

J.J. CARROLL REDEVELOPMENT



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

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

Submitted by:
2Life Development Inc.
c/o 2Life Communities
30 Wallingford Road
Brighton, MA 02135

In Association with:
MASS Design Group
Stantec
Klein Hornig LLP

October 29, 2019

Expanded Project Notification Form

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Chapter 1.0

Project Information

1.0 PROJECT INFORMATION

1.1 Introduction

2Life Development Inc., the development arm of 2Life Communities (“2Life” or the “Proponent”), was designated by the Boston Housing Authority (BHA) to redevelop BHA’s J.J. Carroll Apartments located on Chestnut Hill Avenue in the Brighton neighborhood of Boston. The redevelopment is proposed to include approximately 144 affordable senior housing residential units, new non-residential space along Chestnut Hill Avenue, space for a new Program for All-Inclusive Care for the Elderly (PACE) center or other commercial/retail use, as well as new parking spaces, and publically-accessible open space (the “Project”). Existing residents of the J.J. Carroll Apartments will be offered apartments in the Project once construction is complete. The Project will be linked to 2Life’s existing senior housing community adjacent to the Project site which offers numerous programs and services to residents.

2Life Communities, formerly Jewish Community Housing for the Elderly, is a well-established non-profit provider of senior supportive housing in the Greater Boston area. Since its founding in 1965, 2Life has developed seven distinct properties and nearly 1,300 units, all of which 2Life owns, manages and provides services to: Ulin House, Leventhal House, Kurlat House, and Weinberg House make up 2Life’s complex in Brighton which directly abuts the J.J. Carroll Apartments.

2Life’s real estate development practice is built to innovate. Every one of 2Life’s projects seeks to demonstrate new and creative ways to support aging in community:

- ◆ *Affordability:* The high cost of housing in Massachusetts is the single biggest cause of economic insecurity among older adults. 2Life assembles financing to create housing that is affordable to older adults who have been priced out of the supportive senior housing market. In addition to 2Life’s deeply subsidized projects, this work includes groundbreaking work on aging in community options for seniors who are over-income for housing with government subsidies but do not make enough to afford market rate options.
- ◆ *Village Centers:* Research has proven that community is the best antidote to the loneliness and social isolation experienced by so many older adults. 2Life makes it easy to be part of the community, both by building on main streets and near public transportation, and by creating vibrant program spaces that are accessible to residents and neighbors alike. Resident Services offices are always located near mailboxes and other hubs of activity to make it easy for staff to know every resident and for residents to get the help they need.
- ◆ *Accessibility:* 2Life works to ensure that each resident can stay in their apartment even if their circumstances change. 2Life’s apartments include universal design features and are designed to adapt to each individual’s changing physical and intellectual circumstances.

- ◆ *Sustainability and Emerging Technology:* In addition to developing highly efficient buildings, 2Life is an expert in “grey-green technology” that saves money on operations, is good for the planet, and is informed by how seniors use technology.
- ◆ *Life Cycle Investing:* As a long-term owner and operator, 2Life has a long-term stake in what is built. 2Life’s projects are smart, comprehensive, and informed by best practice, prioritizing high-performing materials and systems that last. In addition to being more environmentally and financially sustainable over the life of the building, this helps create more livable homes for residents.

2Life brings its extensive experience to the Project, bringing much needed affordable housing and programs to low-income seniors in Boston.

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

1.2 Project Description

1.2.1 Project Site

The Project site, approximately 1.86-acre, is located at 130 Chestnut Hill Avenue in the Brighton neighborhood of Boston. The site is bordered by 2Life’s properties to the east and south, Chestnut Hill Avenue to the west, and residential properties to the north. Currently on the site are two-and-a-half-story residential buildings with 64 units owned by BHA as well as surface parking, landscaped area and a Community Room with a small kitchen and laundry facilities. As is, the fifty-plus year old buildings would require significant upgrades to meet current code requirements. One significant shortcoming worth noting is that as walk up townhouses, the buildings themselves present significant mobility challenges for its population of seniors and young disabled living on both the first and second stories. The site also includes Ledgemere Road, a dead-end street that connects to Chestnut Hill Avenue.

The Project site is proximate to Massachusetts Bay Transportation Authority (MBTA) bus stops for the 86 route along Chestnut Hill Avenue and the 501 “Downtown Express” route and approximately a quarter-mile from the Chiswick Road “B” Green Line station.

See Figure 1-1 for aerial locus map and Figures 1-2 for existing site photographs. Appendix A includes a site survey.



J.J. Carroll Redevelopment Boston, Massachusetts



Figure 1-1
Aerial Locus Map



J.J. Carroll Redevelopment Boston, Massachusetts

1.2.2 Area Context

The immediate neighborhood surrounding the Project site is a mix of commercial and residential buildings, with several buildings constructed over the past several years including the Weinberg House, another new 2Life building located at 132 Chestnut Hill Avenue. The older buildings in the immediate proximity of the site typically range in height from two to three stories. The newer buildings in the area range in height from four to six stories, with surface parking prevalent throughout the neighborhood. The site is also near recreational parks including Theresa Hynes Park, Rabbi Joseph Shalom Shubow Park, and Foster Street Hill (see Figure 1-3); several religious institutions; and St. Elizabeth's Medical Center.

The site is proximate to Washington Street, which is a major commercial corridor running through Brighton.

1.2.3 Proposed Project

The Project includes the demolition of existing buildings on the site and the construction of a six-story, approximately 180,000 square foot (sf) building containing approximately 144 residential units, a PACE center, ground floor "Village Center," and approximately 15,000 sf of publically-accessible open space. The Village Center will primarily be common space included in the residential square footage such as a multi-purpose room, Resident Service Coordinator offices, lobby, marketing/leasing office, and potentially a small resale shop and salon for residents and open to the community. The ground floor will also contain approximately 1,200 sf of commercial space, which is envisioned as neighborhood-oriented retail with fresh foods and convenience items that would serve the 2Life staff and residents as well as the surrounding neighborhood.

All apartments will be affordable to households earning up to 60% of the Area Median Income (AMI) with additional subsidies for many apartments to serve households up to 50% AMI. The new apartments will be designated for households age 62 and over, except approximately 13 units set aside for people with disabilities with a preference for those under age 62. To support the City's goals of ending homelessness, 2Life has committed to setting aside 10% of units for homeless or formerly homeless households. One unit will be set aside for an on-site resident manager to provide 24-hour emergency response support, in collaboration with the other resident managers in adjacent 2Life's properties. Table 1-1 summarizes the Project program.

Floor plans are presented in Figures 1-4 to 1-9 and elevations and sections of the building are illustrated in Figures 1-10 to 1-13.

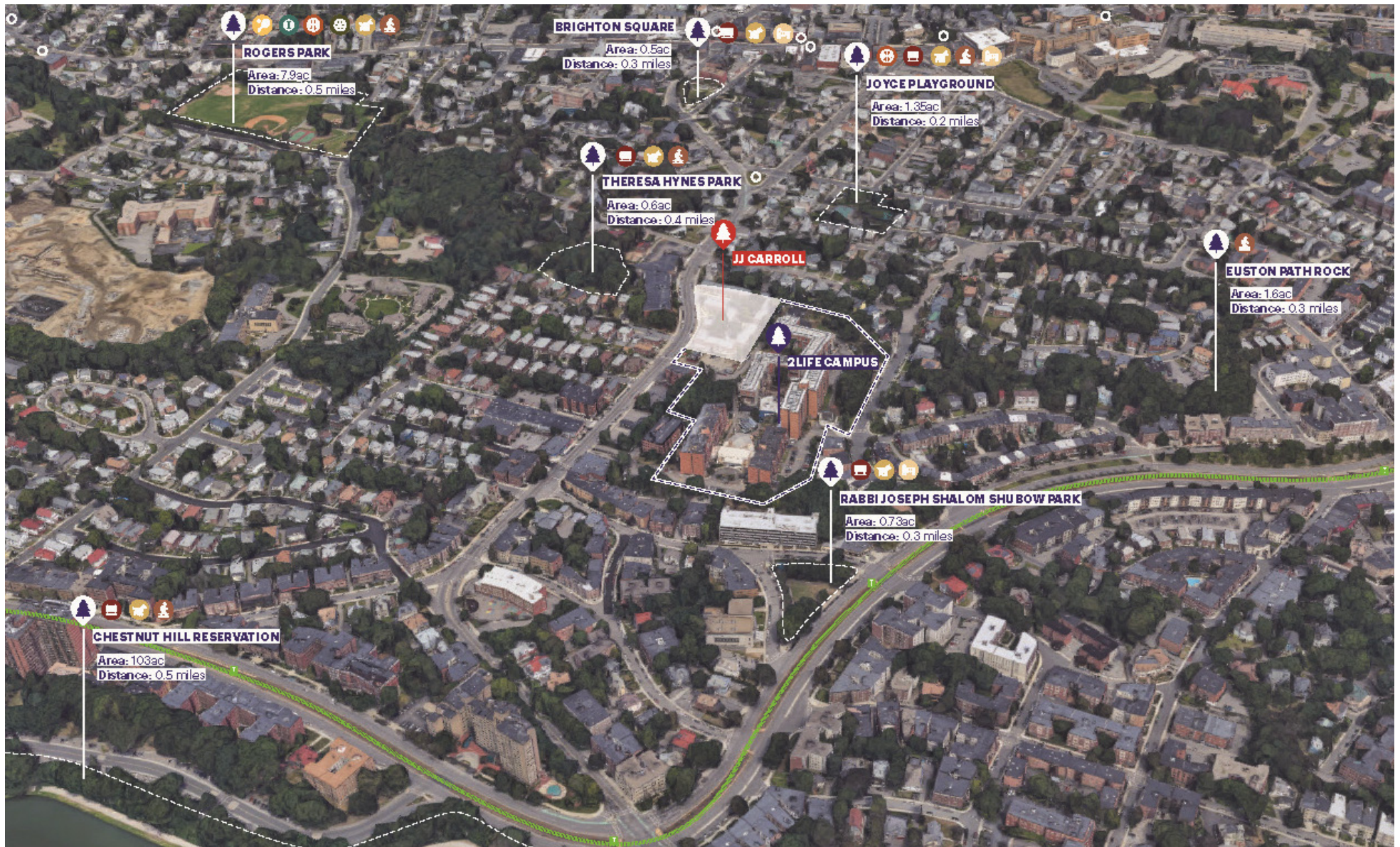
Table 1-1 Project Program

Project Element	Approximate Count / Dimension
Multifamily Residential (incl. units, common area, back of house, and enclosed parking)	167,800 sf / 144 units
Clinic (<i>PACE</i>)	11,000 sf
Commercial Use (publicly accessible; possible use as grocery/convenience store)	1,200 sf
Total Square Footage	180,000 sf
Height	70 feet
Parking Spaces	70
Publicly-Accessible Open Space	15,000 sf

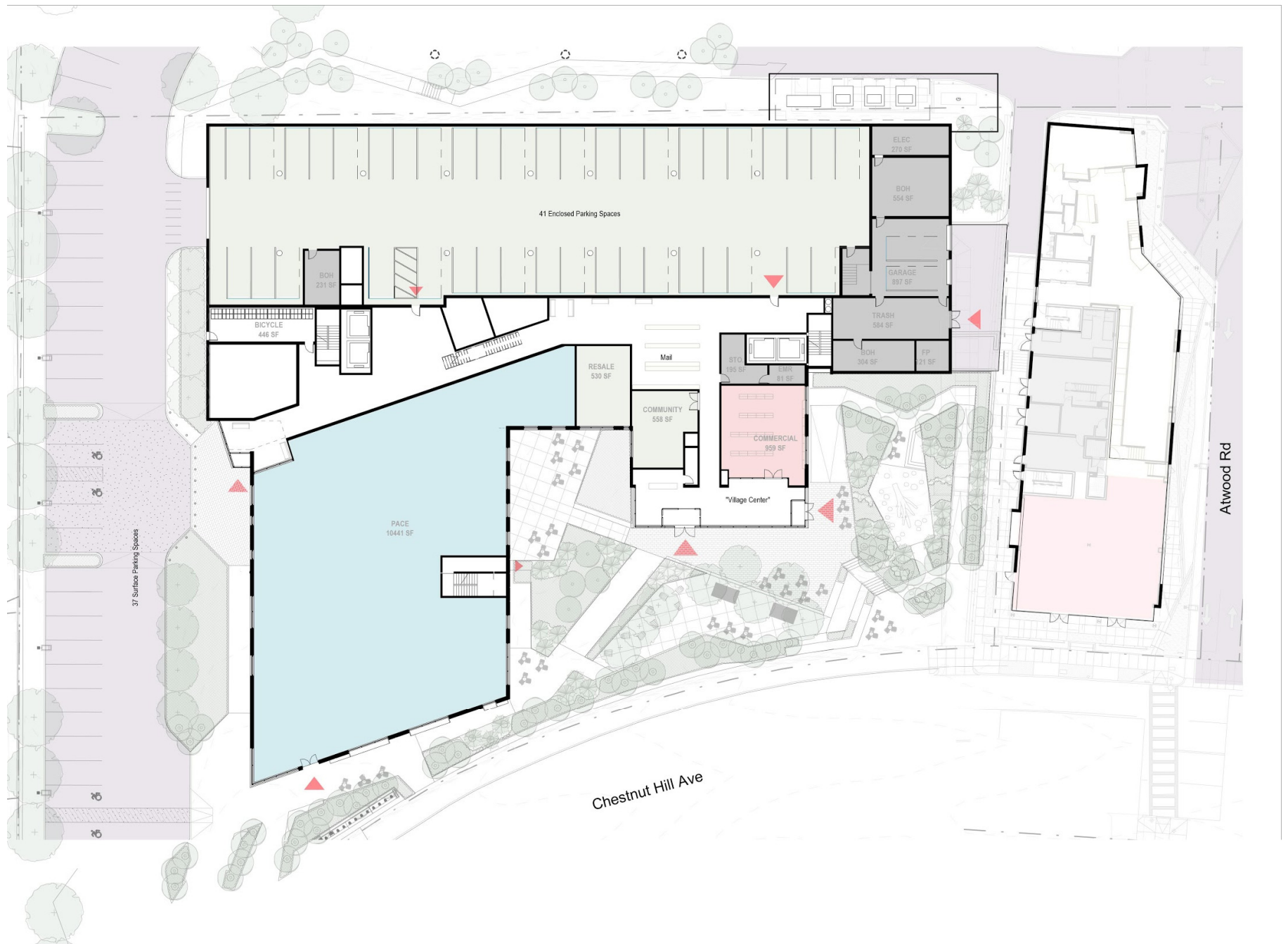
The ground floor along Chestnut Hill Avenue will be designed to foster interaction between residents and community members with spaces such as a residential lobby, multipurpose room, Resident Service Coordinator offices, and a marketing/leasing office. These spaces complement the wide array of spaces on the adjacent 2Life properties such as a dining room, fitness center, library, computer center, auditorium and resident lounge, and extend 2Life’s active presence on Chestnut Hill Avenue created by Weinberg House, which directly abuts the site to the south. A key project feature is a bridge to the neighboring Weinberg House, which will create an easy year-round, fully-accessible connection to the programs and services throughout 2Life’s Brighton community. The ground floor will also feature approximately 11,000 sf for a PACE center, an innovative healthcare model for seniors that will be accessible to eligible 2Life residents and area seniors. In the event that the PACE Center does not move forward, the building would include community-oriented retail and/or program space in a smaller footprint of space.

To create a smaller scale of community within a larger, fully accessible building, the massing consists of five double-loaded corridors that create clusters of five to eight apartments. These clusters will be connected by a corridor that provides natural light and views of courtyards and opportunities for sitting areas, exercise equipment, and art galleries to be interspersed on upper floors. This approach to massing also creates a series of open spaces – some active and open to the surrounding Brighton community, and others more private for resident use only. The plaza along Chestnut Hill Avenue will feature sitting areas, walkways, and an intergenerational play area to welcome residents, visitors, and other community members into the new building. Landscape materials and plants will be selected to weave the Project site into 2Life’s existing complex and further the sense of one community rather than separate properties.

As part of the comprehensive redevelopment, the Project will usher in a new future for the site that not only replaces the existing apartments with a more efficient, accessible, and comfortable building, but also creates additional sorely needed affordable housing options for Boston’s growing senior population.



J.J. Carroll Redevelopment Boston, Massachusetts



Scale 1" = 50'

J.J. Carroll Redevelopment Boston, Massachusetts



Scale 1" = 50'

J.J. Carroll Redevelopment Boston, Massachusetts



Scale 1" = 50'

J.J. Carroll Redevelopment Boston, Massachusetts



Scale 1" = 50'

J.J. Carroll Redevelopment Boston, Massachusetts



Scale 1" = 50'

J.J. Carroll Redevelopment Boston, Massachusetts



Scale 1" = 50'

J.J. Carroll Redevelopment Boston, Massachusetts



West Elevation (at Chestnut Hill Ave)

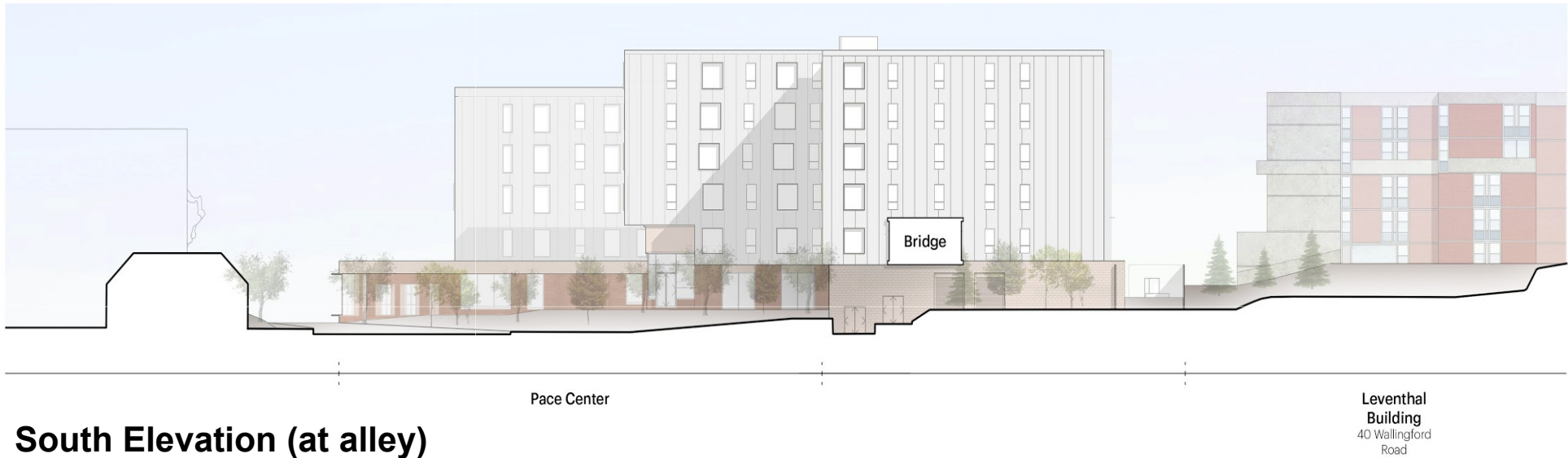


East Elevation

J.J. Carroll Redevelopment Boston, Massachusetts

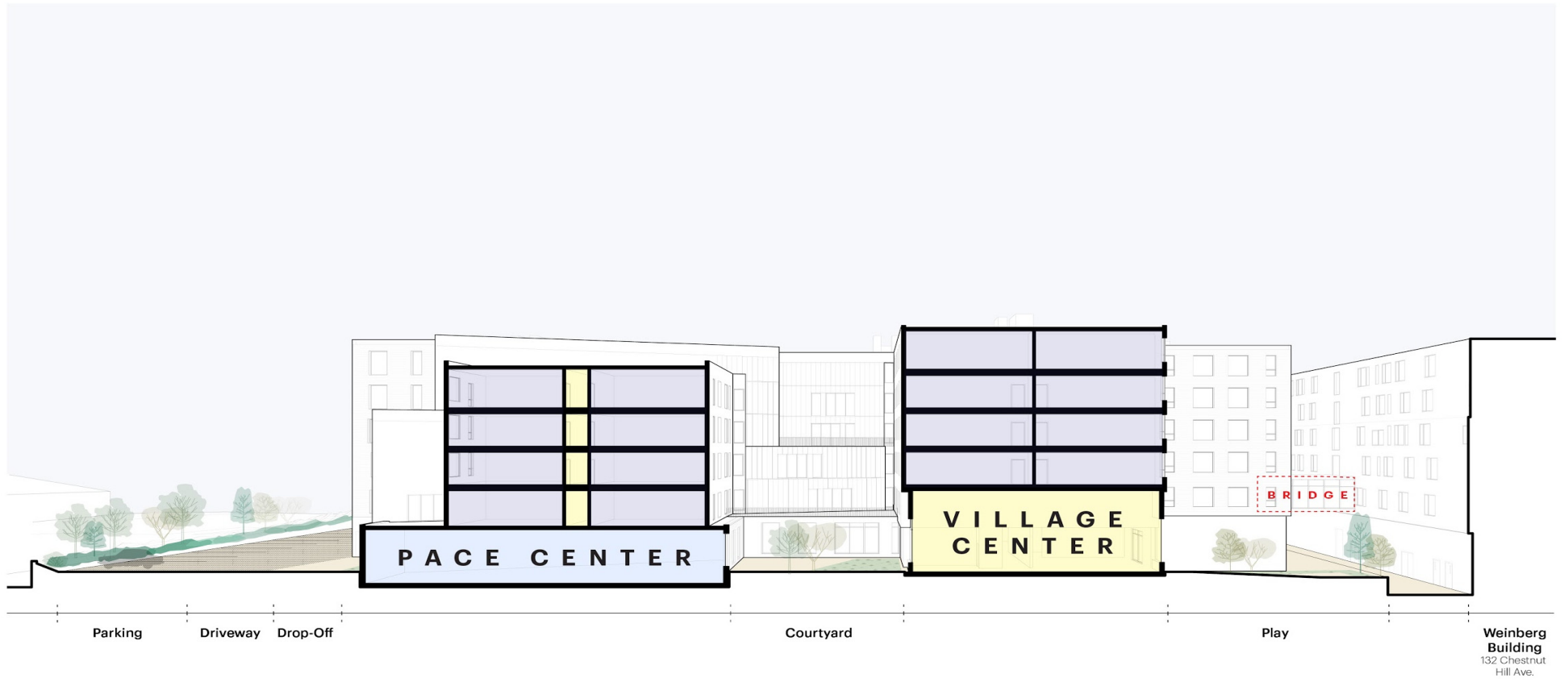


North Elevation (at Driveway)

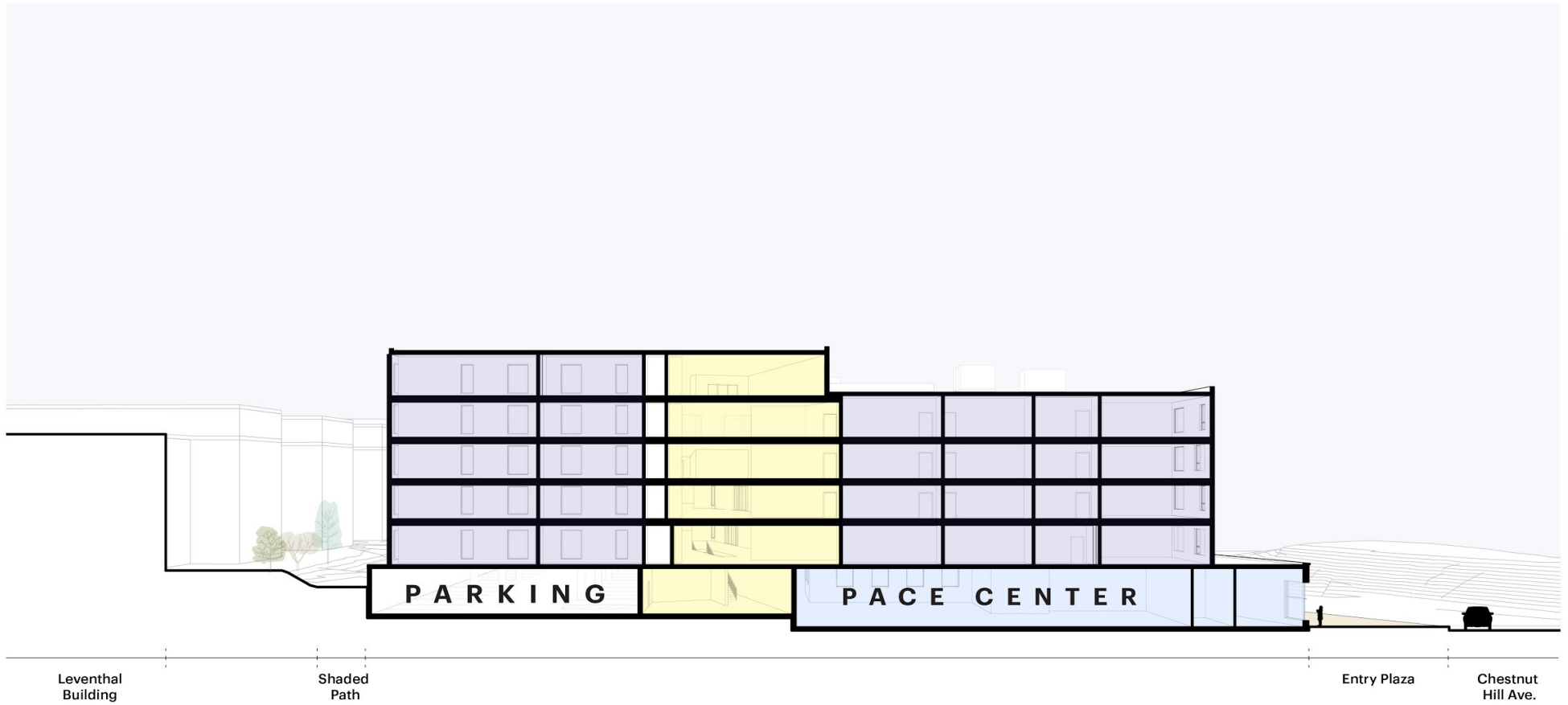


South Elevation (at alley)

J.J. Carroll Redevelopment Boston, Massachusetts



J.J. Carroll Redevelopment Boston, Massachusetts



J.J. Carroll Redevelopment Boston, Massachusetts

MASS.

Figure 1-13
Section

Universal Design and Adaptability

Building off of 2Life’s own “Design Guidelines for Aging in Community,” all of the Project’s apartments will include universal design and adaptability features. Threshold-free floors and low-pile carpet will extend throughout every apartment. Special focus will be on the kitchen and bathrooms where older adults often face the most challenges to remaining independent. For example, kitchens will include lower drawers instead of cabinets where possible, removable cabinets underneath the sink, D-shaped drawer pulls, and refrigerators with lower-drawer freezers. Bathrooms will have step-in showers with removable curbs, towel bars and toilet paper holders with blocking to function as grab bars, and continuous blocking for additional future grab bars. Five-foot turning radiuses in all kitchens and bathrooms will also be a key feature.

Many techniques and design choices included in the Project will be aimed at making the physical environment easier to navigate for those with dementia. Some of these measures are subtle or are universally beneficial regardless of cognitive ability, such as avoiding high-contrast patterns or providing clear wayfinding. Measures that might be perceived as institutional, such as the use of bright primary colors or exit-detecting technology, will be considered only on an as-needed basis in a resident’s unit. The Project’s goal is to provide a comfortable environment for all residents that strikes a balance for those with dementia.

Circulation and Access

As part of the Project, the Proponent proposes to discontinue Ledgemere Road, a dead-end road through the property. A new driveway will be added on the northern side of the Project site, creating a buffer between the Project and the residences to the north, and allowing access to the Project’s surface parking and covered parking at grade underneath the eastern portion of the building. Approximately 70 parking spaces are proposed – 41 in the parking garage and 29 surface parking spaces. Additional connections to 2Life’s adjacent properties are also being studied, and may be implemented if they enhance circulation for residents, staff, and service and emergency vehicles. Loading and trash areas for the building will be located in the southeast corner of the building in order to share loading space with the adjacent Weinberg House.

1.3 Public Benefits

In 2018, the City of Boston identified the need to create up to 69,000 new residential units by the year 2030, updating its 2014 goal of creating 53,000 new residential units. This need for a dramatic increase in Boston’s housing inventory cuts across virtually all demographic categories and is reflected in 2Life’s experience seeing waiting lists of up to six years for its deeply affordable apartments. The 1,030 applications 2Life received for Weinberg House – 775 of which were for just 22 deeply-subsidized apartments – further underscored the unmet need in the area. The Project will contribute towards the City’s housing goals and enable low-income seniors to join 2Life’s vibrant Brighton community. In addition, several other community benefits are expected to arise as a result of the Project including:

- ◆ **Permanently Affordable Housing:** The new apartments will be permanently deed-restricted to households earning up to 60% of the AMI, with additional subsidies to serve many households up to 50% of AMI.
- ◆ **Public Open Space:** Approximately 15,000 sf of open space along Chestnut Hill Avenue on the Project site, like other outdoor spaces on 2Life’s Brighton properties, will be available to the broader community. The Project is proposed to include outdoor amenities such as an intergenerational play area, outdoor fitness equipment, and passive shaded areas for rest and relaxation.
- ◆ **Ground-Floor Village Center Space:** The Project is proposed to include several accessible and flexible ground floor common spaces such as a multipurpose room, resale shop, neighborhood-oriented retail, and salon to enliven the street and promote intergenerational activity. 2Life also welcomes the broader community to take part in many activities in its buildings such as lecture series, concerts, and fitness programs.
- ◆ **Sustainable Design/Green Building:** The Proponent is committed to building a LEED Silver certifiable project under the LEED v4/v4.1 rating system in accordance with Article 37 of the Boston Zoning Code and Department of Neighborhood Development requirements. In addition to this holistic design standard, the team is studying the feasibility of Passive House standards for air tightness and low Energy Use Intensity; renewable technologies such as photovoltaic, solar battery storage, and solar thermal hot water; and incorporating Zero Emissions strategies into the design in support of Mayor Walsh’s Carbon Neutral Boston 2050 commitment.
- ◆ **Access to Innovative Healthcare:** The proposed Project includes approximately 11,000 sf for a PACE center, a comprehensive health and wellness program that helps frail seniors meet their health care needs in the community instead of going to a nursing home, and is particularly beneficial for extremely low-income older adults who are both Medicare and Medicaid eligible. PACE’s on-site continuum of care would complement 2Life’s current programs and services and offer one more powerful tool in 2Life’s *aging in community* toolkit by delivering nursing home level care to people in their apartments.
- ◆ **Smart Growth/Transit-Oriented Development:** The Project is consistent with many smart-growth and transit-oriented development principles. The Project site is well served by existing public transportation, including the MBTA Green Line, the 86 bus, and the 501 (Downtown Express) bus that provide easy access between the Project site and downtown Boston, Harvard Square and Cleveland Circle. 2Life also offers a van for shared rides to shopping and cultural amenities each week, helping many residents remain independent without owning a car. The Project proposes relocating and upgrading the existing MBTA bus shelter on Chestnut Hill Avenue along with a new Bluebikes station.

- ◆ **Job Creation:** The construction of the Project is expected to generate and foster over 300 direct and indirect jobs. Approximately 200 of those jobs will be direct full time professional, skilled, and unskilled positions. Approximately 100 of these jobs will be indirectly created as a result of construction activity. Permanent jobs will include new positions in 2Life’s Brighton operations, such as in resident services, maintenance, and/or compliance. In addition, 2Life anticipates annual local vendor contracts for landscaping, electrical, plumbing, and heating, ventilation, and air conditioning (HVAC) services and more.

1.4 Legal Information

1.4.1 Legal Judgements Adverse to the Proposed Project

The Proponent is not aware of any legal judgments or pending actions against the proposed Project.

1.4.2 History of Tax Arrears on Property

The Proponent does not own any property in Boston on which the property taxes are in arrears. The Project site, 1-23 Ledgemere Road, is owned by the Boston Housing Authority and classified as exempt from property taxes.

1.4.3 Site Control/Public Easements

The Project site is owned by the BHA and will be leased to a new single-purpose entity affiliated with 2Life. The site includes easements in favor of the City of Boston (for Ledgemere Road) and Metropolitan District Commission (now the Massachusetts Water Resources Authority). Possible rights of others in Burkland Terrace are also noted, as well as applicability of a Public Improvement Commission order for the construction of drains and sewer in Chestnut Hill Avenue.

1.5 City of Boston Zoning

1.5.1 Existing Zoning

The Project site is located within a 1F-5000 Subdistrict within the Allston-Brighton Neighborhood District and is not located within any overlay districts. Multifamily dwelling, clinic and retail uses are all forbidden in this single-family district. Therefore, the Project will require multiple use variances.

The Project is expected to require the following dimensional relief:

- ◆ The minimum required lot area per dwelling unit is 5,000 sf. Because this is a single-family district, the applicable table of dimensional requirements in the Zoning Code does not address the requirement of additional lot area per additional dwelling unit. It is likely that the Project will be cited for non-compliance with this dimensional requirement, as the

Proponent is proposing approximately 144 dwelling units on an approximately 81,078 sf parcel (amounting to approximately 563 sf per dwelling unit). A variance will likely be required.

- ◆ The maximum allowable floor area ratio (FAR) is 0.5. The Project has a FAR of approximately 2.2, based on lot size of approximately 81,078 sf and proposed gross floor area of approximately 180,000 sf. A variance will be required.
- ◆ The maximum allowable building height is 2 ½ stories / 35 feet. The proposed building is 6 stories / approximately 70 feet. A variance will be required.
- ◆ The minimum required front yard setback is 20 feet. The Project has an approximately 14'-3" minimum setback provided at Chestnut Hill Avenue. A variance will be required.
- ◆ The minimum required side yard setback is 12 feet. The proposed bridge from the new building to Weinberg house may require a variance.
- ◆ The minimum required rear yard setback is 40 feet. The Project has a rear yard depth of approximately 2 feet. A variance will be required.

The Project complies with all other dimensional requirements.

Screening and buffering requirements will be determined through the Article 80 Large Project Review process. The Project will incorporate screening and buffering components that are intended generally to meet the requirements of underlying zoning, found in Zoning Code Section 51-53, which would otherwise be applicable outside the Article 80 context. All off-street parking and accessory storage will be screened from view from the public way with vegetation.

Off-Street parking and loading requirements will be determined through the Article 80 Large Project Review process. A total of approximately 70 off-street parking spaces (29 surface spaces and 41 enclosed spaces) and zero off-street loading bays are proposed for the Project site.

If the Project were not governed by Article 80 and the requirements of Article 51 were to apply, the off-street parking and loading requirements would be as follows:

Use	Parking Requirement	Requirement applied to Project	Proposed Project
Clinic	1 space per 1,000 SF	$(11,000 / 1,000) = 11$ spaces	20 spaces
Elderly housing (affordable)	0.5 spaces per unit	$(0.5 \times 131) = 66$ spaces	48 spaces total
Non-Elderly housing (affordable)	0.7 spaces per unit	$(0.7 \times 13) = 9$ spaces = 75 spaces total	(36 for residents at 0.25 spaces/unit, 12 for staff and visitors)
Retail	2 spaces / 1,000 SF	$(1,200 / 1,000) = 2$ spaces	2 spaces
Total		88	70

In addition, the Project may be non-compliant with underlying zoning as to parking stall size (for increase in number of compact spaces) and maneuverability.

The Project would also require one or more loading bays if Article 51 were applicable to loading bay requirement. The Project does not provide any loading bays.

In conclusion, the following variances are anticipated: multifamily residential use, clinic use, retail use, lot area per dwelling unit, building height, FAR, front yard, side yard, and rear yard.

1.6 Anticipated Permits and Approvals

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

Table 1-2 Anticipated Permits and Approvals

<i>Agency</i>	<i>Permit / Approval</i>
Local	
Boston Planning & Development Agency	Review under Article 80, including Large Project Review, as required pursuant to Article 80B of the Code; Cooperation Agreement; Other permits as may be identified
Boston Fire Department	Approval of Fire Safety Equipment; Permit for Maintenance of Fire Protection Equipment; Permit for Safe Access to Site by Fire Department
Interagency Green Building Committee	Article 37 Compliance
Boston Transportation Department	Transportation Access Plan Agreement; Construction Management Agreement
Public Improvements Commission	Street Sidewalk Specific Repair Plan; Maintenance Agreement Approval; Discontinuance
Boston Department of Public Works	Curb Cut and Street/Sidewalk Opening Permits
Boston Water and Sewer Commission	Site Plan Review; Water and Sewer Connection Permits; Cross Connection Backflow Prevention Approval (as required); Temporary Construction Dewatering Permit (as required)
Boston Inspectional Services Department	Building Permit; Demolition Permit; Other construction-related permits; Certificate of Occupancy

Table 1-2 Anticipated Permits and Approvals (Continued)

<i>Agency</i>	<i>Permit / Approval</i>
Local (continued)	
Boston Public Safety Commission Committee on Licenses	Inflammables Storage Permit/Garage License (as required)
Boston Landmarks Commission	Article 85 review
Zoning Board of Appeals	Variances and conditional use permits as needed
State	
Massachusetts Department of Environmental Protection	Notification of Demolition and Construction
Massachusetts Historical Commission	Determination of No Adverse Impact
Massachusetts Water Resources Authority	Construction Dewatering Permit (if required); Temporary Construction Dewatering Permit (if required)
Federal	
Environmental Protection Agency	National Pollutant Discharge Elimination System Permit

1.7 Public Participation

In May 2019, 2Life responded to the BHA’s Request for Proposals for a development partner for the Project site. Prior to submitting its proposal, 2Life reached out to stakeholders including local elected officials, the Brighton Allston Improvement Association, and 2Life’s own resident-led Community Advisory Council that includes representatives from each of its four existing properties in Brighton.

Since 2Life was designated by BHA, the residents of the J.J. Carroll Apartments have been an integral part of the Project planning and design. To date, 2Life has hosted four interactive meetings with J.J. Carroll residents and will continue those meetings throughout the planning and development process. 2Life approaches resident participation with several goals in mind, including ensuring that J.J. Carroll residents know they are a welcome addition to 2Life’s Brighton complex, building trust that their voices will be heard in the design process, and clearly communicating that their rights as public housing tenants will be respected and protected throughout the development process and ongoing operations.

After initial meetings with the J.J. Carroll residents, 2Life gave an informational presentation at the Brighton Allston Improvement Association on August 1, 2019 with the goal of introducing the development team and 2Life’s resident-centric approach, brainstorming priorities for the Project, and discussing the anticipated Project schedule.

Soon after, 2Life hosted an open neighborhood meeting at 2Life’s property on August 14, 2019 with similar goals to discuss the opportunity and provide transparency into the development process. 2Life reached out to its neighbors in a 300-foot radius of the site, with letters to property owners as well as current residents of rental properties; flyers to direct abutters on Wallingford Road and Chestnut Hill Avenue retail tenants; and emails to the Veronica Smith Senior Center and Brighton Main Streets. 2Life hosted a second neighborhood meeting on October 3, 2019 to discuss the proposed design.

2Life looks forward to continuing to work with the BPDA, city agencies, local community groups and residents during the review of the Project.

1.8 Schedule

Construction of the Project is estimated to commence in 2020 and conclude in 2022.

1.9 Project Identification and Team

Proponent: 2Life Development Inc. (formerly known as “Jewish Community Housing for the Elderly III, Inc.”)
30 Wallingford Road
Brighton, MA 02135
(617) 912-8400
Lizbeth Heyer
Zoe Weinrobe
Rachel Belanger

Architect: MASS Design Group
334 Boylston Street, Suite 400
Boston, MA 02116
(857) 233-5788
Patricia Gruits
Jonathan Evans

Permitting Consultant: Epsilon Associates, Inc.
3 Mill & Main Place, Suite 250
Maynard, MA 01754
(978) 897-7100
Geoff Starsiak

Legal Counsel:

Klein Hornig LLP
101 Arch Street, Suite 1101
Boston MA 02110
(617) 224-0605
Teresa Santalucia
Joseph Lieber

**Transportation Consultant and
Civil Engineer:**

Stantec
266 Causeway St, 6th Floor
Boston, MA 02114
(617) 523-8103
Chris Fee
Richard Bryant

Chapter 2.0

Transportation

2.0 TRANSPORTATION

2.1 Overview

This transportation study, prepared by Stantec to evaluate the transportation impacts of the Project, has been prepared based on information provided by the Boston Transportation Department (BTD) and BPDA. This study includes an evaluation of existing conditions and future conditions with the Project

2.1.1 Project Description

The Project site, located at 130 Chestnut Hill Avenue, is bordered by 2Life’s properties to the east and south, Chestnut Hill Avenue to the west, and residential properties to the north. Currently on the site are two-and-a-half-story residential buildings with 64 public housing units owned by BHA as well as surface parking, landscaped area, a Community Room, and a public accessible dead-end road, Ledgemere Road.

As described in detail in Chapter 1, the Project will consist of the demolition of the existing buildings and the construction of a building containing approximately 144 residential units, a PACE center, ground floor common space including a multi-purpose room, staff offices, lobby, and potentially a small resale shop and market, and 70 parking spaces.

Vehicular access to the new development is proposed by way of a new two-way entrance drive to be located approximately 40 feet north of the existing Ledgemere Road. The proposed driveway location is also located approximately 400 feet north of Atwood Road. The new driveway will extend through the Project site and through the adjacent 2Life senior housing community (“Leventhal House,” located at 40 Wallingford Road) to meet Wallingford Road. The new driveway configuration anticipates the discontinuance of Ledgemere Road. The Project site plan is shown in Figure 2-1.

2.1.2 Traffic Impact Study

This transportation study considers existing and “Build” conditions along Chestnut Hill Avenue. “Build” conditions assume demolition of the existing buildings on the project site, discontinuance of Ledgemere Road and redevelopment of the site as described above.

2.2 Existing Condition

The Existing Condition analysis includes commuter peak period turning movement counts at the Atwood Road/Chestnut Hill Avenue intersection, and traffic count data for the Wallingford Road/Chestnut Hill Avenue intersection obtained from BTD files. Turning movement counts provide information on vehicular and bike traffic volumes on Chestnut Hill Avenue; trip generation for development on Atwood Road; and pedestrian crossings on Chestnut Hill Avenue.

2.2.1 Existing Roadway Conditions

The study area includes the following roadways:

Chestnut Hill Avenue, a two-lane, two-way minor arterial owned and maintained by the City of Boston. In the vicinity of the Project site, it provides on-street bike lanes and on-street parking. On-street parking is not provided on Chestnut Hill Avenue just south of Atwood Road as there is a fire station located at this location on the east side of Chestnut Hill Avenue. A signalized crosswalk is provided on Chestnut Hill Avenue on the north side of Atwood Road. The signal is interconnected with a signal that stops traffic on Chestnut Hill Avenue to allow emergency vehicles to enter and exit the fire station.

Atwood Road, a two-way, two-lane dead-end private way. It provides access to Weinberg House, 2Life's most recently completed building at 132 Chestnut Hill Avenue, which has 61 apartments for seniors and adults aging with developmental disabilities, 3,000 sf of ground floor commercial space, and 13 parking spaces that serve these land uses.

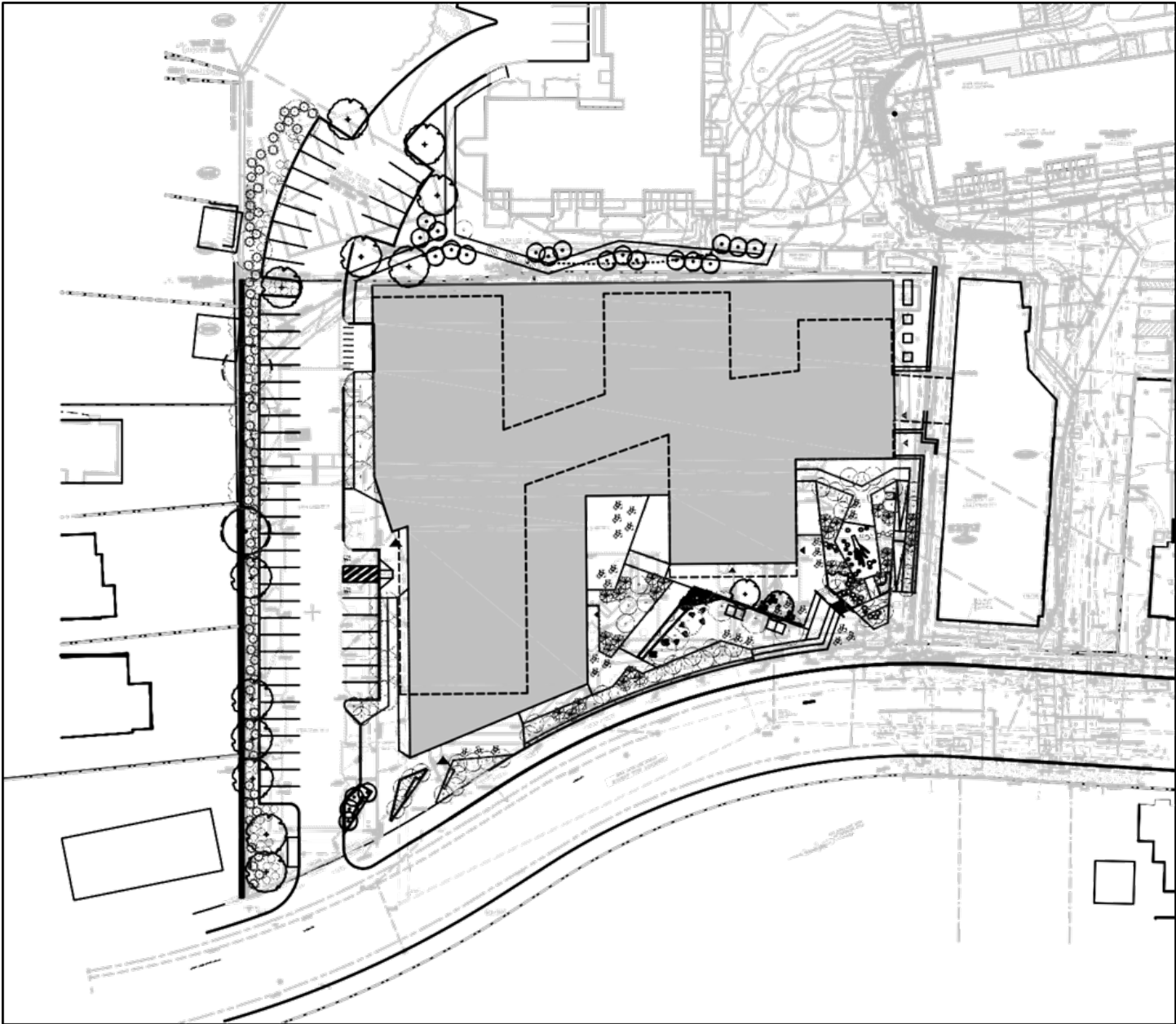
Wallingford Road, approximately 230 feet north of Ledgemere Road, also enters Chestnut Hill Avenue from the east. Wallingford Road is a two-lane roadway with parking allowed on both sides. It is under STOP sign control at its intersection with Chestnut Hill Avenue. At the intersection, a crosswalk is provided across Wallingford Road and across Chestnut Hill Avenue north of Wallingford Road.

2.2.2 Existing Traffic Volumes

Vehicle turning movement counts conducted in August 2019 indicated that approximately 790 vehicles use Chestnut Hill Avenue north of Atwood Road during the a.m. peak traffic hour and approximately 1,010 vehicles travel past this location during the p.m. peak hour. Peak hours occur from 7:45 to 8:45 a.m. and from 4:45 to 5:45 p.m. Northbound volumes are heavier than southbound volumes during the a.m. peak hour. The pattern is reversed during the p.m. peak hour. Included in these volumes are MBTA buses operating on approximately 18-minute headways between Sullivan and Reservoir (Route #86). Trucks and buses comprise approximately 5.5 and 1.9 percent of the traffic stream during the a.m. and p.m. peak hours, respectively.

Traffic count data for Atwood Road showed that during the a.m. peak traffic hour, approximately four vehicles enter or exit Atwood Road and approximately nine vehicles use Atwood Road during the p.m. peak hour. Comparing these volumes to the number of senior residential units accessed by Atwood Road indicates that these units generate approximately 0.07 and 0.15 a.m. and p.m. peak hour vehicle trips per dwelling unit, respectively.

The Atwood Road traffic count data also reports on pedestrian and bike activity. The counts show approximately 13 and 11 a.m. and p.m. peak hour pedestrians, respectively, crossing Chestnut Hill Avenue just north of Atwood Road.



Comparable traffic volumes were reported by BTD on Chestnut Hill Avenue at its intersection with Wallingford Road. Wallingford Road carries approximately 215 a.m. peak hour vehicles and approximately 365 p.m. peak hour vehicles at this location. Traffic using Wallingford Road at this location is heavily oriented to the north. Peak hour turning movement counts for this intersection and the Atwood Road intersection are shown in Figures 2-2 and 2-3. These figures include estimated volumes for Ledgemere Road based on existing traffic patterns and site trip generation estimates.

2.2.3 Existing Pedestrian Volumes and Accommodations

Sidewalks are provided along both sides of all nearby roadways. The sidewalks are approximately eight to ten feet wide and include fixed objects, such as streetlights and fire hydrants along Chestnut Hill Avenue. Sidewalks along Wallingford Road are approximately five feet wide and separated from the roadway by a green belt.

2.2.4 Existing Bicycle Volumes and Accommodations

Chestnut Hill Avenue accommodates dedicated bike lanes on either side of the road. Approximately 24 bicyclists pass by the Project site during the p.m. peak hour. During the a.m. peak hour approximately 17 bicyclists pass by Atwood Road on Chestnut Hill Avenue.

2.2.4.1 Bicycle Sharing Services

The site is also located near one Bluebikes bicycle sharing station by Chiswick Road Station. Bluebikes is the bicycle sharing system in the Boston area, which was launched in 2011 and consists of over 260 stations and 2,500 bicycles in four municipalities, including Boston, Cambridge, Brookline, and Somerville. The Bluebikes station is about one quarter-mile away.

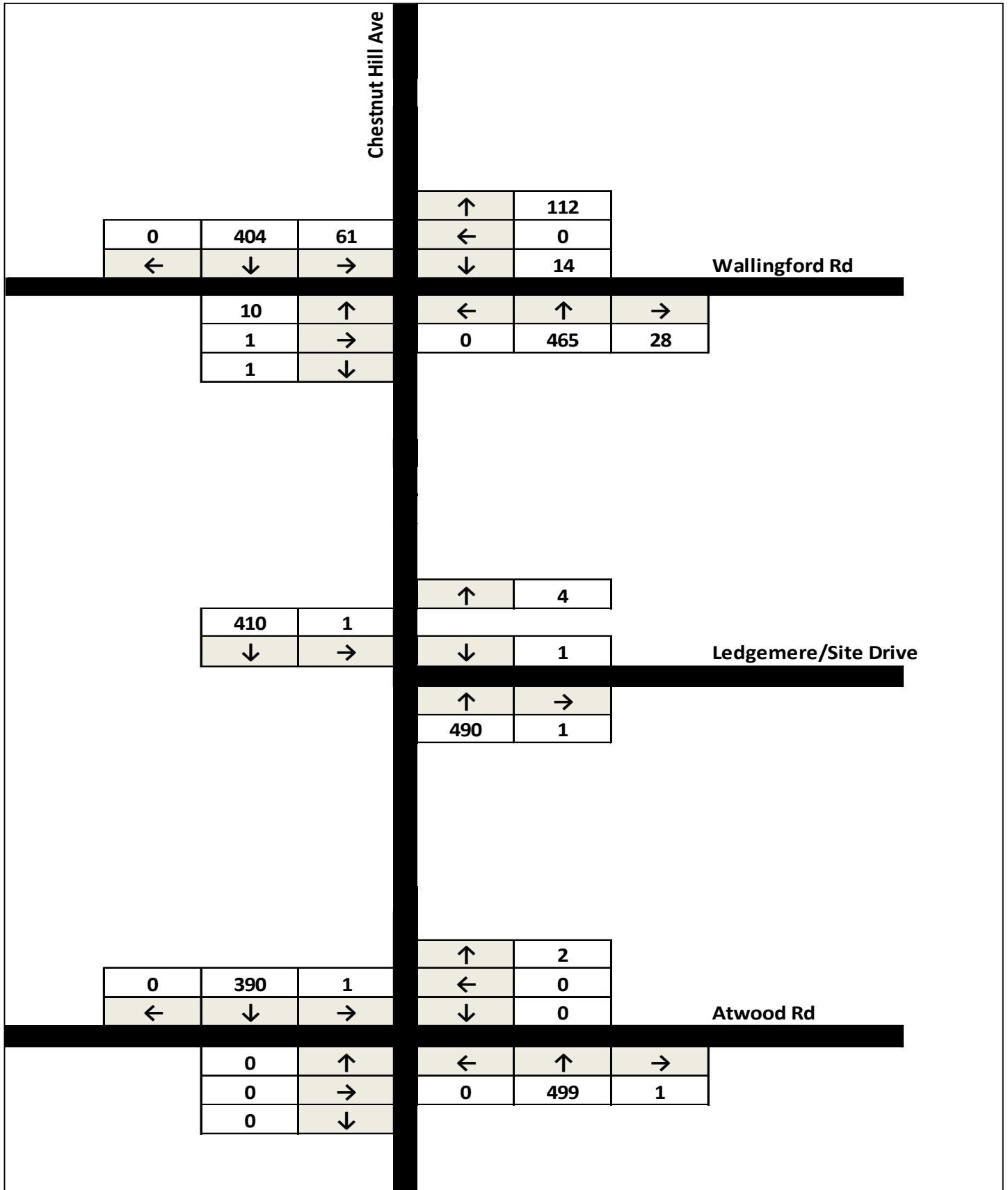
2.2.5 Existing Public Transportation Services

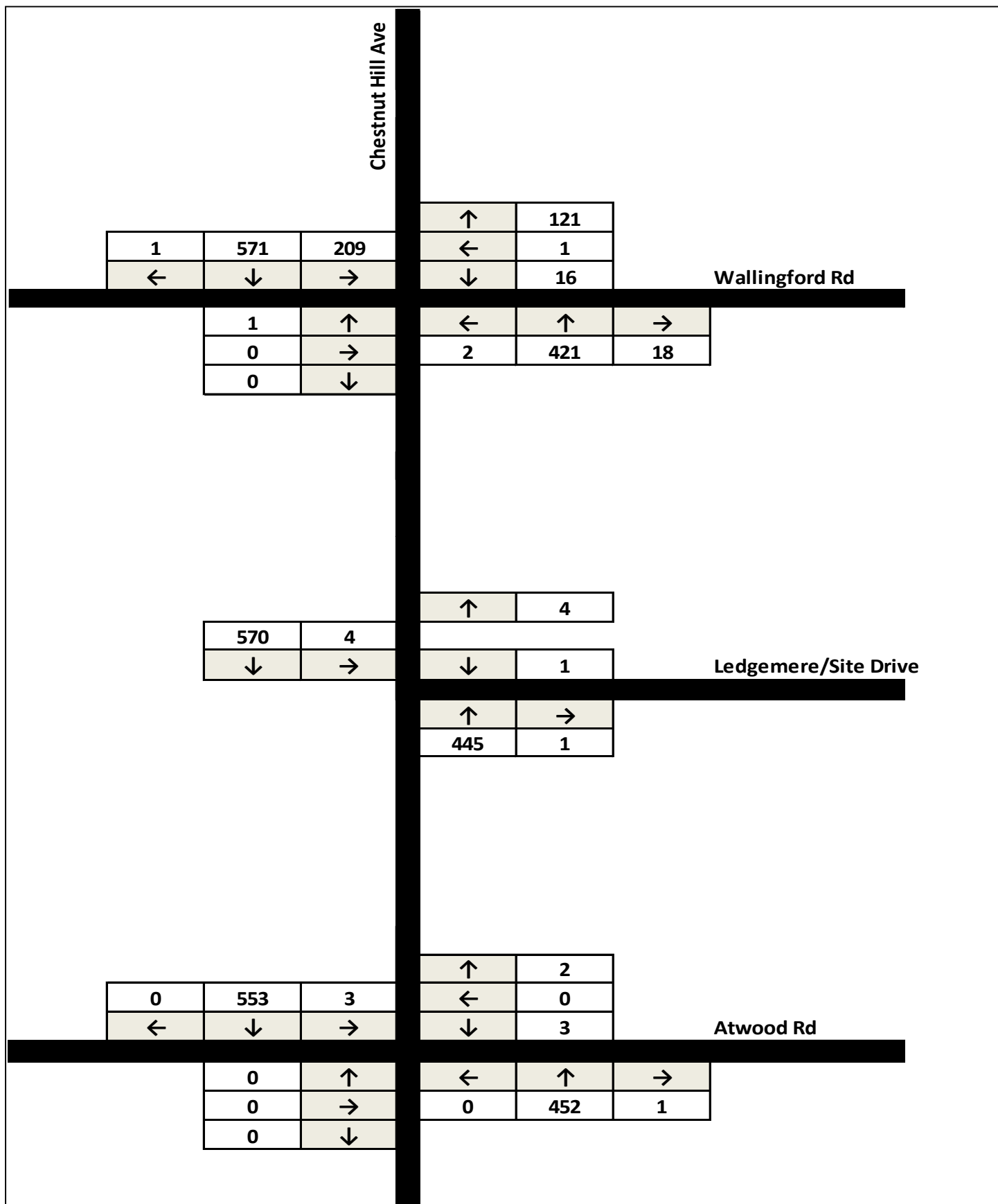
The Project site is proximate to MBTA bus stops for Route 86 along Chestnut Hill Avenue and the 501 (Downtown Express) bus, as well as approximately a quarter-mile from the Chiswick Road “B” Green Line station.

2.3 Future Conditions

Traffic forecasts were developed to estimate future peak hour traffic conditions with the proposed Project built. Intersection operations analyses were then conducted to assess the impact of the Project on area traffic operations.

The principal land use proposed for the Project site, elderly housing, is a relatively low traffic generator. Residents often do not own cars and those that do rarely use them. Shared transportation services are offered to residents for access to shopping, recreation and medical office visits. Vehicle trip generation during peak hours is typically associated with employee arrivals and departures.





2.3.1 Trip Generation

Vehicle trip estimates for the Project were determined by applying Institute of Transportation Engineers (ITE) trip generation rates adjusted to account for non-automobile travel. *Trip Generation, Tenth Edition* published by the ITE indicates that elderly housing developments (ITE Land Use Code 252) generate between 0.20 and 0.26 vehicle trips per dwelling unit during commuter peak hours. Applying these rates to the proposed approximately 142 senior living units indicates that this component of the Project could generate 28 to 37 peak hour vehicle trips as noted in Table 2-1.

Table 2-1 Trip Generation Estimates

Land Use	Approximate Size	ITE Land Use Code	Vehicle Trips		
			AM Peak Hour	PM Peak Hour	Daily
Proposed Senior Living	144 Dwelling units	252-Sr. Housing, Attached	28	37	525
Proposed PACE Center	11,000 sf	630-Medical Clinic	43	38	441
Subtotal			71	75	966
Existing JJ Carroll Apartments	64 Dwelling units	252-Sr. Housing, Attached	13	17	237
Net Total			58	58	729
Adjusted ¹			35	35	438
¹ Assumes 60 percent auto mode share					

Trip rates from *Trip Generation, Tenth Edition*, published by the Institute of Transportation Engineers, Washington, D.C., 2019.

The proposed PACE center will generate additional trips. Some of these trips will be internal to the Project site to the extent that future residents in the proposed senior living units visit this facility. Applying ITE trip rates for Land Use Code 630 – Medical Clinic indicates that the proposed facility would generate an estimated 43 a.m. peak hour trips and 38 p.m. peak hour trips. Medical Clinic is the closest comparable use to the PACE center for which the ITE provides trip rates. The PACE center trip rates will likely be lower than those of a medical clinic as many clients will share a ride when travelling to and from the site in vans provided by the center. Additionally, a significant portion of the clients are expected to be residents of the existing senior housing units adjacent to the Project site or of the proposed senior housing units. Trips between these housing units and the PACE center will not impact the off-site roadway system. It is anticipated that if the

PACE center does not move forward, the building would include community-oriented retail and/or program space in a smaller footprint, and that those uses would generate fewer trips during peak hours than a PACE center.

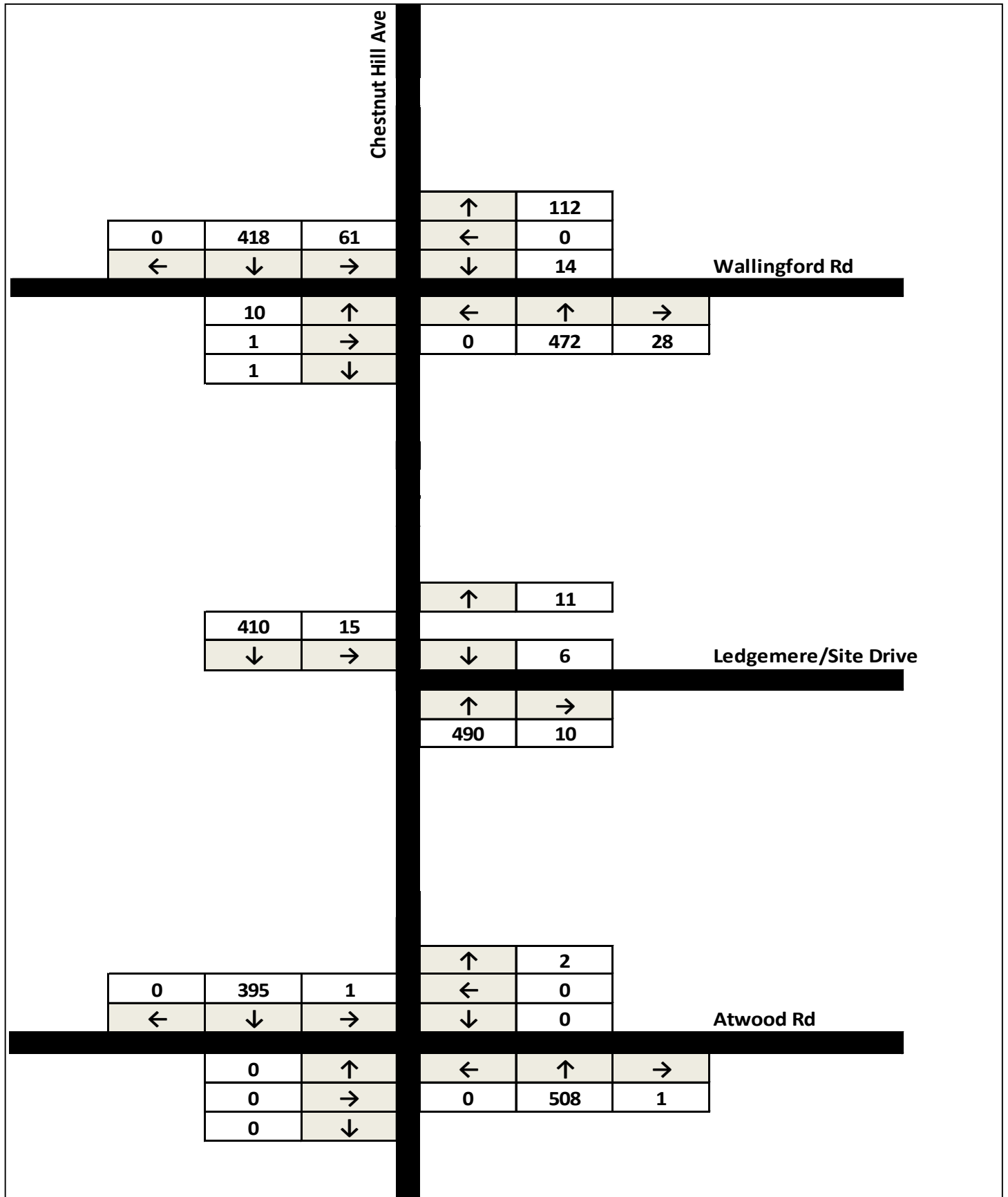
The Project will replace the J.J. Carroll Apartments on Ledgemere Road. This development includes 64 dwelling units. As also shown in Table 2-1, based on ITE trip rates for Senior Housing, the development that would be removed from the site generates an estimated 13 a.m. peak hour trips and 17 p.m. peak hour trips.

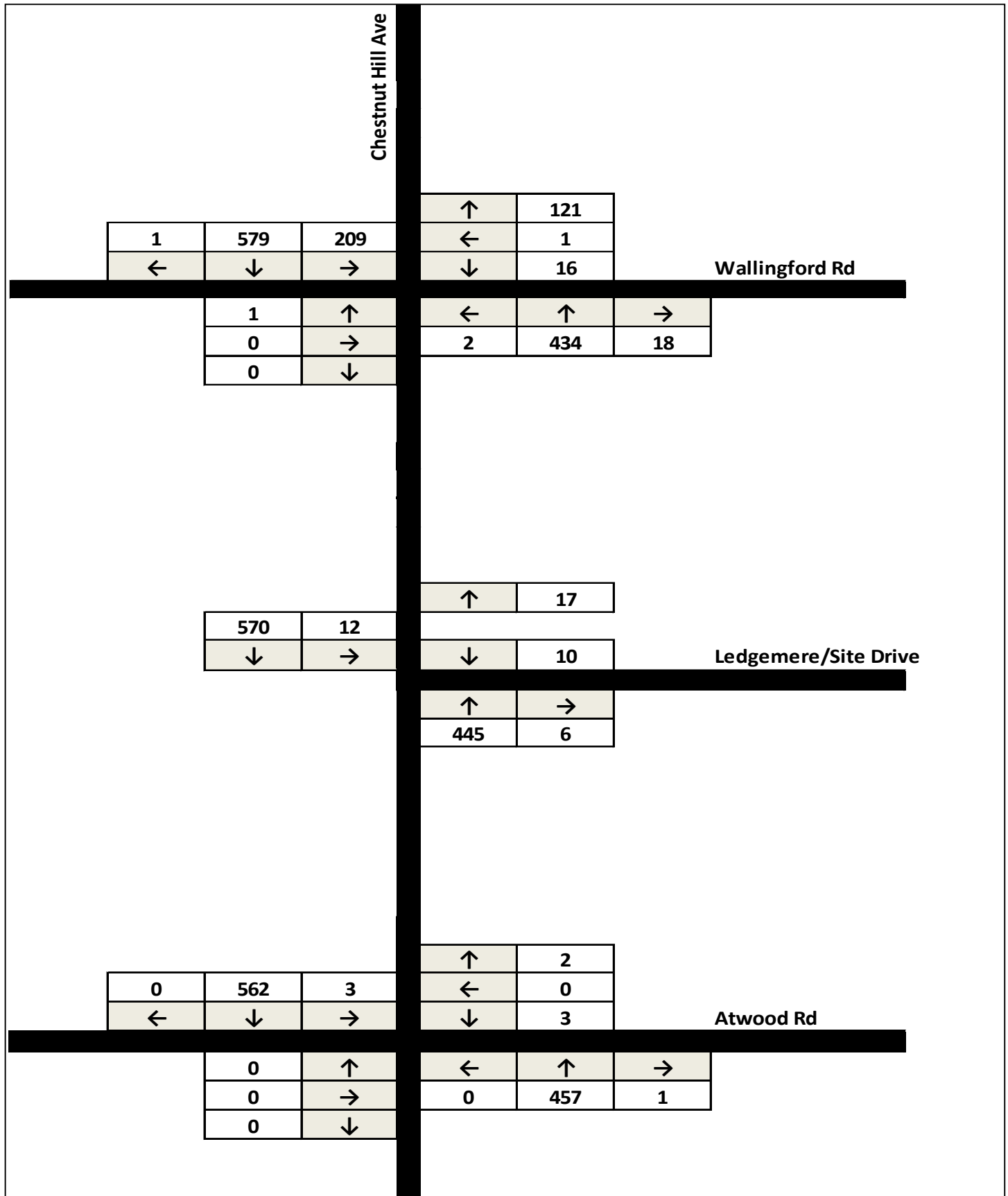
Comparing estimated existing site traffic generation to estimated future site traffic generation, the Project will generate an estimated 58 net new vehicle trips during each peak hour. However, the trip rates applied for this analysis are derived from data collected at suburban sites where virtually all site trips are made by automobile. At the Project site, the propensity for non-automobile travel is high. BTD's study, Access Boston, cites a 40 percent non-automobile travel mode share for this part of the City. Accordingly, the trip generation estimates were adjusted downward by 40 percent to reflect local travel characteristics. With this adjustment, the Project is expected to generate only 35 new peak hour vehicle trips.

The net new traffic generated by the Project was assigned to the local roadway network and added to the existing volumes to create "Build" traffic conditions. Site traffic was assigned to Chestnut Hill Avenue assuming that 60 percent of the traffic will be oriented to Chestnut Hill Avenue north of Wallingford Road, and that 40 percent will be oriented to Chestnut Hill Avenue south of Atwood Road. The resulting Build condition traffic volumes are shown in Figures 2-4 and 2-5 for the a.m. and p.m. peak hours, respectively. Comparing Existing to Build volumes indicates that the Project is anticipated to increase peak hour volumes at the Wallingford Road intersection by approximately 1.5 to 1.9 percent.

2.3.2 *Intersection Traffic Operations Analysis*

Intersection peak hour operating levels of service were calculated for the proposed site driveway and Wallingford Road intersections with Chestnut Hill Avenue following procedures described in the latest edition of the Highway Capacity Manual. Operating level of service (LOS) is a term used to describe the quality of traffic flow on a roadway. It is an aggregate measure of travel delay, travel speed, congestion, driver discomfort, convenience, and safety based on a comparison of roadway capacity to travel demand. Operating levels of service are reported on a scale of A to F with LOS A representing the best operating conditions (little or no delay to motorists) and LOS F representing the worst operating conditions (long delays and with traffic demands sometimes exceeding roadway capacity). For unsignalized intersections, results are typically reported for the worst performing, stop-controlled approach.





The results of the intersection operations analysis are reported in Table 2-2. The calculated operating levels of service under existing and Build conditions are at LOS C for the Wallingford Road approach to Chestnut Hill Avenue and at LOS B for the proposed site drive approach to Chestnut Hill Avenue. The Project will increase delays at the Wallingford Road intersection by less than one second per vehicle and add only 0.01 to the calculated volume-to-capacity ratio for the Wallingford Road approach.

Table 2-2 Peak Hour Intersection Operations

Intersection	Peak Hour	Existing			Build		
		LOS ¹	Delay ²	V/C ³	LOS	Delay	V/C
Site Drive/Chestnut Hill Avenue	AM	B	12.5	0.01	B	13.9	0.04
	PM	B	12.7	0.01	B	14.9	0.07
Wallingford Road/Chestnut Hill Avenue	AM	C	15.1	0.26	C	15.3	0.27
	PM	C	20.5	0.37	C	21.1	0.38

¹ LOS= Level of Service

² Delay = Average delay expressed in seconds per vehicle

³ V/C = Volume-to-capacity ratio for critical movements

Given the travel characteristics of the anticipated senior residents, the Project is not expected to have a significant impact on area traffic operations. The Project does involve construction of a new driveway intersecting Chestnut Hill Avenue and the discontinuance of the existing Ledgemere Road. The Project team will work with the City to ensure the proper and safe design of this new intersection.

2.4 Transportation Demand Management

As noted above, the Project is expected to have only nominal impacts on traffic operations along Chestnut Hill Avenue and nearby side streets. This is due in part to the fact that vehicle ownership and use is significantly lower among residents of senior communities compared to other residential buildings. Independent of this fact, 2Life expects to take the following actions to minimize Project-related traffic and parking demands.

- ◆ Promote, and consider subsidizing, the use of public transportation for site access by employees.
- ◆ Educate residents regarding the availability of public and shared transportation services provided at the site by 2Life and others.

- ◆ Continue to provide transportation services for residents to access shopping, recreation, and cultural destinations.
- ◆ Invite new residents to take advantage of services and programs available in the adjacent 2Life properties.
- ◆ Provide space for a new Bluebikes station alongside a relocated and upgraded MBTA bus shelter at the site to serve the Project and broader community.

The final travel demand management program will be documented in a Transportation Access Plan Agreement to be prepared in cooperation with City staff.

Chapter 3.0

Environmental Review Component

3.0 ENVIRONMENTAL REVIEW COMPONENT

3.1 Wind

Major buildings, especially those that protrude above their surroundings, often cause increased local wind speeds at the pedestrian level. Typically, wind speeds increase with elevation above the ground surface, and taller buildings intercept these faster winds and deflect them down to the pedestrian level. The funneling of wind through gaps between buildings and the acceleration of wind around corners of buildings may also cause increases in wind speed. Conversely, if a building is surrounded by others of similar height, it may be protected from the prevailing upper-level winds, resulting in no significant changes to the local pedestrian-level wind environment.

The Project site is located on a hilly section in the Brighton neighborhood and is contiguous to one major pedestrian thoroughfare, Chestnut Hill Avenue. The surrounding buildings vary in height and include five- and ten-story buildings to the east, the six-story Weinberg House to the south, a three-story residential building built on elevated land to the west, and three-story residential buildings to the north. Due to the hilly landscape and similarity in height of abutting buildings, the Project is not anticipated to have a significant impact on pedestrian level winds.

3.2 Shadow

A shadow impact analysis was conducted at three different times of the day (9:00 a.m., 12:00 p.m. and 3:00 p.m.) during the spring and autumnal equinoxes and the summer and winter solstices, as well as 6:00 p.m. during the summer solstice and autumnal equinox to assess potential shadow impacts from the Project.

The shadow analysis illustrates existing and anticipated new net shadow from the Project (see Figures 3-1 to 3-3). The analysis focuses on nearby open spaces, sidewalks, and bus stops in the vicinity of the Project site. The analysis shows that new shadow will be limited to the immediately surrounding area and will not be cast onto existing public open spaces.

3.2.1 *Spring Equinox/Autumnal Equinox (March 21/September 21)*

At 9:00 a.m. on the spring equinox and autumnal equinox, the proposed building will cast shadow to the west, with new shadow cast onto the site and sections of Chestnut Hill Avenue and its sidewalk abutting the property. At noon, shadow will be cast to the north, with new shadow limited to the proposed parking lot on the north side of the Project site. At 3:00 p.m., new shadow will be cast to the northeast onto the proposed parking lot and the back of the Project site. At 6:00 p.m., new shadow will be cast northeast of the site onto properties abutting 2Life Communities.

3.2.2 Summer Solstice (June 21)

At 9:00 a.m. on the summer solstice, the proposed building will cast new shadow to the west, with new shadow mostly limited to the site and small portions of Chestnut Hill Avenue and its sidewalk. At noon, shadow will be cast to the north, with new shadow limited to the proposed parking lot on the north side of the Project site. At 3:00 p.m., shadow will be cast to the northeast onto the back of the Project site and 2Life Communities' property. At 6:00 p.m., shadow will be cast to the east, onto the Project site, the existing 2Life Communities' building and property, and small portions of residential properties to the east.

3.2.3 Winter Solstice (December 21)

The low angle sun during the winter solstice creates the longest shadows of the year. At 9:00 a.m., new shadow will be cast to the northwest onto portions Chestnut Hill Avenue and its sidewalks and parts of the property across the street from the Project site. At noon, shadow will be cast to the north with new shadow cast onto the proposed parking lot and extend onto parts of abutting properties. At 3:00 p.m., shadow will be cast northeast with new shadow cast over some of the abutting properties to the north and Wallingford Road, north of the site.

3.2.4 Conclusion

The proposed Project will be similar in height to adjacent buildings and set back from the northern and western property lines, and therefore will have limited new shadow on the surrounding area. New shadow will primarily be limited to the Project site, its proposed parking lot to the north, and small portions of surrounding properties and Chestnut Hill Avenue and its sidewalks. No new shadow will be cast onto public open spaces, and new shadow on the existing bus stop will occur, though the stop is sheltered.

Proposed Shadow Condition



March/September 21 - 9am



March/September - 12pm



March/September 21 - 3pm



March/September - 6pm



- NET NEW SHADOW
- EXISTING SHADOW
- 2LIFE CAMPUS BUILDINGS

J.J. Carroll Redevelopment Boston, Massachusetts

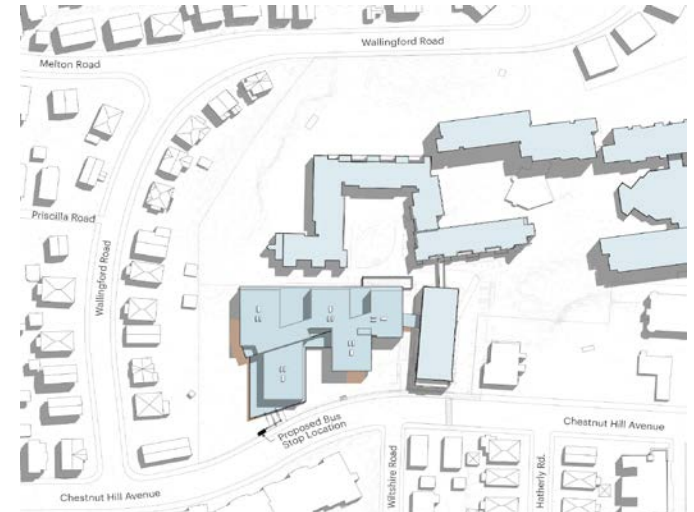


Figure 3-1
Shadow Study – March/September 21

Proposed Shadow Condition



June 21 - 9am



June 21 - 12pm



June 21 - 3pm



June 21 - 6pm



- NET NEW SHADOW
- EXISTING SHADOW
- 2LIFE CAMPUS BUILDINGS

J.J. Carroll Redevelopment Boston, Massachusetts



Figure 3-2
Shadow Study – June 21

Proposed Shadow Condition



December 21 - 9am






December 21 - 12pm



December 21 - 3pm



-  NET NEW SHADOW
-  EXISTING SHADOW
-  2LIFE CAMPUS BUILDINGS

3.3 Daylight Analysis

3.3.1 Introduction

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

3.3.2 Methodology

The daylight analysis was performed using the Boston Redevelopment Authority Daylight Analysis (BRADA) computer program¹. This program measures the percentage of sky dome that is obstructed by a project and is a useful tool in evaluating the net change in obstruction from existing to build conditions at a specific site.

Using BRADA, a silhouette view of the building is taken at ground level from the middle of the adjacent city streets or pedestrian ways centered on the proposed building. The façade of the building facing the viewpoint, including heights, setbacks, corners and other features, is plotted onto a base map using lateral and elevation angles. The two-dimensional base map generated by BRADA represents a figure of the building in the "sky dome" from the viewpoint chosen. The BRADA program calculates the percentage of daylight that will be obstructed on a scale of 0 to 100 percent based on the width of the view, the distance between the viewpoint and the building, and the massing and setbacks incorporated into the design of the building; the lower the number, the lower the percentage of obstruction of daylight from any given viewpoint.

The Project site borders only one public roadway, Chestnut Hill Avenue. Therefore, viewpoints and area context points from Chestnut Hill Avenue were selected to evaluate the daylight obstruction for the existing and proposed conditions, as well as to provide a basis of comparison to existing conditions in the surrounding area. The viewpoint and area context locations are shown on Figure 3-4.

Viewpoint: View from the center of Chestnut Hill Avenue facing east toward the Project site.

Area Context Viewpoint (AC1): View from the center of Chestnut Hill Avenue, facing 96 Chestnut Hill Avenue, north of the Project site.

Area Context Viewpoint (AC2): View from the center of Chestnut Hill Avenue, facing 99 Chestnut Hill Avenue, west of the Project site.

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

Area Context Viewpoint (AC3): View from the center of Chestnut Hill Avenue, facing 163 Chestnut Hill Avenue, southwest of the Project site.

3.3.3 Results

The results for each viewpoint are described in Table 3-1. Figures 3-5 and 3-6 illustrate the BRADA results for each analysis.

Table 3-1 Daylight Analysis Results

Viewpoint Locations		Existing Conditions	Proposed Conditions
Viewpoint	View from the center of Chestnut Hill Avenue facing east toward the Project site	6.3%	17.5%
Area Context Points			
AC1	View from the center of Chestnut Hill Avenue, facing 96 Chestnut Hill Avenue, north of the Project site.	24.1%	N/A
AC2	View from the center of Chestnut Hill Avenue, facing 99 Chestnut Hill Avenue, west of the Project site.	39.3%	N/A
AC3	View from the center of Chestnut Hill Avenue, facing 163 Chestnut Hill Avenue, south-west of the Project site.	44.8%	N/A




Chestnut Hill Avenue – Viewpoint 1



Chestnut Hill Avenue runs along the western edge of the Project site. Viewpoint 1 was taken from the center of Chestnut Hill Avenue facing east toward the Project site. The proposed building is set back from the street, minimizing the Project’s impact on the sky dome. The development of the Project will increase the daylight obstruction value to 17.5%. While this is an increase over existing conditions, the daylight obstruction value is similar to other buildings in the area, including the Area Context buildings.

Area Context Viewpoints

The surrounding area consists primarily of commercial and residential buildings of varying heights (three to six floors) and surface parking lots. To provide a larger context for comparison of daylight conditions, obstruction values were calculated for three Area Context viewpoints described above and shown on Figure 3-6. The daylight obstruction values ranged from 24.1% for AC1 to 44.8% for AC3. Daylight obstruction values for the Project are similar or lower than the daylight obstruction values in the surrounding area.

LEGEND

-  Project Site
-  Viewpoint Location and Direction
-  Area Context Location and Direction

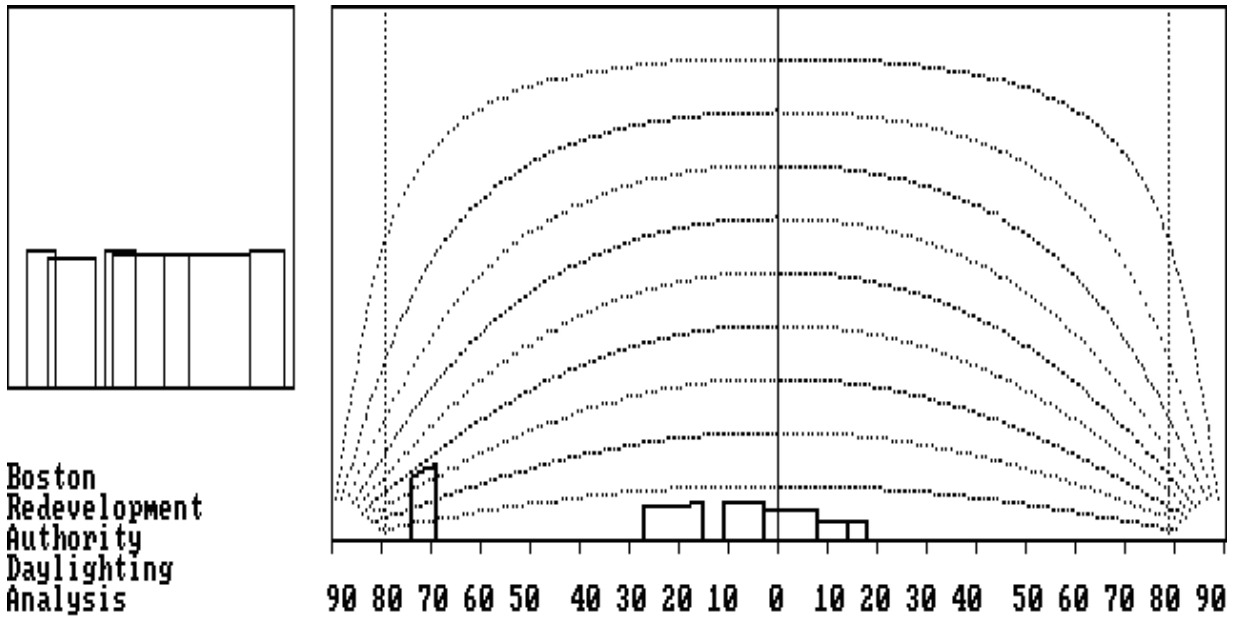
Scale 1:1,800 0 75 150
 1 inch = 150 feet  Feet 

Basemap: Nearmap Aerial Imagery, April 2019



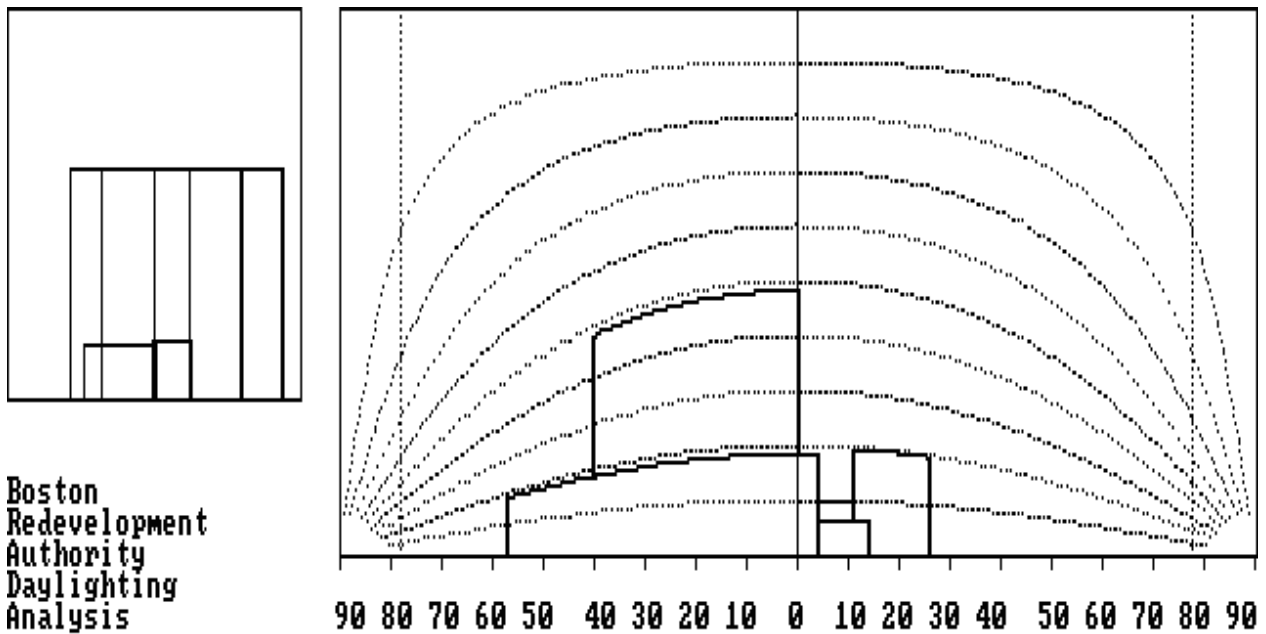
J.J. Carroll Redevelopment Boston, Massachusetts

Viewpoint (Existing): View from Chestnut Hill Avenue facing east towards 130 Chestnut Hill Avenue.



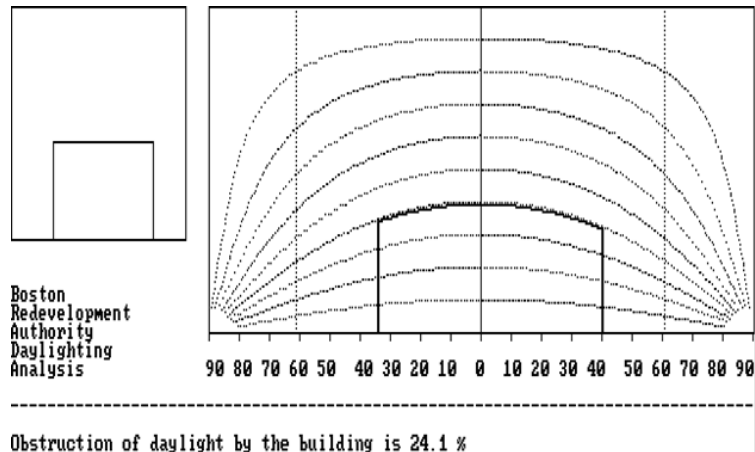
Obstruction of daylight by the building is 6.3 %

Viewpoint (Proposed): View from Chestnut Hill Avenue facing east towards 130 Chestnut Hill Avenue.

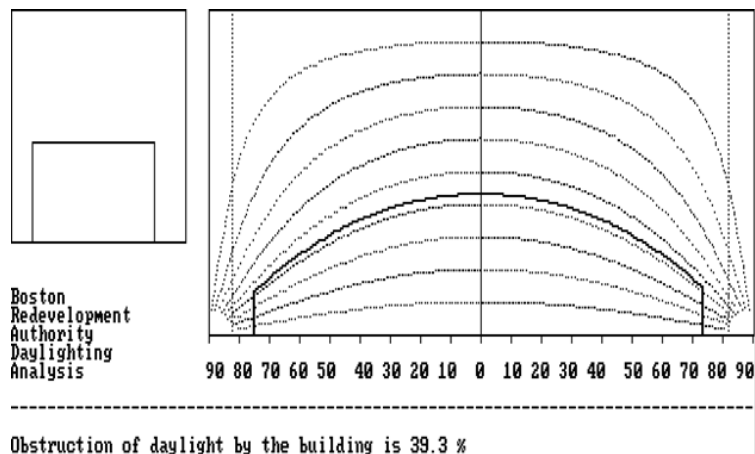


Obstruction of daylight by the building is 17.5 %

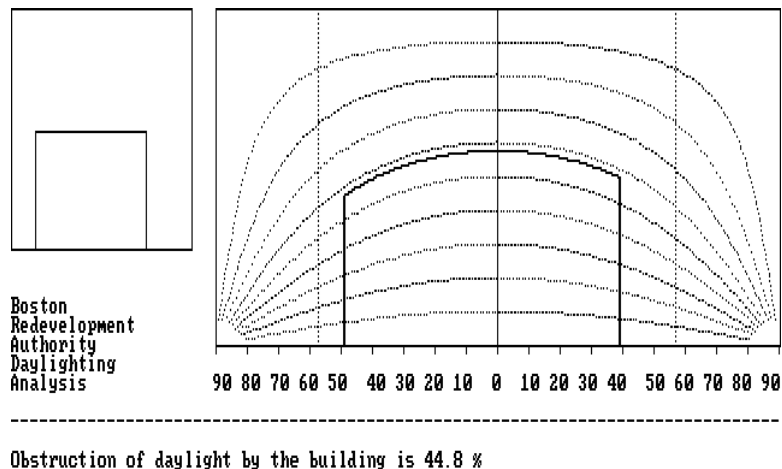
Area Context 1: View from the center of Chestnut Hill Avenue, facing 96 Chestnut Hill Avenue, north of the Project site.



Area Context 2: View from the center of Chestnut Hill Avenue, facing 99 Chestnut Hill Avenue, west of the Project site.



Area Context 3: View from the center of Chestnut Hill Avenue, facing 163 Chestnut Hill Avenue, south-west of the Project site.



J.J. Carroll Redevelopment Boston, Massachusetts

3.3.4 Conclusions

The daylight analysis conducted for the Project describes proposed daylight obstruction conditions at the Project site and existing conditions in the surrounding area. The results of the BRADA analysis show that the Project will result in slightly increased daylight obstruction over existing conditions because existing buildings on the site are lower in height than the Project. However, the resulting conditions will be similar or lower than the daylight obstruction values of surrounding developments and typical of similarly developed areas.

3.4 Solar Glare

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

3.5 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.

The Project is not anticipated to generate 3,000 ADT, nor is it anticipated that the Project will increase traffic volumes by 10 percent or 100 vehicles per hour. As discussed in Chapter 2, 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 was completed. Given the small increases in volume at the study area intersections, it is anticipated that there would be no violations of the National Ambient Air Quality Standards for carbon monoxide at any intersections associated with Project-related traffic.

Stationary Sources

Stationary sources of air pollution are typically units that combust fuel. In this case, these sources likely consist of heating and hot water units and an emergency electrical generator. Cooling towers, although not a combustion source, are a source of particulate emissions. Approximately 41 covered parking spaces will be provided at grade in the rear of the building. Mechanical ventilation may be required.

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

3.6 Stormwater/Water Quality

Chapter 7 includes information regarding stormwater and water quality.

3.7 Flood Hazard Zones/Wetlands

The most current version of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the Project site are Community Panels 25025C0057G and 25025C0057G, effective September 25, 2009, which indicate the FEMA Flood Zone Designation for the site area. The map shows the Project is located on an area of minimal flood hazard Zone X.

The Project site does not contain wetlands.

3.8 Geotechnical Conditions

A subsurface evaluation was completed to determine the soil conditions and for foundation considerations. The subsurface evaluation found that existing ground surface at the site generally slopes slightly upward in an easterly direction from approximately Elevation +155 to Elevation +159.

Surface treatments across the site generally consist of a 6 to 12-inch layer of topsoil, with some areas covered by asphalt. Below the topsoil or asphalt, is a layer of fill material which generally consists of loose to compact, brown to dark brown, gravelly sand with some silt and occasional roots, ash, cinder and brick. The fill layer ranges from approximately 2.5 to 10 feet in thickness. Underlying the fill material across most of the site is a natural, inorganic glacial till deposit. The glacial till deposit typically consists of a dense to very dense, brown fine to medium sand and gravel with trace to some silt. The surface of the glacial till is at a depth of approximately 5 to 8.5 feet below existing ground surface, or at elevations ranging from Elevation +150.8 to Elevation +154.9. Directly underlying the fill or glacial till is a bedrock deposit consisting of hard, moderate to severely weathered, moderately fractured, coarse grained, white to gray to brown, Roxbury Conglomerate was encountered. The surface of the bedrock deposit is at a depth of approximately 2.5 to 15.5 feet below ground surface, or from about Elevation +152.9 to Elevation +144.7.

Groundwater was not observed during subsurface evaluations. However, it is anticipated that groundwater may be periodically perched on the glacial till or bedrock surface. The Project site is not located within the Groundwater Conservation Overlay District.

3.9 Solid and Hazardous Waste

3.9.1 Hazardous Waste

A Phase I Environmental Site Assessment (ESA) was completed for the Project site to evaluate the environmental conditions. The Phase 1 ESA identified that there are no Recognized Environmental Conditions (RECs) in connection with the Project site. Asbestos is found in the existing buildings to be demolished, which will be handled in compliance with all state and federal regulations.

To the extent that hazardous materials are found at the Project site in reportable levels under the Massachusetts Contingency Plan (MCP), they will be handled in accordance with the MCP and any other applicable laws or regulations.

3.9.2 Operational Solid Waste and Recycling

The Project will generate solid waste typical of residential and commercial 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 125 tons of solid waste per year. With the exception of household hazardous wastes typical of residential and commercial developments (e.g., cleaning fluids and paint), the Project will not involve the generation, use, transportation, storage, release, or disposal of potentially hazardous materials. The PACE center would generate routine medical waste and contract with a vendor who specializes in medical waste removal.

3.10 Noise Impacts

The primary set of noise regulations relating to a potential increase in sound levels due to the Project is the City of Boston Zoning District Noise Standards (City of Boston Code – Ordinances: Section 16–26 Unreasonable Noise and City of Boston Air Pollution Control Commission Regulations for the Control of Noise in the City of Boston). Separate regulations within the Standards provide criteria to control different types of noise. Regulation 2 is applicable to the effects of the Project. Zoning District Standards are presented below in Table 3-2.

Table 3-2 City of Boston Zoning District Noise Standards, Maximum Allowable Sound Pressure Levels

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

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

Additionally, MassDEP has the authority to regulate noise under 310 CMR 7.10, which is part of the Commonwealth's air pollution control regulations. According to MassDEP, "unnecessary" noise is considered an air contaminant and thus prohibited by 310 CMR 7.10. The MassDEP administers this regulation through Noise Policy DAQC 90-001 which limits a source to a 10-dBA increase above the L₉₀ ambient sound level (the sound level in dBA exceeded 90 percent of the time during a measurement period) measured at the Project property line and at the nearest residences. The MassDEP policy further prohibits "pure tone" conditions where the sound pressure level in one octave-band is three decibels or more than the sound levels in each of two adjacent bands.

While the details of the mechanical equipment associated with the Project have not yet been precisely determined, steady operational noise from stationary sources will primarily involve heating, cooling and ventilation equipment for the building.

During the final design phase of the Project, mechanical equipment and noise controls will be specified to meet the applicable City of Boston and MassDEP noise limits. Reasonable efforts will be made, if necessary, to minimize noise impacts from the Project using routinely employed methods of noise control, including:

- ◆ Selection of “low-noise” equipment models;
- ◆ Fitting of inlet and discharge vents with duct silencers;
- ◆ Installation of screening barriers to provide shielding where appropriate;
- ◆ Use of sound-attenuating enclosures, acoustical blankets, or both on continuously operating equipment with outdoor exposure; and
- ◆ Siting of noisy equipment at locations that protect sensitive receptors by shielding or with increased distance.

The Project, with appropriate noise control, is not expected to result in any adverse noise impacts to the surrounding area. Short-term, intermittent increases in noise levels will occur during Project construction. However, every reasonable effort will be made to minimize the noise impacts and ensure that the Project complies with the requirements of the City of Boston noise ordinance.

3.11 Construction Impacts

3.11.1 Introduction

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

Proper pre-planning with the City and neighborhood will be essential to the successful construction of the Project. Construction methodologies, that ensure public safety and protect nearby businesses and residents, will be employed.

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

The Proponent intends to follow the guidelines of the City of Boston and the MassDEP, which direct the evaluation and mitigation of construction impacts.

3.11.2 Construction Methodology / Public Safety

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

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

3.11.3 Construction Schedule

It is anticipated that construction will begin in Fall 2020 with an approximately 18 to 24-month construction period.

Typical construction hours will be from 7:00 a.m. to 6:00 p.m., Monday through Friday, with most shifts ordinarily ending at 3:30 p.m. No substantial sound-generating activity will occur before 7:00 a.m. If longer hours, additional shifts, or Saturday work is required, the construction manager will place a work permit request to the Boston Air Pollution Control Commission and BTM in advance. It is noted that some activities such as finishing activities could run beyond 6:00 p.m. to ensure the structural integrity of the finished product; for example, certain concrete components must be completed in a single pour, and placement of concrete cannot be interrupted. In the Construction Management Plan, 2Life will identify holidays on which construction activities shall not be permitted.

3.11.4 Construction Staging / Access

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

3.11.5 Construction Mitigation

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

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

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

3.11.6 Construction Employment and Worker Transportation

The number of workers required during the construction period will vary. It is anticipated that approximately 100 construction jobs will be created. The Proponent is committed to meeting or exceeding City of Boston W/MBE and resident hiring goals and will make reasonable good-faith efforts to have at least 51% of the total employee work hours completed by Boston residents, at least 40% of total employee work hours completed by minorities and at least 12% of the total employee work hours completed by women. The Proponent will enter into a jobs agreement with the City of Boston.

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

3.11.7 Construction Truck Routes and Deliveries

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

3.11.8 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 site during periods of high wind, and careful removal of debris by covered trucks. The construction contract will provide for several 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; and
- ◆ Minimizing storage of debris on site.

3.11.9 Construction Noise

The Proponent is committed to mitigating noise impacts from the construction of the Project. 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.

Mitigation measures are expected to include:

- ◆ Instituting a proactive program to ensure compliance with the City of Boston noise limitation policy;
- ◆ 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.

3.11.10 Construction Waste

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

3.11.11 Protection of Utilities

Existing public and private infrastructure located within the public right-of-way will be protected during construction. The installation of proposed utilities within the public way will be in accordance with the Massachusetts Water Resources Authority, Boston Water Sewer Commission, Boston Public Works, Dig Safe, and the governing utility company requirements. All necessary permits will be obtained before the commencement of the specific utility installation. Specific methods for constructing proposed utilities where they are near to, or connect with, existing water, sewer and drain facilities will be reviewed by the Boston Water Sewer Commission as part of its Site Plan Review process.

3.12 Rodent Control

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

3.13 Wildlife Habitat

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

Chapter 4.0

Sustainable Design / Climate Change Preparedness

4.0 SUSTAINABLE DESIGN / CLIMATE CHANGE PREPAREDNESS

4.1 Introduction

2Life is a leader in sustainable building with a commitment to exemplifying best practices in green building design focusing on system efficiency, occupant comfort, indoor air quality, and resilient design. While these topics are important for every project, 2Life recognizes that thermal comfort, healthy building materials, and emergency backup systems can be especially impactful for older adults. In addition to design strategies implemented in recent new construction projects, 2Life's commitment to sustainability is evidenced by its work reducing energy in its existing buildings. For example, in 2017, 2Life hit its target of reducing portfolio-wide energy usage by 20%, the first multi-family participant in HUD's Better Buildings Challenge to do so.

Regulatory and program requirements related to green building and sustainability for the Project include:

- ◆ Leadership in Energy and Environmental Design (LEED) Silver Certifiability under LEED Homes Midrise rating system
- ◆ ENERGY STAR Certification
- ◆ Stretch Code Compliance

Beyond the regulatory requirements, 2Life Communities will pursue the feasibility of the following the green building design strategies:

- ◆ Passive House Certification
- ◆ Rooftop Solar PV
- ◆ Solar thermal domestic hot water heating
- ◆ Zero emissions strategies

Preliminary energy modeling information is included in Appendix B.

4.2 Leadership in Energy and Environmental Design

The Project team will show certifiability under LEED for compliance with Article 37 using LEED for Homes Midrise. A preliminary review of the checklist shows a total of 58 "yes" points and 27 "maybe" points, reaching LEED Silver Certifiability. The checklist will be updated as the design develops and systems choices and engineering verify the levels of efficiency that can be achieved. At the current time system engineering has not begun and sizes, locations, output and payback calculations have not been prepared. The preliminary LEED checklist is included at the end of this chapter.

The following key credits will be pursued for the Project:

- ◆ Site Selection: The site is a previously developed urban site; work will include environmental remediation if required.
- ◆ Access to Transit: The site is within walking distance to MBTA Green Line Chiswick Station, various bus stops and nearby to a bike system.
- ◆ Heat Island Reduction: The Project will installed a high solar reflectance index roof to mitigate heat island effect.
- ◆ Total Water Use: The site will use low-flow fixtures including lavatories, water closets, and showers.
- ◆ Annual Energy Use: Utilizing Passive House design concepts will reduce the overall assembly U-value, air infiltration and improve overall building performance.
- ◆ Enhanced Ventilation: The project will focus on balanced ventilation with both supply and exhaust air connected to central Energy Recovery Ventilators.

4.3 Passive House Design Feasibility

The Passive House building standards represent the future of building energy efficiency by encompassing stringent energy usage intensity thresholds combined with field performance testing to validate overall building performance.

Passive House core design techniques include the following:

- ◆ High performing thermal envelope with continuous insulation
- ◆ Airtight construction with low air change rates
- ◆ Balanced mechanical ventilation systems for improved indoor air quality and comfort
- ◆ High performance windows and doors to manage solar energy and minimize leakage

To aide in the feasibility analysis of Passive House certification, the process will be overseen by multiple experienced Certified Passive House Consultants (CPHCs) to ensure that the Project team has ample program guidance. Emphasis on Passive House design will be placed during team charrette and schematic design stages to leverage MassSave incentives and identify key design challenges, solutions and decisions.

4.4 Rooftop Solar Photovoltaic Feasibility

The Project team performed a Level 1 Solar Feasibility Assessment to determine the cost-effectiveness of installing rooftop solar photovoltaic (PV) to offset the overall site energy usage. The analysis shows that a potential solar PV system could generate approximately 170,100 kWh per year, or approximately 12% of the total electric load. As the design progresses, 2Life will continue to evaluate the incorporation of solar PV into the design and the incentives available for such an installation.

4.5 Electrification

As outlined in the Carbon Free Boston Summary Report 2019, “Achieving carbon neutrality will require Boston’s buildings to be highly efficient and to move away from fossil fuel use for heating and other services. New buildings can be built to the highest possible performance standards, while avoiding the lock-in of fossil fuels.” Further in the report, the impact of building design on the total greenhouse gas emissions in Boston is identified, “The GHG emissions from the use of electricity, heating oil, natural gas, and steam in Boston’s buildings account for more than two-thirds of the city’s total emissions.”

Passive House design achieves the objective of reducing building energy usage intensity relative to code-compliant buildings. However, to minimize dependence on carbon fuel sources and corresponding GHG emissions, these buildings need to switch to all-electric design where feasible. Due to higher energy costs for electricity relative to natural gas, many projects face an innate challenge to overcome this imbalance to construct feasible projects. When Passive House design is coupled with electric heating, cooling, and domestic hot water generation, the impact of energy usage is reduced in overall life-cycle cost thereby increasing project feasibility.

2Life anticipates the heating and cooling system will be all electric Variable Refrigerant Flow (VRF), consistent with design of its Brown Family House that is under construction at 370 Harvard Street in Brookline. In addition, the domestic hot water generation and ventilation systems will be centralized to allow future conversion from gas-fired equipment to electric type equipment once technology and economic feasibility permit.

4.6 Indoor Air Quality

2Life is committed to providing occupants with a living environment that enhances their lives and health. The Project will accomplish this through two methods: ventilation and material selection. Ventilation systems will be designed to provide fresh supply air directly to each apartment in addition to providing operable windows promoting natural ventilation. Toxins and contaminants will be minimized through careful specification of low VOC and no added urea formaldehyde materials.

The feasibility of the Passive House certification includes review of the U.S. EPA Indoor airPLUS program requiring careful selection and installation of the following:

- ◆ Moisture control systems
- ◆ Heating, ventilation, and air conditioning systems
- ◆ Combustion venting systems
- ◆ Radon resistant construction
- ◆ Low-emitting building materials

4.7 Training, Testing, And Verification

Managing the transition from modeled performance to achieving real world performance is a focus for the Project. A series of on-site trainings, inspections, testing, and continuous feedback to the team will be the primary tools used to ensure designed and modeled approaches translate to performance achievement.

As part of this process, 2Life will:

- ◆ Perform a Sustainability Charrette to educate Project team members on critical design features and strategies;
- ◆ Hold a pre-construction trades training focused on trade specific best practices around performance-based construction;
- ◆ Review submittals for green compliance;
- ◆ Conduct testing and inspections by certified Home Energy Rating System (HERS) and/or Passive House Institute US (PHIUS) raters that include:
 - Foundation insulation inspections
 - Insulation and air barrier inspections
 - Mock-up level duct leakage and compartmentalization testing
 - Final duct leakage testing
 - Final compartmentalization testing
 - Flow testing on water use fixtures
- ◆ Train and educate the buildings operations staff on the green features of the building and how to operate and maintain them; and

- ◆ Train and educate the residents of the buildings on the green features and how to minimize environmental footprint.

4.8 Fundamental Commissioning

Fundamental commissioning provides another critical layer of oversight that will be integrated into the Project. Heating, cooling, ventilation, domestic hot water, lighting, and other mechanical systems will be submitted to performance testing and verification process to ensure proper installation and operations. As part of this process, a certified commissioning agent will:

- ◆ Develop and implement a commissioning plan
- ◆ Verify installation and performance of systems to be commissioned
- ◆ Provide a summary commissioning report to the building owner

4.9 Climate Change Resilience

4.9.1 Introduction

Climate change conditions considered by the Project team and reviewed below include higher maximum and mean temperatures, more frequent and longer extreme heat events, more frequent and longer droughts and more severe rainfall events. Copies of the completed Climate Change Questionnaire is included in Appendix C. Preliminary energy model results are included in Appendix B.

4.9.2 Extreme Heat Events

According to “Climate Ready Boston,” the City of Boston can expect that the number of days with temperatures greater than 90°F will increase. Between 1971 and 2000, Boston experienced an average of eleven days per year over 90 degrees and may experience between 25 and 90 days annually by 2070, depending on the extent of greenhouse gas emissions over the next several decades.¹ The Project design plans to incorporate measures to minimize the impact of high temperature events, including:

- ◆ High-albedo roofing materials and new landscaping to minimize the heat island effect;
- ◆ New street trees to provide shade;
- ◆ New landscaped open space;
- ◆ A high efficiency building envelope; and

¹ Climate Ready Boston, December 7, 2016.

- ◆ High performance HVAC equipment.

The Proponent is also studying measures to further improve the building envelope to minimize the cooling needs of the building.

4.9.3 Rain Events

Because of climate change, New England is expected to experience an increased frequency of intense storms that generate significant volumes of precipitation. Such precipitation events have the potential to overwhelm existing stormwater infrastructure capacity and may result in inland flooding with the potential to damage buildings. Improper conveyance of stormwater during precipitation events may also cause overflows of combined sewer systems that allow wastewater from buildings connected to the combined sewer to discharge to local waterways, or that surcharge the system and cause overflow at other locations.

To mitigate the effects of extreme precipitation events, the Project's stormwater management system will be designed to minimize the volume of stormwater runoff from the Project site and promote groundwater recharge to the greatest extent practicable. The Project will strive to infiltrate at least 1.25 inches of stormwater runoff for the 24-hour storm event.

4.9.4 Drought Conditions

Under the high emissions scenario evaluated by Climate Ready Boston, the occurrence of droughts lasting one to three months could increase by as much as 75% over existing conditions by the end of the century. The Project will approach potential drought impacts by reducing the amount of water used both within the building and across the Project site for irrigation. The Project will include low-flow fixtures and water conserving appliances to the extent feasible to minimize the amount of water used by the building's occupants.



LEED v4 for Building Design and Construction: Multifamily Midrise

Project Checklist

Project Name: J.J. Carroll Redevelopment
 Date: 9-Oct-19

Y ? N

2			Credit	Integrative Process	2
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12	2	1	Location and Transportation		15
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Y			Prereq	Floodplain Avoidance	Required
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PERFORMANCE PATH

			Credit	LEED for Neighborhood Development Location	15
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PRESCRIPTIVE PATH

7	1		Credit	Site Selection	8
2		1	Credit	Compact Development	3
2			Credit	Community Resources	2
1	1		Credit	Access to Transit	2

0	4	3	Sustainable Sites		7
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Y			Prereq	Construction Activity Pollution Prevention	Required
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Y			Prereq	No Invasive Plants	Required
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2			Credit	Heat Island Reduction	2
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1	2		Credit	Rainwater Management	3
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1	1		Credit	Non-Toxic Pest Control	2
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5	3	4	Water Efficiency		12
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Y			Prereq	Water Metering	Required
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PERFORMANCE PATH

5	3	4	Credit	Total Water Use	12
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PRESCRIPTIVE PATH

			Credit	Indoor Water Use	6
			Credit	Outdoor Water Use	4

19	5	13	Energy and Atmosphere		37
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Y			Prereq	Minimum Energy Performance	Required
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Y			Prereq	Energy Metering	Required
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Y			Prereq	Education of the Homeowner, Tenant or Building Manager	Required
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19	3	8	Credit	Annual Energy Use	30
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	2	3	Credit	Efficient Hot Water Distribution	5
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		2	Credit	Advanced Utility Tracking	2
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2	5	2	Materials and Resources		9
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Y			Prereq	Certified Tropical Wood	Required
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Y			Prereq	Durability Management	Required
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1			Credit	Durability Management Verification	1
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	3	2	Credit	Environmentally Preferable Products	5
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1	2		Credit	Construction Waste Management	3
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14	4	1	Indoor Environmental Quality		18
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Y			Prereq	Ventilation	Required
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Y			Prereq	Combustion Venting	Required
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Y			Prereq	Garage Pollutant Protection	Required
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Y			Prereq	Radon-Resistant Construction	Required
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Y			Prereq	Air Filtering	Required
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Y			Prereq	Environmental Tobacco Smoke	Required
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Y			Prereq	Compartmentalization	Required
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3			Credit	Enhanced Ventilation	3
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0.5	0.5	1	Credit	Contaminant Control	2
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3			Credit	Balancing of Heating and Cooling Distribution Systems	3
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3			Credit	Enhanced Compartmentalization	3
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1	1		Credit	Enhanced Combustion Venting	2
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1			Credit	Enhanced Garage Pollutant Protection	1
---	--	--	--------	--------------------------------------	---

1	2		Credit	Low Emitting Products	3
---	---	--	--------	-----------------------	---

1			Credit	No Environmental Tobacco Smoke	1
---	--	--	--------	--------------------------------	---

1	3	2	Innovation		6
---	---	---	-------------------	--	---

Y			Prereq	Preliminary Rating	Required
---	--	--	--------	--------------------	----------

	3	2	Credit	Innovation	5
--	---	---	--------	------------	---

1			Credit	LEED AP Homes	1
---	--	--	--------	---------------	---

3	1	0	Regional Priority		4
---	---	---	--------------------------	--	---

1			Credit	Regional Priority: Balancing of Heating and Cooling Distribution Systems	1
---	--	--	--------	--	---

1			Credit	Regional Priority: Access to Transit	1
---	--	--	--------	--------------------------------------	---

1			Credit	Regional Priority: Heat Island Reduction	1
---	--	--	--------	--	---

	1		Credit	Regional Priority: Annual Energy Use	1
--	---	--	--------	--------------------------------------	---

58	27	26	TOTALS		Possible Points: 110
----	----	----	---------------	--	----------------------

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

Chapter 5.0

Urban Design

5.0 URBAN DESIGN

5.1 Development Context

While much of the Brighton neighborhood is known for one- and two-family homes, the Chestnut Hill Avenue corridor, Brighton Center, and Commonwealth Avenue areas have long had higher-density residential development and many buildings with ground-floor commercial spaces. Directly across Chestnut Hill Avenue to the west of the Project site are the Chestnut Hill Park Condominiums, a 47-unit building constructed in 2006. To the north of the Project site are several two- and three-family homes on Wallingford Road.

To the south is 2Life's six-story Weinberg House (132 Chestnut Hill Avenue) which was completed in April 2019 and created a new "Village Center" for 2Life that invites neighbors into ground floor common spaces and whose 3,000 sf retail space will further activate the street. To the east is 2Life's Leventhal House, a 5-6 story building with 254 apartments completed in 1973. Together, 2Life's four properties in Brighton (Weinberg House, Ulin House, Leventhal House, and Kurlat House) provide 763 subsidized apartments for older adults, all of whom have access to a broad array of supportive services, programs, and common spaces, illustrated in Figure 5-1.

5.2 Urban Design Approach

From its initial proposal to the BHA in May 2019, 2Life recognized the incredible opportunity to help meet the City's goals for affordable housing and connect the Project to the adjacent 2Life properties, as well as the importance of a thoughtful design that provides public open space and mitigates shadow impacts on abutters.

As a result, a key move early in the design process was to locate the new driveway at the north of the site and place the new building approximately 65 feet from the property line, whereas the existing buildings are approximately 20 feet away. The six-story components of the proposed building are located at the back of the site, adjacent to Weinberg House and Leventhal House, while the section closest to Chestnut Hill Avenue and Wallingford Road is five stories. Further mitigating the visual impact of the building, the building will be set back from the street and the grade at the north of the site will also be lowered by a few feet; this revision to the grade will also improve accessibility to the site.

The ground floor "Village Center" will be a new centerpiece of 2Life's *aging in community* model, which combats social isolation and enables residents to continue living independently as their physical needs change. The "Village Center" will consist of common spaces such as a multi-purpose room, Resident Service Coordinator offices, lobby, marketing/leasing office, and potentially a small resale shop and salon. The ground floor will also contain approximately 1,200 sf of commercial space, which is envisioned as neighborhood-oriented retail with fresh foods and convenience items that would serve both 2Life staff and residents and the surrounding neighborhood. With these uses in mind, the ground level façade will be highly transparent to help signal that the building is an active space full of intergenerational activities. 2Life has found

that sun-filled entrances are also a fantastic amenity for residents, providing opportunities to socialize while watching outdoor activities and other residents, visitors, and community members come and go.

Approximately 11,000 sf of the ground floor space will house a PACE center, an innovative healthcare model that enables eligible seniors to live independently rather than move to a nursing home. The primary PACE center entrance will be prominently located at the northwest corner of the building, adjacent to the surface parking and drop-off area.

On the upper floors, the massing is driven by a strategy to create multiple clusters of apartments, rather than a long double-loaded corridor. This strategy is in direct response to the residents of the existing J.J. Carroll Apartments who expressed the desire to continue a sense of familiarity with their neighbors, which is facilitated by four apartments per entry in the existing buildings, as well as 2Life's recognition that shorter corridors can assist with wayfinding for residents as they age, particularly those with dementia. The space between the clusters of apartments will not be just corridor, but a "main street" of welcoming, active spaces with plants, arts, exercise equipment, and sitting areas, as 2Life promotes throughout its buildings. A key Project feature is a bridge that will connect the main residential level of the new building to Weinberg House, providing an indoor connection to the rest of the programs and services in Leventhal, Kurlat, and Ulin Houses as well.

With variations in the façade on each cluster of units and the connecting common space, pedestrians will experience the building as a collection of smaller elements as opposed to one monolithic structure. These textures and colors will establish a movement and rhythm along the street edge that a singular massing could not.

5.3 Site Plan and Features

From Chestnut Hill Avenue, residents, visitors, and neighbors will experience a series of open spaces that will be created by the articulated massing of the building and welcoming entrances, illustrated in Figure 1-7 and Figure 5-2. Currently, the J.J. Carroll Apartments sit approximately four feet above sidewalk level and a retaining wall acts as a barrier between the sidewalk and the site. The proposed site design will improve access into the site by reducing the length of this wall and carefully integrating stairs and ramps with active, playful landscapes (see Figure 5-3).

Starting at the southern edge of the site, the "Community Square" will blend into the elevations established at 132 Chestnut Hill Avenue and also reference some of its design language to create a larger unified plaza with seating adjacent to the Weinberg House retail space. Heading into the site towards the main entrance, larger landscape steps, ramps and other elements will define an intergenerational play area intended to foster connectivity between residents, younger family members and the community at large (see Figure 5-4). Moving northward, an upper terrace will front the entry to the 2Life residential amenity and commercial program. A sloped walk will then bring one back down to meet the sidewalk elevations further up on Chestnut Hill Avenue next to

a relocated MBTA bus shelter and proposed Bluebikes station. These walkways will bridge the grades in a universally accessible manner without overwhelming the site with a significant quantity of stairs and ramps (see Figure 5-5).

Along its southern face, the Project will build on the existing alleyway off of 132 Chestnut Hill Avenue and create a unified back of house zone. The design will take measures to shield this area from public view and share back of house access with Weinberg House via Atwood Road. It is anticipated that deliveries and trash removal for the commercial space will utilize this back of house area.

At its northern edge, a new driveway will replace the existing dead end Ledgemere Road. This driveway will connect the site to Chestnut Hill Avenue and provide off street parking and pick up/drop off areas for the apartments, “Village Center” and PACE center. As shown in Figure 5-6, the site grade will be lowered and northern property line enhanced with a berm and plantings that will buffer the adjacent properties from traffic and parking along the new driveway. The proposed driveway will extend east into 2Life’s Leventhal House property at 40 Wallingford Road, providing a more cohesive circulation between 2Life’s parking areas. This driveway will also connect to the enclosed parking area at the ground level along the eastern edge of the site.

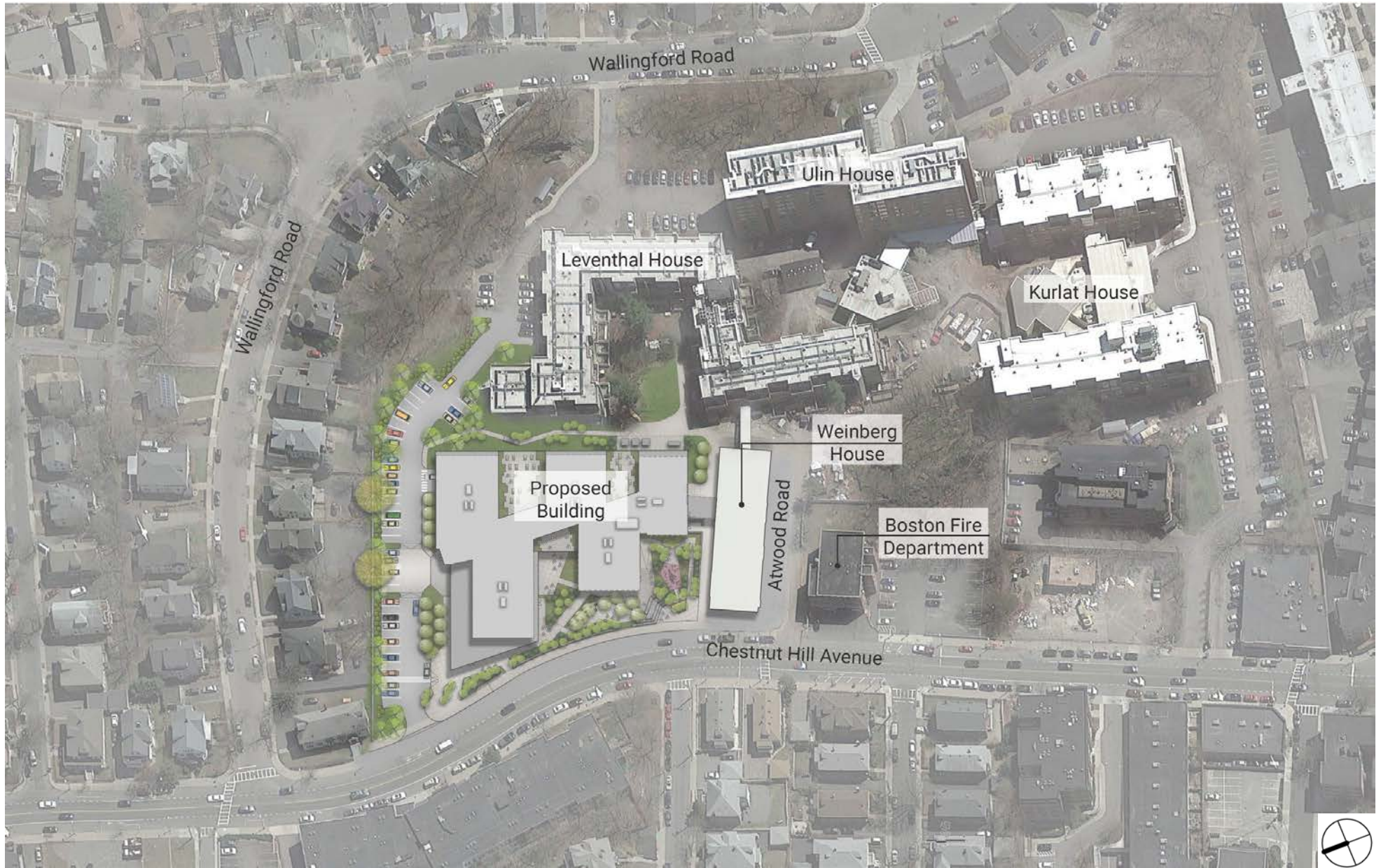
5.4 Facade Design

As discussed earlier, breaking the design down into distinct “neighborhoods” expresses 2Life’s *aging in community* approach. As the floor plans illustrate, these neighborhoods are then connected to form an internal main street of collective programming at each level. The facade design is faithful to this diagram with the neighborhood blocks taking on more of a clean, reserved expression consistent with contemporary multifamily housing, while the main street has a slightly more extroverted expression to celebrate the communal activity that it houses.

The neighborhoods will feature various types of fiber cement panels and clapboard that build on the materiality, scale and textures prevalent in the neighborhood. The “main street” will serve as a point of subtle contrast with slightly larger window openings and material palette that creates richness, texture and warmth. At the ground floor, storefront glazing will create a porous edge to better connect the activity within the building to the public realm.

Energy performance, aiming towards Passive House standards, is the focus of the envelope design and the material palette. The fiberglass windows will be energy efficient. Material choices will be made with an eye towards embodied carbon, local sourcing and recycled content. Further, the Project will leverage the best practices in terms of building assembly detailing to avoid thermal bridging and improve air tightness.

The resulting design is rooted in the place but is forward thinking. It celebrates its residents, welcomes the public, and establishes itself as an anchor in the community at large.



J.J. Carroll Redevelopment Boston, Massachusetts



J.J. Carroll Redevelopment Boston, Massachusetts



J.J. Carroll Redevelopment Boston, Massachusetts

MASS.

Figure 5-3
Perspective View of Intergenerational Play Space



J.J. Carroll Redevelopment Boston, Massachusetts

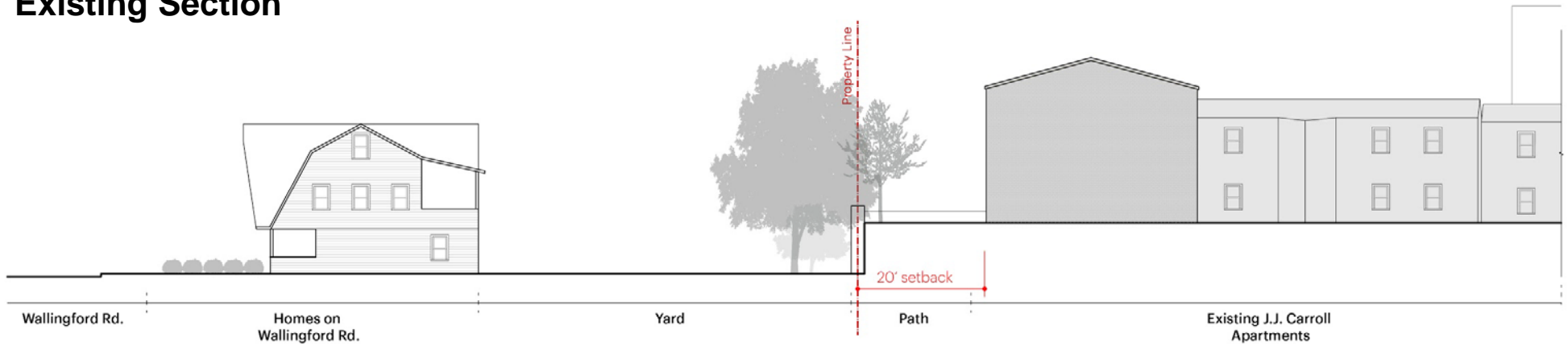


J.J. Carroll Redevelopment Boston, Massachusetts

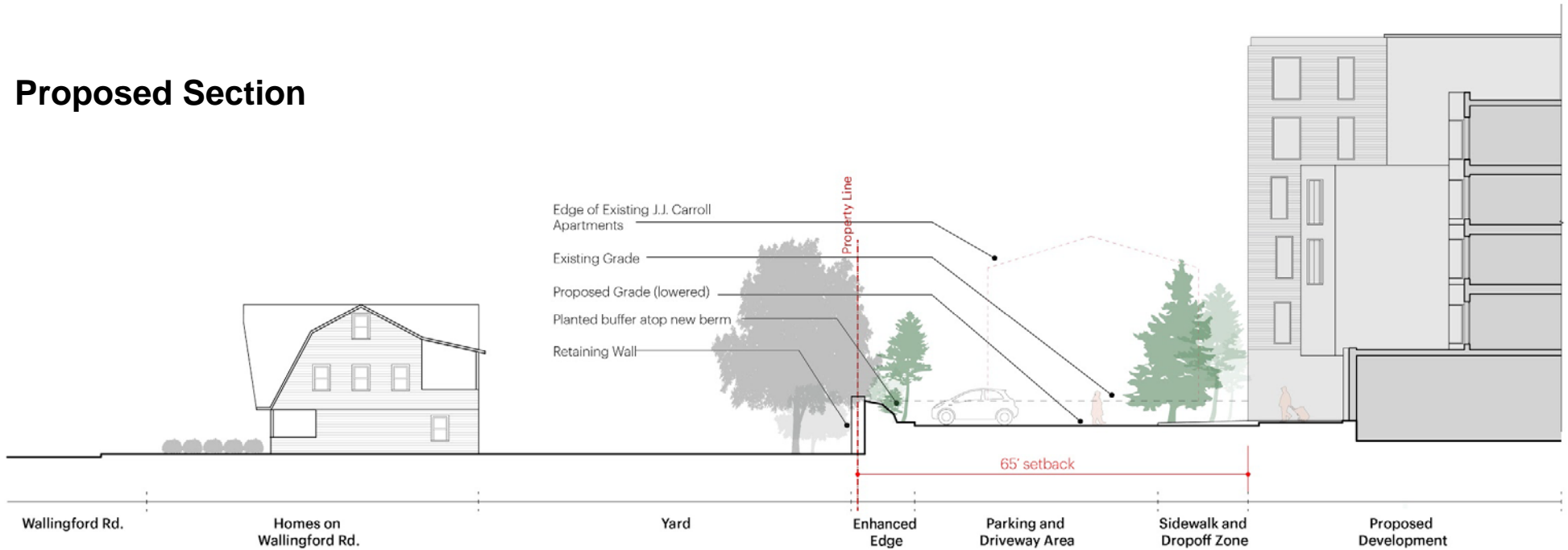


Figure 5-5
Perspective View looking towards Village Center

Existing Section



Proposed Section



Chapter 6.0

Historic and Archaeological Resources

6.0 HISTORIC AND ARCHAEOLOGICAL RESOURCES

6.1 Historic Resources on the Project Site

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

6.2 Historic Resources in the Project Vicinity

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

Table 6-1 Historic Resources Within and in the Vicinity of the Project

Existing Map Key	Historic Resource	Address	Designation*
1	Brighton Center Historic District	Roughly bounded by Washington and Market Streets, Chestnut Hill Avenue, Academy Hill Road, and Henshaw, Leicester, Dighton and Winship Streets. The heart of the community lies at the intersection of Washington and Market streets.	NRDIS
2	Chestnut Hill Avenue, 11-83	11-83 Chestnut Hill Avenue	INV
3	Foster Street, 1-289	1-289 Foster Street	INV
4	Saint John's Roman Catholic Seminary Complex	1 & 9 Lake Street; 2101 & 2121 Commonwealth Avenue	INV
5	Hatherly-Portina Roads Area	The survey area includes the west side of Colwell Street and both sides of Hatherly and Portina Roads.	INV
6	Pama Gardens	218 Foster Street	INV
7	Leamington Road-Commonwealth Avenue Area	Roughly bounded by Commonwealth Avenue, Wallingford Road, Leamington Road	INV
8	Commonwealth Avenue – Ransom Road Area	This area is roughly bounded by Washington Street, Commonwealth Avenue Euston Road, the west side of Colborne Road, and the south side of Ransom Road.	INV
9	Upper Foster Street Area	The survey area includes portions of Greycliffe and Gerald Roads, Lane Park, Rose Garden Circle, and Radnor and Kirkwood Roads.	INV
10	Upper Chestnut Hill – Evergreen Area	Survey area includes apartment buildings along Commonwealth Avenue and Evergreen Cemetery.	INV
11	Commonwealth Avenue – Brighton	Commonwealth Avenue from Packard Corner to the Newton line.	INV

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

Existing Map Key	Historic Resource	Address	Designation*
12	Cleveland Circle – Englewood Avenue Area	The survey area is bordered on three sides by Beacon Street, Chestnut Hill Avenue and Commonwealth Avenue. The northeastern border is formed by Chiswick Road, Selkirk (western segment) and Strathmore roads.	INV
13	Aberdeen Area	This area is roughly bounded by Commonwealth Avenue, Cummings Road and the Brookline town line	INV
*Designation Legend			
NRDIS	National Register of Historic Places historic district		
INV	Massachusetts Historic Commission Inventory		

6.3 Archaeological Resources Within the Project Site

A review of the Massachusetts Historical Commission’s (MHC’s) online archaeological base maps was conducted on September 27, 2019. It found no known archeological sites within the Project site or the immediate vicinity.

6.4 Status of Project Review with Historical Agencies

6.4.1 Boston Landmarks Commission

The submission of this PNF initiates review of the Project by the Boston Landmarks Commission (BLC) under the City’s Article 80 Review process.

6.4.2 Boston Landmarks Commission Article 85

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

6.4.3 Massachusetts Historical Commission

MHC has review authority over projects requiring state funding, licensing, permitting and/or approvals that may have direct or indirect impacts to properties listed in the State Register of Historic Places. Since the Project will utilize state funding, the Project will be subject to review by the MHC in compliance with its State Register Review (Chapter 254) regulations. MHC review will be initiated with the filing of a MHC Project Notification Form. Additionally, since federal permits, licenses or approvals will be required, the Project is subject to Section 106 of the National Historic Preservation Act. Section 106 review will be initiated with the filing of the MHC Project Notification Form.



J.J. Carroll Redevelopment Boston, Massachusetts

Chapter 7.0

Infrastructure

7.0 INFRASTRUCTURE

7.1 Introduction

This Chapter outlines the existing utilities serving the Project site and anticipated impacts. The following utility systems are discussed below:

- ◆ Wastewater;
- ◆ Water;
- ◆ Stormwater;
- ◆ Natural Gas;
- ◆ Electric; and
- ◆ Telecommunications.

7.2 Wastewater

7.2.1 Sewer Infrastructure

A 10-inch clay municipal sewer main, owned by the Boston Water and Sewer Commission (BWSC), runs north to south in Chestnut Hill Avenue. Based on the existing conditions, the sewer main can convey approximately 3.1 cubic feet per second (cfs) at full capacity. The proposed Project's estimated peak sewer flow is approximately 0.14 cfs, or approximately 4.5% of the municipal sewer main's maximum capacity and 9.0% of the municipal "half full" flow rate.

The estimated sewer generation for the Project is approximately 22,090 gallons per day.

7.3 Water Supply

A 12-inch municipal water main running north to south is located in the northbound lane of Chestnut Hill Avenue. A hydrant flow test was last performed in the vicinity of the Project area on February 3, 2016. The results of that test are as follows:

Static Pressure	56 psi
Residual Pressure	52 psi
Total Flow	1736 psi
Flow at 20 psi	5686 gpm

Water usage is assumed to match estimated sewer generation information on a 1:1 basis; therefore, an estimated water usage of 22,090 gallons per day is anticipated.

7.4 Stormwater

A 12-inch reinforced concrete pipe municipal storm main running north to south is located in Chestnut Hill Avenue. The 12-inch storm main is located approximately 6 feet below grade and is located above a 10-inch clay sewer main. The existing lateral services will be utilized if possible.

Per BWSC requirements, proposed developments cannot discharge a peak rate of stormwater runoff that is greater than the peak rate of an existing site for all storm events, including the 100-year, 24-hour event. Additionally, BWSC requires that all developments with greater than or equal to 100,000 feet of floor area retain a volume of stormwater runoff equal to 1.25 inches over the proposed total impervious area on-site. This equates to a volume of approximately 7,902 cubic feet. Therefore, the proposed subsurface infiltration systems will be sized to retain that volume.

Should existing soils on-site prohibit infiltration and groundwater recharge, water quality units will be installed to treat the stormwater prior to discharging to the public storm drain.

7.5 Natural Gas Service

National Grid owns and operates the natural gas services near the Project Site. The Proponent will work with National Grid to confirm adequate system capacity as the design for the building is advanced.

7.6 Electrical Service

Eversource owns and operates the electric facilities near the Project Site. As the design of the Project progresses, the Proponent's electrical engineer and civil engineer will coordinate with Eversource on future configurations of the power system and connections.

Energy conservation measures will be an integral part of the Project-related infrastructure design. All buildings will be designed to include energy-efficient and water-conservation features for mechanical, electrical, architectural, and structural systems, assemblies, and materials, where feasible and reasonable.

7.7 Telephone and Telecommunications

Verizon and Comcast both operate telephone and internet services near the Project Site. The configuration of the proposed service will be developed with one of these two vendors as the design progresses.

Chapter 8.0

Coordination with Other Governmental Agencies

8.0 COORDINATION WITH OTHER GOVERNMENTAL AGENCIES

8.1 Architectural Access Board Requirements

The Project will comply with the requirements of the Architectural Access Board and the standards of the Americans with Disabilities Act. The Accessibility Checklist for each Project Component is included in Appendix D.

8.2 Massachusetts Environmental Policy Act

The Project is not anticipated to require review by the Massachusetts Environmental Policy Act (MEPA) Office of the Massachusetts Executive Office of Energy and Environmental Affairs. The Project does not exceed any of the review thresholds for the filing of an Environmental Notification Form under MEPA, as described in 301 CMR 11.03.

8.3 Massachusetts Historical Commission

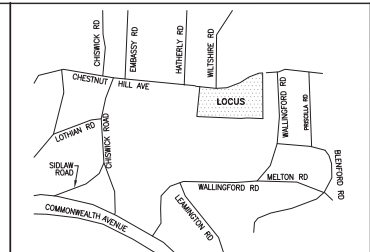
MHC has review authority over projects requiring state funding, licensing, permitting and/or approvals that may have direct or indirect impacts to properties listed in the State Register of Historic Places. Since the Project will utilize state funding, the Project will be subject to review by the MHC in compliance with its State Register Review (Chapter 254) regulations. MHC review will be initiated with the filing of a MHC Project Notification Form. Additionally, since federal permits, licenses or approvals will be required, the Project is subject to Section 106 of the National Historic Preservation Act. Section 106 review will be initiated with the filing of the MHC Project Notification Form.

8.4 Boston Landmarks Commission (Article 85)

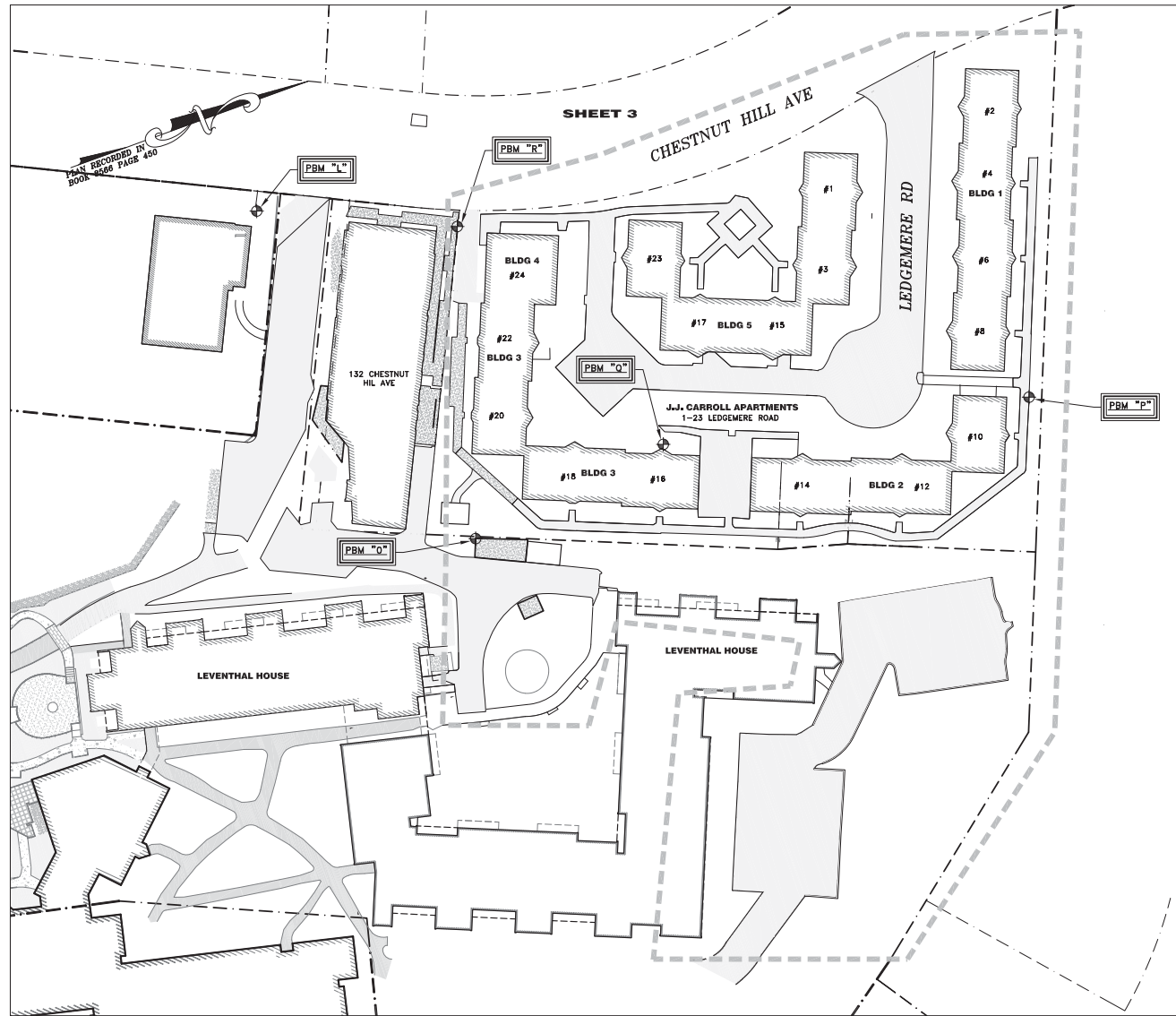
The proposed demolition of the existing buildings on the Project site will be subject to review by the BLC under Article 85 of the Boston Zoning Code. An Article 85 Application for the property will be submitted to the BLC.

Appendix A

Site Survey



LOCUS MAP
NO SCALE



KEY MAP
NO SCALE

LEGEND	
BBS	BOTTOM OF BOTTOM STEP
BT CONC	BITUMINOUS CONCRETE
BC	BOTTOM CURB
BSP	BITUMINOUS CONCRETE PATCH
BL	BOLLARD
BW	BOTTOM OF WALL
CLF	CHAIN LINK FENCE
CNC, CONC	CONCRETE
C, CONF	CONFEROUS
CPO	CONCRETE PAD
CSW	CONCRETE SIDEWALK
CT	CENTER TROUGH
C.U.	CONTINUATION UNKNOWN
OW	COLD WATER
D, DEC, DECID	DECIDUOUS
DNP	DO NOT DUMP
EP	EDGE OF PAVEMENT
EPM	ELECTRIC PAINT MARK
FDC	FOUNDATION DRAIN CLEANOUT
FDC	FIRE DEPARTMENT CONNECTION
FFE	FINISH FLOOR ELEVATION
GCFL	GRANITE CURB FLUSH
GPM	GAS PAINT MARK
GM	GAS METER
GR	GRASS
GRNT	GRANITE
HW	HOT WATER
INV	INVERT
ICV	IRRIGATION CONTROL VALVE
MTL	METAL
MBRW	MODULAR BLOCK RETAINING WALL
OHANG	OVERHANG
PS	PARKING STRIPE
PWS	PARKING
R	RECORD-NOT FOUND
R-NF	RECORD-NOT FOUND
(R)	RECORD
SOC	SLOPED GRANITE CURB
SP	STAND PIPE
TC	TOP OF CURB
TD	TRENCH DRAIN
TOFL	TOP OF CURB FLUSH
TH	THRESHOLD
TTS	TOP OF TOP STEP
T.U.	TYPE UNKNOWN
TW	TOP OF WALL
TWS	TACTILE WARNING STRIP
TYP	TYPICAL
UC	UTILITY COVER
UC	UTILITY FLOW
USC	UNDERGROUND
UP	UTILITY POLE
LPM	UTILITY PAINT MARK

UTILITY LEGEND	
SEWER	---
DRAIN	---
TELEPHONE	---
TELEVISION	---
ELECTRICAL	---
GAS	---
WATER	---

SYMBOL LEGEND	
⊠	CATCH BASIN
---	CONTINUATION UNKNOWN
⊙	DRAIN MANHOLE
⊕	ELECTRIC MANHOLE
⊘	GAS GATE
⊚	HYDRANT
⊞	IRRIGATION CONTROL VALVE
⊠	LIGHT CONTROL BOX
⊛	LIGHT POLE
⊚	MONITORING WELL
⊙	SEWER MANHOLE
⊚	SIGN
⊙	TELEPHONE MANHOLE
⊙	TRAVERSE POINT
⊙	UTILITY POLE
⊙	UTILITY FLOW
⊙	WATER GATE
⊙	WALK LIGHT

PROJECT BENCHMARK "L":
X-CUT ON TOP OF ANCHOR BOLT AT BASE OF TRAFFIC SIGNAL MAST ON EAST SIDE OF CHESTNUT HILL AVE ELEVATION=150.46 (BOSTON CITY BASE)

PROJECT BENCHMARK "O":
BOX CUT SET ON NORTHWESTERLY CORNER OF CONCRETE GENERATOR PAD ADJACENT TO TRASH/RECYCLING AREA ELEVATION=158.42 (BOSTON CITY BASE)

PROJECT BENCHMARK "P":
BOX CUT SET ON SOUTHERLY CORNER OF CONCRETE PAD OPPOSITE THE WALKWAY BETWEEN BUILDINGS 1 AND 2 OF THE J.J. CARROLL APARTMENT COMPLEX ELEVATION=160.32 (BOSTON CITY BASE)

PROJECT BENCHMARK "O":
BOX CUT SET ON NORTHWESTERLY CORNER OF CONCRETE PAD AT ENTRANCE TO #18 LEDGEMERE ROAD (BUILDING NO. 5) ELEVATION=159.94 (BOSTON CITY BASE)

PROJECT BENCHMARK "R":
BOX CUT SET ON CORNER OF WESTERLY END OF CONCRETE RETAINING WALL BETWEEN 132 CHESTNUT HILL AVE AND BUILDING NO. 4 OF THE J.J. CARROLL APARTMENT COMPLEX ELEVATION=154.15 (BOSTON CITY BASE)

TRAVERSE POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
136	6189.2332	4511.9270	153.56	MN-SET
137	6087.7879	4790.7589	161.59	RBP-SET
138	5753.9597	4674.7980	158.13	RBP-SET
142	5855.3069	4452.9528	148.46	MN-SET
143	5999.9423	4544.1001	155.74	RBP-SET

PARCEL DATA	
ASSESSOR'S PARCEL ID#: 2102250001	
CURRENT OWNER OF RECORD: BOSTON HOUSING AUTHORITY	
DEED REFERENCE: BK. 7735 PG. 64	
PLAN REFERENCE:	
TOTAL AREA:	

- NOTES:**
- IMPROVEMENTS SHOWN OUTSIDE THE LIMIT OF SURVEY ARE SHOWN PER PLAN ENTITLED "AS-BUILT SURVEY, 132 CHESTNUT HILL AVE", PREPARED BY WELCH ASSOCIATES LAND SURVEYORS, INC. DATED JUNE 24, 2019.
 - ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON THE FOLLOWING BENCHMARK: SEWER INVERT IN MANHOLE AT STATION 9+95.13 AS SHOWN ON SEWER AS-BUILT PLAN AND PROFILE TITLED "WALLINGFORD ROAD BRIGGTON SHEET 1" DATED JAN. 1904 SUPPLIED BY BOSTON WATER AND SEWER COMMISSION. ELEVATION=153.76 DATUM: BOSTON CITY BASE.
 - COORDINATES SHOWN ON THIS SURVEY ARE BASED ON AN ASSUMED COORDINATE SYSTEM.
 - UNDERGROUND UTILITY LOCATIONS SHOWN HEREON ARE TAKEN FROM AVAILABLE RECORD UTILITY PLANS AND FIELD INFORMATION AND ARE APPROXIMATE ONLY. CONTACT DIG-SAFE BEFORE PLANNING ANY CONSTRUCTION. CONTACT BOSTON FIRE DEPARTMENT FOR INFORMATION REGARDING EXISTENCE/STATUS OF UNDERGROUND STORAGE TANKS.
 - LIMITED RECORD UTILITY PLANS WERE FOUND SHOWING LOCATIONS OF UNDERGROUND ELECTRIC LINES SERVING LIGHT POLES ON THE ICHS CAMPUS.
 - INVERTS, PIPE SIZES, AND PIPE CLASSIFICATIONS FOR SANITARY SEWER AND STORM DRAIN SYSTEMS, AS SHOWN HEREON, WERE DETERMINED BY INSPECTION AND MEASUREMENTS PERFORMED AT GROUND SURFACE LEVEL (STRUCTURES WERE NOT PHYSICALLY ENTERED). THE RESULTS OF THE INSPECTIONS AND MEASUREMENTS MAY VARY FROM ACTUAL CONDITIONS AS COULD BE DETERMINED BY EXCAVATION OR USE OF CONFINED SPACE ENTRY PERSONNEL AND/OR EQUIPMENT.
 - CIRCLED LOT NUMBERS ARE CITY OF BOSTON ASSESSOR'S PARCEL ID NUMBERS.
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PROGRESS
10-17-19

DATE

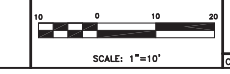
PAMELA M. WELCH AS AGENT FOR WELCH ASSOCIATES LAND SURVEYORS, INC.
REGISTRATION NUMBER 36129

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SHEET 1 OF 3

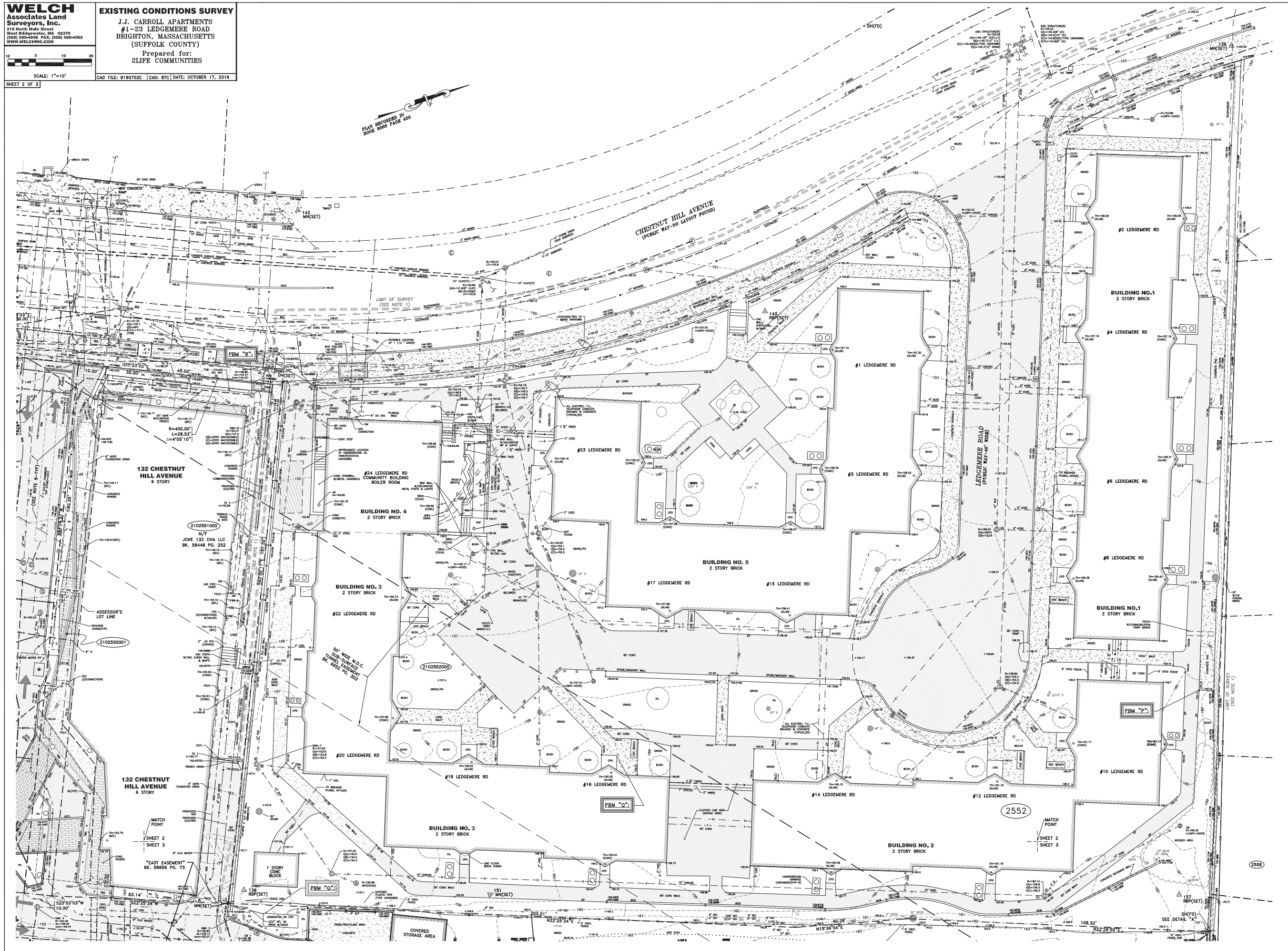
WELCH
Associates Land
Surveyors, Inc.
210 North Main Street
West Bridgewater, MA 02379
(508) 569-8500 FAX: (508) 569-0962
WWW.WELCHINC.COM

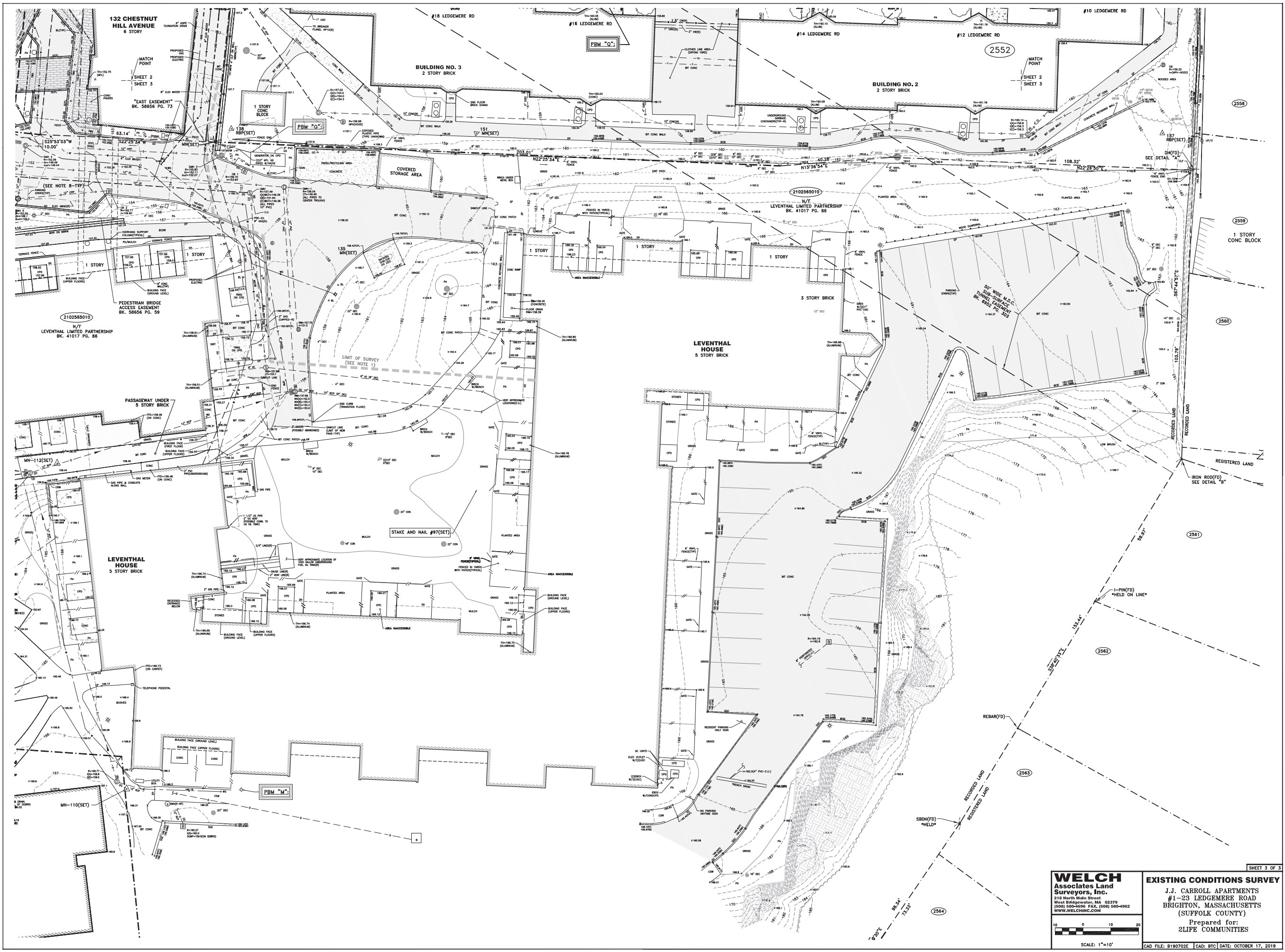
EXISTING CONDITIONS SURVEY
J.J. CARROLL APARTMENTS
#1-23 LEDGEMERE ROAD
BRIGGTON, MASSACHUSETTS
(SUFFOLK COUNTY)
Prepared for:
2LIFE COMMUNITIES



CAD FILE: B190702E CAD: BTC DATE: OCTOBER 17, 2019

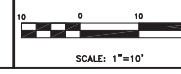
PLAN RECORDED IN
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WELCH
Associates Land
Surveyors, Inc.
 210 North Main Street
 West Bridgewater, MA 02379
 (508) 559-6500 FAX: (508) 580-4962
 WWW.WELCHINC.COM

EXISTING CONDITIONS SURVEY
 J.J. CARROLL APARTMENTS
 #1-23 LEDGEMERE ROAD
 BRIGHTON, MASSACHUSETTS
 (SUFFOLK COUNTY)
 Prepared for:
 2LIFE COMMUNITIES



CAD FILE: B190702E CAD: BTIC DATE: OCTOBER 17, 2019

Appendix B

Preliminary Energy Model

PRELIMINARY ENERGY MODEL REPORT

Energy Model

To support the project's sustainability goals, Petersen Engineering conducted two analyses on the proposed schematic design. The first analysis provided estimates of annual electricity, gas, total energy consumption, and Energy Use Intensity. The second analysis explored the feasibility of Passive House certification. Both analyses will be updated throughout the design process, along with financial analyses to confirm with energy conservation measures are cost effective. As a long-term owner and property manager with utilities included in rents, 2Life has a vested interest in life-cycle costs in addition to its goals of thermal comfort and resiliency to support our residents.

Estimated Annual Energy Use

The energy model results summarized in the below table reveal a high performing building with an energy usage intensity of 31.7kBTU/yr/sf. The DOE estimated ASHRAE 90.1 - 2013 national EUI for mid-rise apartments is 43.9kBTU/yr/sf resulting in a project reduction improvement of 38%. The required stretch code for this project is 10% better than ASHRAE 90.1 – 2013 which this project will easily meet. In addition, the project is estimating a minimum of 19 points for the LEED BD+C Multifamily Midrise Annual Energy Use credit.

Total Electricity (kWh/yr)	Total Gas (therms/yr)	Total Energy Consumption (kWh/yr)	EUI (kBTU/yr/sf)
883,076	18,967	1,438,815	31.7

Model Methodology and Assumptions

The model was based on a preliminary Sketchup massing model of the project received from MASS Design Group on Tuesday 9/24. Petersen Engineering placed windows on this model to approximate 20 to 25% glazing area, then imported the model to WUFI Passive. The following assumptions and inputs were used to generate the energy model. 143 apartments were assumed, with 120 one-bedroom units and 23 two-bedroom units assumed.

Assemblies:

- ◆ Air infiltration: 0.06 CFM/SF envelope area @ 50 Pa
- ◆ Exterior Walls: R-30
- ◆ Roof: R-40

- ◆ Vinyl-Frame Windows: U-0.2 (R-5), SHGC: 0.32

Internal and Miscellaneous Electrical Loads:

- ◆ PHIUS defaults used for appliances.
- ◆ Electric exhaust clothes dryers.
- ◆ PHIUS multifamily calculator used for lighting and miscellaneous electric loads.
- ◆ (Qty. 4) elevators, 1,900 kWh/year/elevator
- ◆ 10% reduction in common area lighting for occupancy sensors

Ventilation:

- ◆ Qty. 5 central energy recovery ventilators (ERVs)
- ◆ Sensible recovery efficiency 80%
- ◆ Humidity recovery efficiency 40% (PHIUS default)
- ◆ Fan energy 0.6W/CFM
- ◆ Enthalpy-controlled bypass economizers

VRF System:

- ◆ AHRI ratings for Mitsubishi PURY-P120
- ◆ COP: 2.3 @ 17/°F
- ◆ COP: 3.4 @ 47/°F
- ◆ IEER: 18.2

Domestic Hot Water:

Two central plants were assumed, one on either end of the buildings, to minimize horizontal distribution piping between building “pods”.

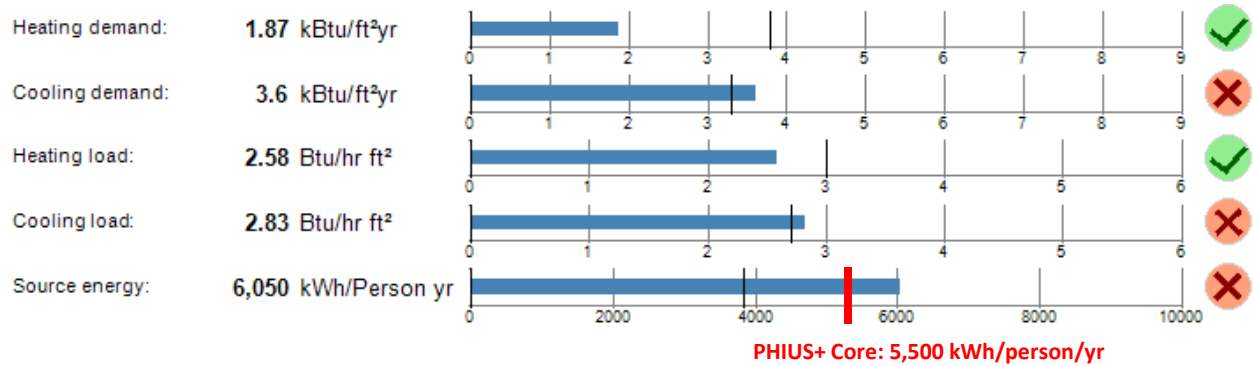
- ◆ Central gas-fired water heaters (96% efficiency)
- ◆ (Qty. 4) 120-gallon domestic hot water tanks

Notes:

Exterior corridor / common connector spaces are assumed at 20-25% glazing area. These spaces have been discussed as having a higher glazing percentage to take advantage of natural lighting/daylighting. The higher glazing percentage will result in higher cooling demand and cooling load values.

Passive House Model Results

The WUFI model indicated that heating demand and head load are within the range allowed for Passive House certification. This preliminary analysis suggested that cooling demand, cooling load, and source energy may exceed the thresholds for Passive House certification. The source energy criterion for PHIUS+ Core certification (5,500 kWh/person/year) is superimposed on the model results above it does not display on the WUFI Passive results. Source energy calculations use the occupancy assumptions incorporated in the WUFI model.



As with most multifamily projects in Climate Zone 5A, annual cooling demand is the most stringent Passive House criterion, in conjunction with source energy. The team will explore strategies to reduce the cooling-related energy consumption. As with other energy conservation measures, the team will perform life-cycle cost analyses to determine which of these strategies to implement as the design progresses.

Appendix C

Climate Change Questionnaire

Boston Planning & Development Agency Climate Resiliency Report Summary



Submitted: 10/25/2019 15:01:10

A.1 - Project Information

Project Name:	JJ Carroll Redevelopment		
Project Address:	130 Chestnut Hill Avenue		
Filing Type:	Initial (PNF, EPNF, NPC or other substantial filing)		
Filing Contact:	Geoff Starsiak	Epsilon Associates	gstarsiak@epsilonassociates.com 978.461.6276
Is MEPA approval required?	No	MEPA date:	

A.2 - Project Team

Owner / Developer:	2Life Communities
Architect:	MASS Design Group
Engineer:	Stantec
Sustainability / LEED:	New Ecology
Permitting:	Epsilon Associates, Inc.
Construction Management:	TBD

A.3 - Project Description and Design Conditions

List the principal Building Uses:	Residential
List the First Floor Uses:	Lobby, Non-residential
List any Critical Site Infrastructure and or Building Uses:	Senior Housing

Site and Building:

Site Area (SF):	81078	Building Area (SF):	180000
Building Height (Ft):	69.67	Building Height (Stories):	6
Existing Site Elevation – Low (Ft BCB):	151	Existing Site Elevation – High (Ft BCB):	160
Proposed Site Elevation – Low (Ft BCB):	151	Proposed Site Elevation – High (Ft BCB):	160
Proposed First Floor Elevation (Ft BCB):	153	Below grade spaces/levels (#):	0

Article 37 Green Building:

LEED Version - Rating System:	V4 Multifamily Midrise	LEED Certification:	No
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Boston Planning & Development Agency Climate Resiliency Report Summary



Proposed LEED rating: **Silver** Proposed LEED point score (Pts.): **58**

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:	40	Exposed Floor:	30
Foundation Wall:	10	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:	N/A	Wall & Spandrel Assembly Value:	
Area of Framed & Insulated / Standard Wall:	75	Wall Value:	30
Area of Vision Window:	25	Window Glazing Assembly Value:	0.2
		Window Glazing SHGC:	0.32
Area of Doors:	0	Door Assembly Value:	N/A

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined	Energy loads were determine using eQuest modeling based on preliminary plan drawing and system configurations that incorporate passive house design strategies. The design still needs to be further developed and parameters finalized		
Annual Electric (kWh):	883076	Peak Electric (kW):	650
Annual Heating (MMbtu/hr):	140	Peak Heating (MMbtu):	0.57
Annual Cooling (Tons/hr):	135	Peak Cooling (Tons):	45
Energy Use - Below ASHRAE 90.1 - 2013 (%):	30	Have the local utilities reviewed the building energy performance?:	No
Energy Use - Below Mass. Code (%):		Energy Use Intensity (kBtu/SF):	31.7

Back-up / Emergency Power System

Electrical Generation Output (kW):	150	Number of Power Units:	1
System Type (kW):		Fuel Source:	diesel

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

Electric (kW):	100	Heating (MMbtu/hr):	0.05
		Cooling (Tons/hr):	5

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): 411

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

Energy efficiency will be a driving factor in building design. The building will be modeled early in the design to allow the energy model to inform architects' and engineers' decisions. High performance envelope details and systems are planned.

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

The project will include a high-performance building envelope, and the development team is studying measures to improve efficiency such as Passive House standards.

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

High efficiency mechanical equipment.

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

The proponent is studying the incorporation of solar PV and solar thermal domestic hot water.

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

No area or district scale energy systems are available at the Project site.

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

The Project will work with Eversource and MassSave to determine what programs and incentives will be available for the Project.

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 gas fired ventilation and domestic hot water systems are centralized on the roof and main mechanical room allowing simplified replacement of non-gas fired equipment opposed to a non-centralized approach.

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.):	7	Temperature Range - High (Deg.):	91
Annual Heating Degree Days:	5512	Annual Cooling Degree Days	776

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

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

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

The building will include high-albedo rooftops and new landscaping will be provided around 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:

The team is studying the feasibility of Passive House design certification which includes continuous insulation, minimal thermal bridges, and airtight construction resulting in minimal temperature swings due to outside conditions

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

The Owner will implement an emergency preparedness plan for use by building occupants and property managers to improve emergency response with a plan approach.

D - Extreme Precipitation Events

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

D.1 – Extreme Precipitation - Design Conditions

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

6

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

The project includes green roofs and will include measures to strive to infiltrate 1.25" of stormwater from a 24-hour storm event.

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):

On-site storm water retention capacity increases and green roofs will be explored for future accommodation of more significant rain events.

E – Sea Level Rise and Storms

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

Is any portion of the site in a FEMA Special Flood Hazard Area?

No

What Zone:

What is the current FEMA SFHA Zone Base Flood Elevation for the site (Ft BCB)?

Is any portion of the site in the BPDA Sea Level Rise Flood Hazard Area (see [SLR-FHA online map](#))?

No

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

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

Proposed projects should identify immediate and future adaptation strategies for managing the flooding scenario represented by the Sea Level Rise Flood Hazard Area (SLR-FHA), which includes 3.2' of sea level rise above 2013 tide levels,

an additional 2.5” to account for subsidence, and the 1% Annual Chance Flood. After using the SLR-FHA to identify a project’s Sea Level Rise Base Flood Elevation, proponents should calculate the Sea Level Rise Design Flood Elevation by adding 12” of freeboard for buildings, and 24” of freeboard for critical facilities and infrastructure and any ground floor residential units.

What is the Sea Level Rise -
Base Flood Elevation for the
site (Ft BCB)?

What is the Sea Level Rise -
Design Flood Elevation for the
site (Ft BCB)?

First Floor Elevation (Ft BCB):

What are the Site Elevations at
Building (Ft BCB)?

What is the Accessible Route Elevation
(Ft BCB)?

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

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

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

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

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

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

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

Thank you for completing the Boston Climate Change Checklist!

Boston Planning & Development Agency
Climate Resiliency Report Summary



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

Appendix D

Accessibility Checklist and Graphics

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 BPDA 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%20200114_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.

Article 80 | ACCESSIBILTY CHECKLIST

1. Project Information: <i>If this is a multi-phased or multi-building project, fill out a separate Checklist for each phase/building.</i>			
Project Name:	J.J. Carroll Redevelopment		
Primary Project Address:	130 Chestnut Hill Avenue		
Total Number of Phases/Buildings:	1 Building		
Primary Contact (Name / Title / Company / Email / Phone):	Rachel Belanger, Project Manager, 2Life Communities, rbelanger@2lifecommunities.org, 617-912-8464		
Owner / Developer:	2Life Communities		
Architect:	MASS Design Group		
Civil Engineer:	Stantec		
Landscape Architect:	Stantec		
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)? <i>If yes</i> , identify and explain.	None anticipated		
2. Building Classification and Description: <i>This section identifies preliminary construction information about the project including size and uses.</i>			
What are the dimensions of the project?			
Site Area:	81,078 SF	Building Area:	180,000 GSF
Building Height:	69'8"	Number of Stories:	6 Flrs.
First Floor Elevation:	153 (aligned with existing sidewalk)	Is there below grade space:	No

Article 80 | ACCESSIBILITY CHECKLIST

What is the Construction Type? (Select most appropriate type)				
	Wood Frame w/ type I podium	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:	PACE Center, Amenity Space, Commercial, Enclosed Parking			
<p>3. Assessment of Existing Infrastructure for Accessibility: <i>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.</i></p>				
Provide a description of the neighborhood where this development is located and its identifying topographical characteristics:	The neighborhood surrounding the site is mostly residential with some commercial space on Chestnut Hill Avenue. The terrain is hilly. On the west and south sides of the site is a senior housing complex owned by the Proponent.			
List the surrounding accessible MBTA transit lines and their proximity to development site: commuter rail / subway stations, bus stops:	The site is adjacent to a bus stop serving bus route 86, a quarter mile from Chiswick Road Green Line Station, and less than a quarter mile from a stop serving the 501 Downtown Express bus route.			
List the surrounding institutions: hospitals, public housing, elderly and disabled housing developments, educational facilities, others:	Rabbi Shimon Miara, Mohel of New England, Yusuf Mosque, American Buddhist Shim Gum Do Association, Alexander Hamilton School, St. Elizabeth Medical Center, 2Life Communities Brighton Complex			
List the surrounding government buildings: libraries, community centers, recreational facilities, and other related facilities:	Joyce Playground, Theresa Hynes Park, Rabbi Joseph Shalom Shubow Park, Brighton Branch Library			
<p>4. Surrounding Site Conditions – Existing: <i>This section identifies current condition of the sidewalks and pedestrian ramps at the development site.</i></p>				

Article 80 | ACCESSIBILITY CHECKLIST

<p>Is the development site within a historic district? If yes, identify which district:</p>	<p>No</p>
<p>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:</p>	<p>Yes; Existing sidewalks are in fair condition, however the accessible route from the street into the site requires navigating slopes up to 1:10. Accessible unit on site is accessed via a ramp. Slope on the ramp exceeds 1:12.</p>
<p>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:</p>	<p>Existing sidewalks and ramps at the interior of the site will all be removed. Sidewalks along Chestnut Hill Avenue are to remain and appear to be in compliance. Curb cuts at Ledgemere Road do not have detectable warnings, however these will be removed and replaced, as the road is being replaced with a new access drive.</p>
<p>5. Surrounding Site Conditions – Proposed</p> <p><i>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.</i></p>	
<p>Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? If yes, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, or Boulevard.</p>	<p>Sidewalk at Chestnut Hill Avenue is to remain. Supplemental sidewalk that will be needed where Ledgemere road is being removed will match the existing Chestnut Hill Avenue sidewalk (neighborhood connector) for continuity.</p>
<p>What are the total dimensions and slopes of the proposed sidewalks? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone:</p>	<p>Sidewalk on Chestnut Hill Avenue is about 10' wide. Supplemental sidewalk will match this dimension. At the new access drive, the vehicular curb cut will be tabled to allow for at-grade crossing, at which point the width of sidewalk will neck-down to 7'. Sidewalks throughout the site vary in width, but are 5' at a minimum. Slopes on proposed city sidewalks follow the slope of Chestnut Hill Avenue. Cross slopes on proposed sidewalks are less than 2%.</p>
<p>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?</p>	<p>Proposed materials within the right-of-way will be cement concrete and granite curbing to match the existing, and per City of Boston standards. Proposed materials on-site vary, but include bituminous concrete at the road, along with concrete, stamped concrete, concrete unit pavers, and resilient surfacing in pedestrian areas.</p>

Article 80 | ACCESSIBILITY CHECKLIST

<p>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?</p>	<p>A relocated bus stop and Bluebikes station will be adjacent to the right-of-way, but not in it. Clearance adjacent to these amenities will be 10'. Any café furnishings will not be placed in the pedestrian right-of-way.</p>
<p>If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the Public Improvement Commission (PIC)?</p>	<p>N/A</p>
<p>Will any portion of the Project be going through the PIC? If yes, identify PIC actions and provide details.</p>	<p>Yes, discontinuance of Ledgemere Road and other sidewalk-related actions, including supplemental concrete sidewalk and granite curbing to match existing.</p>
<p>6. Accessible Parking: <i>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.</i></p>	
<p>What is the total number of parking spaces provided at the development site? Will these be in a parking lot or garage?</p>	<p>70 total spaces 41 in enclosed garage 29 at surface</p>
<p>What is the total number of accessible spaces provided at the development site? How many of these are “Van Accessible” spaces with an 8 foot access aisle?</p>	<p>6 accessible spaces provided 2 van accessible in garage</p>
<p>Will any on-street accessible parking spaces be required? If yes, has the proponent contacted the Commission for Persons with Disabilities regarding this need?</p>	<p>On-street accessible parking spaces have not been anticipated as a need for this Project.</p>
<p>Where is the accessible visitor parking located?</p>	<p>Off-street accessed via new driveway near the northern edge.</p>
<p>Has a drop-off area been identified? If yes, will it be accessible?</p>	<p>Yes, the development site will feature drop-off areas, one for the residential entrance and one for PACE, both of which will be accessible.</p>
<p>7. Circulation and Accessible Routes: <i>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.</i></p>	

Article 80 | ACCESSIBILTY CHECKLIST

Describe accessibility at each entryway: Example: Flush Condition, Stairs, Ramp, Lift or Elevator:	Each entry will have a flush condition where it meets the exterior.
Are the accessible entrances and standard entrance integrated? If yes, describe. If no, what is the reason?	Yes, they are integrated.
If project is subject to Large Project Review/Institutional Master Plan, describe the accessible routes way-finding / signage package.	The wayfinding package will be developed as the design is finalized.
<p>8. Accessible Units (Group 2) and Guestrooms: (If applicable) <i>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.</i></p>	
What is the total number of proposed housing units or hotel rooms for the development?	144
If a residential development, how many units are for sale? How many are for rent? What is the breakdown of market value units vs. IDP (Inclusionary Development Policy) units?	All 144 will be income restricted affordable housing
If a residential development, how many accessible Group 2 units are being proposed?	8 units will be Group 2
If a residential development, how many accessible Group 2 units will also be IDP units? If none, describe reason.	All 8 Group 2 units will be affordable
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

Article 80 | ACCESSIBILTY CHECKLIST

<p>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.</p>	<p>No, all units will be barrier free.</p>
<p>Are there interior elevators, ramps or lifts located in the development for access around architectural barriers and/or to separate floors? If yes, describe:</p>	<p>There will be an interior ramp to bridge an area with two difference floor elevation.</p>
<p>9. Community Impact: <i>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.</i></p>	
<p>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?</p>	<p>Mitigation measures will be determined through consultation with the BPDA and IAG.</p>
<p>What inclusion elements does this development provide for persons with disabilities in common social and open spaces? Example: Indoor seating and TVs in common rooms; outdoor seating and barbeque grills in yard. Will all of these spaces and features provide accessibility?</p>	<p>All indoor and outdoor amenity features will be considered with universal access in mind. The Project is age-restricted housing and as such, the majority of the population has mobility challenges. As a result, all of the common spaces will provide accessibility.</p>
<p>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.</p>	<p>Yes, common restrooms will be single stall ADA-compliant and designated as family/companion.</p>
<p>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?</p>	<p>No</p>

Article 80 | ACCESSIBILITY CHECKLIST

<p>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?</p>	<p>No</p>
<p>10. Attachments <i>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.</i></p>	
<p>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.</p>	
<p>Provide a diagram of the accessible route connections through the site, including distances.</p>	
<p>Provide a diagram the accessible route to any roof decks or outdoor courtyard space? (if applicable)</p>	
<p>Provide a plan and diagram of the accessible Group 2 units, including locations and route from accessible entry.</p>	
<p>Provide any additional drawings, diagrams, photos, or any other material that describes the inclusive and accessible elements of this project.</p> <ul style="list-style-type: none"> • • • • 	

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.

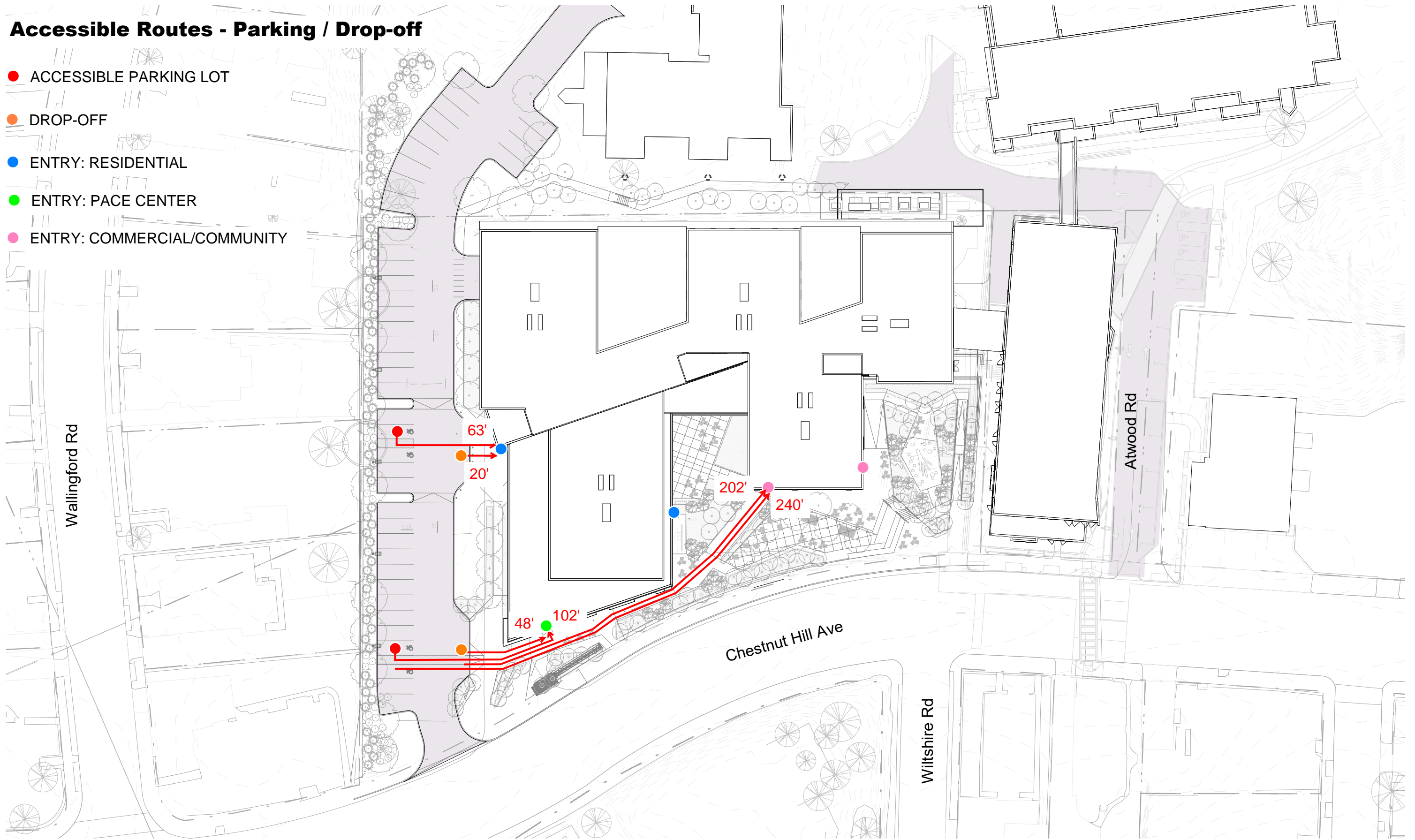
Architectural Access staff can be reached at:

Article 80 | ACCESSIBILTY CHECKLIST

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

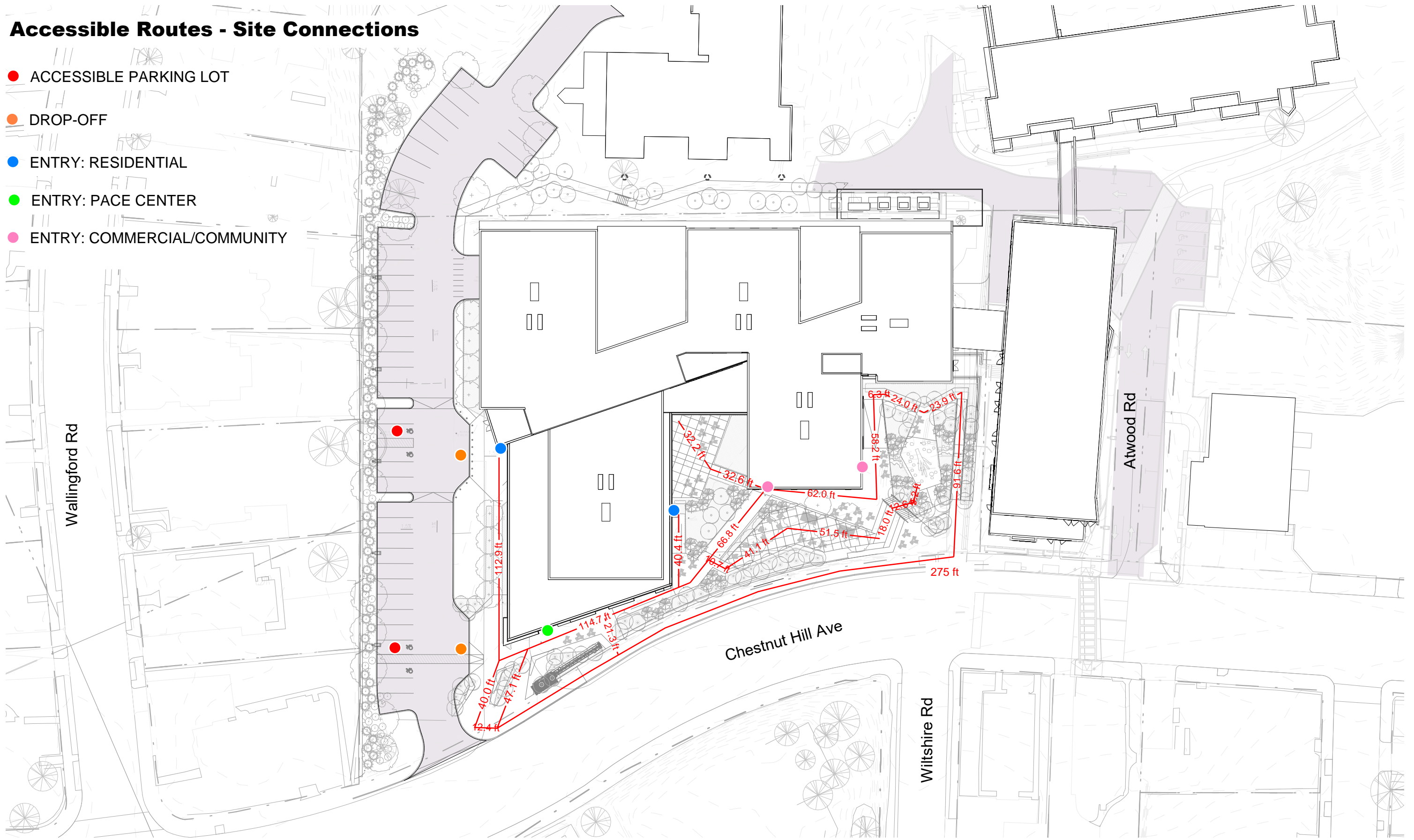
Accessible Routes - Parking / Drop-off

- ACCESSIBLE PARKING LOT
- DROP-OFF
- ENTRY: RESIDENTIAL
- ENTRY: PACE CENTER
- ENTRY: COMMERCIAL/COMMUNITY



Accessible Routes - Site Connections

- ACCESSIBLE PARKING LOT
- DROP-OFF
- ENTRY: RESIDENTIAL
- ENTRY: PACE CENTER
- ENTRY: COMMERCIAL/COMMUNITY



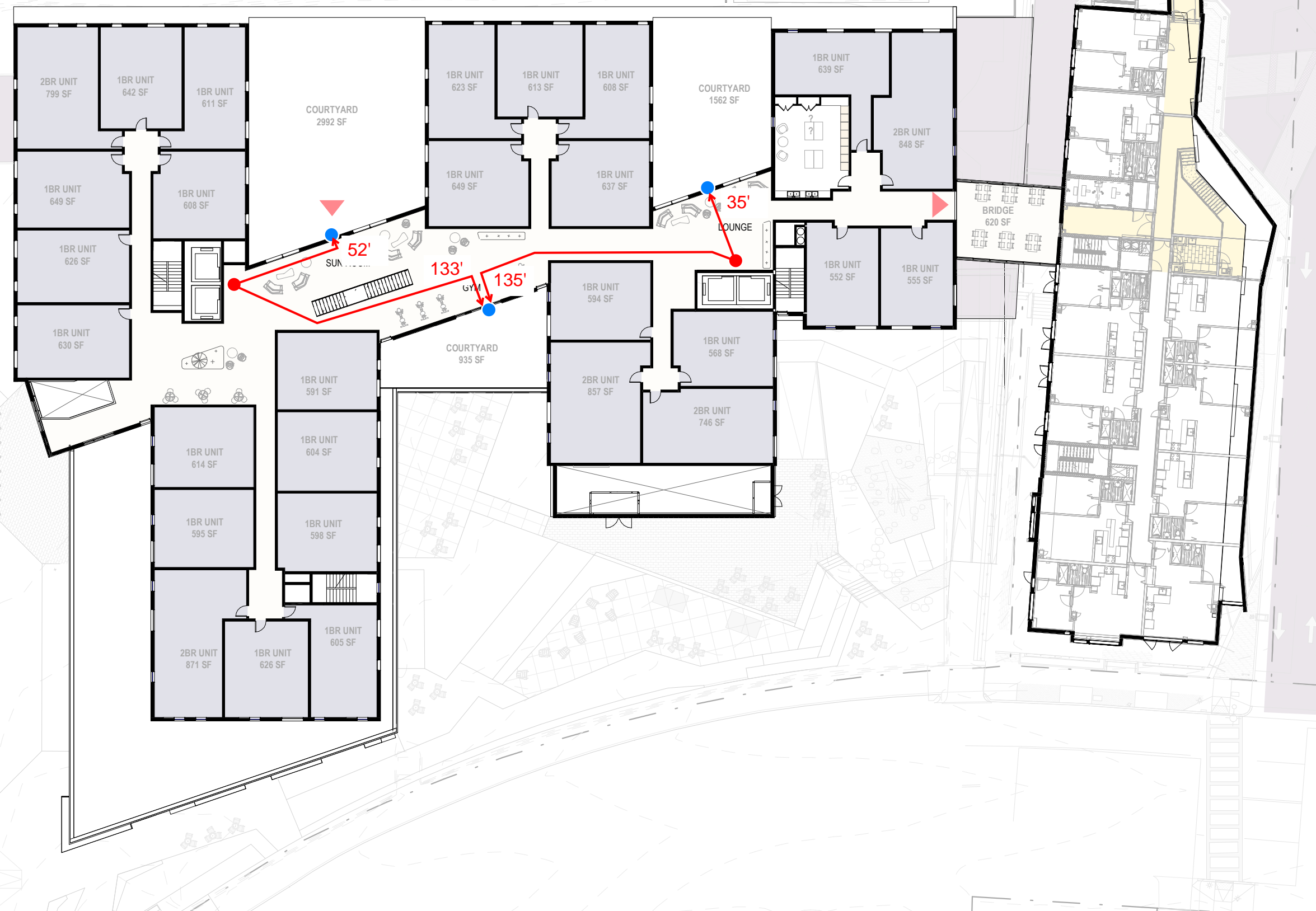
Accessible Routes - Courtyards

● ELEVATOR

● ACCESS TO COURTYARD

NOTE: ACCESSIBLE GROUP 2 UNITS WILL BE DISTRIBUTED AMONG LEVELS AND AREAS. FOR MORE INFORMATION SEE 2 LIFE'S DESIGN GUIDELINES:

https://www.2lifecommunities.org/sites/default/files/2019-03/2Life_Design_Guide_lines_for_Agin_g_in_Community.pdf



Appendix E

Broadband Checklist

**Form Publisher
Template**

10/25/2019



FormPublisher

This is a simple template document automatically generated by Form Publisher.
Feel free to personalize it like any other Google Spreadsheet.

Questions list:

Project Name::

Project Address Primary: :

Project Address Additional: :

Project Contact (name / Title /
Company / email / phone): :

Expected completion date:

Owner / Developer: 2Life Communities

Architect: MASS Design Group

Engineer (building systems):: Petersen Engineering, Inc.

Permitting:: Epsilon Associates, Inc.

Construction Management: TBD

Number of Points of Entry: one

Locations of Points of Entry: unknown

Quantity and size of conduits: (4) 4" conduits

Location where conduits
connect (e.g. building-owned
manhole, carrier-specific
manhole or stubbed at
property line) :

Stubbed at property line

Other information/comments: ^shared with other utilities

Do you plan to conduct a
utility site assessment to
identify where cabling is
located within the street? This
information can be helpful in
determining the locations of
POEs and telco rooms.
Please enter 'unknown' if
these decisions have not yet
been made or you are
presently unsure.:

Unknown

Number of risers: Two

Distance between risers (if
more than one): unknown

Dimensions of riser closets: unknown

Riser or conduit will reach to
top floor : Yes

Number and size of conduits
or sleeves within each riser:
(4) 4" conduit sleeves

Proximity to other utilities (e.g.
electrical, heating): unknown

Other information/comments: ^shared with other utilities

What is the size of the
telecom room?: Minimum of 8' x 8'

Describe the electrical
capacity of the telecom room
(i.e. # and size of electrical
circuits): (4) 20 amp, 120 volt
dedicated circuits

Will the telecom room be
located in an area of the
building containing one or
more load bearing walls?:

Unknown

Will the telecom room be
climate controlled? : Yes

If the building is within a flood-prone geographic area, will the telecom equipment will be located above the floodplain?:	Unknown			
Will the telecom room be located on a floor where water or other liquid storage is present?:	Unknown			
Will the telecom room contain a flood drain?:	No			
Will the telecom room be single use (telecom only) or shared with other utilities?:				
Other information/comments:	^shared with other utilities			
Will building/developer supply common inside wiring to all floors of the building? :	Unknown			
If yes, what transmission medium (e.g. coax, fiber)? Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.:	unknown			
Is the building/developer providing wiring within each unit? :	Yes			
If yes, what transmission medium (e.g. coax, fiber)? Please enter 'unknown' if these decisions have not yet been made or you are presently unsure.:	unknown			
Will the building conduct any RF benchmark testing to assess cellular coverage?:	Unknown			
Will the building allocate any floor space for future in-building wireless solutions (DAS/small cell/booster equipment)?:	Unknown			
Will the building be providing an in-building solution (DAS/ Small cell/ booster)? :	Unknown			
If so, are you partnering with a carrier, neutral host provider, or self-installing?:				
Will you allow cellular providers to place equipment on the roof?:	Unknown			
Will you allow broadband providers (fixed wireless) to install equipment on the roof? :	Unknown			
Will you allow broadband providers (fixed wireless) to install equipment on the roof? :	Unknown			
Date contacted:				
Does Comcast intend to serve the building?:				
Transmission Medium:				
If no or unknown, why?:				
Date contacted:				
Does RCN intend to serve the building?:				
Transmission Medium:				
If no or unknown, why?:				
Date contacted:				
Does Verizon intend to serve the building?:				
Transmission Medium:				

If no or unknown, why?:				
Date contacted:				
Does netBlazr intend to serve the building?:				
Transmission Medium:				
If no or unknown, why?:				
Date contacted:				
Does WebPass intend to serve the building?:				
Transmission Medium:				
If no or unknown, why?:				
Date contacted:				
Does Starry intend to serve the building?:				
Transmission Medium:				
If no or unknown, why?:				
Do you plan to abstain from exclusivity agreements with broadband and cable providers? :				
Do you plan to make public to tenants and prospective tenants the list of broadband/cable providers who serve the building?:				

Appendix F

Smart Utilities Checklist



Boston Smart Utilities Checklist

Date Submitted:

10/28/2019 13:13:55

Submitted by:

GStarsiak@epsilonassociates.com

Background

The Smart Utilities Checklist will facilitate the Boston Smart Utilities Steering Committee's review of:

- a) compliance with the Smart Utilities Policy for Article 80 Development Review, which calls for the integration of five (5) Smart Utility Technologies (SUTs) into Article 80 developments
- b) integration of the Smart Utility Standards

More information about the Boston Smart Utilities Vision project, including the Smart Utilities Policy and Smart Utility Standards, is available at:

[www.http://bostonplans.org/smart-utilities](http://www.bostonplans.org/smart-utilities)

Note: Any documents submitted via email to manuel.esquivel@boston.gov will not be attached to the pdf form generated after submission, but are available upon request.

Part 1 - General Project Information

1.1 Project Name

J.J. Carroll Redevelopment

1.2 Project Address

130 Chestnut Hill Avenue

1.3 Building Size (square feet)

180000

**For a multi-building development, enter total development size (square feet)*

1.4 Filing Stage

Initial Filing (i.e., PNF)

1.5 Filing Contact Information

1.5a Name

Rachel Belanger



Boston Smart Utilities Checklist

1.5b Company	2Life Communities
1.5c E-mail	rbelanger@2lifecommunities.org
1.5d Phone Number	6179128464

1.6 Project Team

1.6a Project Owner/Developer	2Life Communities
1.6b Architect	MASS Design Group
1.6c Permitting	Epsilon Associates
1.6d Construction Management	TBD

Part 2 - District Energy Microgrids

Fill out this section if the proposed project's total development size is equal to or greater than 1.5 million square feet.

Note on submission requirements timeline:

Feasibility Assessment Part A should be submitted with PNF or any other initial filing.

Feasibility Assessment Part B should be submitted with any major filing during the Development Review stage (i.e., DPIR)

District Energy Microgrid Master Plan Part A should be submitted before submission of the Draft Board Memorandum by the BPDA Project Manager (Note: Draft Board Memorandums are due one month ahead of the BPDA Board meetings)

District Energy Microgrid Master Plan Part B should be submitted before applying for a Building Permit

Please email submission to manuel.esquivel@boston.gov

2.1 Consultant Assessing/Designing District Energy Microgrid (if applicable)

2.2 Latest document submitted



Boston Smart Utilities Checklist

2.3 Date of latest submission

2.4 Which of the following have you had engagement/review meetings with regarding District Energy Microgrids? (select all that apply)

2.5 What engagement meetings have you had with utilities and/or other agencies (i.e., MA DOER, MassCEC) regarding District Energy Microgrids? (Optional: include dates)

2.6 Additional Information

Part 3 - Telecommunications Utilidor

Fill out this section if the proposed project's total development size is equal to or greater than 1.5 million square feet OR if the project will include the construction of roadways equal to or greater than 0.5 miles in length.

Please submit a map/diagram highlighting the sections of the roads on the development area where a Telecom Utilidor will be installed, including access points to the Telecom Utilidor (i.e., manholes)

Please email submission to manuel.esquivel@boston.gov

3.1 Consultant Assessing/Designing Telecom Utilidor (if applicable)

3.2 Date Telecom Utilidor Map/Diagram was submitted

3.3 Dimensions of Telecom Utilidor (include units)

Boston Smart Utilities Checklist

3.3a Cross-section (i.e., diameter,
width X height)

3.3b Length

**3.4 Capacity of Telecom Utilidor (i.e.,
number of interducts, 2 inch (ID) pipes,
etc.)**

**3.5 Which of the following have you had
engagement/review meetings with
regarding the Telecom Utilidor? (select all
that apply)**

**3.6 What engagement meetings have you
had with utilities and/or other agencies
(i.e., State agencies) regarding the Telecom
Utilidor? (Optional: include dates)**

3.7 Additional Information

Part 4 - Green Infrastructure

Fill out this section if the proposed project's total development size is equal to or greater than 100,000 square feet.

Please submit a map/diagram highlighting where on the development Green Infrastructure will be installed.

Please email submission to manuel.esquivel@boston.gov

**4.1 Consultant Assessing/Designing Green
Infrastructure (if applicable)**

Stantec

**4.2 Date Green Infrastructure
Map/Diagram was submitted**

10/28/2019

Boston Smart Utilities Checklist

4.3 Types of Green Infrastructure included in the project (select all that apply)

Underground detention, overflow inlets

4.4 Total impervious area of the development (in square inches)

10923724

4.5 Volume of stormwater that will be retained (in cubic inches)*

13654656

**Note: Should equal to at least "Total impervious area (entered in section 4.4)" times "1.25 inches"*

4.6 Which of the following have you had engagement/review meetings with regarding Green Infrastructure? (select all that apply)

4.7 What engagement meetings have you had with utilities and/or other agencies (i.e., State agencies) regarding Green Infrastructure? (Optional: include dates)

4.8 Additional Information

Part 5 - Adaptive Signal Technology (AST)

Fill out this section if as part of your project BTM will require you to install new traffic signals or make significant improvements to the existing signal system.

Please submit a map/diagram highlighting the context of AST around the proposed development area, as well as any areas within the development where new traffic signals will be installed or where significant improvements to traffic signals will be made.

Please email submission to manuel.esquivel@boston.gov

5.1 Consultant Assessing/Designing Adaptive Signal Technology (if applicable)

Boston Smart Utilities Checklist

5.2 Date AST Map/Diagram was submitted

5.3 Describe how the AST system will benefit/impact the following transportation modes

5.3a Pedestrians

5.3b Bicycles

5.3c Buses and other Public Transportation

5.3d Other Motorized Vehicles

5.4 Describe the components of the AST system (including system design and components)

5.5 Which of the following have you had engagement/review meetings with regarding AST? (select all that apply)

5.6 What engagement meetings have you had with utilities and/or other agencies (i.e., State agencies) regarding AST? (Optional: include dates)

5.7 Additional Information

Part 6 - Smart Street Lights

Fill out this section if as part of your project PWD and PIC will require you to install new street lights or make significant improvements to the existing street light system.

Please submit a map/diagram highlighting where new street lights will be installed or where improvements to street lights will be made.

Please email submission to manuel.esquivel@boston.gov

Boston Smart Utilities Checklist

6.1 Consultant Assessing/Designing Smart Street Lights (if applicable)

New street lights are not currently anticipated

6.2 Date Smart Street Lights Map/Diagram was submitted

6.3 Which of the following have you had engagement/review meetings with regarding Smart Street Lights? (select all that apply)

6.4 What engagement meetings have you had with utilities and/or other agencies (i.e., State agencies) regarding Smart Street Lights? (Optional: include dates)

6.5 Additional Information

Part 7 - Smart Utility Standards

The Smart Utility Standards set forth guidelines for planning and integration of SUTs with existing utility infrastructure in existing or new streets, including cross-section, lateral, and intersection diagrams. The Smart Utility Standards are intended to serve as guidelines for developers, architects, engineers, and utility providers for planning, designing, and locating utilities. The Smart Utility Standards will serve as the baseline for discussions on any deviations from the standards needed/proposed for any given utility infrastructure.

Please submit typical below and above grade cross section diagrams of all utility infrastructure in the proposed development area (including infrastructure related to the applicable SUTs).

Please submit typical below and above grade lateral diagrams of all utility infrastructure in the proposed development area (including infrastructure related to the applicable SUTs).

Please email submission to manuel.esquivel@boston.gov



Boston Smart Utilities Checklist

7.1 Date Cross Section Diagram(s) was submitted

10/28/2019

7.2 Date Lateral Diagram(s) was submitted

10/28/2019

7.3 Additional Information