PROJECT NOTIFICATION FORM

1515 Commonwealth Avenue

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

Submitted by:
DIV 1515 Commonwealth, LLC
c/o The Davis Companies
125 High Street, Suite 2111
Boston, MA 02110

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

In Association with:
RODE Architects, Inc.
OJB Landscape Architecture
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
Howard Stein Hudson
Sanborn, Head & Associates, Inc.

June 10, 2019

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Chapter 1.0

Project Description

1.0 PROJECT DESCRIPTION

1.1 Introduction

DIV 1515 Commonwealth, LLC, an affiliate of The Davis Companies (the Proponent), proposes to redevelop an approximately 2.2-acre site (the Project Site) at 1515 Commonwealth Avenue in the Brighton neighborhood of Boston. The Project Site currently consists of a vacant, four-story building previously used as a long-term acute care hospital, as well as approximately 70 surface parking spaces. The Project Site will be developed into an approximately 340,000 square foot (sf) residential building containing approximately 330 residential units, comprising a mix of rental apartments and condominium units, together with approximately 200 parking spaces (the Project).

Over 40 percent of the Project Site will be allocated to a new, 40,000± sf green space fronting on the Commonwealth Avenue West Carriage Road. The Project will also improve access to the City-owned Fidelis Way Park from Commonwealth Avenue, by means of a new pedestrian connection on the northern edge of the Project Site. The amenities provided in the Project's green space will complement the active recreational uses in Fidelis Way Park and will include a flexible lawn for games and passive recreation, and a seating plaza with tables and a canopy structure to serve as a gathering area for small groups. In addition to the new green space, the Project will also provide new housing units, including new opportunities for homeownership and new affordable housing units, construction-period and permanent jobs, and increased tax revenues for the City.

This Project Notification Form (PNF) is being submitted to the Boston Redevelopment Authority (BRA) doing business as Boston Planning & Development Agency (the BPDA) to initiate review of the Project under Article 80B, Large Project Review, of the Boston Zoning Code.

1.2 Existing Project Site and Area Context

The approximately 2.2-acre Project Site is located on the west side of Commonwealth Avenue (West Carriage Road) in the Brighton neighborhood of Boston (see Figure 1-1). The Project Site currently contains a vacant, approximately 58,000 square-foot, four-story building most recently used as a 59-bed long-term acute-care hospital. The building occupies only a small portion of the Project Site, and the remainder of the Project Site contains a surface parking lot containing approximately 70 spaces. The Project Site contains almost no green space. The Project Site is located at the top of a hill along the Commonwealth Avenue West Carriage Road between Warren Street and Washington Street. The topography of the Project Site is extremely varied; across the Project Site it varies from 158'-0" at the Northeast corner of the Project Site to 186'-0" at the center of the Project Site / existing upper level entry. There are large portions of exposed ledge visible across the Project Site, indicating rock at the elevation transition locations.

1515 Commonwealth Avenue Boston, Massachusetts

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Figure 1-1
Aerial Locus Map

Along the existing sidewalk the Project Site slopes approximately 3 feet (2% slope) from the high point (179'-0') towards Washington Street, and approximately 21 feet (10% slope at steepest) to Warren Street. The Project Site is not known to contain any Resource Areas under the jurisdiction of the Massachusetts Wetlands Protection Act. See Figures 1-2 to 1-4 for existing conditions on the Project Site.

The Project Site is surrounded by a variety of uses including hospitals, residential apartment buildings including the Boston Housing Authority-owned Fidelis Way development (now known as the Commonwealth Development), and commercial uses. Brighton High School and Fidelis Way Park are also located to the northwest of the Project Site. The nearby area contains low- to mid-rise buildings surrounded by surface parking lots and landscaped areas. To the east of the Project Site is a residential neighborhood with four- to five-story multi-family residential buildings. The Project Site is ideally situated for its residents to take advantage of several public transportation opportunities, as it is located approximately a quarter-mile from the Warren Street and Washington Street stations that serve the MBTA Green Line B Branch, and less than a half-mile from several MBTA bus routes that connect to Watertown Yard, Kenmore Square, Oak Square, Kendall/MIT, Brighton Center, Harvard Square, Dudley Station, Sullivan Square, and Reservoir Station.

1.3 Project Description

As shown in Table 1-1, the Project includes the demolition of the existing building to construct a new, approximately 340,000 square foot residential building containing approximately 175 rental units and approximately 155 condominium units, for a total of 330 units. Approximately 200 parking spaces will be provided in a partially at-grade and below-grade garage. The tallest portion of the building will be 17 stories, located on the northern portion of the Project Site closer to the higher density buildings along Commonwealth Avenue and towards the lowest topographic point of the Project Site. The remainder of the building will range from six to nine stories.

The building is organized into a U-shape, centered around a green space facing Commonwealth Avenue that will be available for use by the public (see Figure 1-5 for a Site Plan). Over 40% of the Project Site will comprise publicly accessible green space. The Project's green space location on Commonwealth Avenue will be easily accessed by the surrounding community, and will provide a new and clear pedestrian connection to Fidelis Way Park on the northern portion of the Project Site (see Figures 1-6 to 1-8). As described above, the amenities provided in the Project's green space will complement the active recreational uses in Fidelis Way Park, and will include a flexible lawn for games and passive recreational uses, and a seating plaza with tables and a canopy structure to serve as a gathering area for small groups.

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 1-2
Existing Conditions

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 1-3
Existing Conditions

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 1-4
Existing Conditions

1515 Commonwealth Avenue Boston, Massachusetts

RODE OJB | LANDSCAPE ARCHITECTURE

Figure 1-5
Site Plan

1515 Commonwealth Avenue Boston, Massachusetts

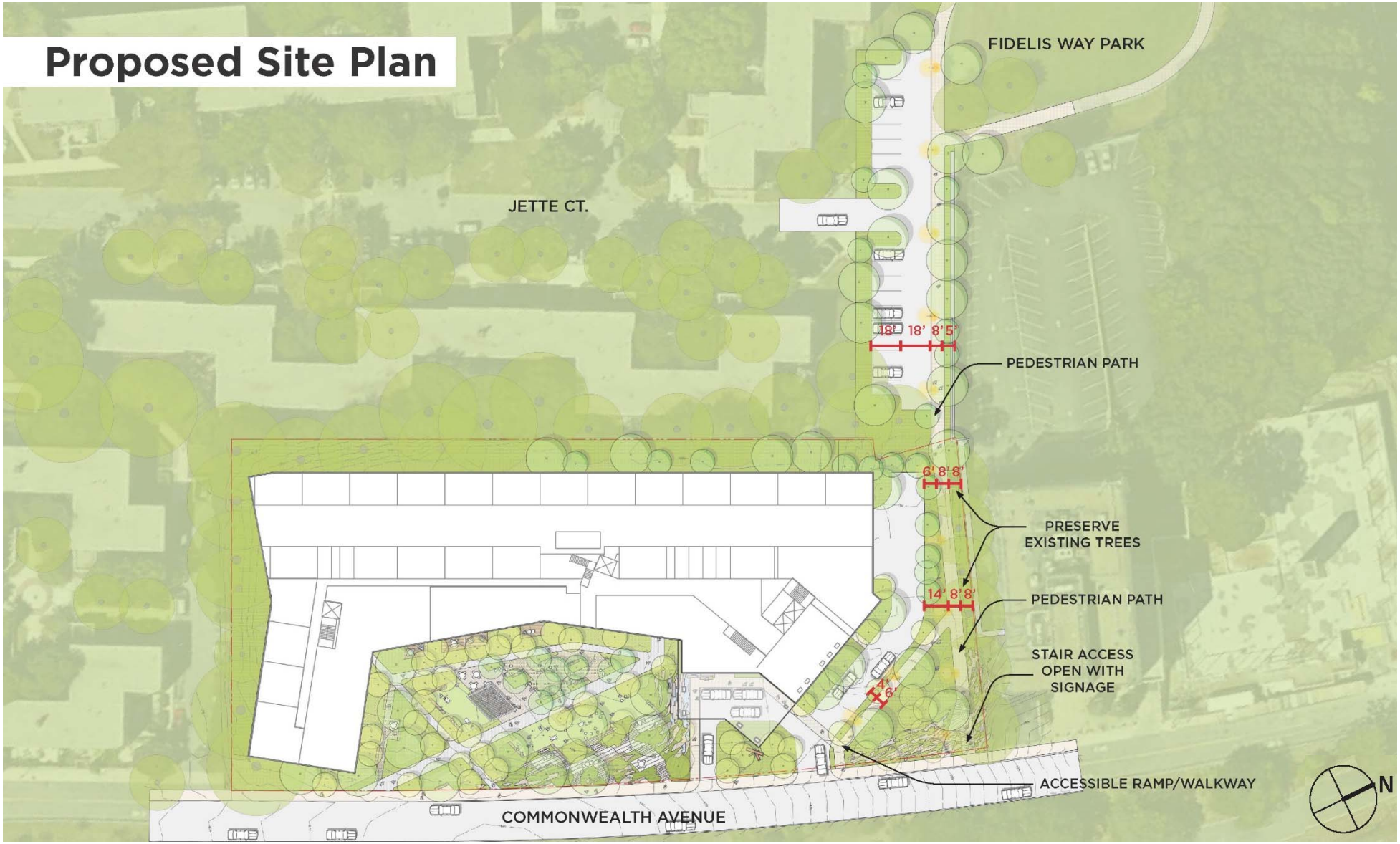
RODE OJB | LANDSCAPE ARCHITECTURE

Figure 1-6
Fidelis Way Access

1515 Commonwealth Avenue Boston, Massachusetts

RODE OJB | LANDSCAPE ARCHITECTURE

Figure 1-7
Fidelis Way Access



1515 Commonwealth Avenue Boston, Massachusetts

RODE OJB | LANDSCAPE ARCHITECTURE

Figure 1-8
Fidelis Way Access

Table 1-1 Project Program

Project Element	Approximate Dimension
Residential	
Condominium units	155±
Rental units	175±
Total units	**330±**
Parking	200± spaces
Total Gross Floor Area	**340,000± sf**
Building Height	9 to 17 stories (70-180 feet)
Parcel Area	92,275 sf (2.2 acres)
Green Space	40,000± sf

The Project is designed to operate as one building that will have two separate residential components. The lower component of the building will contain the rental units and the taller component will contain the condominium units. Each portion of the Project will have its own vertical access and residential amenity/support spaces, while being connected to the Project Site and the public with a shared entry, lobbies, parking, and green space. A series of rooftop terraces will be available for building residents.

The main lobby and entry will be located at the northern side of the Project Site. The lobby will form a nexus, allowing for an accessible transition between the upper and lower portions of the Project Site, and connecting to the residential elevators, amenity areas, garage, and vehicular drop-off. The location of an off-street porte-cochere at the main entry enables the topography to be graded for accessible drop off and passenger loading, which is not possible at the existing grades along the street. See Figures 1-9 through 1-11 for floor plans.

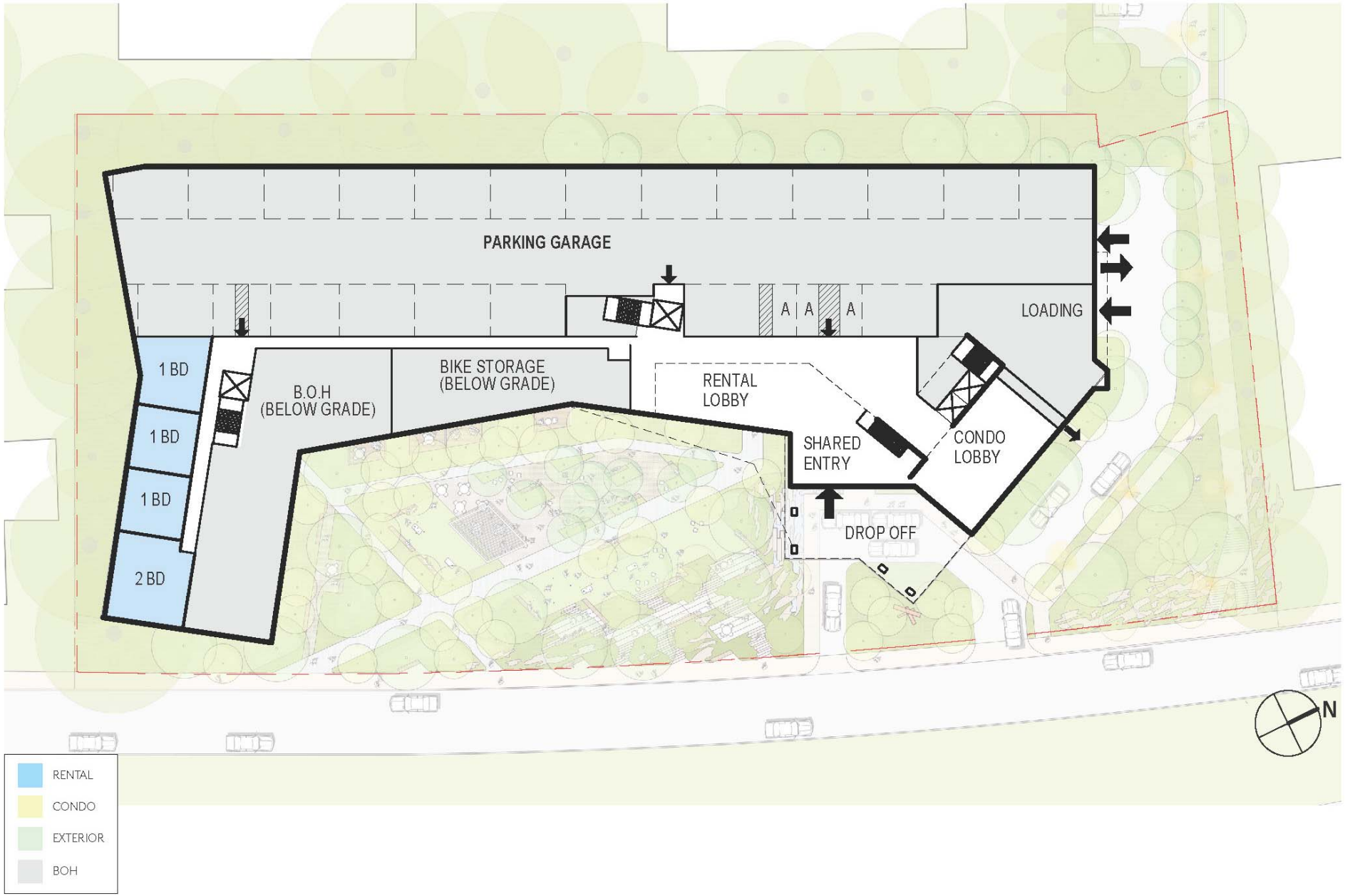
The parking garage will be located at and below grade along the western edge of the building and will provide parking spaces for approximately 200 vehicles utilizing an automated self-parking stacker system. The additional height to accommodate this stacker system also allows all loading, trash and other back-of house access to be concealed within the garage.

1.4 Public Benefits

The Project will provide many 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 Access to Open Space

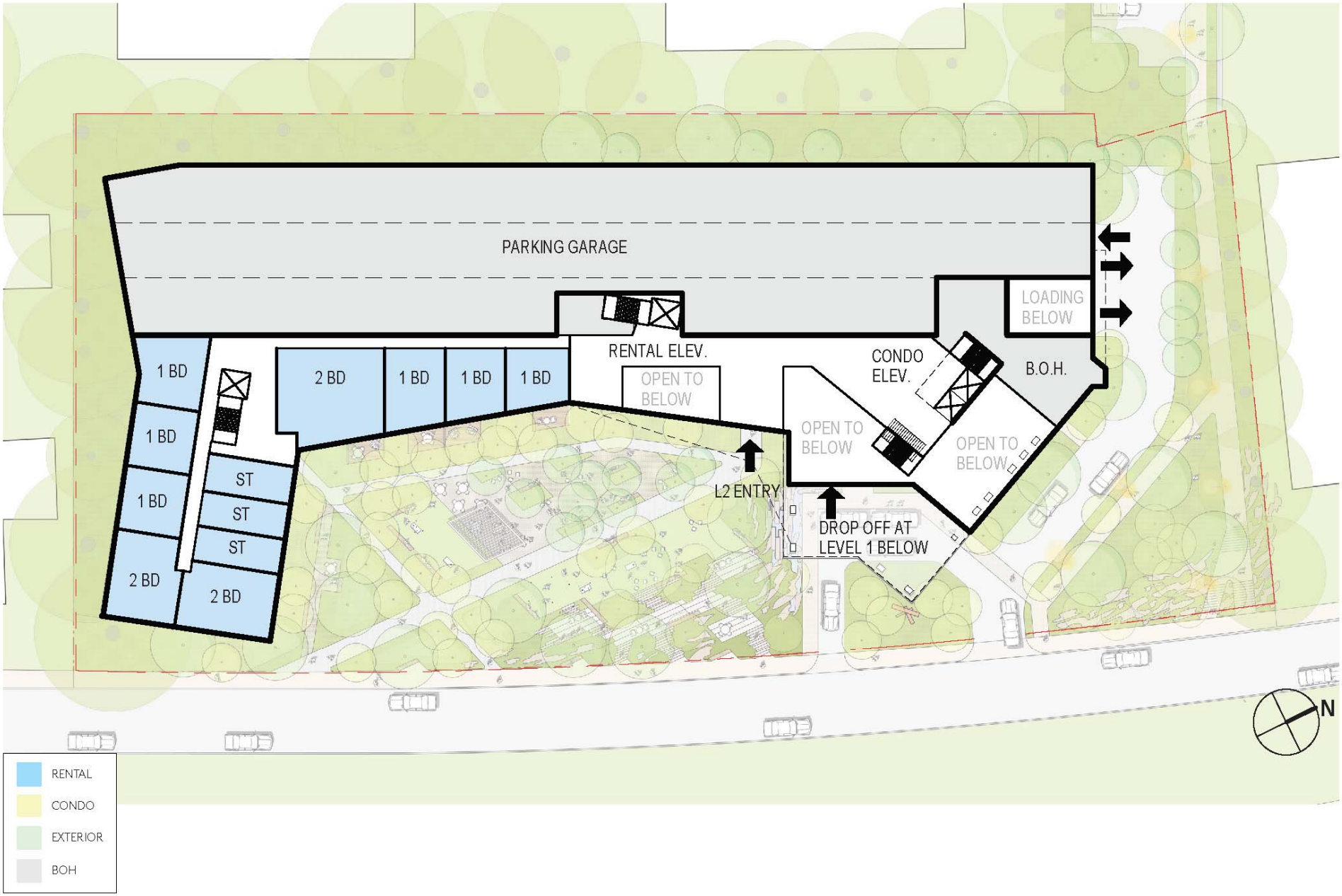
The Project will create approximately 40,000 sf of new green space on Commonwealth Avenue that will be easily accessed by the public. In addition, the Proponent will construct as part of the Project, a new and clear pedestrian connection to Fidelis Way Park.



1515 Commonwealth Avenue Boston, Massachusetts

RODE OJB | LANDSCAPE ARCHITECTURE

Figure 1-9
Ground Floor Plan



1515 Commonwealth Avenue Boston, Massachusetts

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Figure 1-10
Level 2 Plan

1515 Commonwealth Avenue Boston, Massachusetts

RODE OJB | LANDSCAPE ARCHITECTURE

Figure 1-11
Typical Floor Plan

Affordable Housing

The Project will comply with the City's Inclusionary Development Policy.

Sustainable Design/Green Building

Energy conservation and other sustainable design measures are an integral component of the proposed Project. The Proponent is committed to building a LEED certifiable project with a target of the Silver level, incorporating sustainable design features such as a green roof and landscaped terraces into the Project to preserve and protect the environment.

Increased Employment

The Project will result in the creation of approximately 250 construction jobs and approximately 10 permanent jobs once it is occupied.

New Property Tax

The Project will generate new property tax revenues to the City of Boston through significantly increased property values.

1.5 Community Outreach Overview

As part of its planning efforts, the Proponent has contacted nearby residents and representatives of numerous neighborhood groups, elected officials, and public agencies. The formal community outreach process begins with the filing of this PNF.

The Proponent continues to be committed to a comprehensive and effective community outreach process and will continue to engage the community to ensure public input on the Project. The Proponent looks forward to working with the BPDA and city agencies, local elected officials, neighbors, and others as the design and review processes move forward.

1.6 Schedule

It is anticipated that construction will commence in the first quarter of 2020; construction of the Project will take approximately 20 months.

Chapter 2.0

General Information

2.0 GENERAL INFORMATION

This Chapter summarizes the local planning and regulatory controls, and lists the anticipated permits and approvals applicable to the Project. This Chapter also identifies the members of the Project team and provides required legal information.

2.1 Zoning and Regulatory Controls

The Project Site, which is shown on Map 7A/7B/7C/7D of the Boston Zoning Maps, is located within an MFR-1 (multi-family) zoning subdistrict of the Allston Brighton Neighborhood District, which is governed by Article 51 of the Boston Zoning Code, as amended (the "Code"). A portion of the Project Site adjacent to Commonwealth Avenue is also located within a Greenbelt Protection Overlay District, as shown on the survey included in this PNF as Appendix A; see Section 51-42 of the Code.

The Project as proposed will require zoning relief from the City's Board of Appeal, including without limitation, with respect to Building Height[1], maximum Floor Area Ratio, minimum front yard depth, and minimum usable open space/dwelling unit. The Proponent will apply for such zoning relief during the Article 80B Large Project Review process.

2.2 List of Anticipated Permits and Approvals

The Project is anticipated to require the following permits and approvals. As the project program and design evolve, some of the below-listed permits/approvals may not be required and/or other permits/approvals may prove to be necessary.

Table 2-1 Anticipated Permits and Approvals

Agency	Permit, Review or Approval
City Agencies	
Boston Planning & Development Agency	Article 80B Large Project Review Article 80B Agreements
Boston Civic Design Commission	Recommendation of Design Approval
Boston Landmarks Commission	Article 85 Demolition Delay
Boston Board of Appeal	Zoning Relief
Boston Transportation Department	Transportation Access Plan Agreement Construction Management Plan
Boston Water and Sewer Commission	Site Plan Review Approval and related approvals
Interagency Green Building Committee	Article 37 Review
Public Improvement Commission	Streetscape Improvements
Parks and Recreation Commission	Approval of Construction Within 100 feet of a Park

[1] Capitalized terms used without definition in this PNF are as defined in the Code.

Table 2-1 Anticipated Permits and Approvals (Continued)

Agency	Permit, Review or Approval
Committee on Licenses, Public Safety Commission	Garage Permit and Fuel Storage License
State Agencies	
Massachusetts Department of Environmental Protection (MassDEP)	Notice of asbestos abatement activities Notice of commencement of construction
Federal Agencies	
U.S. Environmental Protection Agency	Notice of Intent, National Pollution Discharge Elimination System (NPDES)
Federal Aviation Administration (FAA)	Determination of No Adverse Effect

2.3 Development Team

The following lists the key members of the development team for the proposed Project:

Address/Location: 1515 Commonwealth Avenue

Developer: DIV 1515 Commonwealth, LLC
c/o The Davis Companies
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Boston, MA 02210
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Transportation Consultant:	Howard Stein Hudson 11 Beacon Street, Suite 1010 Boston, MA 02108 (617) 482-7080 Guy Busa Elizabeth Peart
Civil Engineer:	Howard Stein Hudson 11 Beacon Street, Suite 1010 Boston, MA 02108 (617) 482-7080 Rick Latini
Geotechnical Consultant:	Sanborn, Head & Associates, Inc. 239 Causeway Street, Suite 105 Boston, MA 02114 (857) 327-9730 Stan Sadkowski

2.4 Legal Information

2.4.1 Legal Judgments or Actions Pending Concerning the Proposed Project

There are no legal judgments or actions pending concerning the Project.

2.4.2 History of Tax Arrears on Property Owned in Boston by the Proponent

There is no history of tax arrears on property owned in Boston by the Proponent.

2.4.3 Evidence of Site Control/Public Easements

The Project Site was acquired by the Proponent in November 2017. There are no public easements encumbering the Project Site. However, there does exist at the Project Site an easement for passage purposes in favor of the Boston Housing Authority, as owner of the adjacent Fidelis Way development. This easement area is shown on the survey included in this PNF as Appendix A.

Chapter 3.0

Transportation

3.0 TRANSPORTATION

Based on an extensive transportation study undertaken in consultation with the Boston Transportation Department (BTD), all of the intersections studied have similar Levels of Service in the No-Build and Build conditions, indicating that the Project will have no substantial impact upon area traffic operations. The transportation study includes an evaluation of the existing conditions, future conditions with and without the Project, projected parking demand, loading/delivery plan, transit services, pedestrian and bicycle activity, transportation demand management (TDM) strategies for the Project, and construction-period impacts.

3.1 Project Description

The Project Site is located at 1515 Commonwealth Avenue and currently consists of a vacant four-story building with approximately 70 designated parking spaces. The building was formerly used as a long-term acute care hospital.

The proposed Project includes the demolition of the existing building and construction of one new building with approximately 330 residential units and approximately 200 parking spaces (0.60 parking ratio). Table 3-1 summarizes the development program.

Table 3-1 Project Program

Land Use Component	Quantity
Residential	
Condominiums	155± units
Rental	175± units
Parking	200± spaces

3.1.1 Study Methodology

This study adheres to the Boston Transportation Department (BTD) Transportation Access Plan Guidelines and Boston Planning & Development Agency (BPDA) Article 80 Large Project Review process. The study methodology is described below.

The Existing (2019) Condition analysis includes an inventory of the existing transportation conditions such as traffic characteristics, curb usage, transit, pedestrian circulation, bicycle facilities, loading, and Project Site conditions. Existing counts for vehicles, bicycles, and pedestrians were collected at the study area intersections. The study area intersections were selected in consultation with BTD. A traffic data collection effort forms the basis for the transportation analysis conducted as part of this evaluation.

The future transportation conditions analysis evaluates potential transportation impacts associated with the Project. The long-term transportation impacts are evaluated for the year 2026, based on a seven-year horizon from the year of the filing of this traffic study.

The No-Build (2026) 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 (2026) Condition analysis includes the No-Build condition plus the net change in traffic volume due to the Project. Expected roadway, parking, transit, pedestrian, and bicycle accommodations, as well as loading facilities associated with the Project, are identified.

The final sections of the transportation study identify the transportation demand management measures to minimize automobile usage and Project-related impacts and outline the requirements of the Transportation Access Plan Agreement (TAPA) and Construction Management Plan (CMP).

3.1.2 Transportation Evaluation Summary

None of the study intersections are expected to experience a change in level of service from the No-Build Condition to Build Condition, indicating that the Project will have no substantial impact on area traffic operations. Residential developments generate far fewer trips per square foot than comparably sized office or retail developments and do not produce a large proportion of daily trips during commuter travel periods, thereby minimizing the Project's impacts during peak hours. Additionally, the convenience of the nearby MBTA Green Line Station at Warren Street and Washington Street will encourage transit travel to and from the Project Site by Project residents.

Key transportation characteristics of the Project and analysis results include:

- During the a.m. peak hour, the Project will generate 17 new entering vehicle trips and 42 new exiting vehicle trips and during the p.m. peak hour, the Project will generate 39 new entering trips and 27 new exiting trips. Vehicle trips include automobiles, taxicabs, and transportation network company services such as Uber and Lyft.

- The Project will provide approximately 200 parking spaces for residents. The parking ratio will be approximately 0.60 spaces/residential unit. It is expected that many residents will not own an automobile and will instead rely on car sharing services, taxicabs, or Uber/Lyft, for trips requiring a vehicle.

- Subject to any necessary City approvals, the Proponent will construct new sidewalks adjacent to the Project Site in accordance with Boston Complete Streets guidelines and requirements of the Americans with Disabilities Act and Massachusetts Architectural Access Board (ADA/AAB) to the extent feasible.

- In accordance with the City of Boston Bicycle Guidelines, and to encourage bicycling as an alternative mode of transportation, the Proponent will provide secure bicycle storage capacity for residents and employees. Residential bicycle storage capacity will be provided at a ratio of one per residential unit.

- The Project will have an off-street loading area. Residential move-in/move-out activity will occur at the two loading bays and be managed by an on-site transportation coordinator and subject to City regulation. The loading bays/trash pick-up are accessed off the vehicular entry drive at the north edge of the Project Site, with an integrated turnaround at the garage and loading entry. A secondary loading and trash is located within the parking garage adjacent to the drive aisle, utilizing the additional overhead clearance provided for the automated car stacker system.

- The Proponent is committed to implementing Transportation Demand Management (TDM) measures to reduce residents' dependence on automobiles. TDM measures to be undertaken by the Proponent include: promoting transit services in residential marketing materials, providing adequate secure bicycle storage, joining the Allston-Brighton Transportation Management Association, and designating an on-site transportation coordinator.

- A Transportation Access Plan Agreement will be entered into between the Proponent and BTD and will set forth the specific TDM measures and agreements between the Proponent and the City of Boston.

3.1.3 Study Area

The study area, shown in Figure 3-1, consists of the following three intersections in the vicinity of the Project Site:

- Commonwealth Avenue/Warren Street/Kelton Street (signalized);
- Commonwealth Avenue/Washington Street (signalized); and
- Commonwealth Avenue/Fidelis Way (unsignalized).

3.2 Existing Condition

This section includes descriptions of existing study area roadway geometries, intersection traffic control, peak-hour vehicular and pedestrian volumes, average daily traffic volumes, public transportation availability, parking, curb usage, and loading conditions.

3.2.1 Existing Roadway Conditions

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

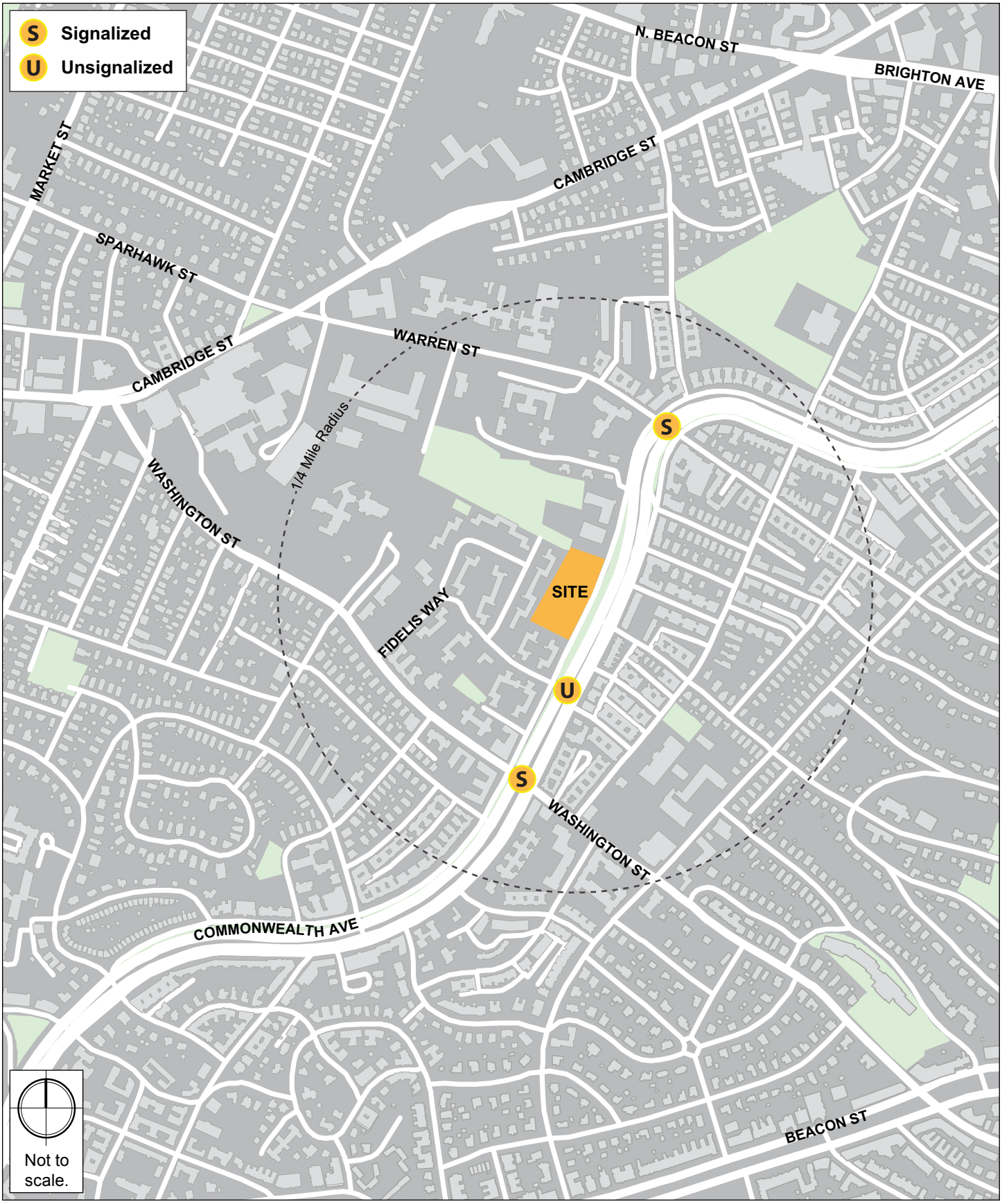

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Figure 3-1
Study Area

Commonwealth Avenue is a two-way, four-lane roadway located east of the Project Site. It is classified as an urban principal arterial roadway under BTD jurisdiction and runs in a predominately east-west direction between I-95 (Route 128) in Weston to the west and Arlington Street in Boston's Back Bay neighborhood to the east. In the vicinity of the Project Site, the roadway has a northeast-southwest orientation. The B Branch of the MBTA Green line travels within a wide median that separates the directions of travel along Commonwealth Avenue in the Project vicinity. Carriage roads are provided along both sides of Commonwealth Avenue, providing access to local destinations, parking, and minor streets. The carriage roads are separated from the main roadway by raised medians, with occasional breaks for access. The carriage road along Commonwealth Avenue northeast- bound is referred to herein as the "East Carriage Road" and the carriage road along Commonwealth Avenue southwest-bound is referred herein to as the "West Carriage Road." The West Carriage Road is two-way from the intersection with Warren Street to the intersection with Washington Street; otherwise, the carriage roads are one-way in the same direction as the adjacent lanes of the main portion of Commonwealth Avenue. Sidewalks are provided along the carriage roads, as is intermittent parking spaces.

Warren Street is a two-way, two-lane roadway located to the north of the Project Site that runs in a northwest-southeast direction between Cambridge Street to the northwest, where the alignment continues as Sparhawk Street, and Commonwealth Avenue to the southeast, where the alignment continues as Kelton Street. Warren Street and its continuation roadways are classified as urban collectors under BTD jurisdiction. On-street parking and sidewalks are provided on both sides of Warren Street.

Washington Street is a two-way, two-lane roadway located to the south side of the Project Site. It runs in a generally southeast-northwest direction between Route 9 in Brookline to the southeast and Cambridge Street to the northwest, where it turns to the west and becomes the continuation of the Cambridge Street alignment and continues west and northwest through Brighton Center to Newton Corner. The segment of Washington Street near the Project Site and continuing southeast is classified as an urban minor arterial roadway under BTD jurisdiction. Where it continues west and northwest on the Cambridge Street alignment, it is classified as an urban principal arterial, and it includes a dedicated bicycle lane in both directions. Sidewalks and on-street parking are provided along Washington Street within the study area.

Fidelis Way is a two-way, two-lane roadway located to the south of the Project Site and runs in a predominately east-west direction between Commonwealth Avenue to the east and Washington Street to the west. Fidelis Way is classified as a local road under the jurisdiction of the Boston Housing Authority (BHA), the owner of the Fidelis Way Housing development. On-street parking is available for BHA residents along one side of the street. Sidewalks exist on both sides of Fidelis Way.

3.2.2 Existing Intersection Conditions

Existing conditions at the study area intersections are described below.

Commonwealth Avenue/Warren Street/Kelton Street is a signalized intersection with seven approaches: Warren Street eastbound approach, Kelton Street westbound approach, Commonwealth Avenue northeast-bound and southwest-bound, the northbound approach of the East Carriage Road, and the southbound approach of the West Carriage Road. Additionally, the MBTA Green Line B Branch trolley travels along Commonwealth Avenue through the intersection. The trolley tracks transition through the intersection from running in the median between the West Carriage Road and the southbound lanes of the main roadway. Warren Street Station is located in the Commonwealth Avenue center median to the southwest of the intersection, serving both directions.

The Warren Street eastbound and Kelton Street westbound approaches, each consist of a shared left-turn/through/right-turn lane. There is an adjacent parking lane on both sides of the roadway on both legs of the intersection. The Commonwealth Avenue northeast-bound and southwest-bound approaches each consist of a shared left-turn/through lane and a shared through/right-turn lane. Parking is not permitted along the main Commonwealth Avenue approaches. The directions of travel along Commonwealth Avenue are separated by a raised median, with the trolley line running in the median to the west of the intersection as described above. The East Carriage Road is one-way in the northbound direction at the intersection and consists of a single travel lane with sharrows that accommodate through movements and right-turns. Left turns are prohibited on this approach. Parking lanes are provided on both sides of the approach. The West Carriage Road southbound approach to the intersection is one-way and consists of a single travel lane that accommodates through movements and right-turns. Left turns are prohibited on this approach. Diagonal parking is provided on the right side of this approach. The south leg of the West Carriage Road is two-way, and the northbound approach consists of a single travel lane that accommodates left-turn-only movements with sharrows on both directions. No parking is allowed on either side of the approach. Both Carriage Roads are separated from the main portion of Commonwealth Avenue by raised medians.

Sidewalks are provided along both sides of Warren and Kelton streets and along the outer edge of the carriage roads. Crosswalks and wheelchair ramps are provided at all approaches.

Commonwealth Avenue/Washington Street is a signalized intersection with six approaches: Washington Street eastbound and westbound, Commonwealth Avenue northeast-bound and southwest-bound, the northbound approach of the East Carriage Road, the southbound approach of the West Carriage Road. Additionally, the eastbound (inbound) and westbound (outbound) tracks of the MBTA Green Line B Branch trolley travel along the center median of Commonwealth Avenue across Washington Street. Washington Street Station, serving both directions, is located in the Commonwealth Avenue center median to the northeast of the intersection.

Due to the complexity of the intersection, there are many turning restrictions. The Commonwealth Avenue northeast-bound approach consists of one through lane and one shared through/right-turn lane. Left turns are restricted along this approach. The Commonwealth Avenue southwest-bound approach consists of a left-turn lane and two through lanes. Right-turns are restricted along this approach. Parking is not permitted along the main Commonwealth

Avenue approaches. The East Carriage Road northbound approach consists of one through lane and one wide shared right-turn/parking lane with sharrows on both lanes. Left-turns are restricted along this approach. The West Carriage Road southbound approach consists of a parking lane and one shared through/right-turn lane with sharrows. Left-turns are restricted along this approach. The Washington Street eastbound and westbound approaches each consist of a single shared left-turn/through/right-turn lane. An MBTA bus stop is located along each of these two approaches at the intersection. Parking is not allowed along the Washington Street approaches due to the location of the MBTA bus stops.

Sidewalks are provided along both sides of Washington Street and along the outer edge of the carriage roads. Crosswalks and wheelchair ramps are provided at all approaches.

Commonwealth Avenue/Fidelis Way/Commonwealth Avenue Carriage Road is a three-leg unsignalized intersection. The Fidelis Way eastbound approach consists of a shared left-turn/right-turn lane under stop control at the Carriage Road. The directions of Commonwealth Avenue are separated by a raised median and trolley tracks, prohibiting travel between Fidelis Way and Commonwealth Avenue in the northeast-bound direction. The Commonwealth Avenue carriage road is separated from the Commonwealth Avenue southwest-bound main line by a raised median and accommodates two-way travel at the intersection. Access is provided to the Commonwealth Avenue southwest-bound main line by a break in the median at the intersection. Both Carriage Road approaches consist of single travel lanes and are under stop control at the intersection. The Commonwealth Avenue main line consists of two travel lanes in each direction. Sidewalks are provided along both sides of Fidelis Way and the southwest-bound travel lane along the Carriage Road.

3.2.3 Existing Parking

An inventory of the existing on-street and car sharing services in the vicinity of the Project Site was collected. A description of each follows.

3.2.3.1 Existing On-Street Parking

Figure 3-2 shows the on-street parking regulations on study area roadways. Along Commonwealth Avenue and the West Carriage Road adjacent to the Project Site, on-street parking is generally prohibited. A mix of resident parking and two-hour parking is provided along segments of Washington Street, Warren Street, and Fidelis Way, a private BHA street.

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Figure 3-2
On-street Parking

3.2.3.2 Car Sharing Services

Car sharing enables easy access to short-term vehicular transportation. Vehicles are rented on an hourly or daily basis, and all vehicle costs (gas, maintenance, and insurance]) are included in the rental fee. Vehicles are checked out for a specific time period and returned to their designated location.

Zipcar is the primary company in the Boston car sharing market. There are currently two Zipcar locations within a quarter-mile radius of the Project Site, with the closest being located at the intersection of Commonwealth Avenue/Gordon Street. There are four additional Zipcar locations located less than one-third of a mile from the Project Site.

Maven is a smaller car-share company owned by General Motors, with one location within a quarter mile of the Project Site and one additional location located less than one-third of a mile southwest of the Project Site.

The nearby car sharing locations are shown in Figure 3-3.

3.2.4 Existing Traffic Data

Turning Movement Counts (TMCs) and vehicle classification counts were conducted at the three study area intersections on Wednesday, January 23, 2019 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 are provided in Appendix B.

To account for seasonal variation in traffic volumes throughout the year, data provided by MassDOT was also reviewed. The MassDOT Weekday Seasonal Factors were used to determine the need for seasonal adjustments to the January 2019 TMCs. The seasonal adjustment factor for roadways similar to the study area (Group 6) in the month of January is 1.03. This indicates that average month traffic volumes are approximately three percent higher than the traffic volumes that were collected. Therefore, the traffic counts were increased to reflect average month conditions resulting in a conservative (higher impact) set of peak hour traffic volumes. The MassDOT 2016 Weekday Seasonal Factors table is provided in Appendix B.

3.2.5 Existing Vehicular Traffic Volumes

The existing traffic volumes that were collected on Wednesday, January 23, 2019 with typical traffic, were used to develop the Existing (2019) Condition traffic volumes. The volumes were adjusted upward based on the seasonal adjustment factor as previously mentioned.

The Existing (2019) weekday a.m. and p.m. peak hour traffic volumes are shown in Figures 3-4 and Figure 3-5, respectively.

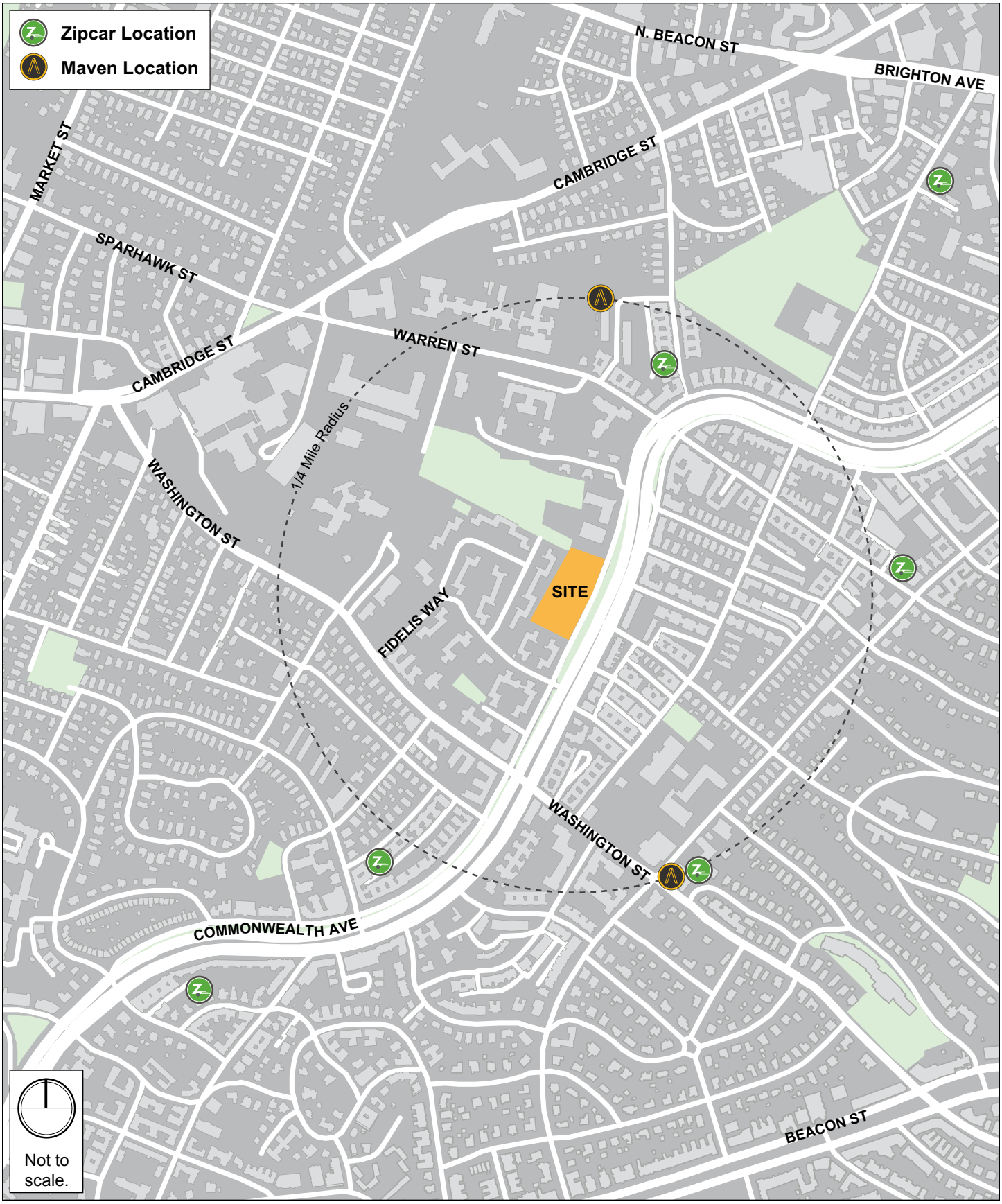

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Figure 3-3
Car Sharing Locations

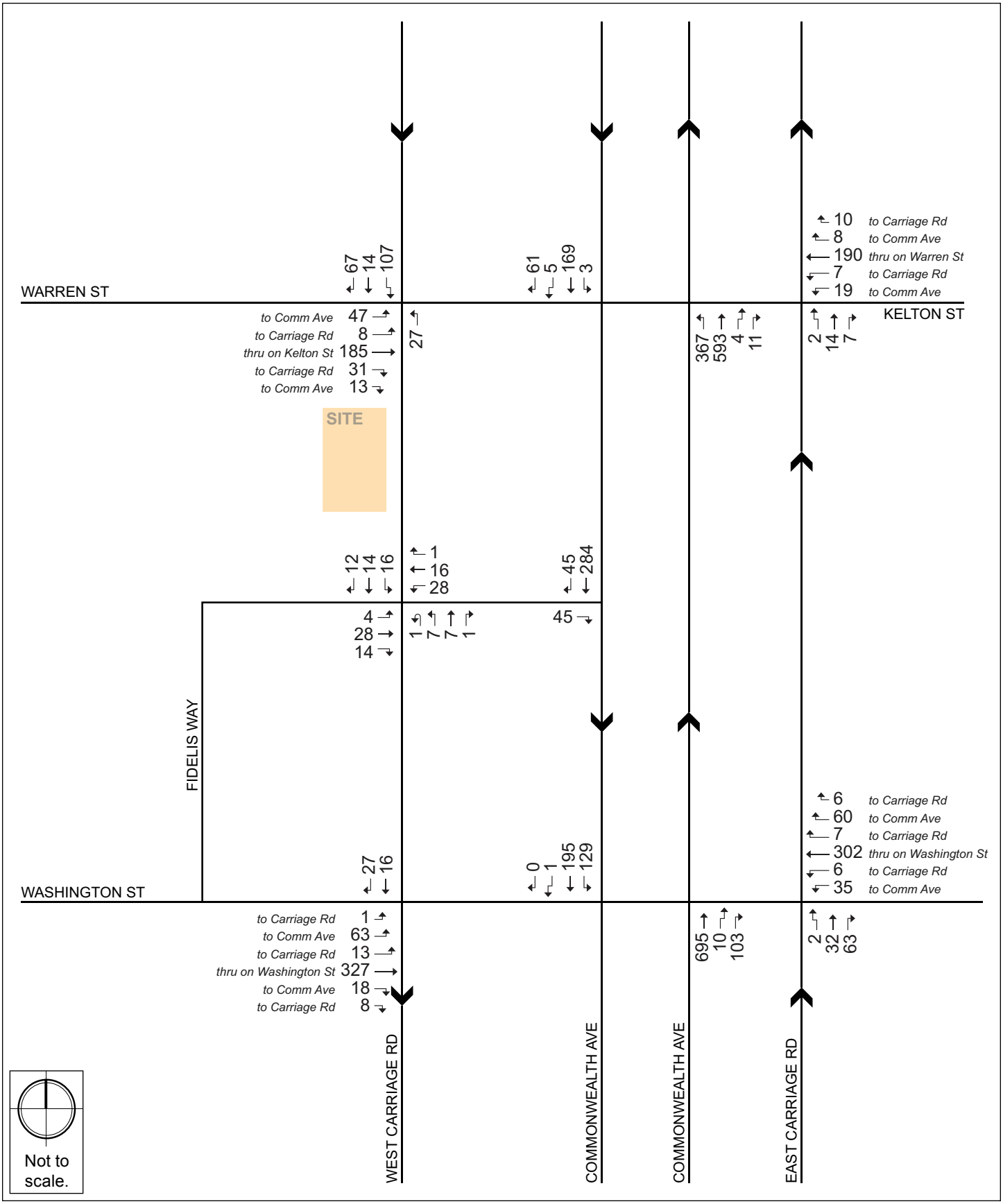

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Figure 3-4

Existing (2019) Condition Traffic Volumes, Weekday a.m. Peak Hour

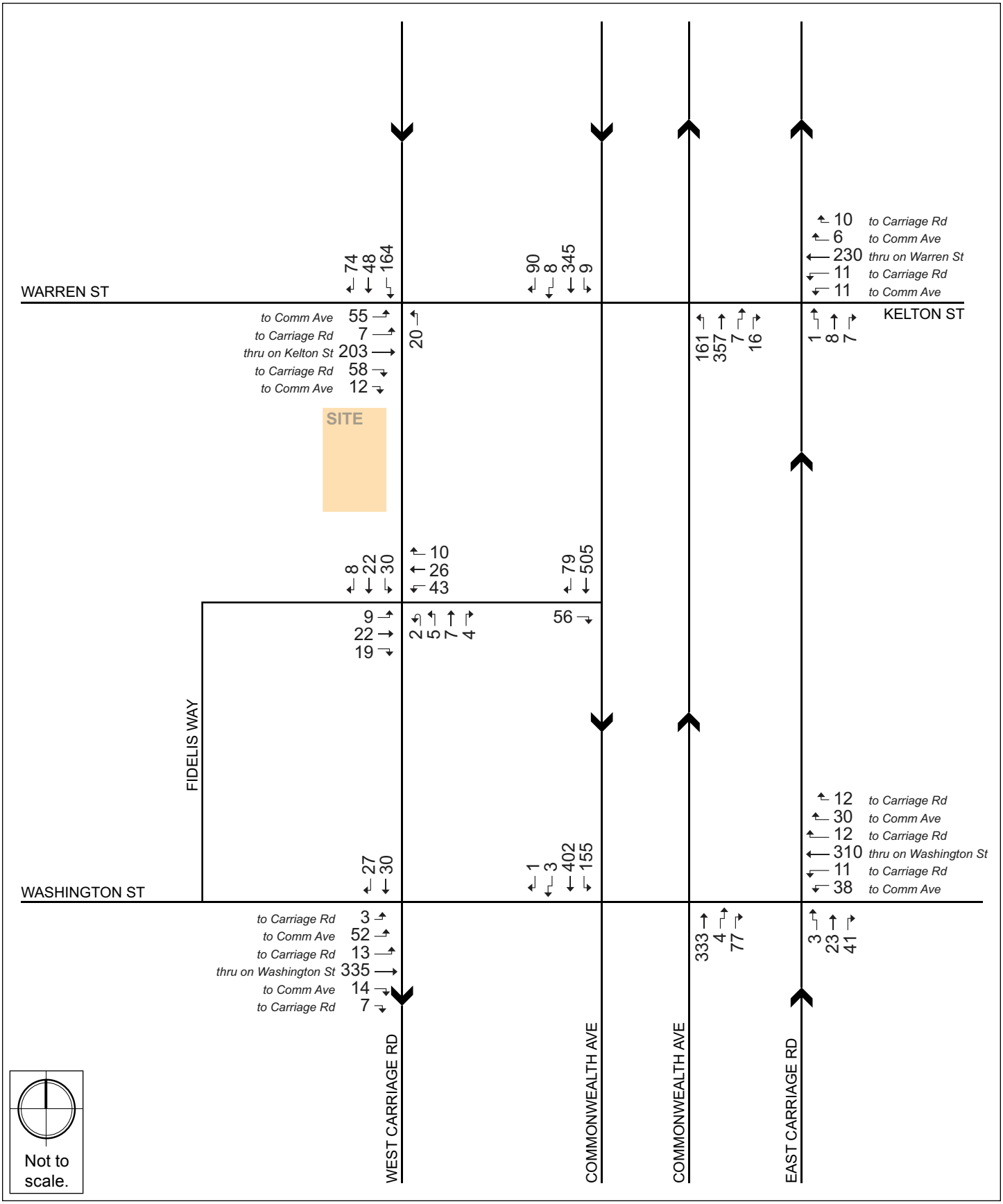

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Figure 3-5

Existing (2019) Condition Traffic Volumes, Weekday p.m. Peak Hour

3.2.6 Existing Bicycle Volumes and Accommodations

Bicycle counts were conducted concurrently with the vehicular TMCs and are presented in Figure 3-6. As shown in the figure, bicycle volumes are extremely low at the study area intersections during both of the peak hours. Various factors could impact low bicycle volumes such as weather (counts were conducted during the winter season) and the complexity of Commonwealth Avenue intersections, and area topography.

Near the Project Site, sharrows are provided along the West Carriage Road for both travel directions and along the East Carriage Road, which is one-way northbound. The Project Site is also located in proximity to two bicycle sharing stations provided by BLUEbikes (formerly Hubway). BLUEbikes is the Boston area's largest bicycle sharing service, which was launched in 2011 and currently consists of more than 3,400 shared bicycles at more than 190 stations throughout Boston, Brookline, Cambridge, and Somerville. There is one operating BLUEbike station within a quarter-mile of the Project Site at the intersection of Commonwealth Avenue/Kelton Street. BLUEbikes plans to open a new location at Washington Street/Egremont Road later in 2019. Two additional BLUEbike stations are less than one-third of a mile from the Project Site.

Figure 3-7 shows the BLUEbike stations near the Project Site.

3.2.7 Existing Pedestrian Volumes and Accommodations

In general, sidewalks are provided along all roadways in the study area and are in good condition. Crosswalks and pedestrian signal equipment are provided at the two-study area signalized intersections.

To determine the amount of pedestrian activity within the study area, pedestrian counts were conducted concurrently with the TMCs at the study area intersections and are presented in Figure 3-8. As shown in the figure, pedestrian activity is heavy throughout the study area, particularly during the a.m. peak hour at all three study area intersections.

3.2.8 Existing Public Transportation Services

The area within which the Project Site is located is well-served by public transportation. The MBTA's Green Line trolley and several bus lines operate within the study area.

The Green Line stations, Washington Street and Warren Street Stations, are approximately one-quarter mile from the Project Site and serves the Green Line's B Branch between Boston College and Park Street. Stations serving the C and D Branches of the Green Line are within one mile of the Project Site. Additionally, seven MBTA bus routes operate in proximity to the Project Site.

Figure 3-9 shows a map of nearby transit services and Table 3-2 provides a summary of the available subway/trolley lines train and bus routes.

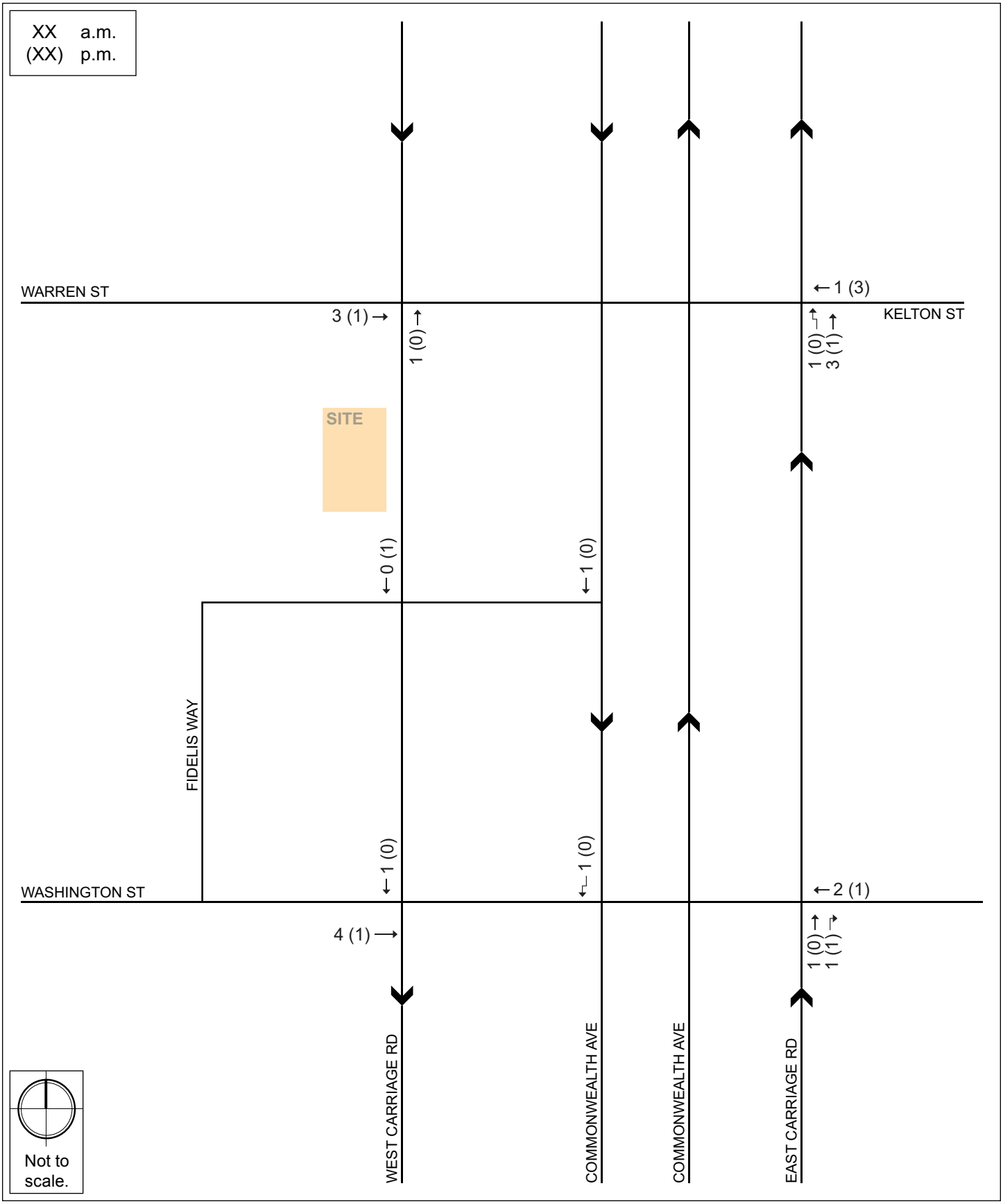

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Figure 3-6

Existing (2019) Condition Bicycle Volumes, Weekday a.m. and p.m. Peak Hours

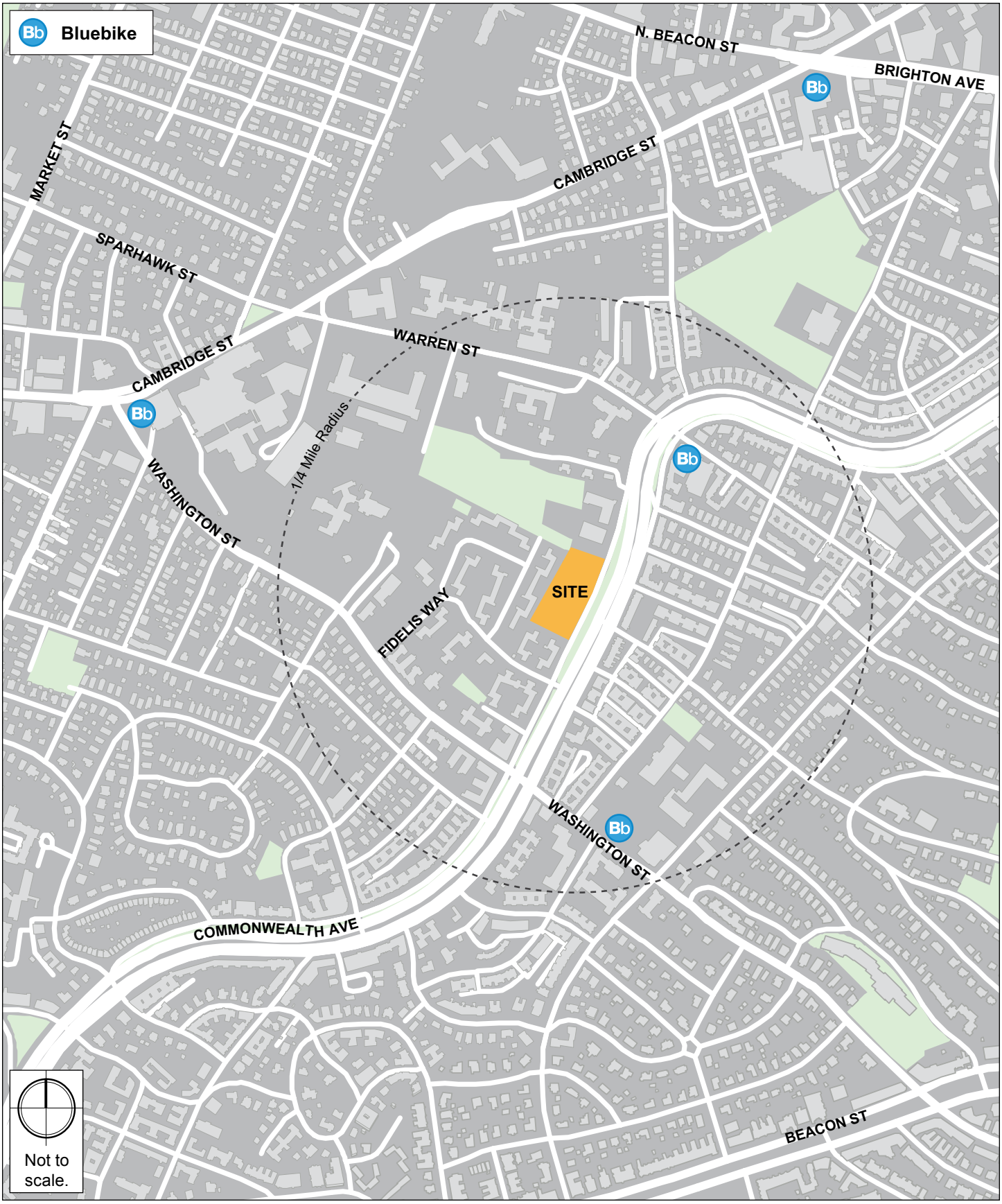

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Figure 3-7
Bicycle Sharing locations

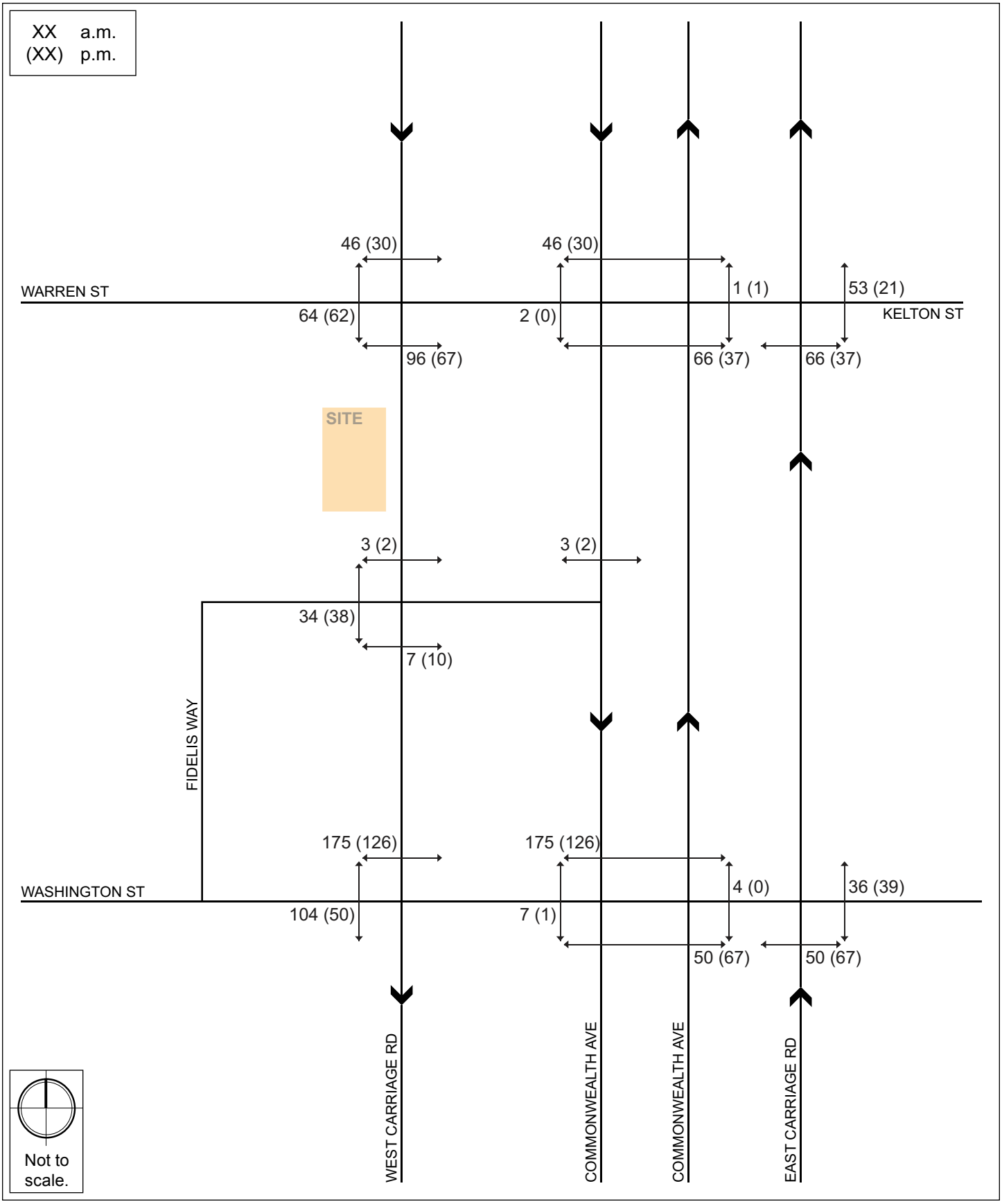

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Figure 3-8

Existing (2019) Condition Pedestrian Volumes, Weekday a.m. and p.m. Peak Hours

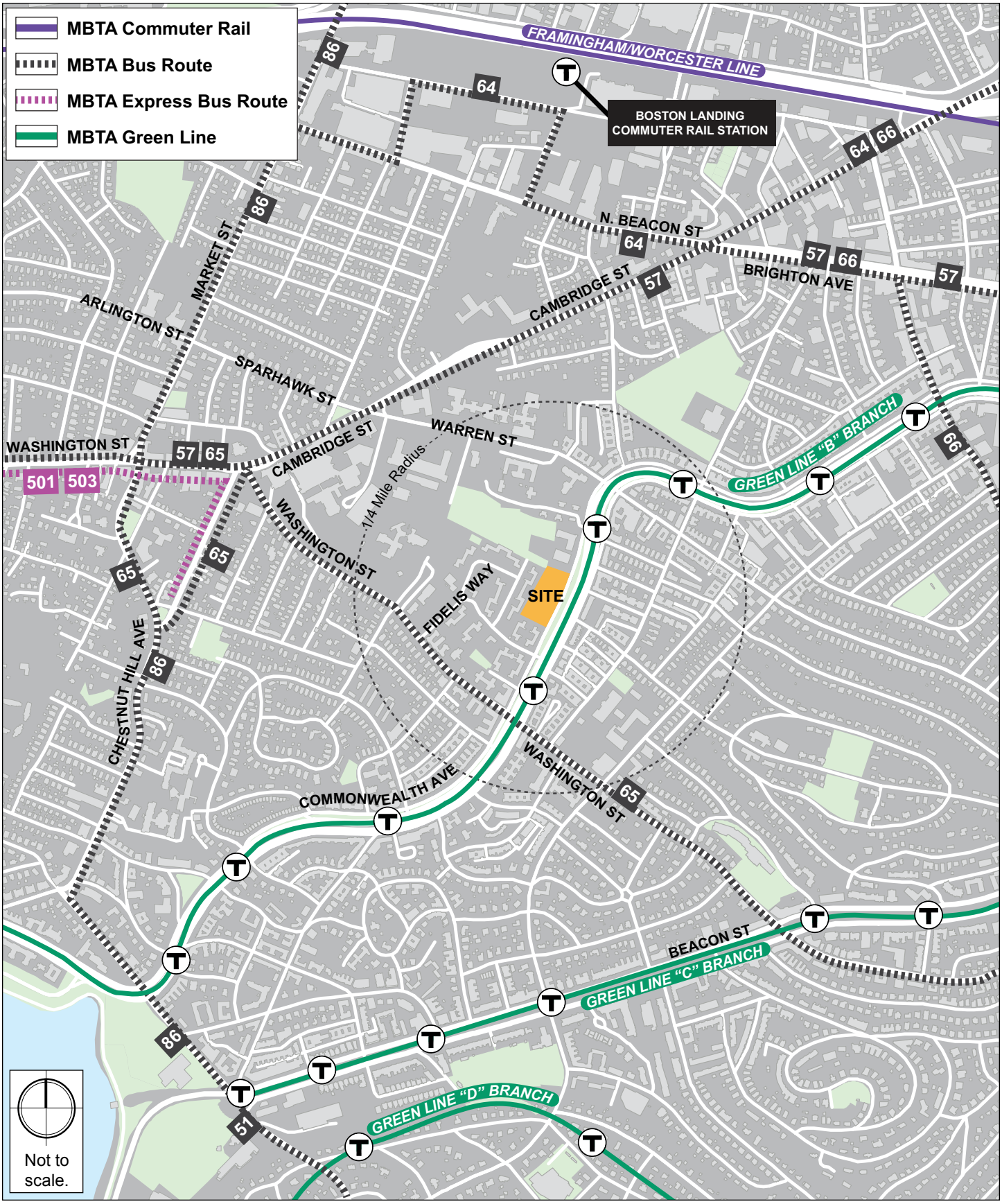

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Figure 3-9
Public Transportation

Table 3-2 Existing Public Transportation

Transit Service	Description	Rush-hour Headway (in minutes) *
Subway/Trolley Lines		
Green Line – B Branch	Boston College - Park Street	6
Green Line – C Branch	Cleveland Circle - North Station	6-7
Green Line – D Branch	Riverside - Government Center	6
Bus Routes		
57	Watertown Yard or Oak Square – Kenmore Station	10
64	Oak Square – University Park or Kendall/MIT	18-20
65	Brighton Center – Kenmore Station	24-27
66	Harvard Square – Dudley Station	10
86	Sullivan Square – Reservoir Station (Cleveland Circle)	8-17
501 Express	Brighton Center – Downtown Boston	6-9
503 Express	Brighton Center – Copley Square	15-30

*Source: MBTA.com, February 2019. Headway is the time between trains/buses.

3.3 No-Build (2026) Condition

The No-Build (2026) Condition reflects a future scenario that incorporates anticipated traffic volume changes associated with background traffic growth independent of any specific project, traffic associated with planned specific developments, and planned infrastructure improvements that will affect travel patterns throughout the study area. These infrastructure improvements include roadway, public transportation, pedestrian and bicycle improvements.

3.3.1 Background Traffic Growth

The methodology to account for generic future background traffic growth, independent of this Project, 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 to account for any additional unforeseen traffic growth, a traffic growth rate of one-half (0.5%) percent per year, compounded annually, was used.

3.3.2 Specific Development Traffic Growth

Traffic volumes associated with known development projects can affect traffic patterns throughout the study area within the future analysis time horizon. Key background development projects were identified in the vicinity of the Project Site and are shown in Figure 3-10. Traffic volumes associated with the following projects were directly incorporated into the future conditions traffic volumes:

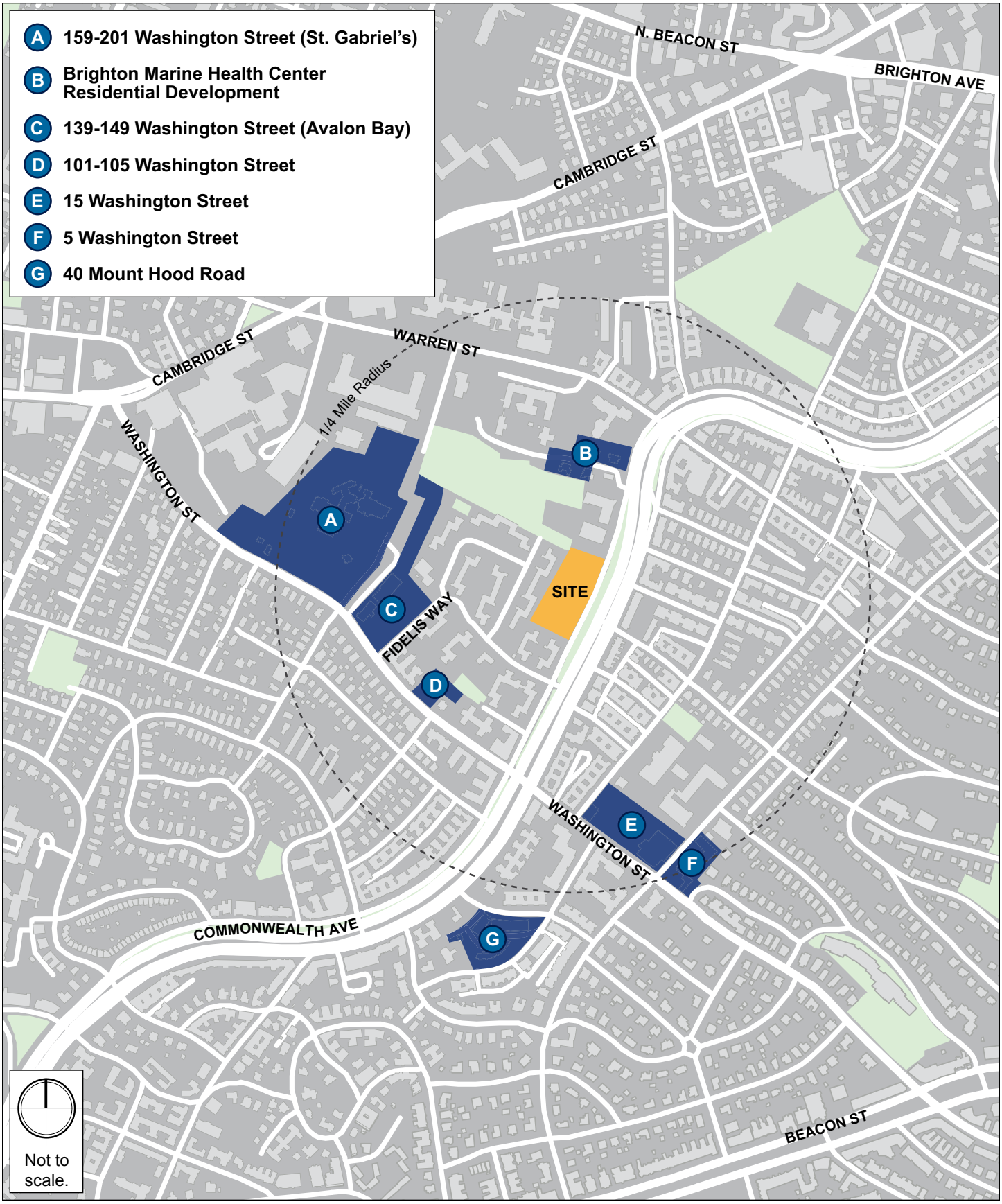

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Figure 3-10
Background Projects

159-201 Washington Street (St. Gabriel's) – This project consists of the renovation of several existing buildings, including St. Gabriel's Monastery, as well as the construction of 660 units of housing in several new buildings and approximately 510 parking spaces within an 11.6-acre site, of which 7.3 acres will be kept as open space. This project is under construction.

Brighton Marine Health Center Residential Development – This project consists of the redevelopment of a 1.5-acre site into approximately 101 residential units with ground floor amenity space and 87 parking spaces located in a surface lot and a below-grade garage. This project is under construction.

139-149 Washington Street (AvalonBay) – This project consists of the construction of two new five-to-six story residential buildings. The first building will contain approximately 180 apartments and the second building will contain approximately 48 condominiums. The project will include 228 parking spaces. This project is under review by the BPDA.

101-105 Washington Street – This project consists of the construction of three separate buildings: a reconstructed Mikvah facility of approximately 5,030 sf, a reconstructed Synagogue facility of approximately 9,285 sf, and a new 70-unit residential building of approximately 85,330 sf with 70 underground parking spaces and 70 bicycling spaces. Twelve above-grade parking spaces will be created for the new religious facilities. This project has been approved by the BPDA Board.

15 Washington Street – This project consists of the development of an approximately 2.3-acre site, including the construction of up to 270 multi-family apartments, an approximately 45,753 sf Whole Foods grocery store, and an approximately 3,593 sf Citizens Bank branch with 323 parking spaces to serve the three developments. This project is under review by the BPDA.

5 Washington Street – This project consists of the development of an approximately 43,500 sf site into an approximately 131,500 sf building with ground floor retail and 115 dwelling units above. Approximately 104 parking spaces will be provided in a partially below-grade, two-level garage, with 25 spaces for retail use and 79 spaces for residential use. This project has been approved by the BPDA Board.

40 Mount Hood Road – This project consists of the redevelopment of a 1.7-acre site into a residential building of 163,000 sf, containing approximately 151 residential units with a mix of rental and condominium units, and 204 parking spaces. This project has been approved by the BPDA Board.

3.3.3 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 study area. These improvements have been incorporated into the future analysis, as appropriate.

Commonwealth Avenue - Commonwealth Avenue, between Packard's Corner and the Warren Street/Kelton Street intersection will be redesigned by the Boston Public Works Department to better accommodate bicycles and pedestrians with separated bicycle lanes, improved sidewalks and crosswalks, and enhanced access to the MBTA Green Line. Concurrently, the Boston Green Links initiative will work within the area to improve access to green spaces, as well as accommodate pedestrians and bicyclists safely. The project is currently in its design stage, with construction estimated to begin later in 2019 and be completed by 2021.

Green Links Network – Commonwealth Avenue between the Warren Street/Kelton Street intersection and the Chestnut Hill Reservoir has been identified in GoBoston 2030 as a candidate corridor in the continuing expansion of the Boston Green Links initiative to improve access to green spaces and active transportation options. Construction of new pedestrian paths, bicycle facilities, and safer road crossings is on-going.

Neighborhood Mobility microHUBs – As part of GoBoston 2030's initiatives to improve transportation, a Mobility microHUB has been identified to be installed in proximity to Warren Street Station. Mobility microHUBs assist users in multi-modal travel by identifying public transportation routes and providing real-time information. Additional features may be provided at the microHUB, such as bus shelter, secure bike parking, ride-hailing pick-up spots, or Wi-Fi.

Walk- and Bike-Friendly Streets – GoBoston 2030's initiatives involve making Boston's 21 "Main Streets" districts friendlier to pedestrians and bicyclists. Brighton Village's Main Streets district, Washington Street between the Cambridge Street intersection and westward to the end of Brighton, as well as sections of surrounding streets, will undergo various improvements such as enhanced signalized crossings, safer intersections, bikeshare stations, and better bike corridors. Implementation of these improvements is on-going, with an estimated two to three Main Streets districts to be completed each year.

3.3.4 No-Build Traffic Volumes

The one-half percent per year annual growth rate, compounded annually, was applied to the Existing (2019) Condition traffic volumes, the traffic volumes associated with the background development projects listed above were added, and the geometric modifications due to the roadway redesign were accounted for to develop the No-Build (2026) Condition traffic volumes.

The No-Build (2026) weekday a.m. and p.m. peak hour traffic volumes are shown on Figure 3-11 and Figure 3-12, respectively.

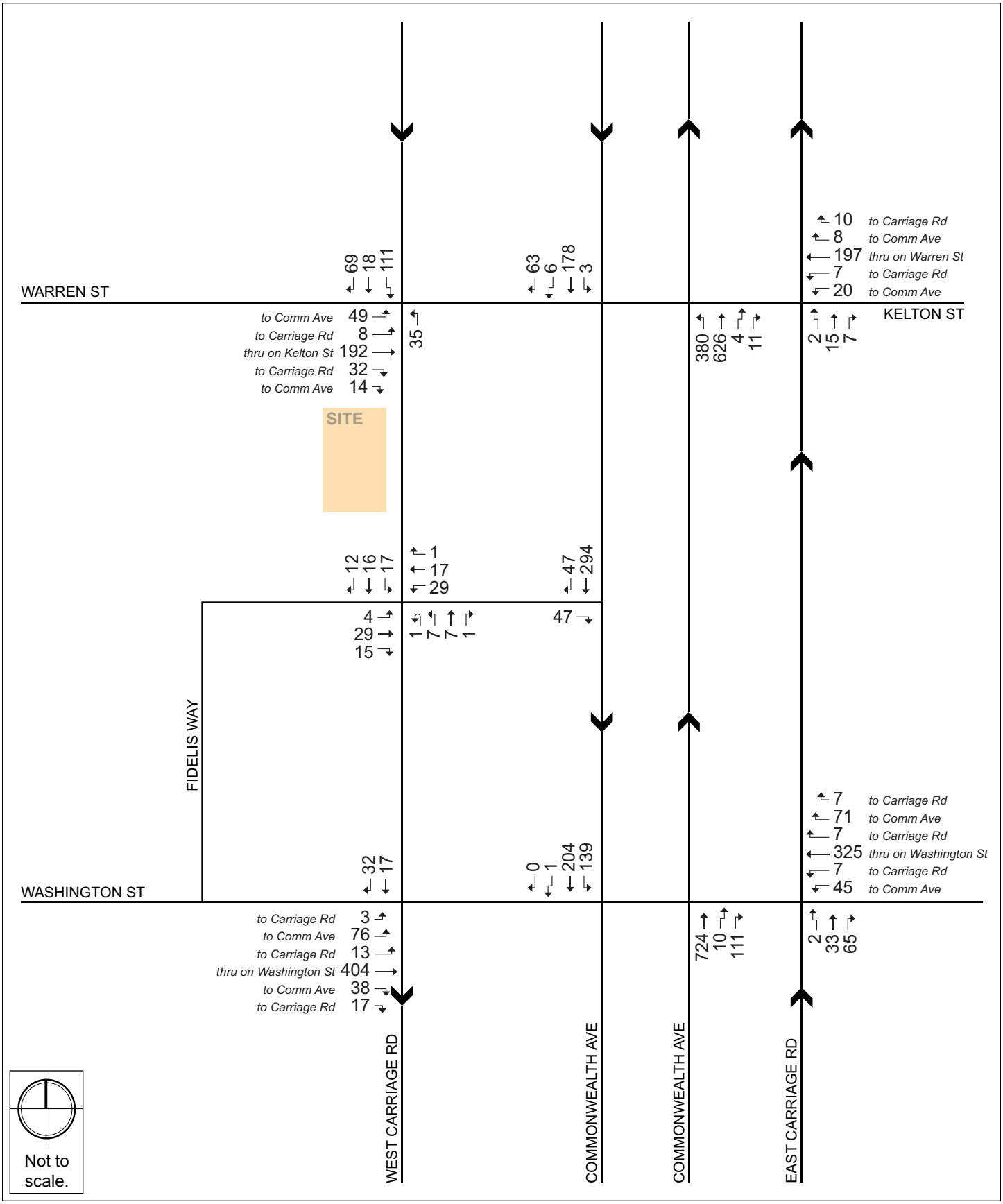

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Figure 3-11

No-Build (2026) Condition Traffic Volumes, Weekday a.m. Peak Hour

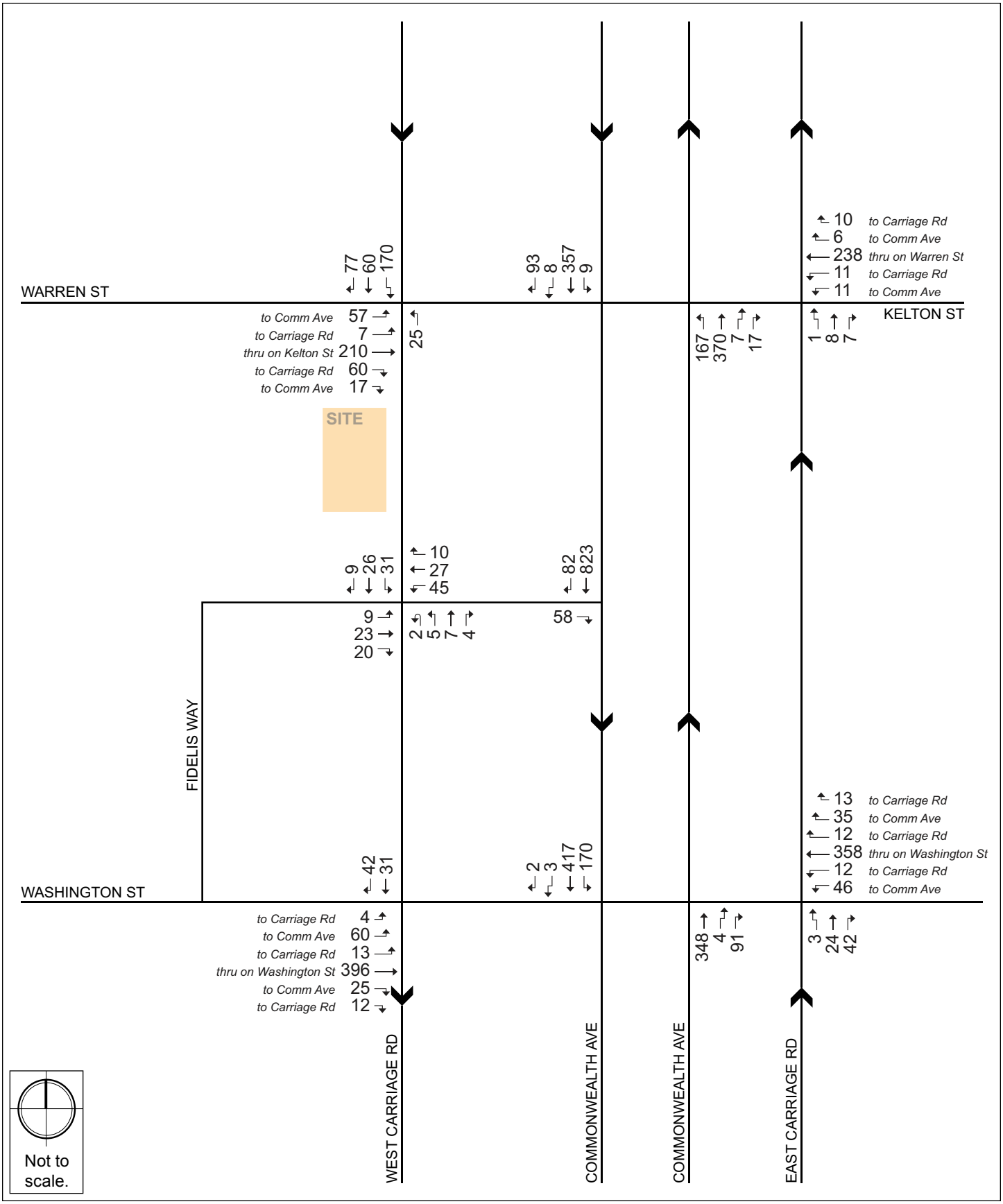

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Figure 3-12

No-Build (2026) Condition Traffic Volumes, Weekday p.m. Peak Hour

3.4 Build (2026) Condition

As previously summarized, the Project Site is located along the west side of Commonwealth Avenue (West Carriage Road). The Project includes the removal of the existing surface parking spaces and demolition of the existing building on the Project Site. Approximately 330 residential units will be constructed and include approximately 200 parking spaces.

3.4.1 Site Access and Vehicle Circulation

The Site Plan is shown in Figure 3-13. As shown in the plan, vehicle access/egress for the Project will be provided via two curb-cuts on the Commonwealth Avenue Carriage Road. A two-way driveway along the northerly side of the Project Site will serve the Project's parking garage. A designated area will be provided adjacent to the building lobby to serve general pick-up/drop-off activity, including taxicabs and transportation network company (TNC) vehicles, such as Uber and Lyft.

The primary pedestrian entrances to the building lobbies will be located along the Commonwealth Avenue West Carriage Road, as shown on the Site Plan. The Proponent will construct new sidewalks adjacent to the Project Site in accordance with Boston Complete Streets guidelines and requirements of the Americans with Disabilities Act and Massachusetts Architectural Access Board (ADA/AAB), to the extent feasible, and as approved by applicable City agencies/boards.

3.4.2 Project Parking

The Project will provide approximately 200 parking spaces for residents in a covered, ground floor and second floor garage. The Project has been designed so that its parking needs can fully be accommodated within the Project Site without affecting the availability of existing on-street parking in the surrounding area.

BTD has set parking space goals and guidelines throughout the City to establish the amount of parking supply provided with new developments. BTD's maximum parking ratio guidelines for residential use in Allston/Brighton is 1.25 spaces per unit for projects within a ten-minute walk away from a MBTA station. The Project will provide a parking ratio of 0.60 spaces per residential unit. It is expected that many residents will not own an automobile and will instead rely on car sharing services, taxicabs, or Uber/Lyft, for trips requiring a vehicle.

3.4.3 Loading and Service Accommodations

Two types of delivery activity are anticipated at the Project:

- Loading area/docks – Activity related to delivery (USPS, UPS, Fed-Ex), furniture delivery, contractor/repair, and move-in/move-out will occur here. Typically, about 50% of loading dock deliveries occur via Single Unit 30-foot (SU30) trucks and about 50% via autos/vans.

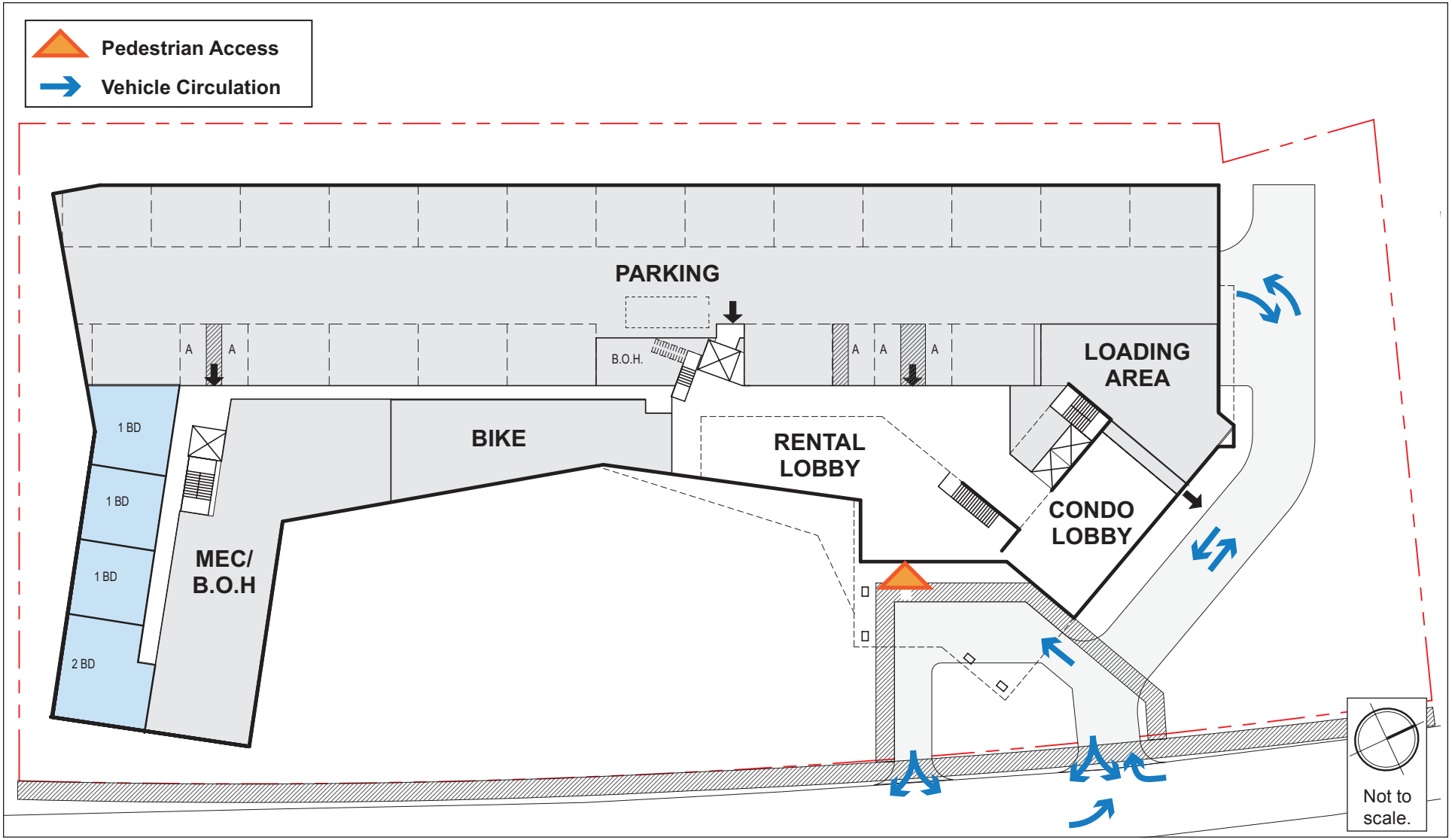

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Figure 3-13
Site Plan

- Residential Lobby – Activity related to laundry/dry cleaning pick-up/drop-off, single small package delivery, housecleaning services, dog walkers, water delivery, cable company service, and food delivery will occur here. Typically, about 90% of this activity occurs via autos/vans and about 10% via walking/bicycle.

The Project will have two truck bays in the single loading area as shown in the Site Plan. Trash and recycling pick-up will occur from this loading area.

Based on observations at other residential buildings, it is expected that about ten deliveries per day will use the loading area. Typically, vehicles associated with such deliveries occupy a loading bay for about 15 minutes. Sufficient loading dock capacity is being provided at the Project. At the lobby, it is expected that about 24 deliveries will occur throughout the day, lasting, on average, about four minutes each. The vehicles associated with these deliveries will use the off-street pick-up/drop-off area.

3.4.4 Bicycle Accommodations

Secure bicycle parking will be provided for residents. Based on BTD guidelines for bicycle accommodations, the Project will provide approximately 330 spaces for residents (1.0 space/ per residential unit). Bicycle spaces will be provided within the parking garage. Additional storage will be provided by outdoor bicycle racks accessible to visitors to the Project Site in accordance with BTD guidelines. The details of the bicycle facilities will be set forth in the Transportation Access Plan Agreement.

3.4.5 Trip Generation Methodology

Determining the future trip generation of a 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 proposed 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 a project. In an urban setting well-served by transit, adjustments are necessary to account for other travel mode shares such as walking, bicycling, and transit.

Land Use Code 222 – Multifamily Housing High-Rise. High-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have more than ten levels (floors). Calculations of the number of trips use ITE's average rate per dwelling units.

[1] Trip Generation Manual, 10th Edition; Institute of Transportation Engineers; Washington, D.C.; 2017.

3.4.6 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 10 – Brighton. 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 3-3.

Table 3-3 Travel Mode Shares and Vehicle Occupancy Rate

Land Use		Walk/Bicycle Share	Transit Share	Vehicle Share		Vehicle Occupancy Rate
				Private Auto	TNC	
Daily						
Residential	In	22%	19%	56%	3%	1.18
	Out	22%	19%	56%	3%	1.18
a.m. Peak Hour						
Residential	In	30%	18%	50%	2%	1.18
	Out	19%	30%	49%	2%	1.18
p.m. Peak Hour						
Residential	In	19%	30%	49%	2%	1.18
	Out	30%	18%	50%	2%	1.18

1. TNC: Transportation Network Companies such as Uber and Lyft.

3.4.7 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. While the hospital building was occupied and generating vehicle trip activity until about 2017, the Project Site currently generates no vehicle trips.

Because the Project Site has been vacant for approximately two years, no credit (reduction) for existing trips has been taken in the calculations relating to the Build Condition.

3.4.8 Project Trip Generation

The mode share percentages shown in Table 3-3 were applied to the number of person trips to develop walk/bicycle, transit, and vehicle trip generation estimates for the Project. The trip generation for the Project by mode is shown in Table 3-4. The detailed trip generation information is provided in Appendix B.

[2] Summary of Travel Trends: 2017 National Household Travel Survey; FHWA; Washington, D.C.; 2017.

Table 3-4 Project Trip Generation

Land Use		Walk/Bicycle Trips	Transit Trips	Vehicle Trips		
				Private Auto Trips	TNC/Rideshare Trips	Total Vehicle Trips
Daily						
Residential – 330 units LUC 222 (High-Rise)	In	191	165	411	44	455
	Out	191	165	411	44	455
	Total	**382**	**330**	**822**	**88**	**910**
a.m. Peak Hour						
Residential – 330 units LUC 222 (High-Rise)	In	9	5	13	4	17
	Out	17	28	38	4	42
	Total	**26**	**33**	**51**	**8**	**59**
p.m. Peak Hour						
Residential – 330 units LUC 222 (High-Rise)	In	16	26	35	4	39
	Out	16	10	23	4	27
	Total	**32**	**36**	**58**	**8**	**66**

As shown in Table 3-4, the Project is expected to generate approximately 330 new transit trips (165 in and 165 out) over the course of a weekday. The Project will generate about 33 transit trips (5 in and 28 out) during the a.m. peak hour and about 36 transit trips (26 in and 10 out) during the p.m. peak hour. Because the number of new transit trips is relatively modest and will be spread over the available transit services shown in Figure 3-4, no adverse impact to area transit operations is expected.

The Project is expected to generate approximately 382 new pedestrian/bicycle trips (191 in and 191 out) on a weekday and about 26 pedestrian/bicycle trips (9 in and 17 out) during the a.m. peak hour and about 32 pedestrian/bicycle trips (16 in and 16 out) during the p.m. peak hour. Note that the cited transit trips start or end as a pedestrian trip at the Project Site. Overall, the modest number of new pedestrian and bicycle trips will not have an impact to the pedestrian and bicycle environments in the study area.

The Project is expected to generate approximately 910 new vehicle trips throughout the day. During the a.m. peak hour, the Project will generate about 59 vehicle trips (17 in and 42 out) and during the p.m. peak hour, the Project will generate about 66 vehicle trips (39 in and 27 out). The impact from these new vehicle trips is evaluated in Section 3.5.

3.4.9 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 10. The trip distribution percentages for the Project are illustrated in Figures 3-14 and Figure 3-15.

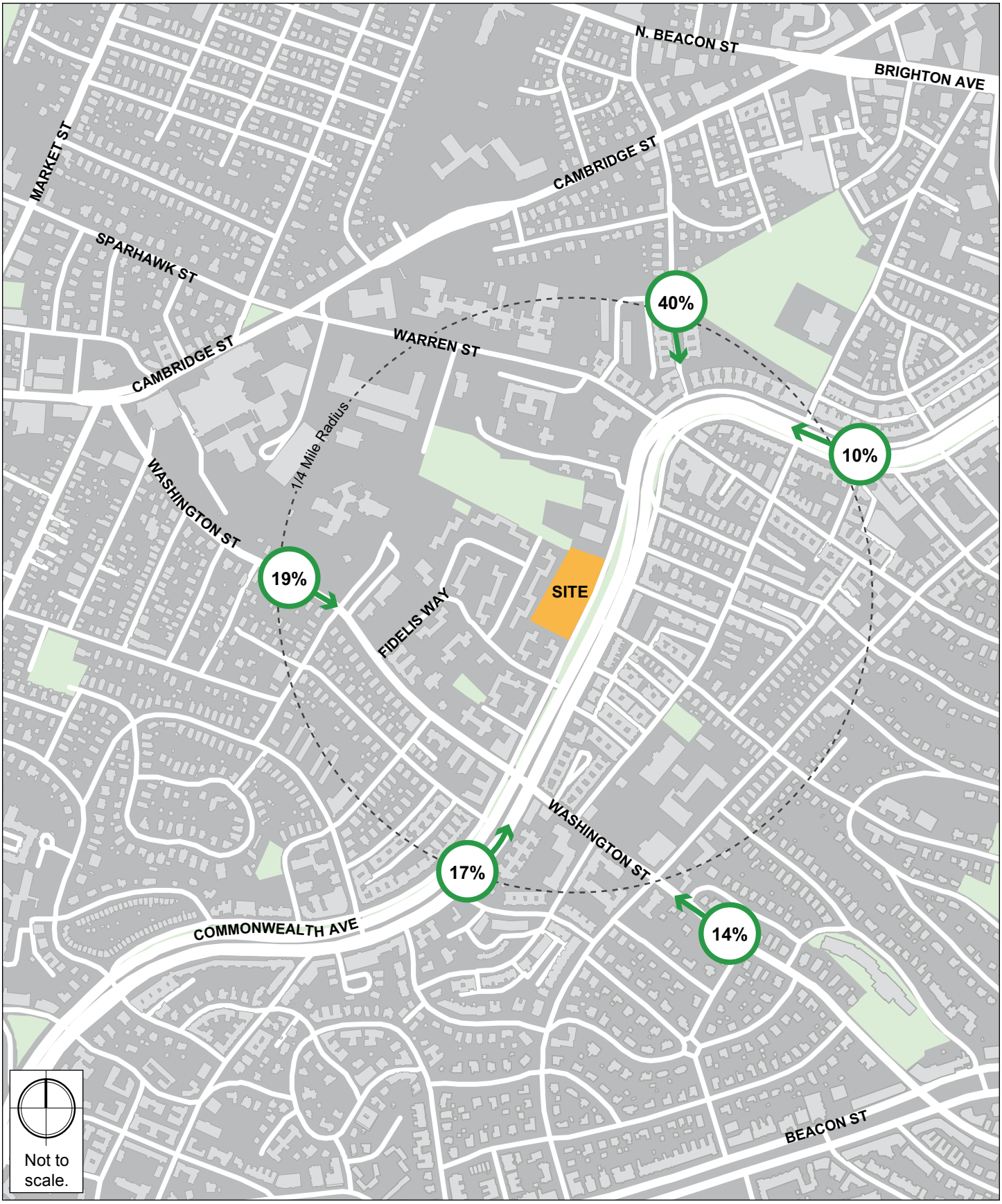

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Figure 3-14
Entering Trip Distribution

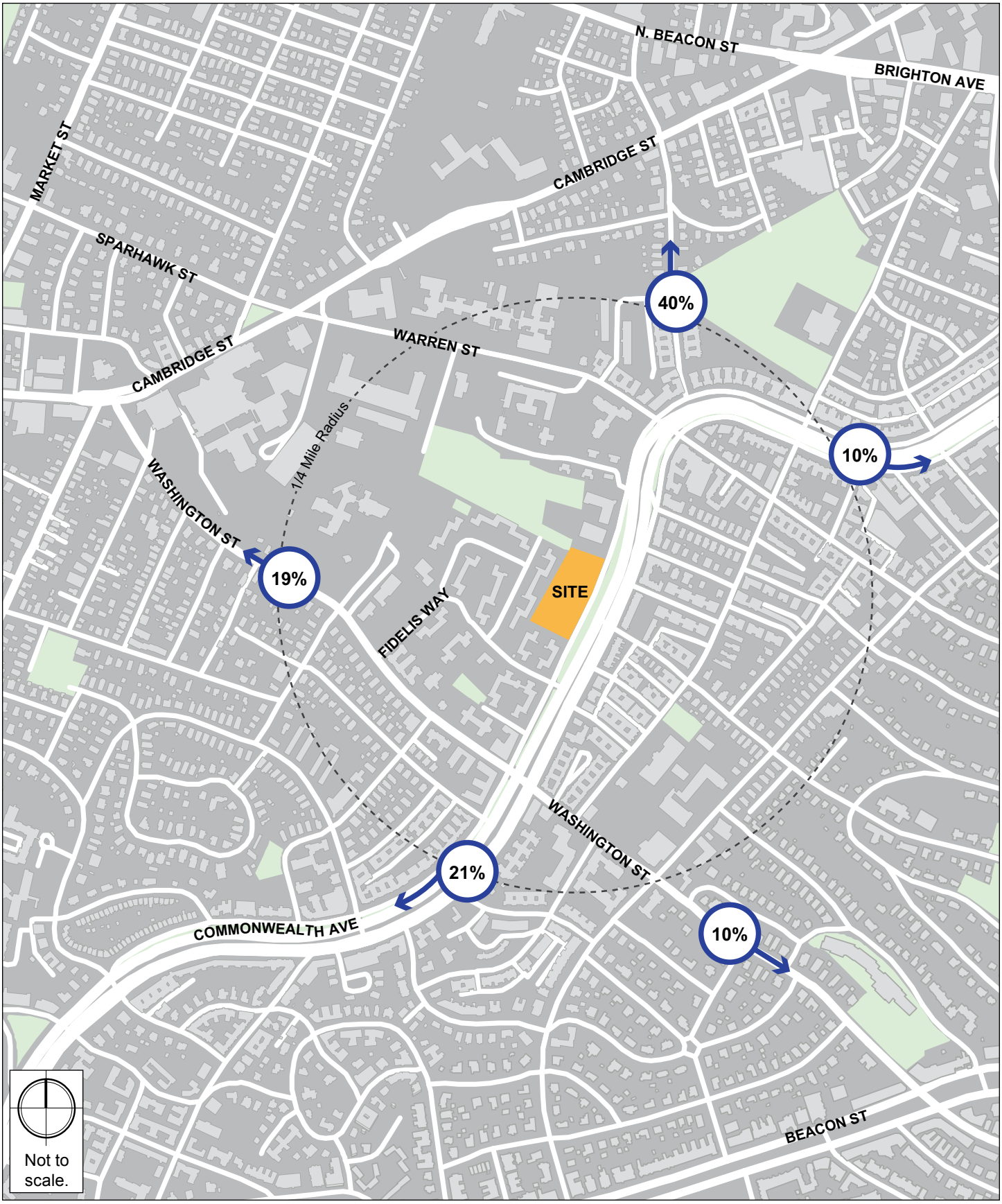

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Figure 3-15
Exiting Trip Distribution

3.4.10 Build (2026) Condition Traffic Volumes

The vehicle trips were distributed through the study area. The Project-generated trips for the a.m. and p.m. peak hours are shown in Figure 3-16 and Figure 3-17, respectively. The trip assignments were added to the No-Build (2026) Condition vehicular traffic volumes to develop the Build (2026) Condition vehicular traffic volumes. The Build (2026) Condition a.m. and p.m. peak hour traffic volumes are shown on Figure 3-18 and Figure 3-19, respectively.

3.5 Traffic Capacity 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).

LOS designations are based on average delay per vehicle for all vehicles entering an intersection. Table 3-5 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.

Table 3-5 Vehicle Level of Service Criteria

	Average Stopped Delay (sec/veh)	
Level of Service	**Signalized Intersections**	**Unsignalized Intersections**
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.

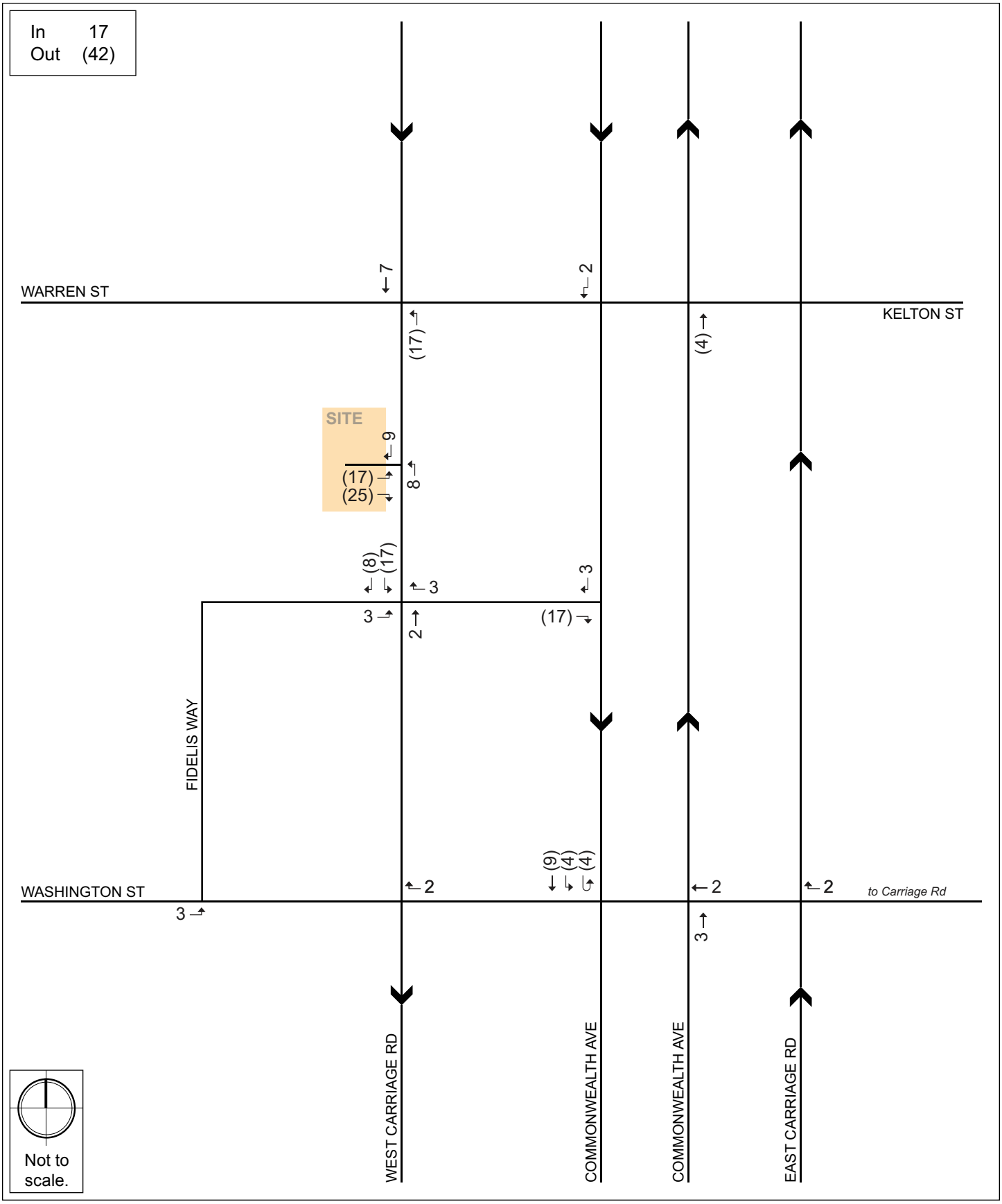

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Figure 3-16
Project-Generated Trips, Weekday a.m. Peak Hour

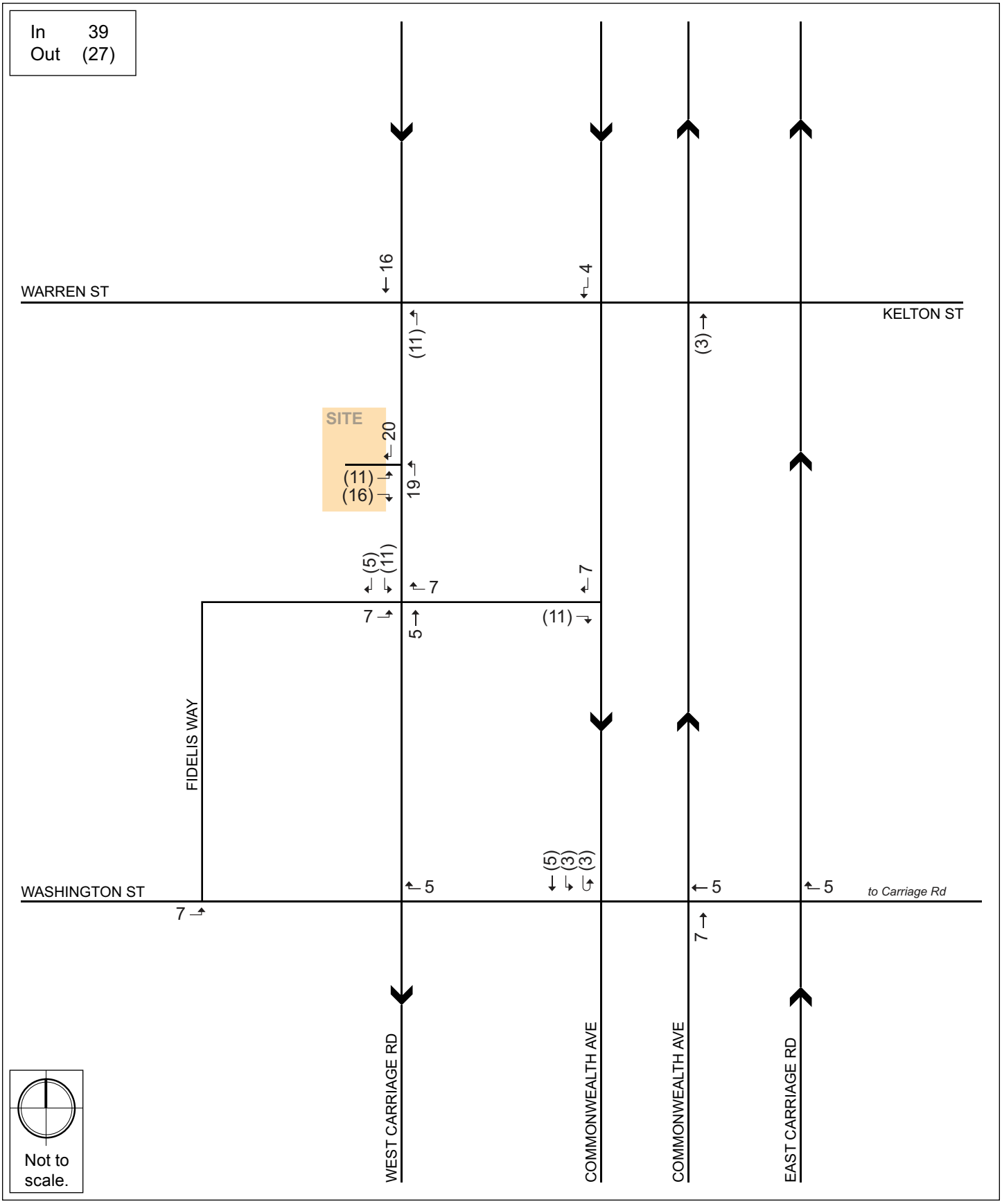

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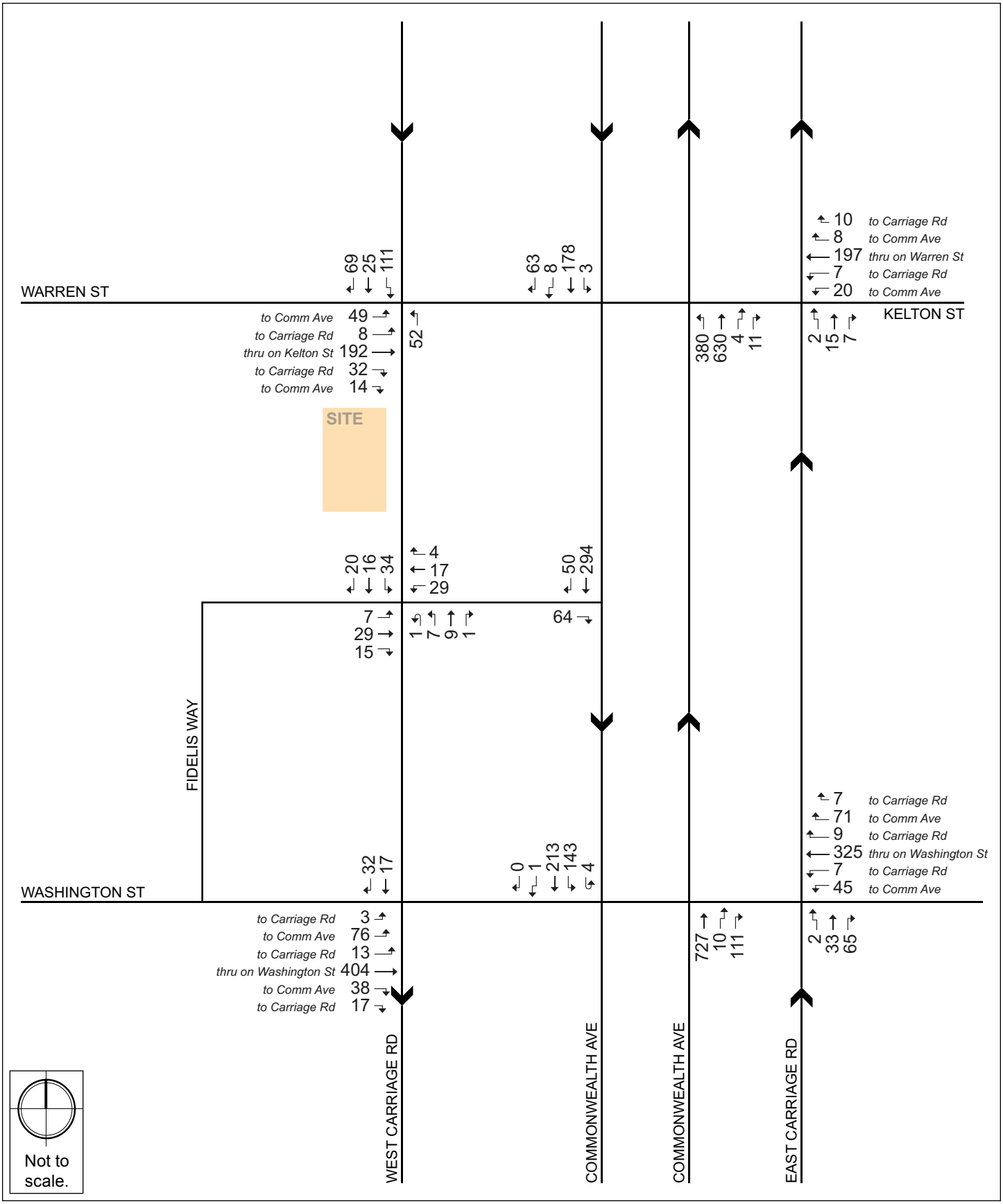
Figure 3-17
Project-Generated Trips, Weekday p.m. Peak Hour



1515 Commonwealth Avenue Boston, Massachusetts

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Figure 3-18

Build (2026) Condition Traffic Volumes, Weekday a.m. Peak Hour

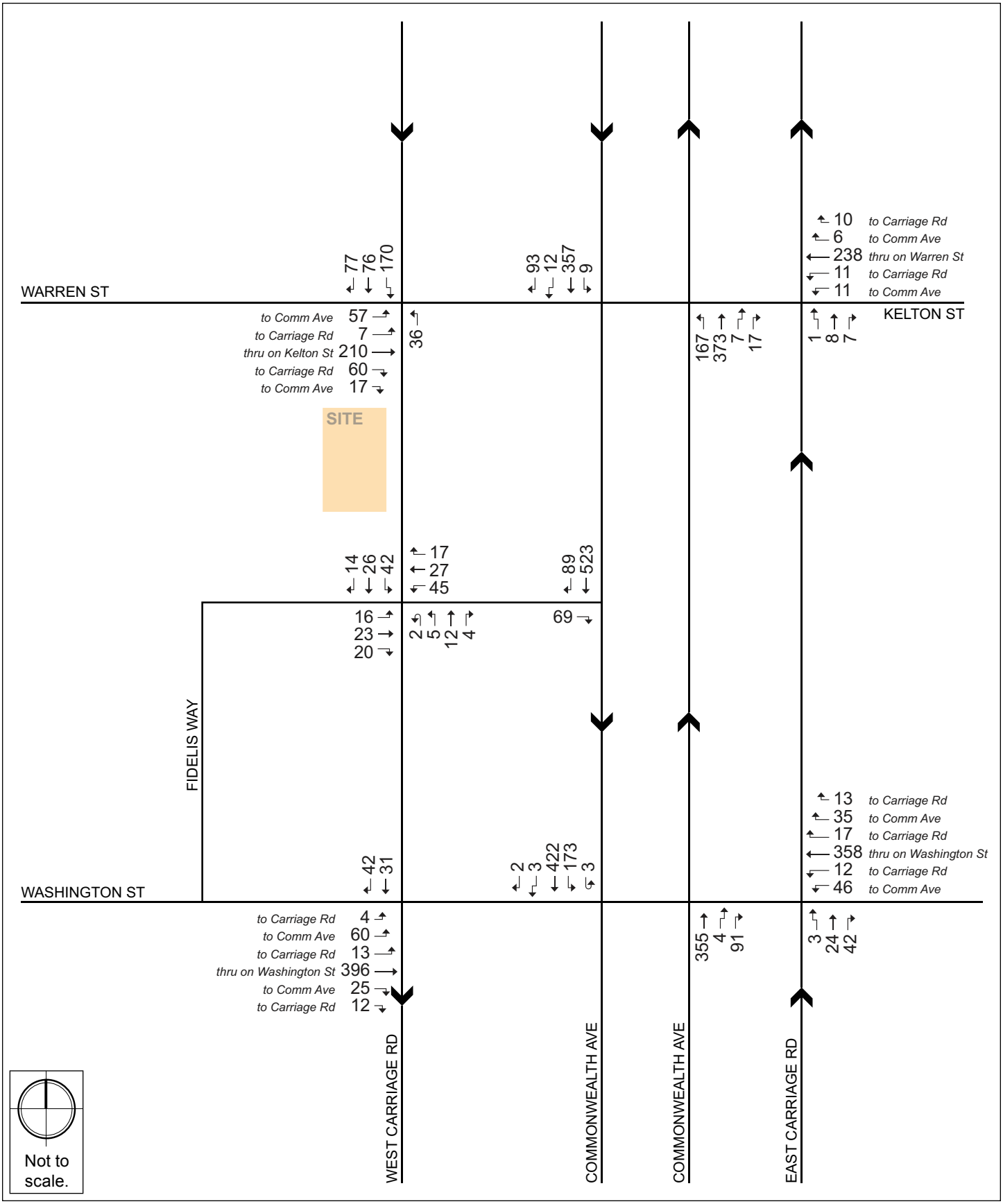

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Figure 3-19

Build (2026) Condition Traffic Volumes, Weekday p.m. Peak Hour

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, 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 3-6 and Table 3-7 summarize the Existing (2019) Condition, the No-Build (2026) Condition, and the Build (2026) Condition capacity analysis for the study area intersections during both the weekday a.m. and p.m. peak hours, respectively. The detailed analysis of the Synchro results is provided in Appendix B.

3.5.1 Existing (2019) Condition Traffic Capacity Analysis

As shown in Table 3-6 and Table 3-7, the study area intersections and approaches generally operate below capacity (v/c ratio below 1.00) and at acceptable levels of service (LOS D or better) under the Existing (2019) Condition. The following locations were shown to have movements at capacity (v/c ratio of 1.00 or higher) or operating at high delays (LOS E or LOS F):

The signalized intersection of **Commonwealth Avenue/Warren Street/Kelton Street** operates at an acceptable LOS during both the morning and evening peak hours. The Warren Street eastbound approach operates at LOS E during the a.m. and p.m. peak hours. During the a.m. peak hour, the Kelton Street westbound approach operates at LOS E. The West Carriage Road northbound left-turn approach operates at LOS E during the p.m. peak hour.

The signalized intersection of **Commonwealth Avenue/Washington Street** operates at an acceptable LOS during both the a.m. and p.m. peak hours. The Commonwealth Avenue southbound left-turn approach operate at LOS E during both the morning and evening peak hours. All other movements operate at an acceptable LOS.

3.5.2 No-Build (2026) Condition Traffic Capacity Analysis

As shown in the No-Build Condition, the study area intersections and approaches continue to operate at the same levels of service as under the Existing (2019) Condition.

3.5.3 Build (2026) Condition Traffic Capacity Analysis

As shown in the Build (2026) Condition, all of the study area intersections continue to operate at the same levels of service as under the No-Build (2026) conditions during the weekday a.m. and p.m. peak hours.

As indicated on Table 3-7, the signalized intersection of **Commonwealth Avenue/Washington Street** continues to operate at the same LOS as the No-Build Condition with the exception of the Commonwealth Avenue southbound left-turn approach, which decreases from LOS E to F during the p.m. peak hour. Because the change in delay on this approach is small (about 8 seconds) as compared to the No-Build Condition and the overall intersection continues to operate at LOS C, the impact of this change is considered minor.

Table 3-6 Capacity Analysis Summary, Weekday a.m. Peak Hour

Intersection/Movement	Existing (2019) Condition					No-Build (2026) Condition					Build (2026) Condition				
	LOS	Delay (s)	V/C Ratio	Queues (ft) 50th	Queues (ft) 95th	LOS	Delay (s)	V/C Ratio	Queues (ft) 50th	Queues (ft) 95th	LOS	Delay (s)	V/C Ratio	Queues (ft) 50th	Queues (ft) 95th
Signalized Intersections															
Commonwealth Avenue/ Warren Street/Kelton Street	**C**	**31.4**	-	-	-	**C**	**32.3**	-	-	-	**C**	**32.4**	-	-	-
Warren St EB thru/right	E	67.6	0.82	178	#303	E	71.0	0.85	186	#318	E	71.0	0.85	186	#318
Kelton St WB thru/right	E	57.4	0.71	155	243	E	58.9	0.73	162	253	E	58.9	0.73	162	253
East Carriage Rd NB left/thru/right	A	9.5	0.03	6	19	A	9.9	0.03	6	20	B	10.7	0.03	6	21
West Carriage Rd NB left	E	59.1	0.29	25	52	E	61.1	0.36	32	62	E	63.2	0.47	49	82
Commonwealth Ave NB left/thru | thru/right	C	21.4	0.71	270	379	C	23.3	0.75	297	424	C	25.1	0.77	307	449
Commonwealth Ave SB left/thru | thru/right	C	27.0	0.26	69	107	C	27.7	0.28	74	115	C	29.0	0.29	76	120
West Carriage Rd SB left/thru/right	C	32.0	0.40	119	198	C	33.0	0.43	128	213	C	34.6	0.44	130	219
Commonwealth Avenue/Washington Street	**C**	**27.0**	-	-	-	**C**	**33.0**	-	-	-	**C**	**32.9**	-	-	-
Washington St EB left/thru/right	D	47.3	0.78	251	345	D	54.5	0.88	320	#504	D	54.5	0.88	320	#504
Washington St WB thru/right	D	47.7	0.79	256	351	D	42.5	0.75	261	385	D	42.7	0.76	263	387
East Carriage Rd NB thru	C	28.4	0.06	19	45	C	29.8	0.07	21	46	C	29.8	0.07	21	46
East Carriage Rd NB right	A	2.7	0.16	0	11	A	3.1	0.18	0	13	A	3.1	0.18	0	13
Commonwealth Ave NB thru | thru/right	D	36.1	0.70	296	#408	D	43.5	0.82	340	#457	D	43.9	0.82	341	#460
Commonwealth Ave SB left	E	63.8	0.64	97	165	E	65.6	0.67	105	#178	E	68.1	0.71	112	#199
Commonwealth Ave SB thru | thru	C	25.8	0.16	53	87	C	28.2	0.19	60	91	C	28.2	0.20	63	94
West Carriage Rd SB thru/right	C	29.4	0.13	24	57	C	31.5	0.17	30	64	C	31.5	0.17	30	64
Unsignalized Intersections															
Commonwealth Avenue/Fidelis Way	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fidelis Way EB left/thru/right	A	7.3	0.07	-	-	A	7.3	0.07	-	-	A	7.4	0.08	-	-
Fidelis Way EB right	A	9.9	0.08	-	6	A	9.9	0.08	-	7	B	10.1	0.11	-	10
Fidelis Way WB left/thru/right	A	7.5	0.06	-	-	A	7.6	0.06	-	-	A	7.6	0.06	-	-
West Carriage Rd NB left/thru/right	A	7.5	0.04	-	-	A	7.5	0.04	-	-	A	7.6	0.04	-	-
West Carriage Rd SB left/thru/right	A	7.3	0.05	-	-	A	7.4	0.06	-	-	A	7.6	0.09	-	-
Commonwealth Ave SB thru | thru/right	A	0.0	0.14	-	0	A	0.0	0.14	-	0	A	0.0	0.14	-	-

Grey Shading indicates decrease to LOS E or F.
~ 50th percentile volume exceeds capacity. Queue shown is the maximum after two cycles.
# 95th percentile volume exceeds capacity. Queue shown is the maximum after two cycles.
m Volumes for 95th percentile queue is metered by upstream signal

Table 3-7 Capacity Analysis Summary, Weekday p.m. Peak Hour

Intersection/Movement	Existing (2019) Condition					No-Build (2026) Condition					Build (2026) Condition				
	LOS	Delay (s)	V/C Ratio	Queues (ft) 50th	Queues (ft) 95th	LOS	Delay (s)	V/C Ratio	Queues (ft) 50th	Queues (ft) 95th	LOS	Delay (s)	V/C Ratio	Queues (ft) 50th	Queues (ft) 95th
Signalized Intersections															
Commonwealth Avenue/ Warren Street/Kelton Street	**C**	**25.8**	**-**	**-**	**-**	**C**	**26.5**	**-**	**-**	**-**	**C**	**27.5**	**-**	**-**	**-**
Warren St EB thru/right	E	55.3	0.77	206	308	E	57.5	0.80	218	#346	E	57.5	0.80	218	#346
Kelton St WB thru/right	D	57.8	0.65	169	259	D	48.0	0.66	174	267	D	48.0	0.66	174	267
East Carriage Rd NB left/thru/right	A	8.6	0.03	4	12	A	8.8	0.03	4	12	A	9.2	0.03	4	13
West Carriage Rd NB left	E	57.4	0.22	19	41	E	58.8	0.28	24	49	E	61.1	0.37	35	63
Commonwealth Ave NB left/thru | thru/right	B	14.8	0.44	116	161	B	15.4	0.47	124	172	B	15.9	0.48	125	178
Commonwealth Ave SB left/thru | thru/right	C	27.8	0.39	134	198	C	29.1	0.42	148	215	C	30.0	0.43	150	222
West Carriage Rd SB left/thru/right	C	32.5	0.51	175	292	C	34.7	0.56	196	320	D	36.6	0.60	209	346
Commonwealth Avenue/Washington Street	**C**	**23.6**	**-**	**-**	**-**	**C**	**26.4**	**-**	**-**	**-**	**C**	**26.3**	**-**	**-**	**-**
Washington St EB left/thru/right	D	40.3	0.72	246	349	D	44.3	0.81	302	443	D	44.3	0.81	302	443
Washington St WB thru/right	D	38.1	0.69	231	328	D	38.7	0.73	265	390	D	39.1	0.74	270	395
East Carriage Rd NB thru	C	26.0	0.05	16	31	C	26.9	0.05	18	33	C	26.9	0.05	18	33
East Carriage Rd NB right	A	0.7	0.12	0	0	A	1.0	0.13	0	0	A	1.0	0.13	0	0
Commonwealth Ave NB thru | thru/right	C	28.5	0.37	130	184	C	31.1	0.43	146	197	C	31.2	0.44	149	200
Commonwealth Ave SB left	E	72.8	0.76	124	#229	E	77.7	0.82	138	#259	F	81.3	0.84	143	#270
Commonwealth Ave SB thru | thru	C	27.3	0.34	125	176	C	29.5	0.38	136	184	C	29.5	0.39	137	186
West Carriage Rd SB thru/right	C	26.2	0.12	31	66	C	27.8	0.17	43	82	C	27.8	0.17	43	82
Unsignalized Intersections															
Commonwealth Avenue/Fidelis Way	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Fidelis Way EB left/thru/right	A	7.3	0.07	-	-	A	7.3	0.08	-	-	A	7.5	0.09	-	-
Fidelis Way EB right	B	10.8	0.11	-	9	B	10.9	0.11	-	9	B	11.1	0.14	-	12
Fidelis Way WB left/thru/right	A	7.6	0.10	-	-	A	7.7	0.10	-	-	A	7.7	0.11	-	-
West Carriage Rd NB left/thru/right	A	7.3	0.02	-	-	A	7.3	0.02	-	-	A	7.4	0.03	-	-
West Carriage Rd SB left/thru/right	A	7.6	0.07	-	-	A	7.6	0.08	-	-	A	7.8	0.10	-	-
Commonwealth Ave SB thru | thru/right	A	0.0	0.21	-	0	A	0.0	0.21	-	0	A	0.0	0.21	-	0

Grey Shading indicates decrease to LOS E or F.
~ 50th percentile volume exceeds capacity. Queue shown is the maximum after two cycles.
# 95th percentile volume exceeds capacity. Queue shown is the maximum after two cycles.
m Volumes for 95th percentile queue is metered by upstream signal

3.6 Transportation Demand Management

While the results presented in Section 3.5 show that the Project will not have any material impact to the adjacent roadway system, the Proponent is committed to implementing comprehensive travel demand management (strategies to minimize dependence on automobile travel.

Because the Project is entirely residential, its trip generation will already be lower than that of an office or retail use project. TDM will be facilitated by the Project's proximity to two Green Line transit stations, workplaces, and shopping, thereby helping to reduce auto use by residents and visitors alike. The Proponent is committed to implementing the TDM commitments listed below:

- Limited Parking: The Project will have approximately 200 parking spaces for residents. With approximately 330 residential units, the resulting parking ratio is anticipated to be approximately 0.60 spaces per unit. It is expected that many residents will not own an automobile and will instead rely on car sharing services, taxicabs, or Uber/Lyft, for trips requiring a vehicle.

- Public Transportation:

  - Provide orientation packets to new residents containing information on the available transportation choices, including transit routes and schedules.

  - Provide information on travel alternatives for residents and visitors via the Internet and in the building lobby.

  - Provide an annual (or more frequent) newsletter or bulletin summarizing transit, ridesharing, bicycling, alternative work schedules, and other travel options.

- Bicycle Spaces: Secure bicycle storage will be made available to tenants and visitors to encourage bicycling as an alternative mode of transportation. In accordance with BTD guidelines, the Proponent will provide one secure/covered bicycle parking spaces for each residential unit. Bicycle racks, signs, and parking areas will conform to BTD standards and be sited in safe, secure locations.

- Transportation Coordinator: The Proponent will designate a transportation coordinator to manage loading and service activities and provide alternative transportation materials to Project residents.

- Electric Vehicles: Provide electric vehicle charging stations for five percent of the parking spaces in the garage (10).

- Vehicle Sharing Program: The Proponent will explore the feasibility of providing spaces in the garage for a car sharing service.

- A Transportation Access Plan Agreement will be entered into between the Proponent and BTD. The TAPA will memorialize the specific measures and agreements between the Proponent and the City of Boston.

3.7 Evaluation of Short-term Construction Impacts

Most construction activities will be accommodated within the 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 a Construction Management Plan (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 Project Site each day.

The CMP will be approved by BTD prior to commencement of construction and document all construction related mitigation measures committed to by the Proponent.

Chapter 4.0

Assessment of Development Review Components

4.0 ASSESSMENT OF DEVELOPMENT REVIEW COMPONENTS

This chapter provides detailed green building strategies, as well as discussions and qualitative analyses of other environmental impacts related to the Project.

4.1 Environmental Protection

4.1.1 Wind

The Project will have heights ranging from approximately 70 to 180 feet. A wind study will be prepared, as required by the BPDA, and the results will be included in the Draft Project Impact Report (DPIR).

4.1.2 Shadow

4.1.2.1 Introduction and Methodology

As 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 winter solstice (December 21). In addition, shadow studies were conducted for the 6:00 p.m. time period during the summer solstice and autumnal equinox. 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 4.1-1 to 4.1-14 at the end of this section.

The shadow analysis presents the existing shadow and new shadow that would be created by the proposed Project, illustrating the incremental impact of the Project. The analysis focuses on nearby open spaces, sidewalks and bus stops adjacent to and in the vicinity of the Project Site. For most of the time periods studied, the shadows are limited to the streets or sidewalks immediately abutting the Site. New shadow will be cast onto Fidelis Way Park only during three of the fourteen time periods studied (March 21 at 9:00 a.m., and December 21 at 9:00 a.m. and 12:00 p.m.). No new shadow will fall on bus stops or on other existing open spaces.

4.1.2.2 Vernal Equinox (March 21)

At 9:00 a.m. during the vernal equinox, new shadow from the Project will be cast to the northwest onto portions of Jette Court and its sidewalks, and onto the southeastern corner of Fidelis Way Park. No new shadow will be cast onto nearby bus stops or on other existing open spaces.

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

At 3:00 p.m., shadow from the Project will be cast to the northeast across a portion of Commonwealth Avenue and its sidewalks. No new shadow will be cast onto nearby bus stops or on existing open spaces.

4.1.2.3 Summer Solstice (June 21)

At 9:00 a.m. during the summer solstice, shadow from the Project will be cast to the west onto Jette Court and its sidewalks. No new shadow will be cast onto nearby bus stops or on existing open spaces.

At 12:00 p.m., shadow from the Project will be cast to the northwest. No new shadow will be cast onto nearby streets, sidewalks, bus stops, or existing open spaces.

At 3:00 p.m., shadow from the Project will be cast to the northeast onto a small portion of Commonwealth Avenue and its western sidewalk. No new shadow will be cast onto nearby bus stops or on existing open spaces.

At 6:00 p.m., shadow from the Project will be cast to the east onto Commonwealth Avenue and its sidewalks and onto Commonwealth Court and its sidewalks. No new shadow will be cast onto nearby bus stops or on existing open spaces.

4.1.2.4 Autumnal Equinox (September 21)

At 9:00 a.m. during the summer solstice, shadow from the Project will be cast to the northwest onto Jette Court and its sidewalks. No new shadow will be cast onto nearby bus stops or on existing open spaces.

At 12:00 p.m., shadow from the Project will be cast to the northwest. No new shadow will be cast onto nearby streets, sidewalks, bus stops, or existing open spaces.

At 3:00 p.m., shadow from the Project will be cast to the northeast onto Commonwealth Avenue and its western sidewalk. No new shadow will be cast onto nearby bus stops or on existing open spaces.

At 6:00 p.m., much of the area is under existing shadow. Shadow from the Project will be cast to the northeast, onto a small portion of Commonwealth Avenue's western sidewalk. No new shadow will be cast onto nearby bus stops or on existing open spaces.

4.1.2.5 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., shadow from the Project will be cast to the northwest. New shadow will be cast onto Jette Court and its sidewalks, and onto Fidelis Way Park. No new shadow will be cast onto nearby bus stops or other existing open spaces.

At 12:00 p.m., shadow from the Project will be cast to the north. A small portion of shadow will fall on Fidelis Way Park. No new shadow will be cast onto nearby streets, sidewalks, or bus stops.

At 3:00 p.m., shadow from the Project will be cast to the northeast onto portions of Commonwealth Avenue and its sidewalks. No new shadow will be cast onto nearby bus stops or on existing open spaces.

4.1.2.6 Conclusion

Consistent with BPDA shadow study protocols, fourteen time periods were studied to determine the extent of new shadow cast by the Project. The shadow study shows that new shadow will mainly be cast across nearby streets and sidewalks. New shadow will be cast onto Fidelis Way Park during only three of the fourteen time periods (March 21 at 9:00 a.m., and December 21 at 9:00 a.m. and 12:00 p.m.). No new shadow will fall on bus stops or on other existing open spaces.

4.1.3 Daylight

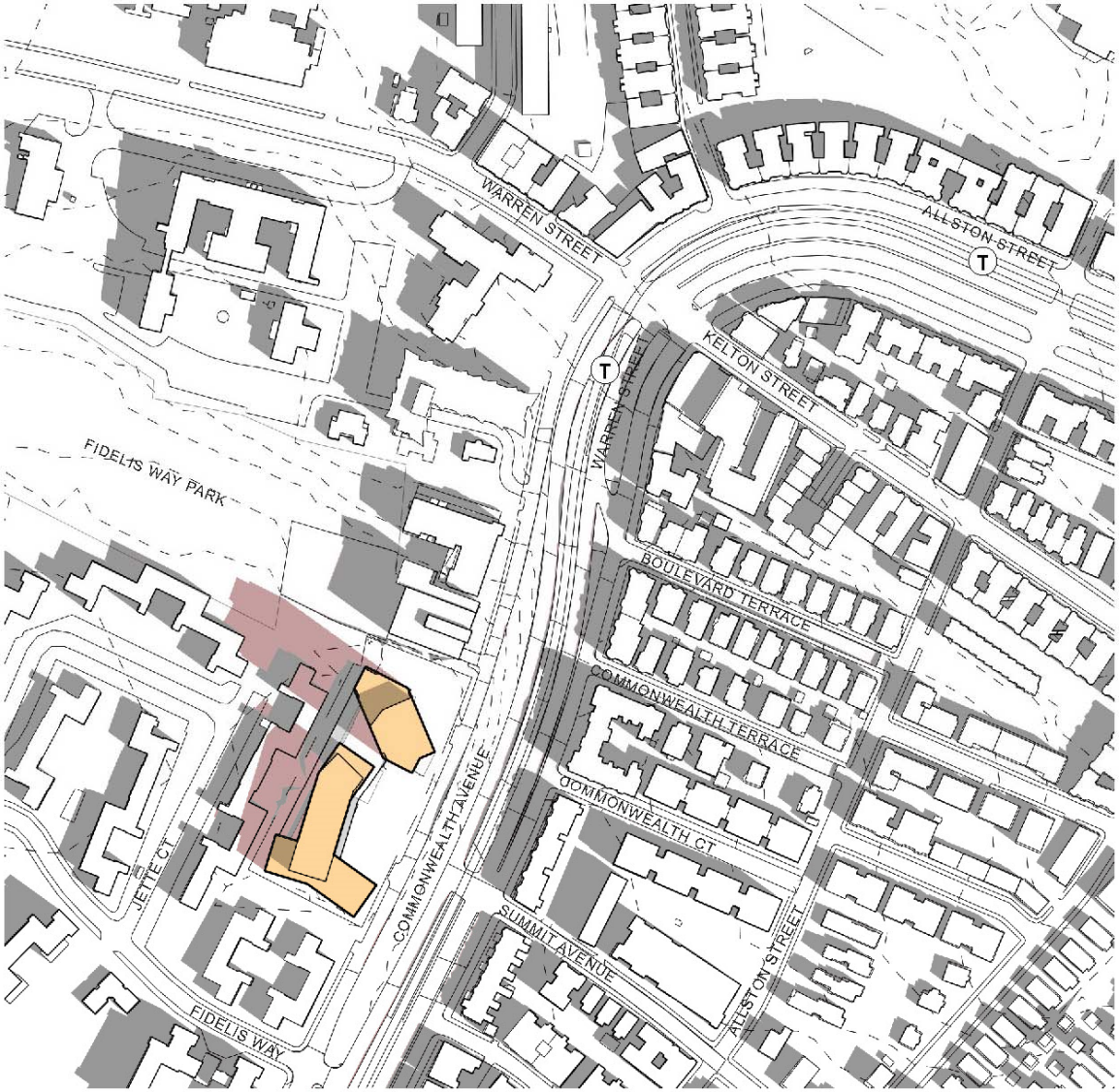
The purpose of a daylight analysis is to estimate the extent to which a proposed project affects the amount of daylight reaching public streets in the immediate vicinity of a project site. The daylight obstruction related to the Project is anticipated to be similar to daylight obstruction on streets in the surrounding area. The extent of daylight obstruction resulting from the Project and measures to mitigate adverse impacts will be included in the DPIR.

4.1.4 Solar Glare

It is not anticipated that the Project will include the use of reflective glass or other reflective materials on the building facades that would result in adverse impacts from reflected solar glare from the Project.

4.1.5 Air Quality

The BPDA requires that project-induced impacts to ambient air quality be addressed. A microscale analysis is used to determine the effect on air quality of the increase in traffic generated by the Project. This microscale analysis may be required for a project at intersections where 1) project traffic would impact intersections or roadway links currently operating at Level of Service (LOS) D, E, or F or would cause LOS to decline to D, E, or F; 2) project traffic would increase traffic volumes on nearby roadways by 10% or more (unless the increase in traffic volume is less than 100 vehicles per hour); or, 3) the project will generate 3,000 or more new average daily trips (ADT) on roadways providing access to a single location.



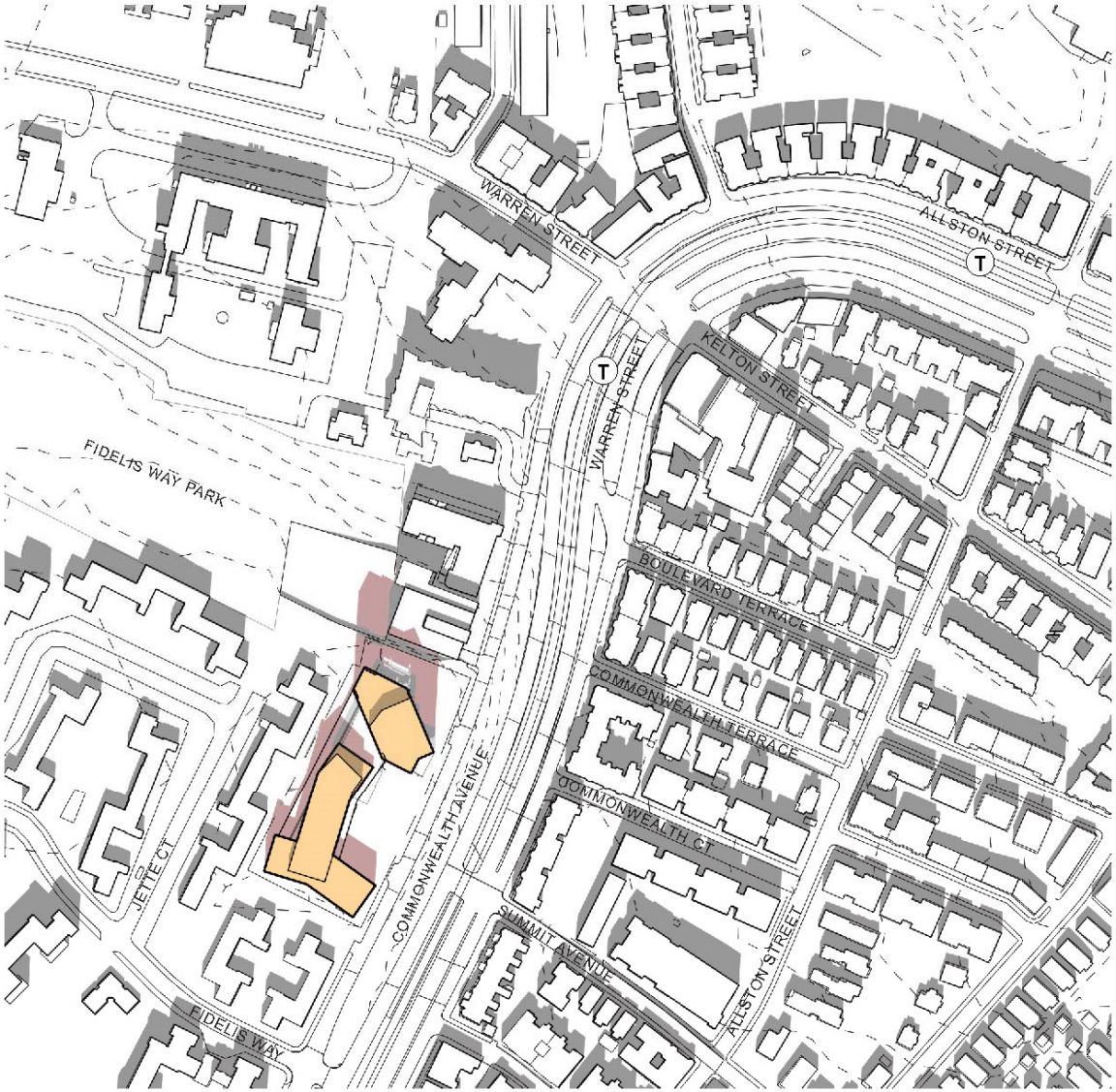
EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

9:00 AM
MARCH 21
ALTITUDE: 33.0
AZIMUTH: 125.7
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-1
Shadow Study: March 21, 9:00 a.m.



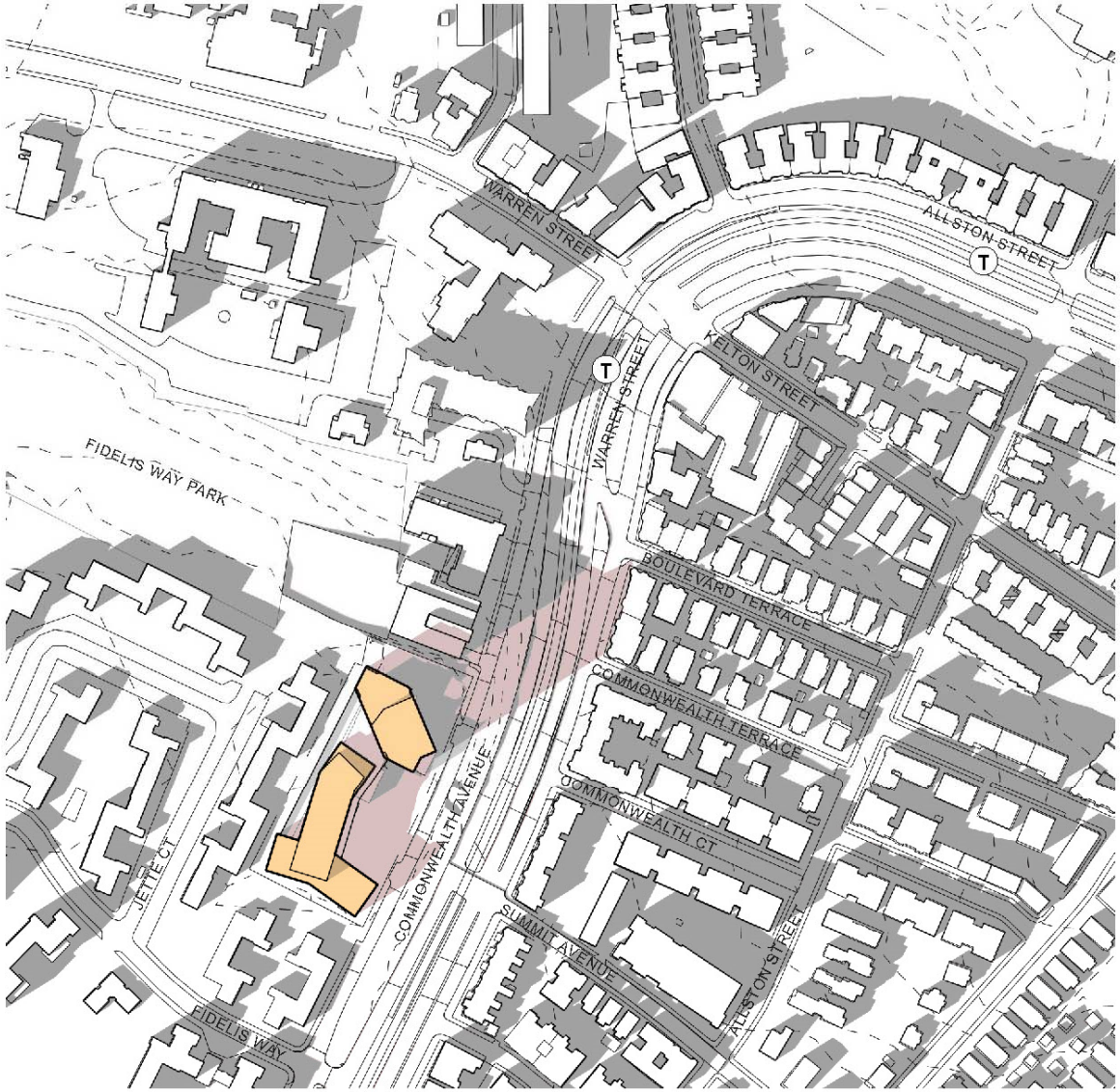
EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

12:00 PM
MARCH 21
ALTITUDE: 48.0
AZIMUTH: -176.9
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-2
Shadow Study: March 21, 12:00 p.m.



EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

3:00 PM
MARCH 21
ALTITUDE: 30.5
AZIMUTH: -121.8
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-3
Shadow Study: March 21, 3:00 p.m.

EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

9:00 AM
JUNE 21
ALTITUDE: 39.9
AZIMUTH: 93.5
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-4
Shadow Study: June 21, 9:00 a.m.

EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

12:00 PM
JUNE 21
ALTITUDE: 68.8
AZIMUTH: 149.4
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-5
Shadow Study: June 21, 12:00 p.m.

EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

3:00 PM
JUNE 21
ALTITUDE: 56.5
AZIMUTH: -113.7
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-6
Shadow Study: June 21, 3:00 p.m.

EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

6:00 PM
JUNE 21
ALTITUDE: 7.3
AZIMUTH: -96.0
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-7
Shadow Study: June 21, 6:00 p.m.

EXISTING
PROPOSED
PROPOSED BUILDING
T T STOP

9:00 AM
SEPTEMBER 21
ALTITUDE: 25.9
AZIMUTH: 115.3
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-8
Shadow Study: September 21, 9:00 a.m.

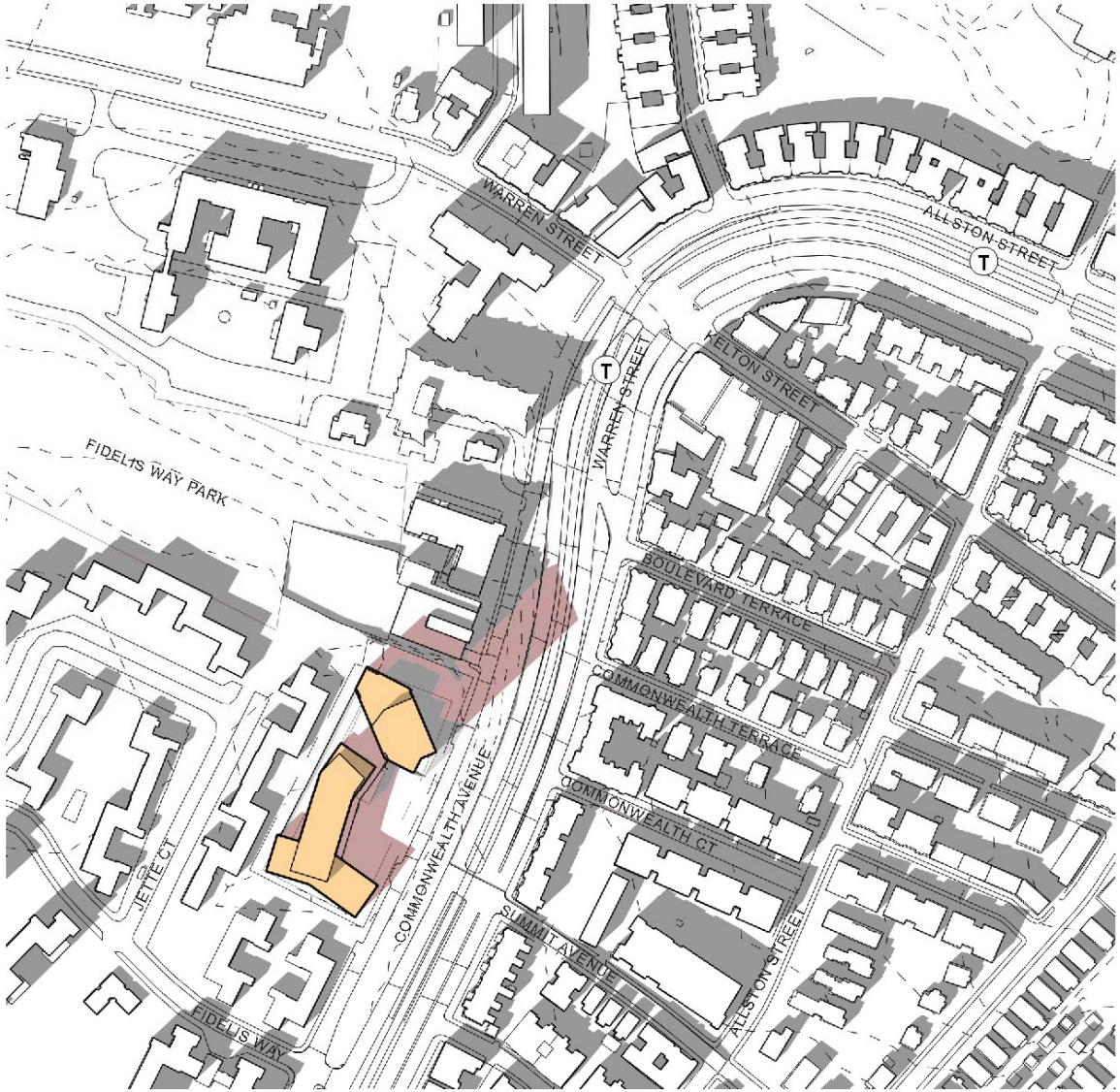
EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

12:00 PM
SEPTEMBER 21
ALTITUDE: 47.4
AZIMUTH: 166.0
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-9
Shadow Study: September 21, 12:00 p.m.



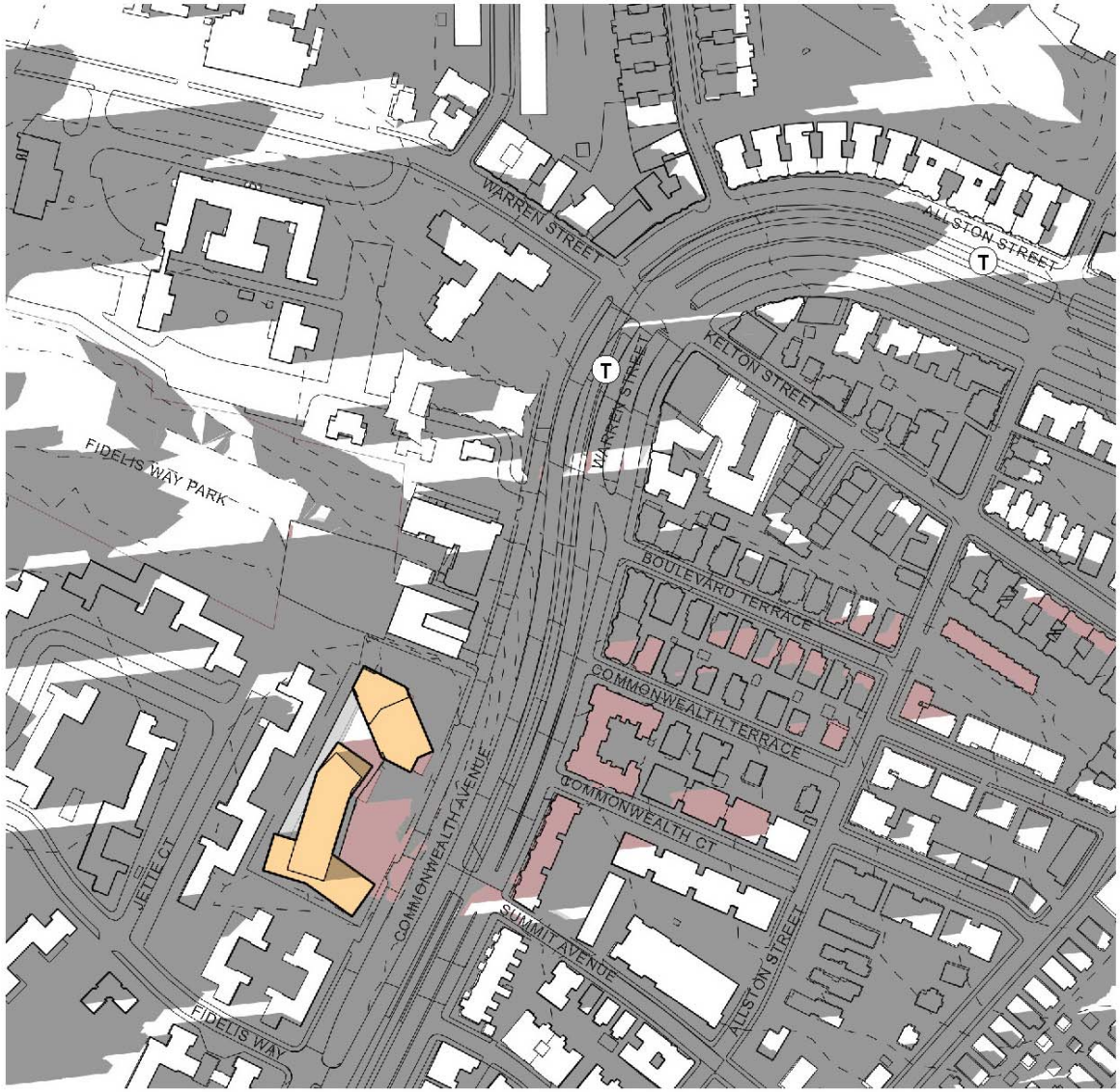
EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

3:00 PM
SEPTEMBER 21
ALTITUDE: 37.4
AZIMUTH: -132.9
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-10
Shadow Study: September 21, 3:00 p.m.



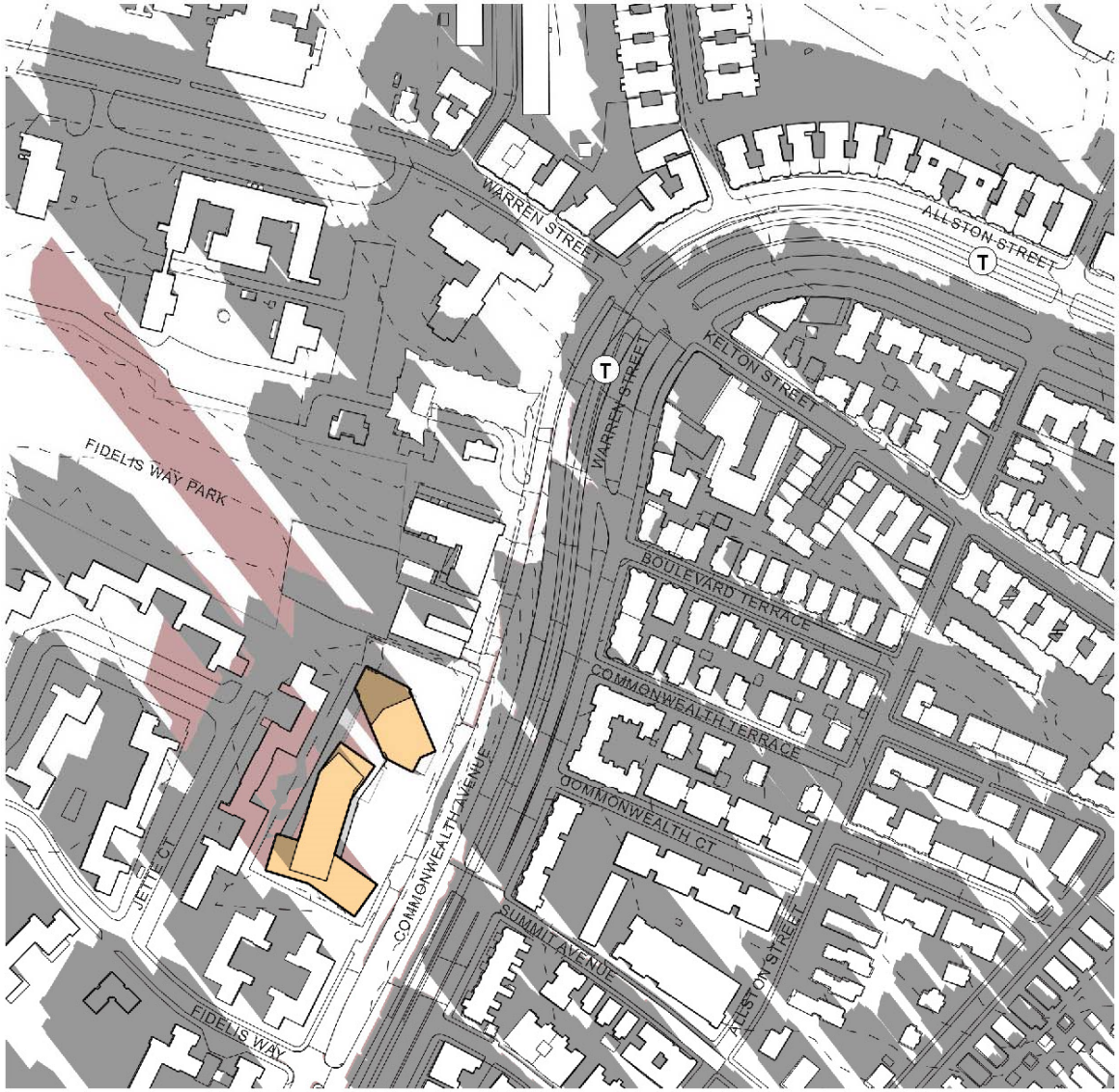
EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

6:00 PM
SEPTEMBER 21
ALTITUDE: 7.3
AZIMUTH: -96.0
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-11
Shadow Study: September 21, 6:00 p.m.



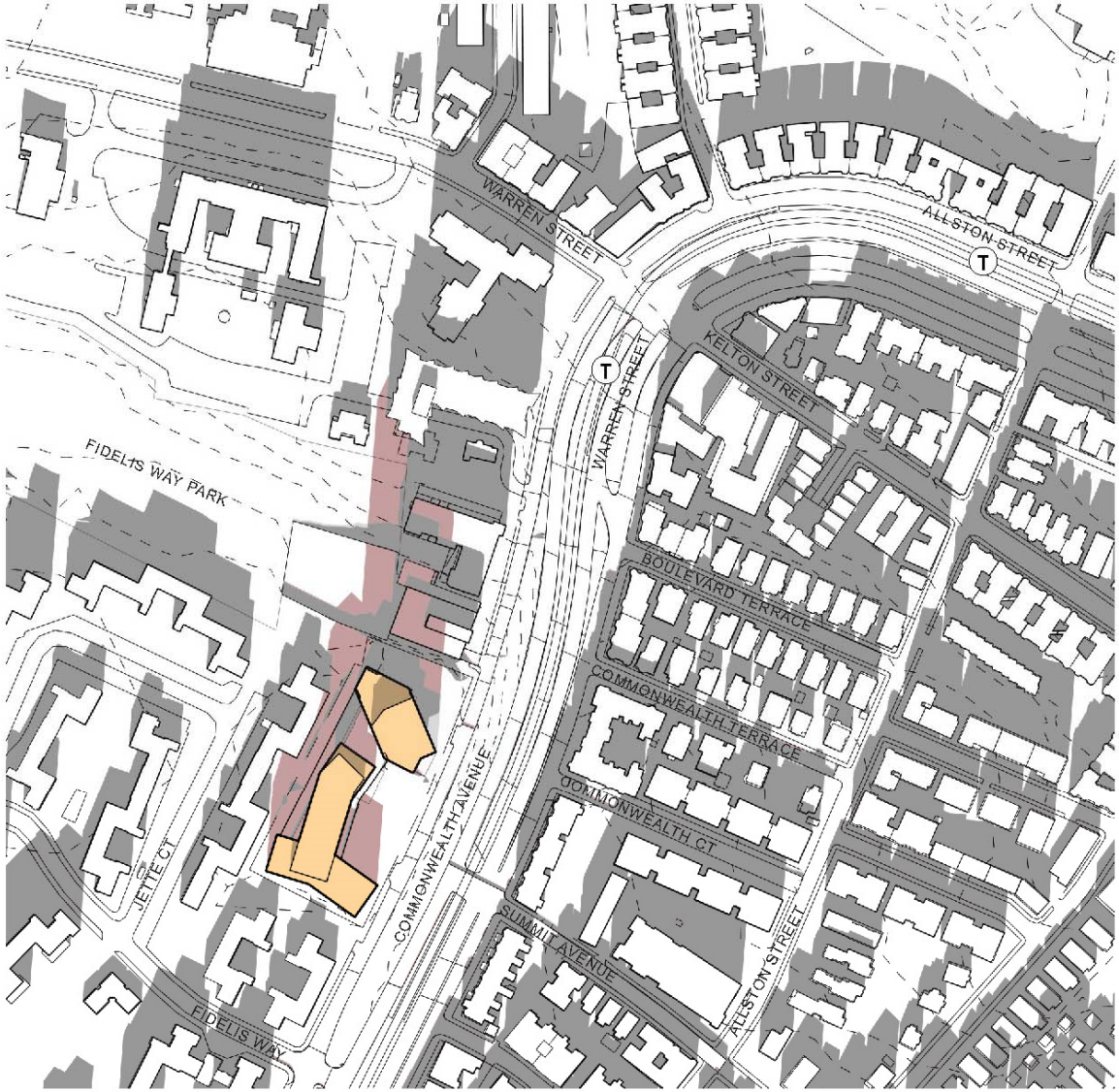
EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

9:00 AM
DECEMBER 21
ALTITUDE: 14.2
AZIMUTH: 141.9
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-12
Shadow Study: December 21, 9:00 a.m.



EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

12:00 PM
DECEMBER 21
ALTITUDE: 24.1
AZIMUTH: -175.6
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-13
Shadow Study: December: 21, 12:00 p.m.

EXISTING
PROPOSED
PROPOSED BUILDING
T STOP

3:00 PM
DECEMBER 21
ALTITUDE: 10.0
AZIMUTH: -135.1
N42.36, W71.06

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Figure 4.1-14
Shadow Study: December 21, 3:00 p.m.

The proposed Project will not generate 3,000 ADT, nor will it increase traffic volumes by 10 percent or 100 vehicles per hour. As discussed in Chapter 3, all intersections studied will continue to operate at the same LOS as under the No Build conditions during both the a.m. and p.m. peak hours. Therefore, no quantitative analysis is required. Given the generally well-operating intersections, and the small increases in volume at the worst intersections, it is expected that there would be no violations of the NAAQS for CO at any intersections associated with Project-related traffic.

4.1.6 Flood Hazard Zones/Wetlands

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the Project Site located in the City of Boston - Community Panel Number 25025C0057G indicates the FEMA Flood Zone Designations for the Project Site. The map shows that the Project is located in a Zone X Area determined to be outside the 0.2% annual chance floodplain.

The Project Site does not contain wetlands.

4.1.7 Geotechnical/Groundwater

4.1.7.1 Geotechnical Site Conditions

Based on a subsurface exploration program, the subsurface conditions at the Project Site generally consist of one to nine feet of granular fill underlain by glacial till and/or bedrock. Bedrock was encountered between approximately 1.5 feet to more than 16 feet below ground surface. Bedrock underlies the glacial till, or was observed to be present below the fill where glacial till was not observed in the test borings. Bedrock is anticipated to consist of felsic granite or conglomerate based on work on nearby sites and review of public geologic maps.

4.1.7.2 Groundwater

Groundwater was not observed in test borings undertaken by the Proponent.

The Project Site is not located within the Groundwater Conservation Overlay District (GCOD) established by Article 32 of the Zoning Code.

4.1.7.3 Anticipated Foundation Construction

It is anticipated that the proposed buildings could be supported by shallow spread footings and a slab-on-grade bearing on natural glacial till, bedrock, or compacted fill placed over glacial till or bedrock. Shallow bedrock (less than five feet below ground surface) was encountered along Commonwealth Avenue. Rock excavation for foundations and utilities is anticipated. It is anticipated that the bedrock surface undulates, and that the top of the bedrock surface could vary widely over short distances. The Project Site design concepts will consider maintaining existing grades to limit the potential for rock removal. It is expected that bedrock could be removed by mechanical methods and/or controlled blasting techniques.

4.1.8 Solid and Hazardous Wastes

4.1.8.1 Existing Hazardous Waste Conditions

A Phase I Environmental Site Assessment for the Project Site was conducted by the Proponent, and one or more petroleum releases have occurred at the Project Site. These releases were the subject of response actions, including a subsurface investigation and limited remediation, conducted in accordance with the Massachusetts Contingency Plan (MCP). A Class A-2 RAO was submitted for this release, indicating that a Permanent Solution has been achieved, without returning the soil and groundwater to background conditions and without the need for an Activity and Use Limitation on any portion of the Project Site.

If soil disposal is required, the Proponent will obtain site specific information regarding environmental conditions of excavated soils to evaluate for the presence of oil and hazardous materials. Foundation construction for the new building may generate soil requiring off-site transport. Chemical testing of the material will be required by receiving facilities to identify chemical constituents and any contaminants present. Chemical testing of the material will be conducted prior to construction in accordance with facility requirements.

Any material leaving the Project Site will be required to be legally transported and disposed of in accordance with local, state and federal requirements. In addition, any regulated soil conditions related to oil and hazardous materials will be managed in accordance with appropriate MassDEP regulatory requirements.

4.1.8.2 Operational Solid and Hazardous Wastes

The Project will generate solid waste typical of residential 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 331 tons of solid waste per year.

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

4.1.9 Noise

The mechanical equipment for the Project will be similar to that used on similarly sized residential buildings. Rooftop equipment will be screened if necessary, and acoustic screening will be included if necessary to meet City noise regulations. The Project team will ensure that the building's mechanical equipment will meet the City of Boston Noise Standards.

Construction period noise impacts and mitigation are discussed below in Section 4.1.10.2.

4.1.10 Construction Impacts

The proximity of city streets and abutting commercial properties to the Project Site will require careful scheduling of material removal and delivery. Planning with the City and neighborhood will be essential to the successful development of the Project.

A Construction Management Plan (CMP) will be submitted to the BTD for review and approval prior to issuance of a building permit. The CMP will define truck routes which will help in minimizing the impact of trucks on local streets.

Construction methodologies that ensure public safety and protect nearby businesses will be employed. Techniques such as barricades, walkways, painted lines, and signage will be used as necessary. Construction management and scheduling including plans for construction worker commuting and parking, routing plans and scheduling for trucking and deliveries, protection of existing utilities, maintenance of fire access, and control of noise and dust will minimize impacts on the surrounding environment.

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

4.1.10.1 Construction Air Quality

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

- 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 the site; and
- Periodic street and sidewalk cleaning with water to minimize dust accumulations.

4.1.10.2 Construction Noise

The Proponent is committed to mitigating noise impacts from the construction of the Project. Periodic increased community sound levels, however, are an inherent consequence of construction activities. Construction work will comply with the requirements of the City of Boston Noise Ordinance. Every reasonable effort will be made to minimize the noise impact of construction activities, including:

- Instituting a proactive program to ensure compliance with the City of Boston noise regulations;
- 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, 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.

4.1.10.3 Construction Waste Management

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

4.1.11 Rodent Control

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

4.1.12 Wildlife Habitat

The Project Site is currently developed within a fully developed urban area and, as such, the Project will not impact wildlife habitats as designated on the National Heritage and Endangered Species Priority Habitats of Rare Species and Estimated Habitats of Rare Wildlife maps.

4.2 Sustainable Design and Green Buildings

The Project team will leverage the Project's location and approach to construction to achieve the most sustainable development feasible. The Project team seeks to minimize the Project's energy consumption, promote water conservation, and seek to include measures to minimize the Project's ecological footprint. The Project is located in a dense urban area with access to public transportation and bicycle amenities. The redevelopment provides the opportunity to increase permeable surfaces and landscaping, which will be a significant improvement over the existing condition. The building will be constructed to the current energy and building codes, which will provide for a high efficiency envelope and high efficiency mechanical equipment.

The Project will use the LEED BD+C for New Construction v4 rating system to demonstrate the Project's compliance with Article 37 of the Zoning Code. The LEED rating system tracks the sustainable features of the Project by assigning points in the following categories: Location and Transportation (LT); Sustainable Sites (SS); Water Efficiency (WE); Energy & Atmosphere (EA); Materials and Resources (MR); Indoor Environmental Quality (IEQ); Innovation & Design (ID); and Regional Priority (RP). Currently, the Project's preliminary evaluation has targeted 52 possible points, meeting Silver level. As the Project design advances, all credits that have been targeted and any credits identified as "Maybe" will continue to be evaluated to determine if they could be achievable.

Location and Transportation

The Project team will target 10 points within Location and Transportation. The Project is anticipated to achieve these credits based on its location in a dense neighborhood with access to a number of services and amenities and transit and bicycle facilities, as well as the provision of bicycle amenities on the Project Site and providing parking below-grade.

Sustainable Sites

The Project team will target five points related to redevelopment of the Project Site from a mostly impervious, paved condition, to a condition with more permeability and landscaping. The Project will reduce stormwater runoff for the 90th percentile storm, create open spaces that covers at least 30% of the Project Site, and includes measures to reduce the heat island effect.

Water Efficiency

The Project team will target five points for through the use of water efficient fixtures and minimal irrigation for landscaping. The Project anticipates meeting the additional water metering requirements beyond the prerequisite.

Energy and Atmosphere

The Project team will target 14 points for the Energy and Atmosphere category through the implementation of various energy-saving strategies such as high-efficiency building envelope systems and components, high efficiency unit owner HVAC systems, as well as through commissioning measures above those required by the prerequisites. The Project team will also evaluate the inclusion of renewable energy onsite.

Materials and Resources

The Project team will target four points in the Materials and Resources category by carefully selecting materials for the Project. The Project will also implement a construction waste management plan. The construction team will work with the waste management provider for the project to collect waste on-site that will meet the program requirements.

Indoor Environmental Quality

The Project team will target seven points related to the implementation of indoor air quality measures, including but not limited to: monitoring outdoor air delivery to interior spaces to counter high concentrations of indoor air pollutants; increasing ventilation rates to spaces throughout the building; and managing indoor air quality during construction for the construction team as well as future occupants. The Project will seek to further provide a high quality indoor environment through controllable lighting and thermal systems, as well as provide daylight and quality views.

Innovation and Design

The Project team includes at least one LEED AP. Additional points are anticipated to be achieved through exemplary performance. The Project team will continue to evaluate pilot credits to determine what may be achievable.

Regional Priority Credits

The four points available in this category are contingent upon meeting certain thresholds for credits in other categories, as determined by the USGBC. The Project currently will target two credits in this category, and will evaluate the potential to achieve other credits as the design advances.

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

Project Checklist

Project Name: 1515 Commonwealth Avenue

Date:

Y	?	N			
1			Credit	Integrative Process	1

10	4	18	Location and Transportation		16
		16	Credit	LEED for Neighborhood Development Location	16
1			Credit	Sensitive Land Protection	1
	2		Credit	High Priority Site	2
4	1		Credit	Surrounding Density and Diverse Uses	5
3		2	Credit	Access to Quality Transit	5
1			Credit	Bicycle Facilities	1
1			Credit	Reduced Parking Footprint	1
	1		Credit	Green Vehicles	1

5	3	2	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
2	1		Credit	Rainwater Management	3
2			Credit	Heat Island Reduction	2
	1		Credit	Light Pollution Reduction	1

5	3	3	Water Efficiency		11
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
1	1		Credit	Outdoor Water Use Reduction	2
3		3	Credit	Indoor Water Use Reduction	6
	2		Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

14	7	14	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
6			Credit	Enhanced Commissioning	6
8	2	10	Credit	Optimize Energy Performance	18
	1		Credit	Advanced Energy Metering	1
		2	Credit	Demand Response	2
	1	2	Credit	Renewable Energy Production	3
	1		Credit	Enhanced Refrigerant Management	1
	2		Credit	Green Power and Carbon Offsets	2

4	4	5	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
1	1		Credit	Construction and Demolition Waste Management	2

7	8	1	Indoor Environmental Quality		16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
1	1		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
1	1		Credit	Interior Lighting	2
	3		Credit	Daylight	3
1			Credit	Quality Views	1
		1	Credit	Acoustic Performance	1

4	2	0	Innovation		6
3	2		Credit	Innovation	5
1			Credit	LEED Accredited Professional	1

2	2	0	Regional Priority		4
1			Credit	Regional Priority: Optimize Energy Performance	1
1			Credit	Regional Priority: Rainwater Management	1
	1		Credit	Regional Priority: Specific Credit	1
	1		Credit	Regional Priority: Specific Credit	1

52	33	43	TOTALS	Possible Points:	110

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

4.3 Climate Change Resilience

4.3.1 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.

A copy of the completed Climate Resiliency Checklist is included in Appendix C. Given the preliminary level of design, the responses are also preliminary and will be updated as the Project design progresses.

4.3.2 Extreme Heat Events

The *Climate Ready Boston* report predicts that in Boston, there may be between 25 to 90 days with temperatures over 90 degrees by 2070, compared to an average of 11 days per year over 90 degrees between 1971 and 2000. The Project design will include measures to adapt to these conditions, including providing approximately 40,000 sf of green space and partial green roofs to reduce the urban heat island effect, using reflecting roof materials, constructing a high performance building envelope, and including operable windows where possible.

4.3.3 Rain Events

As a result of climate change, the Northeast is expected to experience more frequent and intense storms. To mitigate this, the Proponent will take measures to minimize stormwater runoff and protect the Project's mechanical equipment, as necessary. The existing Project Site is nearly entirely impervious and the Project will reduce the amount of impervious area on the Project Site, which will reduce stormwater runoff on the site. 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.

4.3.4 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 and high efficiency irrigation systems will be installed. Aeration fixtures and appliances will be chosen for water conservation qualities, thereby conserving potable water supplies.

4.4 Urban Design

4.4.1 Site History

The Project Site is located at one of the tallest points in the city of Boston. This topography, which is due to the presence of stone below grade, made the Project Site into a natural material asset, becoming one of the Rowe family quarries and providing stone and building materials for the city of Boston. Being located at a high point in Boston meant that horse-drawn wagons carrying the stone to building sites were able to more effectively roll their heavy payloads downhill. In addition, the reduction of height/exposed stone in Brighton would provide a level foundation for future residential buildings on the Project Site.

By 1925, stone removal was completed and the quarry had been reduced in height to a buildable level, but the Project Site and surrounding block was in stark contrast to the highly developed east side of Commonwealth Avenue. In the 1940's and 50's, after the quarry shut down, the Project Site began to be developed, with a hospital being built at the highest point of the hill (current Project Site), and the Fidelis Way housing development built on surrounding parcels to provide housing on the newly graded land. As this land around the Project Site was developed, space was designated for more natural public connections including Fidelis Way Park, creating buildings at a larger scale which were integrated more with landscape than the dense development across Commonwealth Avenue.

4.4.2 Project Massing

The main concept driving the massing design is the creation of green space into and around the proposed building, while relating to Project Site's topography, history, and existing context. The Project Site is located within a superblock, which is comprised of residential and institutional structures integrated with open landscape and abutting Fidelis Way Park. The Project is designed to add to the concept of these "buildings within a park" by connecting the public user to the natural history and openness of the Project Site.

The main open space area is located along Commonwealth Avenue, placed towards the center of the Project Site with the proposed residential building wrapping the central green space, creating an urban edge on three sides of the space. This massing is further divided into two main components, a lower rise rental component and a high-rise condominium component. In order to provide the quantity of open space proposed, the taller condominium component is placed on the northern edge of the Project Site closer to the higher density buildings along Commonwealth Avenue and towards the lowest topographic point on the Project Site. By strategically restricting this height to a small footprint of the Project Site, the remainder of the building design can be limited to between 70 to 95 feet while still providing ample green space. The form of the tower portion of the building is angled and shaped to evoke the material language of the quarry, to minimize shadow impacts on Fidelis Way Park, and to reduce its visual presence from the street (see Figure 4.4-1).

1515 Commonwealth Avenue Boston, Massachusetts

RODE OJB | LANDSCAPE ARCHITECTURE

Figure 4.4-1
View from Commonwealth Avenue

The change in topography and locations of ledge across the Project Site present a challenge for vehicular and pedestrian access. The massing will be placed in a manner that allows entry to the garage from the lowest grade on the Project Site, at the northern edge, which creates direct access into a parking level that transfers below-grade at the midpoint of the Project Site.

4.4.3 Landscape Design

The development and identity of the Project's green space fronting on Commonwealth Avenue was influenced by the natural and industrial history of the Project Site. This green space will use exposed granite slopes, granite stone terraces, steps, and walkways as ways to pay homage to the historic quarry uses. This open space, which will be universally accessible, will also utilize native trees and plants to integrate the space into the natural landscape of the area.

The Project's green space location on Commonwealth Avenue will be easily accessed by the surrounding community, and will provide a new, clear, and safe connection to Fidelis Way Park on the northern portion of the Project Site. This connection will provide an opportunity to further activate both spaces. The amenities provided in the Project's green space will include a flexible lawn for games and leisure, and a seating plaza with tables and a canopy structure to serve as a gathering area for small groups (see Figure 4.4-2).

4.4.4 Exterior Materials

The materials to be used for the exterior of the building are intended to celebrate the history and context of the Project Site. The building was conceptualized as three overall material sections: 1) a stone façade at levels one and two evoking the ledge at the Project Site and providing a tactile backdrop to the green space; 2) a terra cotta façade at the lower-rise apartment component, forming a dialogue with the existing masonry buildings in this area of Brighton; and 3) a stone and glass tower – rising out of the ledge as a beacon to the quarry history and gradually transitioning from stone to glass as the building rises and lightens to meet the sky. The lines of the façade gradient along the tower are intended to represent the shifting lines of exposed stone within a working quarry, while following a strict logic of patterning and shifting – creating a diagonal gradient to enable more glazing to be brought in at upper levels.

4.5 Historic and Archaeological Resources

4.5.1 Historic Resources on the Project Site

The Project Site is an approximately 2.2-acre parcel of land located on the west side of Commonwealth Avenue (West Carriage Road) in Boston's Brighton neighborhood. The Project Site contains a vacant, approximately 58,000 square-foot, four-story building most recently used as Hahnemann Hospital, a long-term acute-care inpatient medical facility. The building footprint occupies only a small portion of the Project Site, the remainder of which has been maintained as a surface parking lot of approximately 70 spaces.

1515 Commonwealth Avenue Boston, Massachusetts

RODE OJB | LANDSCAPE ARCHITECTURE

Figure 4.4-2
Proposed Green Space

Originally constructed in 1940 to the designs of the Boston-based architectural firm of Coolidge, Shepley, Bulfinch & Abbott, the original hospital building experienced numerous renovations and alterations over the years, including significant additions in 1951, 1956, and 1966. The last major permit activity was recorded in 1994, when a small (3,000 sf, 44-foot high) metal-clad wing was added to the east elevation. Canopies were installed above the main and rear entries at the same time; the building's windows were also replaced and the interior extensively remodeled. As a result of these successive renovations, no discernible trace of the building's original 1940 appearance now remains. The existing buildings on the Project Site are not included the Massachusetts Historical Commission's (MHC) *Inventory of Historic and Archaeological Assets of the Commonwealth* ("the Inventory"); nor are they included in the State or National Registers of Historic Places.

4.5.2 Historic Resources in the Project Vicinity

The Project Site is located adjacent to the Washington-Warren Streets Institutional Area and the locally designated Aberdeen Architectural Conservation District, as depicted in Figure 4.5-1.

The Project Site is located adjacent to the Washington-Warren Streets Institutions Area, an area included in the Inventory. The Washington-Warren Institutions Area is believed to be among the largest, most densely developed collections of late 19th and early 20th century institutional buildings in the city. The area includes the 1890s William Howard Taft School, the St. Gabriel's Monastery and Church complex, the 1930s Brighton High School complex, the former 1940s Kennedy Memorial Hospital and the 1940s Brighton Marine Hospital complex. While the Washington-Warren Institutions Area is not currently in the State or National Registers of Historic Places, the MHC has been determined the area to be eligible for listing in the National Register.

The Aberdeen section of Brighton, a previously independent municipality which was annexed by the City of Boston in 1873, was developed after 1887. Spurred by the introduction of a trolley line in 1887, the area developed as a suburb of freestanding residential buildings, chiefly of frame construction. In the closing years of the 19th century, large, ornate houses in the Queen Anne, Colonial Revival and other popular styles were built for Boston commuters along the winding roads that follow the local topography.

In the years following the First World War, previously-vacant sites in the neighborhood were developed with large masonry apartment buildings, many of which were organized around a central courtyard. Their exteriors abundantly decorated with economical pre-cast concrete, these apartment blocks most often reflected the Georgian Revival and other classically derived styles, though notable examples in the Spanish Revival and Art Moderne idioms are also present. In recognition of its distinguished ensemble of late 19th-century single- and early 20th-century multi-family housing types, the Aberdeen neighborhood was locally designated as an architectural conservation district by the Boston Landmarks Commission in 2001.

1515 Commonwealth Avenue Boston, Massachusetts

Epsilon Associates Inc.

Figure 4.5-1

Historic Resources Map

4.5.3 Archaeological Resources Within the Project Site

There are no known archaeological resources within the Project Site. The Project Site is located on previously developed land and therefore, no impacts to archaeological resources are anticipated.

4.5.5 Status of Project Review with Historical Agencies

4.5.5.1 Boston Landmarks Commission

The proposed demolition activities are subject to BLC's review in accordance with Article 85 of the Boston Zoning Code (Demolition Delay). At the appropriate time, the Proponent will file the required Article 85 application with the BLC. The Proponent will work closely with the BLC staff to complete the Article 85 review process.

4.5.5.2 Massachusetts Historical Commission

The Proponent does not anticipate that the Project will require any review by MHC as the Project does not require any state or federal licenses, permits or approvals and is not anticipated to utilize any state or federal funding. The existing buildings on the Project Site are not included the Massachusetts Historical Commission's (MHC) *Inventory of Historic and Archaeological Assets of the Commonwealth* ("the Inventory"); nor are they included in the State or National Registers of Historic Places.

4.6 Infrastructure Systems

The existing infrastructure surrounding the Project Site appears sufficient to service the needs of the Project. The following sections describe the existing sewer, water, and drainage systems surrounding the Project Site and explain how these systems will service the Project. The analysis also discusses any anticipated Project-related impacts on those utilities and identifies mitigation measures to address these potential impacts.

A detailed infrastructure analysis will be performed when the Project proceeds into the design development phase. The Project team will coordinate with the appropriate utilities to address the capacity of the area utilities to provide services for the new building. A Boston Water and Sewer Commission (BWSC) Site Plan and General Service Application will be submitted for the new water, sanitary sewer, and storm drain connections. In addition, a Storm Water Pollution Prevention Plan will be submitted to the BWSC specifying best management practices for protecting the existing stormwater drainage system, wetland resources areas, and adjacent properties during construction.

4.6.1 Wastewater

4.6.1.1 Existing Sanitary Sewer System

The BWSC owns and maintains a separate sewer main in Commonwealth Avenue (See Figure 4.6-1). The 10-inch sewer line flows in a northeasterly direction east of the Project Site. The sanitary sewer ultimately flows to the Deer Island Wastewater Treatment Plant.

Table 4.6-1 Existing Sanitary Sewer Flow Capacity

MH to MH	Length (ft)	Invert Up	Invert Down	Slope (ft/ft)	Manning's Number	Flow Capacity (cfs)	Flow Capactiy (MGD)
19 to 18	222	113.50	102.60	0.050	.013	4.95	3.20

Since the existing building has been closed for approximately two years, the existing wastewater generation will not be utilized in the calculation of the net sewer generation of the Project.

4.6.1.2 Project Generated Sanitary Sewer Flow

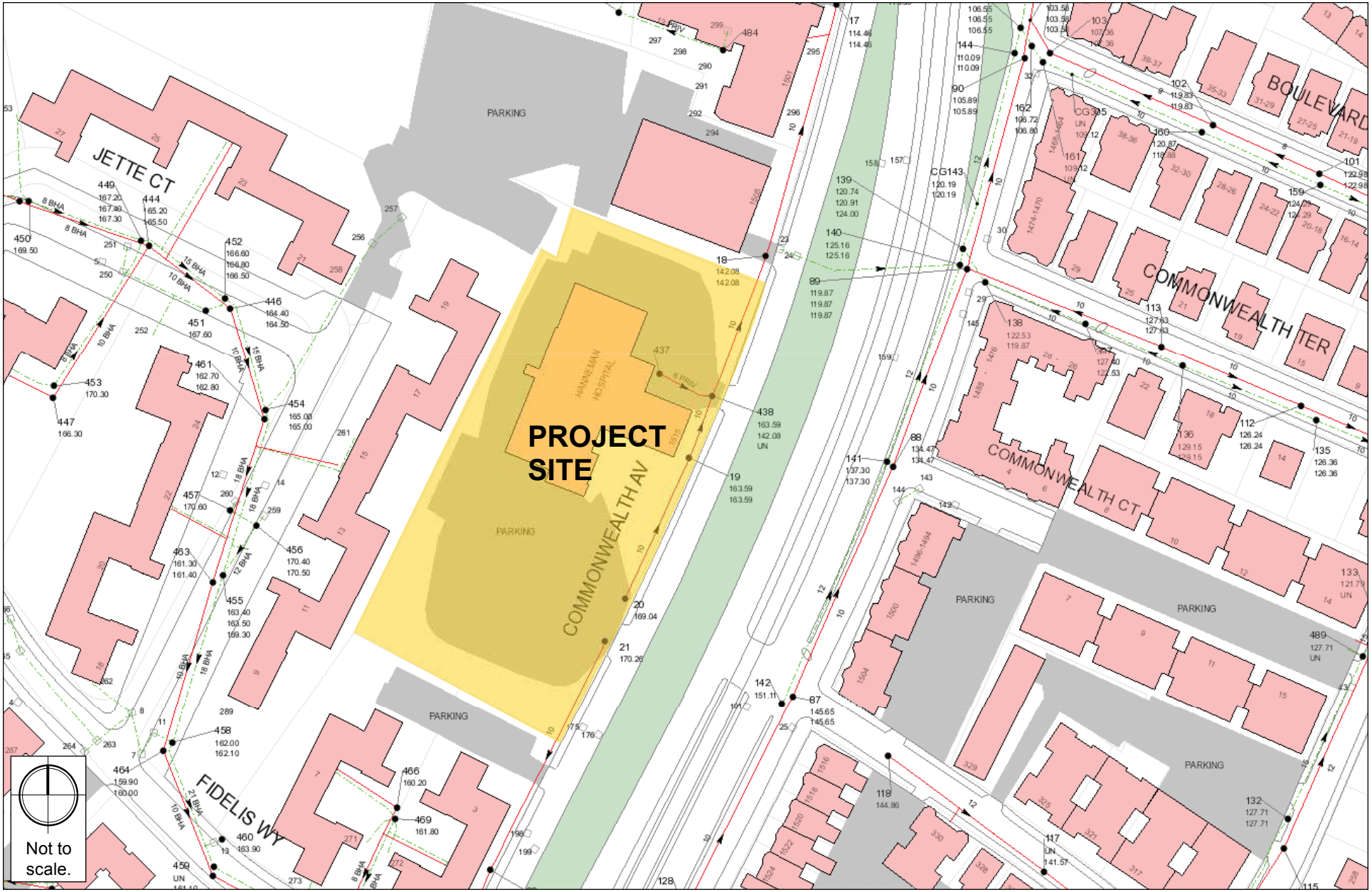
The estimated wastewater flow from the Project is 49,940 gallons per day (gpd). This is based on 330 residential units (454 bedrooms) and the design flows provided in 310 CMR 15 (Title V). The Proponent intends to participate in BWSC's sewer inflow/infiltration program since wastewater flows are expected to be above 15,000 gpd.

Table 4.6-2 Projected Sanitary Sewer Flows

Use	Quantity	Unit Flow Rate	Estimated Maximum Daily Flow (gpd)
Family Dwelling, Multiple	454 bedrooms	110 gpd/bedroom	49,940 gpd
Total			**49,940 gpd**

4.6.1.3 Proposed Sanitary Sewer Service

The Proponent is proposing to tie the building's wastewater services into the 10-inch sewer main in Commonwealth Avenue. The proposed garage will have floor drains routed through an oil and sand separator before connecting to the BWSC sanitary sewer service. It's anticipated that the existing 10-inch sewer will have enough capacity to service the proposed wastewater generated from the Project.



1515 Commonwealth Avenue Boston, Massachusetts

HOWARD STEIN HUDSON
Engineers + Planners

Figure 4.6-1

BWSC Sanitary Sewer and Storm Drain Map

4.6.2 Water System

4.6.2.1 Existing Water Service

BWSC owns and maintains the water distribution system near the Project Site (see Figure 4.6-2). A 12-inch pitted cast-iron pipe is located on Commonwealth Avenue and is part of BWSC's Southern High Service System. The 12-inch water main was built in 1899 and relined in 2000. There are two existing fire hydrants in the vicinity of the Project Site. One is located directly east of 1515 Commonwealth Avenue and the other is located one block north along the westerly side of Commonwealth Avenue.

4.6.2.2 Anticipated Water Consumption

The anticipated water demand for the Project is approximately 54,934 gpd. The estimated water consumption is based on the Project's estimated sewage generation, plus a factor of 10 percent to account for consumption, system losses, and other usages to estimate an average water demand. A more detailed water use summary as well as meter-sizing calculations will be submitted to BWSC as part of its Site Plan Review process.

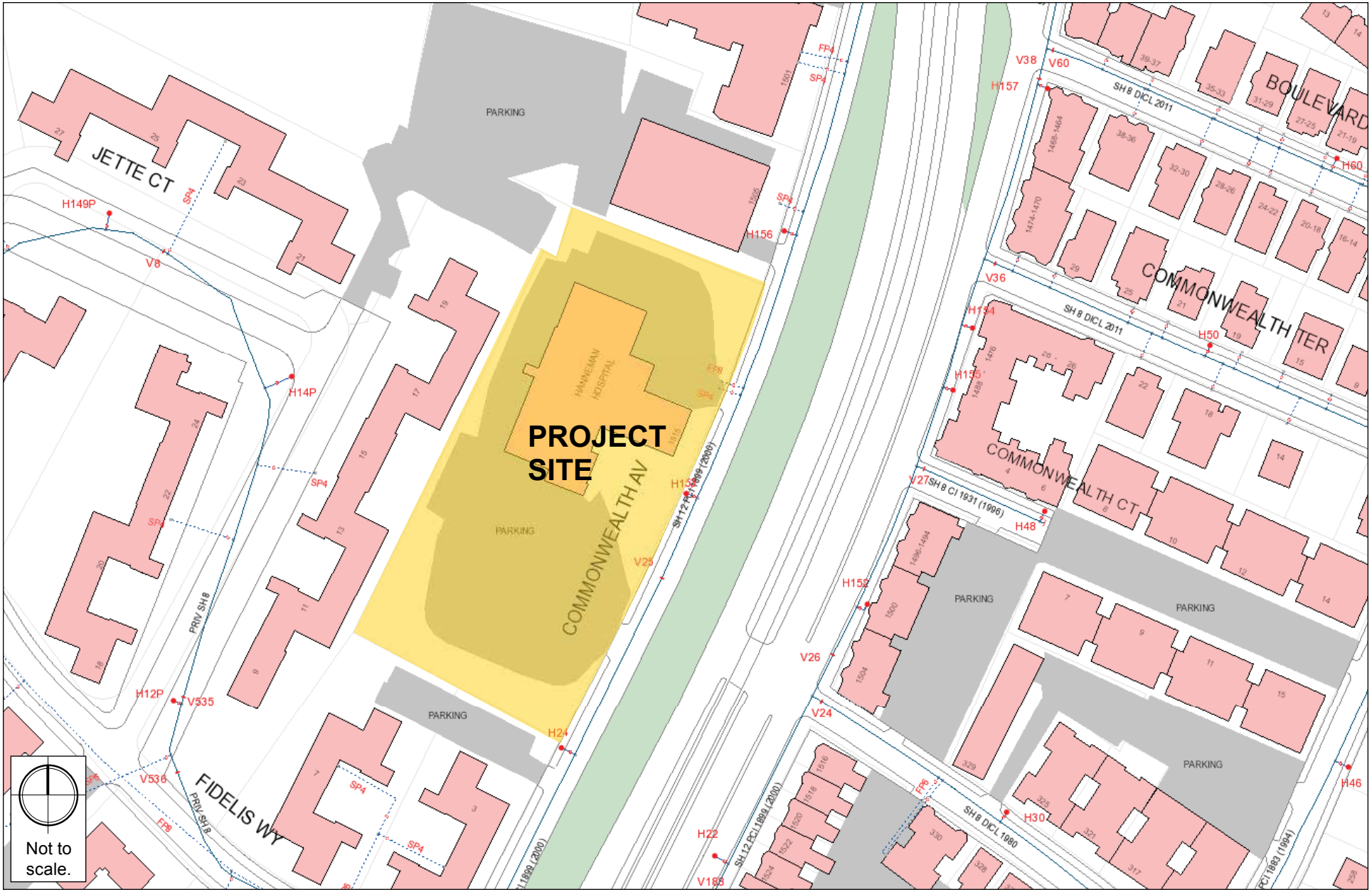
4.6.2.3 Proposed Water Service

It is anticipated that a dedicated domestic water service and fire protection service will be directly tapped from the 12-inch service main in Commonwealth Avenue. The water supply systems servicing the building will be gated to minimize public hazard or inconvenience in the event of a water main break. Final locations and sizes of the services will be provided on a Site Plan during the detailed design phase and submitted to BWSC for review and approval. It's anticipated that the existing 12-inch water main will have enough capacity to service the Project's water demand.

Water service to the building will be metered in accordance with BWSC's requirements. The Proponent will provide a suitable location for a Meter Transmission Unit (MTU) as part of BWSC's Automatic Meter Reading System. Water meters over 3-inches will be provided with a bypass to allow BWSC testing without service interruption. A backflow preventer will be installed on the fire protection service and will be coordinated with BWSC's Cross Connection Control Department. Separate services will be provided for domestic use and fire protection.

4.6.2.4 Water Supply Conservation and Mitigation Measures

Water conservation measures such as low-flow fixtures, aerated showerheads, and dual-flush toilets are being considered to reduce potable water usage. Other water conservation and wastewater reduction measures will be reviewed further as building design progresses.



1515 Commonwealth Avenue Boston, Massachusetts

HOWARD STEIN HUDSON
Engineers + Planners

Figure 4.6-2

BWSC Water Supply Map

4.6.3 Storm Drainage System

4.6.3.1 Existing Storm Drainage

The storm drain system owned and maintained by BWSC is located to the north of the Project Site on Commonwealth Avenue and to the west on Jette Court (see Figure 4.6-1). The existing approximately 2.2-acre Project Site is made up of mostly impervious surfaces, including an existing building and a surface parking lot. Stormwater runoff from the Project Site primarily flows overland to the eastern side of the Project Site where existing catch basins are located at driveway entry points. Any runoff that bypasses existing structures flows into Commonwealth Avenue to the existing catch basins gradient down of the Project Site.

4.6.3.2 Proposed Storm Drainage System

A stormwater management system will be constructed as part of the Project to treat, detain and infiltrate stormwater runoff to maintain the existing hydrology of the Project Site. It is expected that subsurface stormwater infiltration systems will be constructed that can infiltrate the first 1.25 inches of runoff from the Project Site's impervious areas to the greatest extent possible. Existing ledge may impact the sizing and location of infiltration systems for the Project. Rooftop runoff will be piped directly to the stormwater infiltration systems. Stormwater runoff from paved areas, such as the proposed driveway, will be captured by deep sump, hooded catch basins and provided pretreatment prior to being directed to the stormwater infiltration systems. The infiltration systems are expected to be provided with bypass structures that allow overflows during larger storm events to be directed to the adjacent closed drainage system. Existing catch basins are located on Commonwealth Avenue just beyond Project limits to the north and south. The preferred design will be to connect directly to the closed drainage system, but regulatory agencies may require flow to travel overland in the Commonwealth Avenue gutter to the closest existing catch basin or overland to the existing catch basin on Jette Court west of the Project Site.

4.6.3.3 MassDEP Stormwater Management Standards

The Project will comply with the MassDEP stormwater management standards, as outlined 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.

The Project will result in an improvement to the water quality of the stormwater reaching the existing outfall located in the Charles River through the use of deep sump hooded catch basins, water quality units or other pretreatment devices, and infiltration systems. The Project will maintain or reduce the peak flows reaching the outfall, reducing the potential for erosion caused by runoff from the Project Site.

Standard 2: Post-development peak discharge rates do not exceed pre-development peak discharge rates.

The Project's stormwater management system will be designed to maintain or reduce stormwater peak discharge rates leaving the Project Site by providing stormwater infiltration and detention Best Management Practices (BMPs).

Standard 3: Loss of annual recharge to groundwater shall be eliminated or minimized.

The Project is not expected to result in a loss of annual recharge to the area's groundwater. This will be accomplished by constructing stormwater infiltration systems that will infiltrate rooftop runoff and treated, parking area drainage.

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

Rooftop runoff is expected to be directed to a subsurface infiltration system for treatment and for providing groundwater recharge. Runoff from pavement areas is anticipated to be captured by deep sump catch basins, routed through a proprietary separator or other pretreatment device, and then to a subsurface infiltration system prior to connecting to the existing storm drain system. These BMPs are expected to provide full compliance with this standard.

Standard 5: Land uses with higher potential pollutant loads.

The Project will not contain a land use with higher potential pollutant loads. While the Project will generate more than 1,000 unadjusted vehicle trips per day, there is no high-intensity use parking lot that will be generating stormwater runoff.

Standard 6: Stormwater discharges to critical areas.

Stormwater from the Project Site will not discharge to a critical area.

Standard 7: Redevelopment projects.

Portions of the Project Site have been previously developed. However, the Proponent intends to meet the standards even for the redeveloped portions of the Project Site.

Standard 8: Control construction-related impacts.

A Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented during construction. The SWPPP will include, but not be limited to, erosion and sediment controls, good house-keeping measures, and potential pollutant source controls during construction.

Standard 9: Long-term operation and maintenance plan.

A long-term operation and maintenance plan will be developed and implemented for the stormwater management system. It will include schedules for system inspection and maintenance and will identify the responsible party for system maintenance.

Standard 10: No illicit discharges.

The Project will not result in illicit connections or discharges. An Illicit Discharge Compliance Statement will be provided as part of the Project's filing with the Boston Conservation Commission under the Wetlands Protection Act.

4.6.4 Electrical Service

Eversource owns and maintains the electrical transmission system in the vicinity of the Project. The Proponent will work with Eversource to confirm that the system has adequate capacity to support the proposed building demands as design progresses.

4.6.5 Telecommunication Systems

Verizon and Comcast provide cable and telephone services in the Project area. Services will be coordinated later during the development design phase.

4.6.6 Gas Systems

National Grid provides natural gas in the Project area. They own and maintain an 8-inch carbon steel main in Commonwealth Avenue that is capable of supplying the Project.

4.6.7 Utility Protection During Construction

The Project construction contractor will notify utility companies and register with "Dig Safe" prior to excavation. During construction, infrastructure will be protected using sheeting and shoring, temporary relocations, and construction staging as required. The Project construction contractor will be required to coordinate all protection measures, temporary supports, and temporary shutdowns of all utilities with the appropriate utility owners and/or agencies.

The Project construction contractor will also be required to provide adequate notification to the utility owner prior to any work commencing on their utility. In addition, in the event a utility cannot be maintained in service during switch over to a temporary or permanent system, the Project construction contractor will be required to coordinate the shutdown with the utility owners and Project abutters to minimize impacts and inconveniences.

Chapter 5.0

Coordination with other Governmental Agencies

5.0 COORDINATION WITH OTHER GOVERNMENTAL AGENCIES

5.1 Architectural Access Board Requirements

The Project will comply with the requirements of the Massachusetts Architectural Access Board and the standards of the Americans with Disabilities Act. An Accessibility Checklist and related plans is included in Appendix D.

5.2 Massachusetts Environmental Policy Act (MEPA)

A project is subject to the Massachusetts Environmental Policy Act (MEPA) review when the following two conditions are met: (1) a project is subject to MEPA jurisdiction, and (2) a MEPA review threshold is exceeded. Current plans do not call for the Project to receive any state permits or state funding, or to involve any state land transfers and thus, there is no MEPA jurisdiction.

5.3 Massachusetts Historical Commission State Register Review

The Proponent does not anticipate that the Project will require any state or federal licenses, permits or approvals, and does not anticipate utilizing any state or federal funds, nor does the Project involve alteration of a property on the State Register. Therefore, review by the Massachusetts Historical Commission (MHC) is not anticipated at this time. In the event that state or federal licenses, permits, approvals or funding is involved, the Proponent will file an MHC Project Notification Form to initiate MHC's review of the Project.

5.4 Boston Landmarks Commission Review

The proposed demolition of the existing building is subject to BLC's review in accordance with Article 85 of the Boston Zoning Code (Demolition Delay). At the appropriate time, the Proponent will file the required Article 85 application with the BLC. The Proponent will work closely with the BLC staff to fulfill the requirements of the Article 85 review process.

Appendix A

Site Survey

HAWK Consulting, Inc.
3 Wedgewood Lane
Millbury, MA 01527
Phone: (203) 814-7960

ALTA/NSPS Land Title Survey

Kindred Acute Care Portfolio

Surveyor Certification

Kindred Brighton

1515 Commonwealth Avenue
Brighton, MA 02135
County of Suffolk

To: Curahealth Property, LLC; Curahealth Boston, LLC; Commonwealth Land Title Insurance Company; WELLS FARGO BANK, NATIONAL ASSOCIATION, as Administrative Agent, its successors and assigns: This is to certify 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, 6a, 6b, 7a, 7b1, 7c, 8, 9, 13, 14, 16, 17, 18 and 19 of Table A thereof. The fieldwork was completed on November 28, 2017.

Timothy R. Callahan, PLS
Land Surveyor Number 35022
In the State of MA
Date of Plat or Map 11/26/2017
Date of last revision 12/14/2017
Date of this Printing 12/14/2017

Survey Prepared by:
HAWK Consulting, Inc.
3 WEDGEWOOD LANE
MILLBURY, MA 01527

Legal Description

Real property in the City of Brighton, County of Suffolk, Commonwealth of Massachusetts, described as follows:

A certain parcel of land with the buildings thereon, situated in the Brighton District of Boston, Suffolk County, Massachusetts, now known and numbered as 1515 Commonwealth Avenue, and being shown as Hahnemann Hospital, Lot B and Hospital Road, containing 92,289 square feet, on a plan entitled "Plan of Land of Hahnemann Hospital Boston-Mass., (Brighton District)", dated January 31, 1940, recorded with Suffolk County Registry of Deeds in Book 5845, Page 229, bounded and described as follows:

Southeasterly by Commonwealth Avenue, by three lines measuring fifty and 02/100 (50.02) feet

three hundred twenty-eight and 77/100 (328.77) feet, and eighty and 63/100 (80.63) feet, respectively;

Southwesterly by Right of Way, as shown on said plan, two hundred thirteen and 11/100 (213.11) feet;

Northwesterly by Lot A and by land of Massachusetts Memorial Hospital, as shown on said plan, by two lines measuring two hundred nineteen 11/100 (219.11) feet and one hundred sixty-nine and 84/100 (169.84) feet, respectively;

Northeasterly and

Northwesterly again, by land of Massachusetts Memorial Hospital, as shown on said plan, now Hospital Road, by two lines measuring twelve and 70/100 (12.70) feet, and fifty and 80/100 (50.80) feet, respectively; and

Northeasterly again, by land now or formerly of Sophie M. Friedman, one hundred eighty-nine and 36/100 (189/36) feet.

AS-SURVEYED LEGAL DESCRIPTION:

A certain parcel of land with the buildings thereon, situated in the Brighton District of Boston, Suffolk County, Massachusetts, now known and numbered as 1515 Commonwealth Avenue, and being shown as Hahnemann Hospital, Lot B and Hospital Road, containing 92,289 square feet, on a plan entitled "Plan of Land of Hahnemann Hospital Boston, Mass., (Brighton District)", dated January 31, 1940, recorded with Suffolk County Registry of Deeds in Book 5646, Page 229, bounded and described by an updated field survey as follows:

Beginning at a point on the westerly line of Commonwealth Avenue; thence, along said westerly line the following two courses: along a radial curve to the right, in a southwesterly direction, having radius of two thousand seven hundred thirty-nine and ten hundredths feet (2,739.10' and an arc length of three hundred seventy-eight and forty-eight hundredths feet (378.48'), thence S27°00'55"W, a distance of eighty and sixty-three hundredths feet (80.63') to a point; thence N62°59'05"W, a distance of two hundred thirteen and eleven hundredths (213.11') feet to a point; thence N27°00'55"E, a distance of three hundred eighty-eight and ninety-five hundredths feet (388.95') to a point; thence S68°41'46"E a distance of twelve and seventy hundredths feet to a point; thence N11°08'14"E, a distance of fifty and eighty hundredths feet (50.80') to a point; thence S68°41'2'46"E, a distance of one hundred eighty-nine and twenty hundredths feet (189.20') to the point of beginning. The above described parcel contains 92,273 square feet (2.12 acres), more or less.

THE ABOVE DESCRIBED PARCEL IS THE SAME PARCEL DESCRIBED IN COMMONWEALTH LAND TITLE INSURANCE COMPANY CASE NOUMBER: BLC-24505, BEARING AN EFFECTIVE DATE OF NOVEMBER 17, 2017.

GENERAL NOTES:

1. Bearings are based on control found with reference to recorded streets rights of way.
2. This property has direct access to Commonwealth Avenue.
3. There are 69 regular striped parking spaces and 4 handi-cap parking spaces.
4. At the time of this survey there was no evidence of roadway construction.
5. At the time of this survey there was no observed evidence site use as a solid waste dump, sump or sanitary landfill.
6. There is no knowledge of impending rights of way changes and no observed street or sidewalk construction or repairs.
7. There appears to be no wetlands within 100' of this property.
8. City of Boston Parcel ID#2101831000.
9. There are no specific large vehicle parking spaces on this site.
10. No cemetery or burial grounds were observed on this property.
11. Professional Liability Insurance policy obtained by the surveyor in the amount of $1,000,000 and will remain in effect throughout the contract term. Certificate of insurance to be furnished upon request.
12. All field measurements matched record dimensions within the precision requirements of ALTA/NSPS (2016) specifications.
13. Error of closure conforms to ALTA/NSPS(2016). Total traverse closure= 0.08' with a adjusted positional tolerance of more than 95%.
14. No apparent wetlands or wetland flags were observed on this site.
15. All visible utilities required for the operation of the property either enter the property through adjoining public streets or the Survey shows the point of entry and location of any easements for utilities which pass through or are located on adjoining private land.

LEGEND OF SYMBOLS & ABBREVIATIONS

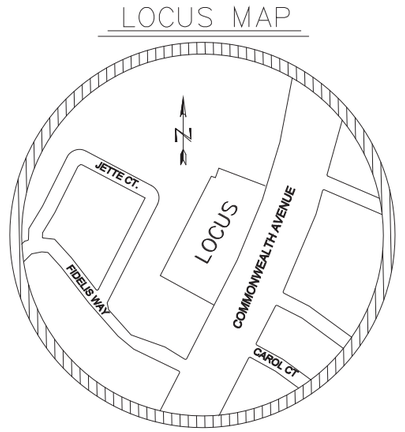
- FH – Fire Hydrant/Standpipe
- MW – Monitoring Well
- CB – Catch Basin
- DMH – Drain Manhole
- PS – Painted Stripe
- EOP – Edge of Pavement
- LP – Light Pole
- F – Fence
- SMH – Sanitary Manhole
- UP – Utility Pole
- LP – Light Pole
- HC – Handicap Space
- VGC – Vertical Granite Curb
- VCC – Vertical Concrete Curb
- VAC – Vertical Asphalt Curb
- DW – Doorway/Bay Door
- BCS – Buried Cable Service
- WV – Water Valve
- GV – Gas Valve
- E – Electric Box & Manhole
- EV – Electric Vault/Handhole
- FP – Flag Pole
- BP – Bollard Post
- CRW – Concrete Retaining Wall
- MW – Monitoring Well
- DH# – Drill Hole Set in Walk
- TCS – Traffic Control Sign

STATEMENT OF ENCROACHMENTS

There appear to be encroachments of a fence line and part of a curb onto an adjacent property as shown on this plan and noted in the Schedule B, Section 2 comments.

UTILITY NOTES:

The location of utilities shown hereon are from observed evidence of above ground appurtenances.
From observed above ground appurtenances electric, storm sewer, telephone, water, cable, gas and septic system line and/or service is available for the subject property within this property or within the public right of way of Commonwealth Avenue.



NOTES CORRESPONDING TO SCHEDULE B, SECTION 2

1. Rights or claims of persons in possession.
   This survey discovered no rights or claims of persons in possession. See note 2 regarding physical encroachments.
2. Easements or claims of easements not shown by the public records, boundary-line disputes, overlaps, encroachments, title to filled lands (if any) and any matters not of record which would be disclosed by an accurate survey and inspection of the premises.
   An apparent fence line encroachment and a part of a vertical granite curb are shown and noted on this plan as encroachments.
3. Any lien, or right to a lien, for services, labor or material, heretofore or hereafter furnished, imposed by law and not shown by the public records.
   This item does not affect this survey.
4. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met.
   This item does not affect this survey.
5. Liens for taxes and municipal charges which become due and payable subsequent to the date of said policy.
   This item does not affect this survey.
6. Rights and easements granted by Hahnemann Hospital to Massachusetts Memorial Hospitals by instrument dated August 16, 1937, recorded in Book 5695, Page 93.
   This fifty foot wide easement is shown/noted on this survey plan.
7. Notice of Lease by and between Curahealth Property, LLC and Curahealth Boston, LLC, dated October 1, 2016, recorded in Book 56901, Page 128, as affected by a Lease Subordination Agreement, dated October 1, 2016, recorded in Book 56901, Page 152.
   This item does not affect this survey.
8. Matters set forth in the Deed recorded in Book 56901, Page 121.
   This quit claim deed does not affect this survey.

By graphic plotting only, this property is in Zone "X" of the Flood Insurance Rate Map, Community Panel, No. 25025C0057G, which bears an effective date of September 25, 2009.

ZONING INFORMATION

STATUS	CURRENT ZONING: Allston-Brighton Neighborhood District within the Conservation Multifamily Residential Subzones.			MFR MULTI-FAMILY-RESIDENCE
ZONING ITEM	REQUIRED	ACTUAL	SOURCE OF INFORMATION	Jeffrey Hampton Senior Zoning Planner One City Hall Square Boston, MA 02201 PHONE: 617-918-4308
PERMITTED USE	per current zoning	Hospital (non-conforming)		
MINIMUM LOT AREA	4,000 s.ft.	16,026 s.ft.	SOURCE OF INFORMATION	PJR. 1300 South Meridian Ave. Suite 1000 Oklahoma City, OK 73108 Project: 108424-1
MINIMUM FRONTAGE	N/A	N/A		
MINIMUM LOT WIDTH	40 feet	459.42 feet	This existing use is noted by the City as legally non-conforming to the current code requirements.	
MAXIMUM BUILDING COVERAGE	1:1	0.61		
MINIMUM SETBACKS FRONT	20 feet	19.5' feet min.		
REAR	20 feet	33.5 feet		
SIDE	10 feet	all setbacks over 20 feet.		
MAXIMUM BUILDING HEIGHT	55 feet 3 stories	50.33 feet pre-existing "grandfathered"		
PARKING REGULAR	56 spaces	65 spaces		
HANDICAP	N/A	4		
TOTAL	56	69		

SCALE: 1"=30'
FEET 0 15 30 45 60 75
METERS 0 4.5 9 18 27

Appendix B

Transportation

Transportation Appendix is Available Upon Request

Appendix C

Climate Resiliency Checklist

Boston Planning & Development Agency
Climate Resiliency Report Summary

boston planning & development agency

Submitted: 06/06/2019 09:51:48

A.1 - Project Information

Project Name:	1515 Commonwealth Avenue			
Project Address:	1515 Commonwealth Avenue			
Filing Type:	Initial (PNF, EPNF, NPC or other substantial filing)			
Filing Contact:	Talya Moked	Epsilon Associates	tmoked@epsilonassociates.com	9784616223
Is MEPA approval required?	No	MEPA date:		

A.2 - Project Team

Owner / Developer:	DIV Commonwealth, LLC
Architect:	RODE Architects
Engineer:	WSP USA
Sustainability / LEED:	Epsilon Associates, Inc.
Permitting:	Epsilon Associates, Inc.
Construction Management:	

A.3 - Project Description and Design Conditions

List the principal Building Uses:	Residential
List the First Floor Uses:	Lobby, parking, bike storage, mechanical room and utilities, trash storage, residential units
List any Critical Site Infrastructure and or Building Uses:	

Site and Building:

Site Area (SF):	92275	Building Area (SF):	340000
Building Height (Ft):	180	Building Height (Stories):	17
Existing Site Elevation – Low (Ft BCB):	158	Existing Site Elevation – High (Ft BCB):	186
Proposed Site Elevation – Low (Ft BCB):	158	Proposed Site Elevation – High (Ft BCB):	186
Proposed First Floor Elevation (Ft BCB):	176	Below grade spaces/levels (#):	

Article 37 Green Building:

LEED Version - Rating System:	LEED v4 BD+C	LEED Certification:	

Boston Planning & Development Agency

Climate Resiliency Report Summary

boston planning & development agency

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

Building Envelope:

When reporting R values, differentiate between R discontinuous and R continuous. For example, use "R13" to show R13 discontinuous and use R10c.i. to show R10 continuous. When reporting U value, report total assembly U value including supports and structural elements.

Roof:	30	Exposed Floor :	12.5
Foundation Wall:	7.5	Slab Edge (at or below grade):	10

Vertical Above-grade Assemblies (%'s are of total vertical area and together should total 100%):

Area of Opaque Curtain Wall & Spandrel Assembly:	5	Wall & Spandrel Assembly Value:	0.064
Area of Framed & Insulated / Standard Wall:	56	Wall Value:	13
Area of Vision Window:	39	Window Glazing Assembly Value:	0.45
		Window Glazing SHGC:	0.40
Area of Doors:	0.5	Door Assembly Value :	0.77

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined	A preliminary energy model will be provided in the DPIR		
Annual Electric (kWh):		Peak Electric (kW):	
Annual Heating (MMbtu/hr):		Peak Heating (MMbtu):	
Annual Cooling (Tons/hr):		Peak Cooling (Tons):	
Energy Use - Below ASHRAE 90.1 - 2013 (%):		Have the local utilities reviewed the building energy performance?:	
Energy Use - Below Mass. Code (%):		Energy Use Intensity (kBtu/SF):	

Back-up / Emergency Power System

Electrical Generation Output (kW):		Number of Power Units:	
System Type (kW):		Fuel Source:	

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

Electric (kW):		Heating (MMbtu/hr):	
		Cooling (Tons/hr):	

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:

Sustainable design and energy efficiency goals were established early and strategies associated with the building envelope attributes, lighting design, thermal comfort ranges, plug and process loads, and operational parameters and their impact on the building energy performance will be explored and discussed throughout the design process.

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

Passive design considerations will include optimized building orientation to maximize usable daylight for occupant comfort/wellness and reduction of lighting power density, high-performance façade and building envelope, and selection of electricity-based building systems to allow the Project to benefit from progressive greening of the grid.

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

Design considerations will include: high-performance façade and building envelope, high performance MEP and lighting systems with optimized controls, and enhanced commissioning to verify/monitor energy consumption to ensure the building systems are operating as designed.

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

The Project will be designed to be PV-ready.

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 design team has not reached out to local utilities yet, but will do so to understand available utility or Mass Saves energy efficiency incentives

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):

The Project will prioritize electricity-based building systems to allow the Project to benefit from progressing greening of the grid by the utility company.

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:

TPO membranes with white exposed fascia will be considered to manage heat gains and load on the building cooling systems during high temperature events/heatwaves. The design will consider roof membranes with a Solar Reflectance Index [SRI] after 3 years of 0.70 and hardscape materials with SRI of 0.29 at a minimum. Exterior hardscape will be reduced through the incorporation of covered/in-building parking. The Project will also include significant green space and partial green roofs to reduce the heat island effect at the site.

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:

TPO membranes with white exposed fascia will be considered to manage heat gains and load on the building cooling systems during high temperature events/heatwaves. The design will consider roof membranes with a Solar Reflectance Index [SRI] after 3 years of 0.70 and hardscape materials with SRI of 0.29 at a minimum. Exterior hardscape will be reduced through the incorporation of covered/in-building parking. The building will include a high performance building envelope to alleviate impact on interior environment, high performance HVAC and lighting systems to reduce energy footprint during heatwaves, energy recovery ventilation systems, and potentially operable windows and partial/complete green roofs.

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:

An emergency generator sized for life safety systems will be considered for the project. Incorporation of operable windows and a high performance building envelope will be evaluated to alleviate space ventilation and occupant thermal comfort issues in the event of extended interruption to HVAC utilities.

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:

It is expected that subsurface, stormwater infiltration systems will be constructed that can infiltrate the first 1.25 inch of runoff from the site's impervious areas to the greatest extent possible. Existing ledge may impact sizing and location of infiltration systems for the Project. Rooftop runoff will be piped directly to the stormwater infiltration systems. Stormwater runoff from paved areas, such as the proposed driveway, will be captured by deep sump, hooded catch basins and provided pretreatment prior to being directed to the stormwater infiltration systems

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):

The Project will be reviewing the feasibility of additional stormwater retention, infiltration and storage, including rain gardens, storage basins and other infrastructure to accommodate more significant future rain events

E – Sea Level Rise and Storms

Boston Planning & Development Agency

Climate Resiliency Report Summary

boston planning & development agency

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:	1515 Commonwealth Avenue
Primary Project Address:	1515 Commonwealth Avenue, Brighton, MA 02135
Total Number of Phases/Buildings:	One Phase/Building
Primary Contact (Name / Title / Company / Email / Phone):	
Owner / Developer:	DIV Commonwealth, LLC
Architect:	RODE Architects, Inc
Civil Engineer:	Howard Stein Hudson
Landscape Architect:	OJB Landscape Architecture
Permitting:	Epsilon Associates, Inc.
Construction Management:	TBD

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.	Yes, outlets at exterior walls and Group 1 sink depth.

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:	*92,275 SF*	Building Area:	*340,000 GSF*
Building Height:	*96 FT/180 FT.*	Number of Stories:	*9-17 Flrs.*
First Floor Elevation:	176'-0"	Is there below grade space:	☑ *Yes / No*

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:	*Lobby, parking, bike storage, mechanical room and utilities, trash storage, residential units*			

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 site is located at the top of a hill along the Commonwealth Avenue carriage road between Warren Street and Washington Street. The topography across the site varies from 158'-0" at the northeast corner of the site to 186'-0" at the center of the site/existing upper level entry. There are large portions of exposed ledge visible across the site, indicating rock at the elevation transition locations. Along the existing sidewalk the site slopes approximately 3 ft (2% slope) from the high point (179'-0') towards Washington Street, and approximately 21 ft (10% slope at steepest) to Warren Street.
List the surrounding accessible MBTA transit lines and their proximity to development site: commuter rail / subway stations, bus stops:	• MBTA Subway – Green Line, B branch: Washington Street Station (accessible). 0.1 miles away; one block south along Commonwealth Avenue to the intersection with Washington Street. • MBTA Bus lines: Route 65 follows Washington Street, 0.1 miles from the site. Routes 57 and 86 operate through Brighton Center, 0.7 miles west of the site. All MBTA Bus Routes are accessible
List the surrounding institutions: hospitals, public housing, elderly and disabled housing developments, educational facilities, others:	**Affordable/Public Housing:** 91-95 Washington, Federal Family 35 Fidelis Way, Federal Family 20 Washington Street, Federal Elderly Disabled **Assisted Living:** Welch Healthcare, 170 Corey Rd **School:** Boston Public: Early Ed / Elementary – Baldwin ELPA / Winship; Jackson/Mann K-8, Horace Mann K-12; Brighton HS, Boston Green Academy, Another Course to College **Police:** Boston Police District D-14, Station 0.7 miles **Fire:** District 11; Engine Co.'s 29 & 41 **Hospitals:** St Elizabeth's Medical Center, 0.7 miles; Franciscan Children's, 0.5 miles; Ambulance Districts 9 & 14

List the surrounding government buildings: libraries, community centers, recreational facilities, and other related facilities:	**Recreation/Open Space:** Commonwealth Tenants Association Community Gardens, Fidelis Way Park, Brian Honan Park, Our Lady of Fatima Shrine, Joyce Playground **Public Library:** Boston Public Library Brighton Branch – 1.0 miles **Community Center:** Jackson Mann, 500 Cambridge St Boston College Neighborhood Center, 480 Washington St. **Transit:** Site is located (0.1 miles) to the Washington Street B-line station connecting the site to major Boston public facilities.
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:	The Project site is not within a historic district.
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 sidewalk widths vary from 6'-0" to 6'-6" with a 6" curb. Along the existing sidewalk the site slopes approximately 3 ft (2% slope) from the high point (179'-0') towards Washington Street, and approximately 21 ft (10% slope at steepest) to Warren Street. The existing pedestrian route to Washington street is accessible, while the pedestrian route towards Warren Street does not have accessible slopes.
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 existing sidewalks and pedestrian ramps are to remain.
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,	The proposed sidewalk complies with the Boston Complete Streets Guidelines and will fall under the *Residential* Street Type. The streetscape will focus on pedestrian safety, street trees, and well-defined connections to public transportation and public parks and amenities.

Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, or Boulevard.	
What are the total dimensions and slopes of the proposed sidewalks? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone:	The total dimension of the proposed sidewalk is 7'. The total dimension will align with the adjacent existing sidewalk. The Pedestrian Zone will be 5' and the Greenscape/Furnishing Zone is 2' wide. The slope of the sidewalks will follow the grade of the existing sidewalk.
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?	Th Pedestrian Zone will be concrete. The Greenscape/Furnishing Zone will also be concrete. The proposed materials will be on the City of Boston pedestrian right-of-way.
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?	No
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.	
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?	200 spaces within parking garage
What is the total number of accessible spaces provided at the development site? How many of	6 accessible spaces, 1 will be van accessible

these are "Van Accessible" spaces with an 8 foot access aisle?	
Will any on-street accessible parking spaces be required? ***If yes,*** has the proponent contacted the Commission for Persons with Disabilities regarding this need?	All accessible parking requirements will be met on site.
Where is the accessible visitor parking located?	Accessible parking spaces will be located in the parking garage, closest to the elevator core. These parking spaces can be designated for visitors as required.
Has a drop-off area been identified? ***If yes,*** will it be accessible?	Yes, all provided drop-off areas 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:	Flush condition. The Project site has over 15 feet in topographic changes, connecting to the exterior at two different levels. Each entryway is flush and they are connected indoors by an elevator. Additionally, accessible circulation routes are being provided across the exterior of the site.
Are the accessible entrances and standard entrance integrated? ***If yes,*** *describe.* ***If no,*** what is the reason?	Yes, all standard entrances are accessible.
If project is subject to Large Project Review/Institutional Master Plan, describe the accessible routes way-finding / signage package.	Signage will be integrated into the exterior landscape, indicating accessible pathways toward the entrances and Level 1 and Level 2. All future way-finding signage will be developed to meet Building Code and Accessibility Board Requirements
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?	330 units
If a residential development, how many units are for sale? How many are for rent? What is the breakdown of market value units	175 rental units and 155 condominium units The mix of market/affordable units has not yet been determined.

vs. IDP (Inclusionary Development Policy) units?	
If a residential development, how many accessible Group 2 units are being proposed?	5% of the 175 rental units will be accessible: 9 units will be provided in full compliance with MAAB Group-2A regulations
If a residential development, how many accessible Group 2 units will also be IDP units? ***If none***, describe reason.	Accessible units will include a mix of affordable and market rate units, in a proportion similar to the overall composition of units. Final breakdown to be determined.
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.	N/A
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:	Interior elevators are provided to access all floors.
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?	Yes, the Project is providing an accessible connection to Fidelis Way Park from the Commonwealth Avenue carriage road, in addition to providing an accessible public green space on site, including planting of additional trees.
What inclusion elements does this development provide for persons with disabilities in common social	All amenity spaces will be fully accessible, with all accessible controls and appliances and will accommodate for accessible seating, and accessible amenity bathrooms.

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?	
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.
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?	Proposed plan has been discussed with accessibly team at the BPDA pre-file review. Intention of the design team is to make all areas of the site fully accessible – this is challenged by the steep changes in topography across the existing site, but plans have been reviewed that allow accessible slopes and ramps to traverse all areas to be made available to the public.
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?	Not yet.

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. •

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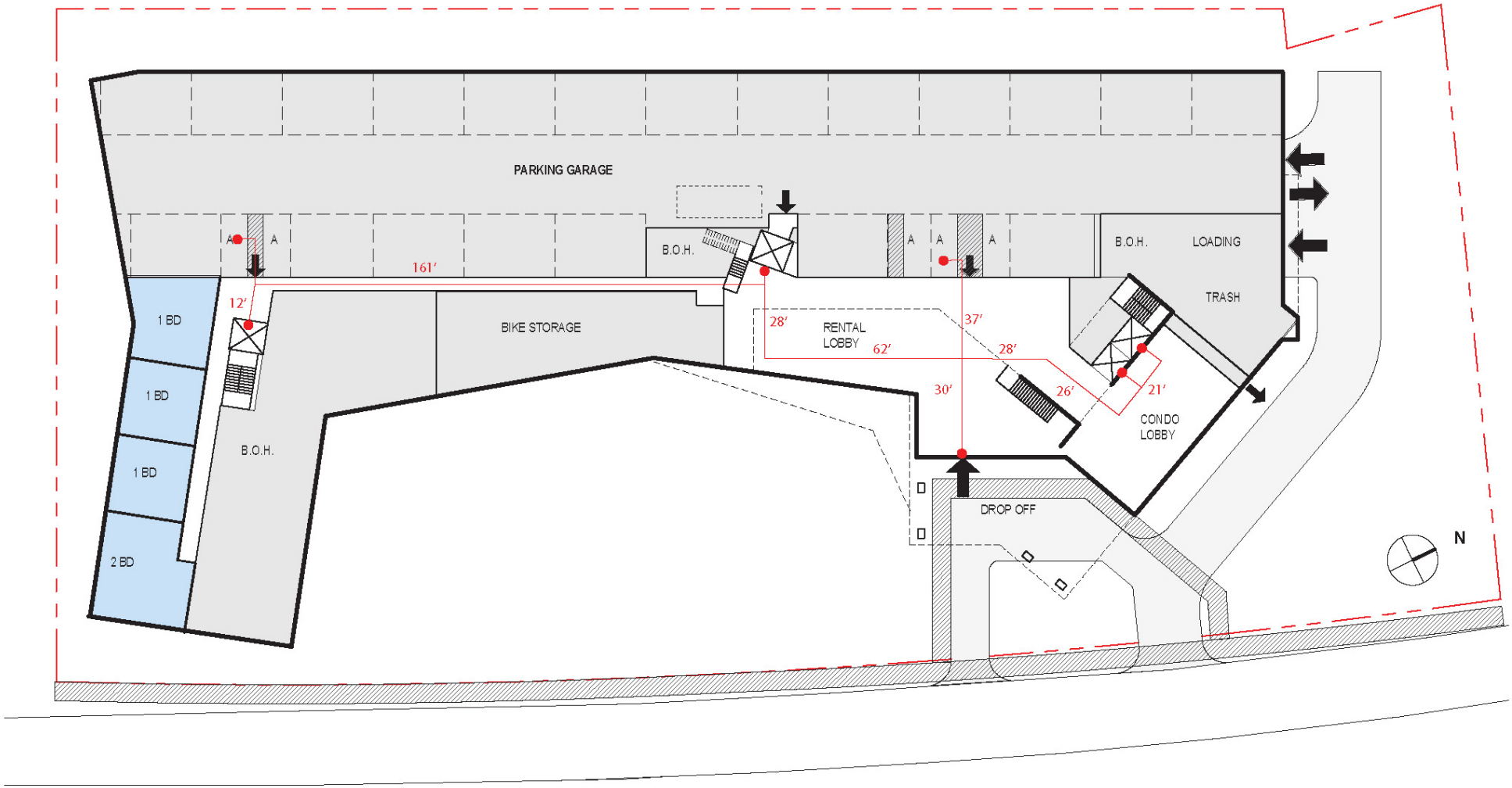
This completes the Article 80 Accessibility Checklist required for your project. Prior to and during the review process, Commission staff are able to provide technical assistance and design review, in order to help achieve ideal accessibility and to ensure that all buildings, sidewalks, parks, and open 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:

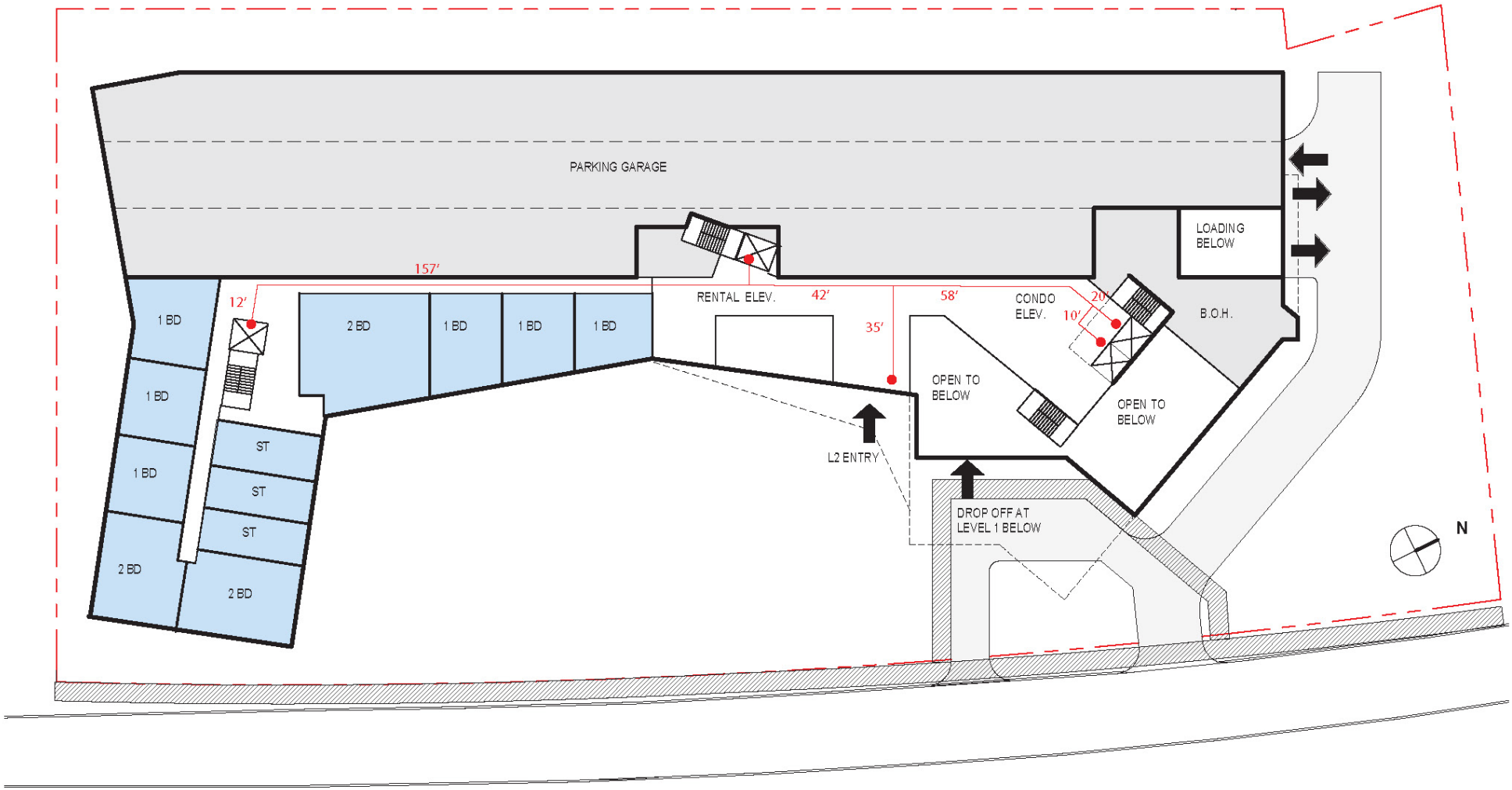
accessibility@boston.gov | patricia.mendez@boston.gov | sarah.leung@boston.gov | 617-635-3682



1515 Commonwealth Avenue Boston, Massachusetts

RODE

Ground Floor Accessibility



1515 Commonwealth Avenue Boston, Massachusetts

RODE

Second Floor Accessibility

1515 Commonwealth Avenue Boston, Massachusetts

RODE

Upper Levels Accessibility


RENTAL
AMENITY
RENTAL
AMENITY
DECK AT L7
32'
152'
14'
1 BD+
ST
ST
ST
1 BD+
ST
ST
1 BD
2 BD
1 BD
1 BD
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