, others:	Boston Art's Academy is 476 feet away, Berkeley School of Music is 0.3 miles away, Boston Children Hospital is 0.4 miles away, Federal Family Housing is available 1.4 miles away, Federal Elderly Disabled Housing is available 1.1 miles away, Boston University East Campus is 0.8 miles away, and Boston Conservatory is 0.2 miles away.
List the surrounding government buildings: libraries, community centers, recreational facilities, and other related facilities:	City of Boston School Department is .03 miles away, Fenway Community Center is 0.2 miles away, Fenway Garden Society is across the street, Back Bay Fens (park) is 0.2 miles away.

4. Surrounding Site Conditions – Existing:

This section identifies current condition of the sidewalks and pedestrian ramps at the development site.

Is the development site within a historic district? ***If yes,*** identify which district:	No.
Are there sidewalks and pedestrian ramps existing at the development site? ***If yes***, list the existing sidewalk and pedestrian ramp dimensions, slopes, materials, and physical condition at the development site:	Yes. Existing sidewalks along Ipswich and Boylston streets are concrete and generally in good condition.

Are the sidewalks and pedestrian ramps existing-to-remain? ***If yes,*** have they been verified as ADA / MAAB compliant (with yellow composite detectable warning surfaces, cast in concrete)? ***If yes,*** provide description and photos:	No.
5. Surrounding Site Conditions – Proposed *This section identifies the proposed condition of the walkways and pedestrian ramps around the development site. Sidewalk width contributes to the degree of comfort walking along a street. Narrow sidewalks do not support lively pedestrian activity, and may create dangerous conditions that force people to walk in the street. Wider sidewalks allow people to walk side by side and pass each other comfortably walking alone, walking in pairs, or using a wheelchair.*	
Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? ***If yes***, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, or Boulevard.	The proposed sidewalks will be consistent with the Boston Complete Streets guidelines to the maximum extent practicable for Downtown Commercial. A full site plan has not yet been established for the Project at this time, and the proposed improvements consistency with Boston Complete Street will be evaluated by the appropriate governing agencies during the design process (e.g. the Public Improvement Commission, Boston Transportation Department, etc.)
What are the total dimensions and slopes of the proposed sidewalks? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone:	Ipswich Street (Downtown Commercial) : 13.5' total Frontage- 0' (min.) - varies Pedestrian Zone – 8' (min.) - varies Greenscape/Furnishing Zone: 1.5' (min.) - varies Curb Zone – 0.5' Boylston Street (Downtown Commercial): 14.5' total Frontage- 0' Pedestrian Zone – 8' (min.) – 12' (max) Greenscape/Furnishing Zone: 1.5' (min.) - varies Curb Zone – 0.5'
List the proposed materials for each Zone. Will the proposed materials be on private property or will the proposed materials be on the City of Boston pedestrian right-of-way?	This has not yet been determined
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way? ***If yes,*** what are the proposed dimensions of the sidewalk café or furnishings and what will the remaining right-of-way clearance be?	

If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the Public Improvement Commission (PIC)?	
Will any portion of the Project be going through the PIC? ***If yes,*** identify PIC actions and provide details.	Yes, for specific repair and vertical discontinuance for awnings and canopies.
6. Accessible Parking: *See Massachusetts Architectural Access Board Rules and Regulations 521 CMR Section 23.00 regarding accessible parking requirement counts and the Massachusetts Office of Disability – Disabled Parking Regulations*.	
What is the total number of parking spaces provided at the development site? Will these be in a parking lot or garage?	All parking spaces will be valet parking.
What is the total number of accessible spaces provided at the development site? How many of these are "Van Accessible" spaces with an 8 foot access aisle?	All parking spaces will be valet parking.
Will any on-street accessible parking spaces be required? ***If yes,*** has the proponent contacted the Commission for Persons with Disabilities regarding this need?	No.
Where is the accessible visitor parking located?	All parking spaces will be valet parking.
Has a drop-off area been identified? ***If yes,*** will it be accessible?	Yes, the drop-off area will be accessible.
7. Circulation and Accessible Routes: *The primary objective in designing smooth and continuous paths of travel is to create universal access to entryways and common spaces, which accommodates persons of all abilities and allows for visitability with neighbors*.	
Describe accessibility at each entryway: Example: Flush Condition, Stairs, Ramp, Lift or Elevator:	The main entry of the hotel will be flush.
Are the accessible entrances and standard entrance integrated? ***If yes,*** *describe.* ***If no,*** what is the reason?	All entrances will be accessible and flush with grade.

If project is subject to Large Project Review/Institutional Master Plan, describe the accessible routes way-finding / signage package.	This will be developed as design progresses.
8. Accessible Units (Group 2) and Guestrooms: (If applicable) *In order to facilitate access to housing and hospitality, this section addresses the number of accessible units that are proposed for the development site that remove barriers to housing and hotel rooms.*	
What is the total number of proposed housing units or hotel rooms for the development?	184 hotel rooms.
If a residential development, how many units are for sale? How many are for rent? What is the breakdown of market value units vs. IDP (Inclusionary Development Policy) units?	
If a residential development, how many accessible Group 2 units are being proposed?	
If a residential development, how many accessible Group 2 units will also be IDP units? ***If none***, describe reason.	
If a hospitality development, how many accessible units will feature a wheel-in shower? Will accessible equipment be provided as well? ***If yes,*** provide amount and location of equipment.	5% of the rooms will be accessible (10) 8 tubs and 2 with roll in showers
Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs / thresholds at entry, step to balcony, others. ***If yes,*** provide reason.	No
Are there interior elevators, ramps or lifts located in the development for access around architectural barriers and/or to separate floors? ***If yes,*** describe:	No

9. Community Impact:

Accessibility and inclusion extend past required compliance with building codes. Providing an overall scheme that allows full and equal participation of persons with disabilities makes the development an asset to the surrounding community.

Is this project providing any funding or improvements to the surrounding neighborhood? Examples: adding extra street trees, building or refurbishing a local park, or supporting other community-based initiatives?	This will be determined through the Article 80 process.
What inclusion elements does this development provide for persons with disabilities in common social and open spaces? Example: Indoor seating and TVs in common rooms; outdoor seating and barbeque grills in yard. Will all of these spaces and features provide accessibility?	All public spaces within the hotel will be fully accessible.
Are any restrooms planned in common public spaces? ***If yes,*** will any be single-stall, ADA compliant and designated as "Family"/ "Companion" restrooms? ***If no***, explain why not.	Yes, accessible Men's and Women's rooms will be provided. No family restrooms will be provided as the occupants can utilize the guest rooms.
Has the proponent reviewed the proposed plan with the City of Boston Disability Commissioner or with their Architectural Access staff? ***If yes,*** did they approve? ***If no,*** what were their comments?	No.
Has the proponent presented the proposed plan to the Disability Advisory Board at one of their monthly meetings? Did the Advisory Board vote to support this project? ***If no,*** what recommendations did the Advisory Board give to make this project more accessible?	No.

10. Attachments

Include a list of all documents you are submitting with this Checklist. This may include drawings, diagrams, photos, or any other material that describes the accessible and inclusive elements of this project.

Provide a diagram of the accessible routes to and from the accessible parking lot/garage and drop-off areas to the development entry locations, including route distances.
Provide a diagram of the accessible route connections through the site, including distances.
Provide a diagram the accessible route to any roof decks or outdoor courtyard space? (if applicable)
Provide a plan and diagram of the accessible Group 2 units, including locations and route from accessible entry.
Provide any additional drawings, diagrams, photos, or any other material that describes the inclusive and accessible elements of this project. • • • •

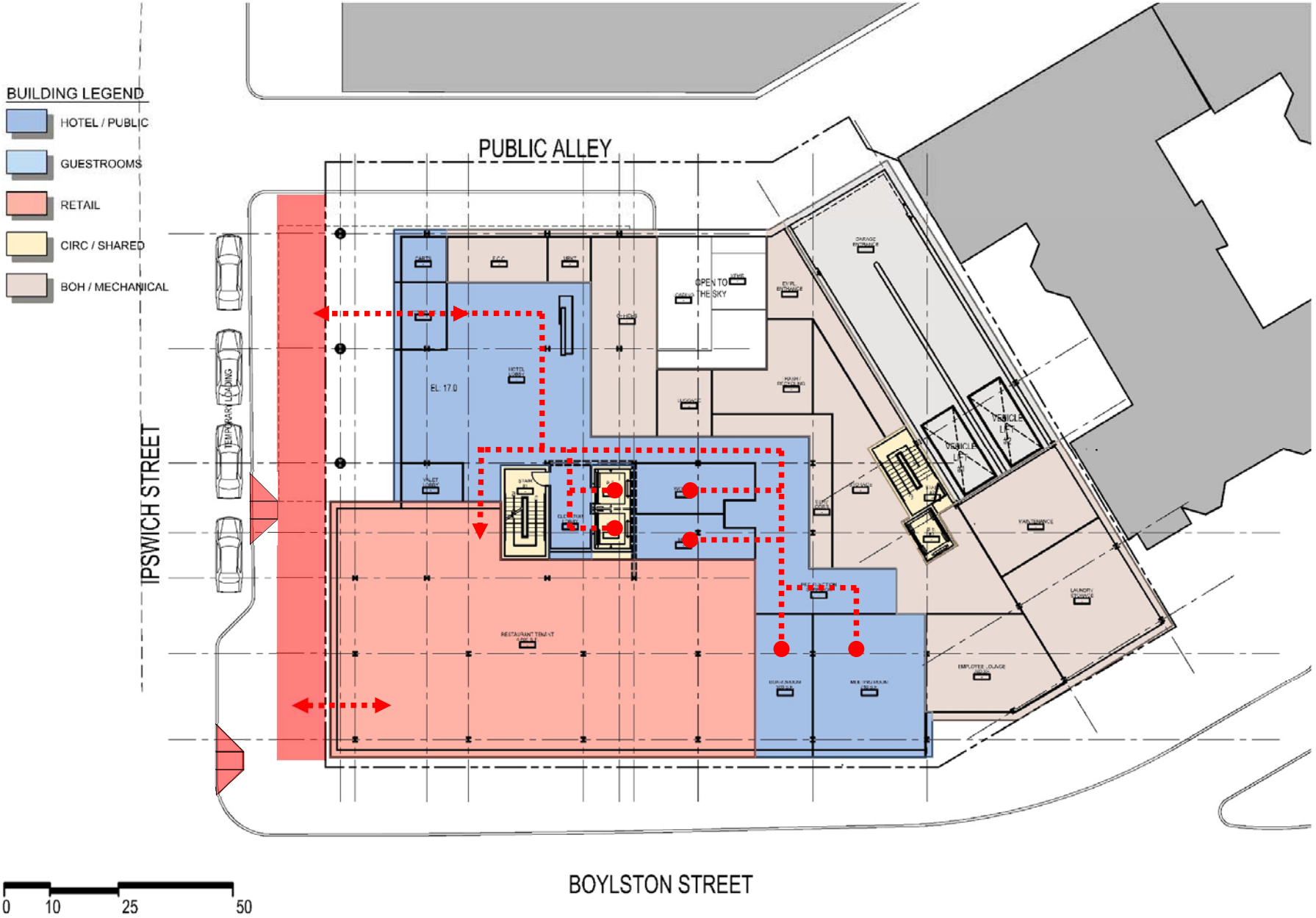
This completes the Article 80 Accessibility Checklist required for your project. Prior to and during the review process, Commission staff are able to provide technical assistance and design review, in order to help achieve ideal accessibility and to ensure that all buildings, sidewalks, parks, and open spaces are usable and welcoming to Boston's diverse residents and visitors, including those with physical, sensory, and other disabilities.

For questions or comments about this checklist, or for more information on best practices for improving accessibility and inclusion, visit www.boston.gov/disability, or our office:

The Mayor's Commission for Persons with Disabilities
1 City Hall Square, Room 967,
Boston MA 02201.

Architectural Access staff can be reached at:

accessibility@boston.gov | patricia.mendez@boston.gov | sarah.leung@boston.gov | 617-635-3682



Fenway Hotel **Boston, Masachusetts**

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