Project Notification Form

SUBMITTED TO
Boston Redevelopment Authority
Boston, Massachusetts

SUBMITTED BY
Boston College
140 Commonwealth Avenue
Chestnut Hill, Massachusetts

December 22, 2014
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Chapter 1

PROJECT SUMMARY
CHAPTER 1: PROJECT SUMMARY

1.1 PROJECT IDENTIFICATION

Project Name: 2000 Commonwealth Avenue Residence Hall
Address/Location: 2000 Commonwealth Avenue, Brighton, Massachusetts 02135
Assessor’s Parcel Number: 02464000

1.2 PROJECT SITE

Boston College (the “University”) is proposing to renovate the existing apartment building at 2000 Commonwealth Avenue for use as a student residence hall ("the Project"). The site is located on Commonwealth Avenue, just east of Wade Street and the Evergreen Cemetery, north of Chestnut Hill Driveway, the Chestnut Hill Reservoir and Department of Conservation and Recreation (“DCR”) parkland, and west of South Street (the “Site”). See Figure 1.1, Locus Plan and Figure 1-2, Aerial View of Existing Site. The Boston College Chestnut Hill Campus is located one third of a mile to the west of the Site. The Brighton Campus is located northwest of the Site across Commonwealth Avenue and west of Greycliff Road.

1.3 PROJECT SUMMARY

The Project is the renovation of an existing 287,920 gross square foot apartment building for use as a student residence hall. See Figure 1-3 Project Site Plan. The proposed student residence hall will house 540 students in a 182 1 bedroom and-2 bedroom apartments. The housing will accommodate Boston College junior and senior class students in University-controlled housing. The existing building also includes a 202 space parking garage currently used by the University. The renovations to the existing building include the following:

- Replace all exterior windows and sliding balcony doors;
- Upgrade 3 elevators;
- Restore concrete in parking garage and create bicycle storage;
- Replace carpet and paint dorm rooms, as needed;
Build new common areas, including a student lounge on the second and seventeenth floors;

Replace existing generator and boiler;

Renovate laundry rooms for handicap accessibility;

Remove existing gym on second floor and replace with 2 bedroom apartment;

Replace smoke alarms; and

Upgrade Internet network.

1.4 COMMUNITY PROCESS

The University is committed to continuing its public outreach with the Allston-Brighton Boston College Community Task Force. The Task Force is comprised of community representatives from various community and civic organizations in Allston and Brighton. The University has established ongoing communications with the community and has identified areas where the University and its neighbors can agree on ways to resolve issues. There have been multiple meetings to discuss the various projects approved in the Boston College Institutional Master Plan (“IMP”). The Task Force met on September 22, 2014 and was provided with an update on the new residence hall currently under construction at 2150 Commonwealth Avenue, as well as a brief overview of the 2000 Commonwealth Avenue project. The Task Force met again on October 20, 2014 and had a more detailed presentation and discussion about the Project. A tour of the building was also conducted on December 4, 2014 for the Task Force members, elected officials, and the community.

1.5 PUBLIC AND COMMUNITY BENEFITS

The Project includes the following public and community benefits:

- The Project will implement the second residence hall project approved in the Institutional Master Plan (IMP);

- In support of the housing goals stated in the IMP and in response to the community concerns expressed at the Task Force meetings, the Project will provide high quality University-controlled housing for 540 undergraduate students in 182 apartments, helping the University to satisfy the existing demand for student housing;

- The residence hall will be managed by the University, consistent with other residence halls, to provide enhanced security and student behavior management through Resident Advisors (15 total), a Resident Director, and a Resident Minister;
• This will foster positive community relations with the residents of adjacent buildings and the surrounding neighborhood;

• The Project will create a safer environment for students and the community by locking all balcony doors and providing additional security in the building; and

• The Project will create approximately 125-150 construction-related jobs and will stimulate the local and regional economies.

1.6 CONSISTENCY WITH THE INSTITUTIONAL MASTER PLAN

The mission of the Office of Residential Life is to foster an inclusive residential community that complements the academic mission of the University. In support of this goal, Boston College intends to increase the supply of undergraduate student housing to meet 100 percent of undergraduate demand. The IMP includes Proposed Institutional Projects comprising a net total of 940 new bed spaces for undergraduate housing. The University is committed to maintaining its undergraduate enrollment at approximately 9,000 students, and thus by adding 940 net new beds, the University will provide housing for 96% of those undergraduates seeking housing. The 2000 Commonwealth Avenue Residence Hall project was included in the IMP as a Proposed Institutional Project and thus is consistent with the IMP.
1.7 SUMMARY OF REQUIRED PERMITS AND APPROVALS

The following table is a list of approvals that may be required for the Project.

**Table 1-1: Anticipated Project Approvals**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td></td>
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</table>
| Boston Redevelopment Authority (“BRA”) | • Article 80B Large Project Review  
|                                       | • Certificate of Compliance with Article 80  
|                                       | • Certificate of Consistency with IMP              |
| Boston Civic Design Commission        | • Schematic Design Reviews/Recommendation           |
| Boston Transportation Department      | • Construction Management Plan                     |
| Inspectional Services Department      | • Building Permit  
|                                       | • Certificate of Occupancy                         |
| Aberdeen Architectural District       | • Certificate of Exemption                          |
| Commission                            |                                                    |
| Boston Parks Commission               | • Approval for Work in GPOD and Near Parkland       |
| MA Department of Conservation and    | • Access Permit (temporary construction use)        |
| Recreation                             |                                                    |
## 1.8 PROJECT TEAM

<table>
<thead>
<tr>
<th>Role</th>
<th>Organization</th>
<th>Address</th>
<th>Contact Information</th>
</tr>
</thead>
</table>
| Proponent                   | Trustees of Boston College             | 140 Commonwealth Avenue          | Thomas J. Keady, Jr. VP for Governmental and Community Affairs  
|                             |                                        | Chestnut Hill, MA 02467         | (617) 552-4787 thomas.keady@bc.edu                          |
| Planning and Permitting     | Fort Point Associates, Inc.            | 33 Union Street, 3rd Floor       | Jamie Fay President  
|                             |                                        | Boston, MA 02108                 | (617) 357-7044 x204 jfay@fpa-inc.com                        |
| Architect                   | DiMella Architects                     | 281 Summer Street, MA 02210      | Randy Kreie President  
|                             |                                        |                                  | (617) 426-5004 rkreie@dimellashaffer.com                     |
| Legal                       | Office of General Counsel              | Boston College                   | Joseph M. Herlihy General Counsel  
|                             |                                        | 140 Commonwealth Avenue         | (617) 552-2855 joseph.herlihy@bc.edu                        |
|                             |                                        | Chestnut Hill, MA 02467         |                                                            |
Aerial View of Existing Site

Source: Fort Point Associates, Inc., 2014; Bing, 2014
2000 Commonwealth Avenue Residence Hall

Project Site Plan

Source: DiMella Shaffer, 2014
Chapter 2

PROJECT DESCRIPTION
CHAPTER 2:  PROJECT DESCRIPTION

2.1 PROJECT SITE AND SURROUNDINGS

The 2000 Commonwealth Avenue Residence Hall Project ("the Project") is located on Commonwealth Avenue in Brighton. The existing building faces Commonwealth Avenue on the north and is located southeast of the 65 acre Brighton campus and east of the Chestnut Hill campus. The project site is surrounded by apartment buildings on the east and west, DCR parkland and the Chestnut Hill Reservoir to the south. See Figure 2-1 Oblique View of Existing Site; Figure 2-2, Existing Conditions and Figures 2-3, and 2-4 Existing Conditions Photographs.

2.2 PROPOSED PROJECT

The proposed residence hall will have 540 beds in a combination of 1-bedroom and 2-bedroom apartments. The Project includes renovations to the existing apartments and creation of new common areas on the second and seventeenth floors for student lounges and study space, as well as support space for laundry facilities and vending. The pool, currently located on the patio area at the rear of building off the second floor, will be removed or in-filled and no longer be available for use.

During the academic year, the outdoor patio area at the rear of the building will be available for use by student residents and will be programmed and monitored by the building’s residential life staff who will set expectations for the types of events or meetings held in the space, appropriate student behavior and acceptable noise levels. In an effort to provide some attenuation for the adjacent building at 1988 Commonwealth Avenue, the University is currently exploring the use of a natural buffer of potted plantings along the east edge of the patio deck closest to the building. Other measures that will assist with attenuation of noise and improve both resident and community safety will be the installation of new windows throughout the building that will be equipped with limiters to prevent windows from opening more than approximately six inches. Access to the balconies will be restricted by installing key locking mechanisms to prevent student access during the academic year.

Due to a need to accommodate requests for housing for academic conferences held on campus during the summer months, the University is planning to utilize this building for summer conferencing from approximately June 1st to the first week in August. Similar to the academic year, staff will set expectations with guests for use of the patio area and balconies, if made available, appropriate guest behavior, and acceptable noise levels during their visit.
The total area of the building which will have extensive renovations is only 39,715 square feet. There are no changes being made to the massing of the existing building. New windows and balcony doors will be installed on floors 2-17.

Table 2-1: Project Program

<table>
<thead>
<tr>
<th>Project Element</th>
<th>Approximate Dimension</th>
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<tbody>
<tr>
<td>Residential (existing area)</td>
<td>216,800 sf (gross)</td>
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<tr>
<td>Parking Garage (existing area)</td>
<td>71,120 sf (gross)</td>
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<tr>
<td>Existing Square Footage</td>
<td>287,920 sf (gross)</td>
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<tr>
<td>Residential alterations</td>
<td>37,615 sf (gross)</td>
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<tr>
<td>Parking Garage alterations</td>
<td>2,100 sf (gross)</td>
</tr>
<tr>
<td>Alterations Square Footage</td>
<td>39,715 sf (gross)</td>
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2.2.1 GROUND FLOOR USES

The program for the Project is focused on components of a residence hall to provide 540 beds in 182 apartments of student housing, as well as additional spaces that support this student housing occupancy. The first floor is comprised partially of the top of 3 levels of existing parking (2 of which are below grade) as well a lobby for the building that will provide security and an open stair to the second floor. New program elements include bike parking and furniture storage within the garage as well as other building infrastructure support functions for a new emergency generator. See Figure 2-5 Ground Floor Plan.

2.2.2 UPPER FLOOR USES

The second floor contains apartments for undergraduates as well as new common area lounges that will provide study space and meeting space for the residents. This floor will also provide spaces for the Resident Director office and management area as well as a small vending area. See Figure 2-6, Second Floor Plan.

Floors 3 through 16 are comprised of the existing apartments. The 17th floor will include the existing apartments as well as a new student lounge and common area designed for quiet and reflection. Two apartments will house a Resident Minister and a Resident Director. See Figure 2-7, Typical Upper Floor Plan and Figure 2-8, Seventeenth Floor Plan.
2.2.3 PARKING AND ACCESS

Currently the existing building provides 202 parking spaces available for Boston College use. The total number of parking spaces available will be reduced by 12 spaces to provide adequate space for bicycle storage, furniture storage and infrastructure improvements. Access to parking will continue through the drive on the eastern side of the building off Commonwealth Avenue with card access provided for security. Parking is available for Boston College faculty, staff, and a limited number of students who qualify for practicum placements. Parking will be made available and managed through the Boston College parking administration as currently managed.

Accessibility

The building will be required to be fully accessible in accordance with the Massachusetts Architectural Access Board (MAAB), with the exception of existing apartments that have been grandfathered. Ten apartments will be renovated to provide full accessibility. All new spaces (common areas, bathrooms, Resident Director Office, etc) will be accessible. Other areas to be modified include existing laundry rooms, existing egress stair handrails, and access to the pool terrace. The existing main building entrance is accessible and will remain unchanged.

2.2.4 BICYCLE ACCOMMODATION

Eighty-four secure, covered bicycle parking spaces will be provided for residents within the garage. These spaces will be accessed through card access from the door on the eastern side of the building. Twelve new bicycle rack spaces will be provided within the existing landscaped plaza area near the building entry for visitors to the building.

2.2.5 LANDSCAPING

The area available for landscaping is limited by the footprint of the building which covers the majority of the Site. Boston College will maintain the existing landscape in its current configuration, with the exception of the patio deck where the University is exploring the use of a natural buffer of potted plants along the eastern edge.

2.3 COMPLIANCE WITH BOSTON ZONING CODE

According to the City of Boston Zoning Districts Map 7A/7C for the Allston Brighton Neighborhood District, the Site is located within the Multifamily Residential Subdistrict 2. The Multifamily Residential Subdistricts were established to encourage medium density multifamily areas with a variety of allowed housing types. The Project would result in the conversion of an existing multifamily building to a dormitory use, an Institutional Use requiring approval through an Institutional Master Plan. The Boston College Institutional
Master Plan (IMP) was approved by the BRA in 2009 and the Boston Zoning Commission in 2009 as well. This Project was included in the IMP as a Proposed Institutional Project, and thus is consistent with the IMP. A recommendation for a map amendment to include the Site as part of the Boston College IMP Area Overlay District was approved by the Boston Redevelopment Authority on November 13, 2014. This recommendation for a map amendment was approved by the Zoning Commission on December 3, 2014.

2.3.1 GREENBELT PROTECTION OVERLAY DISTRICT

Commonwealth Avenue is designated in the Greenbelt Protection Overlay District (GPOD). As stated in Article 29 of the Boston Zoning Code, the purposes of the GPOD are to preserve and protect the amenities of the City of Boston; to preserve and enhance the air quality by protecting vegetation and open space along the City’s Greenbelt Roadways; to enhance and protect the scenic resources of the City; to protect the City’s Greenbelt Roadways from traffic congestion; and to abate serious and present safety concerns. The Project will respect the important qualities of the Commonwealth Avenue Greenbelt. The footprint of the building will not change and there will be no exterior additions. Consequently, there will be no impacts to the Greenbelt Protection Overlay District along Commonwealth Avenue. The University plans to maintain the existing landscaping in the planters in front of the building on Commonwealth Avenue. In addition, compliance with the GPOD goals will be achieved through the BRA design review and issuance of a Certificate of Consistency.

2.3.2 ARTICLE 37 – GREEN BUILDINGS

The scope of the Project does not align perfectly with the LEED rating systems, but the LEED 2009 for Existing Buildings: Operations and Maintenance was selected as the most appropriate checklist. The scope of the project is not intended to be a major renovation from the standpoint of systems or building envelope, but rather a conversion of functional issues to accommodate the new use as a residence hall. See Chapter 4 for more information on the energy and operational improvements the University plans to make as a result of this renovation project.
Brighton, Massachusetts

2000 Commonwealth Avenue Residence Hall

Figure 2-1

Oblique View of Existing Site

Source: Fort Point Associates, Inc., 2014
Figure 2-2

Existing Conditions

Source: Feldman Surveyors, 2007
View of the existing building looking southeast from Commonwealth Avenue

View of the existing building looking southwest from Commonwealth Avenue

Figure 2-3

Existing Conditions Photographs
Source: Fort Point Associates, Inc., 2014
View of existing entrance to the building as seen approaching from the east on Commonwealth Avenue

Existing hardscape features and interior lounge as seen from Commonwealth Avenue
Chapter 3

URBAN DESIGN
CHAPTER 3: URBAN DESIGN

3.1 INTRODUCTION

2000 Commonwealth Avenue is an existing 17-story building occupied since its completion in 1984 as an apartment building. The building faces onto Commonwealth Avenue on the North and DCR parkland on the South. Other apartment uses border the property on the East and West. See Figure 3-1 Project Site Plan and Figure 3-2, Neighborhood Context.

3.2 MASSING

The 17-story building is an “L” shape form with one leg parallel to Commonwealth Avenue and one leg extending to the parkland behind on its western side. This “L” rests on a single story base which provides a partial level of parking on the first floor and two below-grade levels of parking. Access to the parking is provided through a main entry overhead door facing the street on the northwest corner of the Site as well as a service overhead door on the eastern edge of the Site facing east. The top surface of this base, not occupied by the “L” portion, provides space for an outdoor common patio deck including a pool.

3.3 CHARACTER AND MATERIALS

The “L” configuration is comprised of brick panels and concrete horizontal banding at the floor lines as well as stacked windows and balconies providing a regimented stacked pattern. See Figure 3-3, Perspective Looking South. The first and second levels, while configured differently to accommodate the change of program are comprised of the same brick, concrete, and window materials as seen in the upper floors (See Figures 3-4 through 3-7, Building Elevations).

While there are no planned changes to the massing of the building, it is the intent, as part of this Project to provide new windows and balcony doors for floors 2-17. This change provides the opportunity to reconsider the operation, color, materials, and configuration of these window/door units. The intent is to provide new units that are lighter in color than the current units with spandrel glass in the lower portions rather than the dark brown panels that currently exist. Window operation will be modified from a sliding window configuration to a casement type window with limiters to provide fresh air to the units while minimizing the opening of these new windows. Screens will be provided on the interior to minimize the visual affect. Balcony doors will be replaced with new, more energy efficient doors and locks to prevent access to the balconies when occupied by the student population.

Other renovation to the exterior will include limited repairs of masonry, concrete, and sealants used on the exterior of the structure. The current entry/window system at the ground level as well as the curtain wall that runs vertically in the elevator lobbies above the entry will remain.
3.4 LANDSCAPE AND STREETSCAPE

The building sits near the street line with a majority of the building immediately fronting Commonwealth Avenue. A small landscape area runs between the building and the sidewalk along this section of the façade. To the east, a small paved plaza which provides access to the transformer for the building, which sits back from the street in a small screen enclosure. This plaza area also provides service access to the garage as well as egress from one fire stair and pool deck area during emergencies.

The entry to the building is within a slight setback from the street and consists of a small courtyard that will include new visitor bicycle parking for 12 bicycles as well as accessible van parking when required.

Parking garage entry and exit is provided by an access drive on the western side of the Site. This entry is intended to remain unchanged and is limited to vehicular traffic with access cards that will allow University parking within the building. No public parking will be provided at this site.
Figure 3-1
Project Site Plan
Source: DiMella Shaffer, 2014
North Elevation

Source: DiMella Shaffer, 2014
Figure 3-7
South Elevation
Source: DiMella Shaffer, 2014
Chapter 4

SUSTAINABILITY
CHAPTER 4: SUSTAINABILITY

4.1 SUSTAINABLE DESIGN

The scope of the Project does not align perfectly with the LEED rating systems, but the LEED 2009 for Existing Buildings: Operations & Maintenance was selected as the most-appropriate checklist. The Project’s scope is not intended to be a major renovation from the standpoint of systems or building envelope, but rather a conversion of functional issues to accommodate the new use of a residence hall. The Project will make many changes that positively affect the energy performance and operation of the building and provide many new sustainable features that may not necessarily fall neatly under a LEED credit. Significant energy and operational improvements are anticipated once the Project is complete and occupied as a residence hall. The following sections describe these features and other sustainable aspects of the Project.

4.1.1 IMPROVEMENTS TO DATE

Since its initial purchase in 2008, Boston College has made significant changes to 2000 Commonwealth Avenue to improve energy performance and sustainability. Mechanical changes include the replacement of the rooftop cooling towers to a more energy-efficient system. The rooftop air handlers were replaced with more energy-efficient equipment. A new roof was installed with additional insulation reducing heat loss/absorption at the roof level. As replacements are needed, units have been outfitted with Energy Star appliances and water-saving fixtures.

The building continues to operate a cogeneration plant that was installed in 2007 to supplement the heating system. The cogeneration plant provides 500 MBH of heat to the heating system, and helps alleviate the energy usage during peak loads. Windows, entry doors, and garage doors have been repaired or replaced to reduce infiltration and improve overall envelope efficiency.

4.1.2 BUILDING ENVELOPE IMPROVEMENTS

The proposed renovations include many improvements to the building’s envelope. Most notably, every unit’s exterior window and balcony door will be replaced with high performance windows, which will include 1 inch insulated glass, thermally broken frames and low E coatings to greatly improve energy performance and reduce infiltration. Each of these windows and doors will be limited in their ability to open beyond 6 inch (per Boston College's standard practice for residence halls). In order to make up this fresh air restriction, energy recovery units are being provided with new duct shafts to deliver additional fresh air to the units.
Additionally, repairs are being made over the entire exterior envelope to sealants and other areas of potential infiltration. Upon completion, a thorough inspection of the exterior façade will allow for repair of the façade to minimize points of air leakage.

### 4.1.3 ELECTRICAL SYSTEM IMPROVEMENTS

Where new lighting is provided, new LED fixtures will be installed reducing the overall energy lighting load. Additionally within the apartments, new LED lighting sources will be added to existing fixtures as part of the repairs to the units.

### 4.1.4 PLUMBING SYSTEM IMPROVEMENTS

The most significant use of water for this building comes from residents within the apartments themselves. It is the intent of Boston College to install low flow toilet fixtures and showerheads for any units undergoing major renovations, as part of this project and to install these fixtures at additional units as future repairs are conducted with the long-term goal of 100% replacement. Many units that have needed repair since the building purchase have already seen improvements to these systems.

### 4.1.5 MECHANICAL SYSTEM IMPROVEMENTS

As part of this project, a new front end direct digital controls (DDC) system will be installed to assist in managing and monitoring the new equipment installed as part of this project. The system will control and monitor the new equipment installed during this Project, but will also have an open architecture communication protocol (BACnet), such that the system will be capable of being expanded to other equipment throughout the building as budgets permit. The DDC system will be able to log/trend energy usage and monitor equipment that is in need of repair or that is not operating as designed.

BC intends to repair or replace deficient heat pump units within the apartments that have begun to fail due to age. These new units will be adding to the system efficiency of the existing systems.

A large aspect of this Project is the installation of new energy recovery units (ERU’s) which will provide fresh ventilation air to all spaces in the building, and meet ASHRAE 62.1. The ERU’s are being provided high efficiency enthalpy energy recovery wheels. Additionally, there will be filtration within the units to ensure fresh air to the spaces. Currently, this is not possible within the units as fresh air is provided through the operable windows.

A new boiler plant is also being provided as part of this Project. The existing boiler plant uses older, cast iron modular boilers. The new design incorporates high efficiency, condensing boilers with outdoor air temperature reset for maximum efficiency. Additionally, the building is heated and cooled by a water source heat pump loop, with
cooling tower and boiler connections. Since this system typically operates between 60 degrees F and 90 degrees F, the water temperatures are much lower than that of a typical heating system. Therefore, the use of condensing boilers maximizes efficiency for this application. Condensing boilers achieve higher efficiency’s as the return water temperatures drop. Furthermore, the use of outdoor air temperature reset allows for the required water temperature to be reduced during ‘shoulder’ months when extreme heating loads are not needed.

4.1.6 TRANSPORTATION SYSTEM IMPROVEMENTS

Due to the proximity of campus, it is anticipated that many building residents will use the shuttle bus provided by Boston College transportation systems. Due to the short distance to campus, it is anticipated that many residents will walk to campus as well.

Additionally bicycle racks will be added for visitors outside the entry and additional parking for 84 bikes will be added for resident’s use.

4.1.7 BUILDING OPERATION IMPROVEMENTS

Finally, the operation of this building will be improved under management of Boston College allowing for the improved green purchasing and cleaning approaches already in place at Boston College. The operation of this building is proposed to be improved under management of Boston College allowing for the improved green purchasing and cleaning approaches. These management practices include using environmentally safe cleaning products for regular cleaning products and paper products. For example, the cleaners are either green seal certified or carry the Eco certification and are dispensed from a dilution system to reduce waste. Paper products are Eco certified and FFC certified. The hand soap is green seal certified. All staff is trained on the proper use of the cleaning products and the goals of the green cleaning program.

Waste management is another focus area for the operations department in addition to the occupants as well. Waste reduction is emphasized as well as reuse, through programs such as BC Clean. Additionally, single stream recycling is accessible to all at each floor of the residence hall. Communication of the goals and signage are available to ensure that all stakeholders are informed.

4.1.8 SUMMARY

Our review of these improvements and how these might apply to the LEED rating system suggests that the most applicable rating system for this renovation would be the LEED 2009 for Existing Buildings: Operations and Maintenance. The attached LEED checklist indicates the currently anticipated points achievable under this renovation scope and building operation. While we are below a Certifiable level due to the minimal nature of this
renovation, the above illustrates the extent of sustainable additions and the significant energy and operational improvements that are anticipated following the occupancy of this residence hall.
## LEED 2009 for Existing Buildings: Operations & Maintenance

### Project Checklist

<table>
<thead>
<tr>
<th>Sustainable Sites</th>
<th>Possible Points: 26</th>
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<td><strong>Prereq 1</strong></td>
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### Water Efficiency

#### Possible Points: 14

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<th>Gold 60 to 79 points</th>
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CHAPTER 5: TRANSPORTATION

5.1 INTRODUCTION

This transportation analysis reviews the impact of the renovation of 2000 Commonwealth Avenue on various transportation modes serving Boston College. The following sections describe existing conditions and expected project impacts on the following:

- Traffic and Parking;
- Transit;
- Bicycle and Pedestrian Accommodations;
- Transportation Demand Management (“TDM”); and
- Loading and Service.

5.2 VEHICLE ACCESS AND PARKING

5.2.1 VEHICLE ACCESS

Vehicle access to the Site is from Commonwealth Avenue and a driveway on the eastern side of the building. Loading ingress, egress, and service, including trash, recycling, and resident move-in/move-out and deliveries, will occur on-site along Commonwealth Avenue. If necessary during the renovation of the residence hall, the University will obtain an access permit from DCR to utilize the rear entrance for deliveries of construction materials.

Commonwealth Avenue is the north boundary of the Chestnut Hill Campus and southerly boundary of the Brighton Campus. It is a divided, east/west roadway providing two travel lanes in each direction connecting various parts of the Boston College campus. The MBTA Green Line B Branch is located in the median. On-street parking and sidewalks are provided along both sides of Commonwealth Avenue adjacent to the Site.

5.2.2 PARKING

The existing parking garage on the Project Site contains 202 parking spaces and is managed by Boston College under the campus-wide parking program. The parking will be reduced by 12 spaces in order to complete the first floor program additions.
and infrastructure upgrades. Access to the parking garage will continue through the driveway on the western side of the building.

The existing parking garage will continue to be used for Boston College faculty, staff and a limited number of students who qualify for practicum placements.

There is limited on-street parking on Commonwealth Avenue in front of the building. With the exception of Commonwealth Avenue, Allston-Brighton resident parking permits are required on most streets surrounding the Site.

5.3 TRANSIT

The South Street stop of the MBTA Green Line trolley is located within a two minute walk of the Site. The Boston College B Branch operates between the Boston College and Government Center. The South Street stop is located near the site in the median of Commonwealth Avenue. The B Line operates on a 6-minute headway during rush hour and 9 minute headways during non-peak times. Service from the South Street station is provided between 5:01 a.m. and 12:10 a.m. during the week, between 4:56 a.m. and 12:10 a.m. on Saturdays, and between 5:20 a.m. and 12:10 a.m. on Sundays. The South Street stop is the most convenient location for students and visitors to board the Green Line for service to the Chestnut Hill Campus or toward Downtown Boston.

The Cleveland Circle C Branch operates between Cleveland Circle and North Station on 7-minute headways during rush hours and 10-minute headways throughout the day on weekdays. The Cleveland Circle stop is a ten minute walk from the project site. Service is provided between 5:01 a.m. and 12:10 a.m. during the week, between 4:50 a.m. and 12:10 a.m. on Saturdays, and between 5:30 a.m. and 12:10 a.m. on Sundays.

Riverside D Branch operates between Riverside and Government Center on 6-minute headways during rush hours and on 11-minute headways throughout the day on the weekdays. The Reservoir stop is located just east of the Cleveland Circle stop on the C Branch and is an 11 minute walk from the project site. Service is provided between 4:56 a.m. and 12:05 a.m. during the week, between 4:55 a.m. and 12:05 a.m. on Saturdays, and between 5:25 a.m. and 12:05 a.m. on Sundays.

Boston College provides shuttle bus services for students and employees of the Chestnut Hill, Brighton, and Newton campuses. The services providing transportation to the project site are described below:

The Boston/Commonwealth Avenue Shuttle service provides a Commonwealth Avenue Direct route and an All Stops route that run every 15-20 minutes. The Commonwealth Avenue Direct Route stops at Conte Forum, opposite Greycliff Hall (outbound), 2000 Commonwealth Avenue (the Site), Reservoir Green Line MBTA Stop at Cleveland Circle, Bank of America on Chestnut Hill Avenue, Chiswick Road, the corner of Commonwealth Avenue.
Avenue and Chestnut Hill Avenue, South Street, Greycliff Hall and Robsham Theater. The All Stops route makes all of these stops plus McElroy Commons on Beacon Street, Donaldson House on College Road, and the Main Gate on Commonwealth Avenue.

In addition to the transit services listed above, there are Zipcar services available in various facility locations located approximately 0.5 miles from the Site. See Table 5-1, Transit Services in the Vicinity of the Site and Table 5-2, Zipcar Facilities in the Vicinity of the Site, and Figures 5-1, Public Transportation and 5-2, Zipcar Facilities.

**Table 5-1: Transit Services in the Vicinity of the Site**

<table>
<thead>
<tr>
<th>Route</th>
<th>Start Point</th>
<th>End Point</th>
<th>Via</th>
<th>Peak Hour Headway</th>
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<tbody>
<tr>
<td>Green Line – B Branch</td>
<td>Boston College</td>
<td>Park Street</td>
<td>Commonwealth Avenue</td>
<td>7 min</td>
</tr>
<tr>
<td>Green Line – C Branch</td>
<td>Cleveland Circle</td>
<td>North Station</td>
<td>Beacon Street</td>
<td>6 min</td>
</tr>
<tr>
<td>Green Line – D Branch</td>
<td>Riverside</td>
<td>Park Street</td>
<td>Brookline/Newton</td>
<td>7 min</td>
</tr>
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<td>Bus Route 51</td>
<td>Cleveland Circle</td>
<td>Forest Hill Station</td>
<td>Putterham</td>
<td>10 min</td>
</tr>
<tr>
<td>Bus Route 86</td>
<td>Sullivan Square</td>
<td>Reservoir</td>
<td>Brighton</td>
<td>8 min</td>
</tr>
<tr>
<td>Commonwealth Avenue Route</td>
<td>Conte Forum</td>
<td>Robsham Theatre</td>
<td>Commonwealth Avenue</td>
<td>15-20 min</td>
</tr>
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Table 5-2: Zipcar Facilities in the Vicinity of the Site

<table>
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<tr>
<th>Facility Location</th>
<th>Distance from Site</th>
<th># of Vehicles</th>
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<tbody>
<tr>
<td>2005 Commonwealth Avenue</td>
<td>0.2 Miles</td>
<td>2</td>
</tr>
<tr>
<td>Us Petroleum/Commonwealth Avenue</td>
<td>0.4 Miles</td>
<td>2</td>
</tr>
<tr>
<td>Commonwealth Avenue/Strathmore</td>
<td>0.4 Miles</td>
<td>2</td>
</tr>
<tr>
<td>332 Chestnut Hill Avenue/Shell Gas Station</td>
<td>0.4 Miles</td>
<td>3</td>
</tr>
<tr>
<td>Cleveland Circle T Stop</td>
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<td>2</td>
</tr>
<tr>
<td>Sutherland Road/Chiswick</td>
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<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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5.4 BICYCLE AND PEDESTRIAN ACCOMODATIONS

The Project Site is easily accessible for pedestrians and bicycles from Commonwealth Avenue. There are sidewalks on all roadways serving the Site to allow for safe pedestrian access to and from the Site.

The Chestnut Hill Driveway is directly behind the Site on the south, just north of the Chestnut Hill Reservoir. The reservoir is accessible via the easement located just west and south of the Site linking to the multi-use pathway around the reservoir. This open space easement is owned and managed by the Department of Conservation and Recreation. A major crosswalk across Commonwealth Avenue near the Site provides access to the South Street Green Line stop.

As stated in Chapter 2, bicycle parking will be provided for residents with 84 new bicycle rack spaces located within the garage and accessed through card access from the door on the eastern side of the building. Twelve visitor spaces will be provided near the building entry.

5.5 TRANSPORTATION DEMAND MANAGEMENT

While there will be no increase in vehicle trips per day from the Project, the University actively supports TDM efforts to reduce automobile use by faculty, staff, students and visitors traveling to the campus. Many actions to support this goal are actively employed by Boston College and will be applied to faculty, staff, and students. Existing measures include:

- **Information Dissemination:** Boston College promotes all forms of alternative transportation through the Office of Transportation and Parking. The Office
provides a comprehensive website for the members of the institution and the public that details transportation and parking policies (see www.bc.edu/transportation).

- **Transit:** Boston College is served by the MBTA Green Line B Branch and provides shuttle bus service to the Cleveland Circle and Reservoir MBTA stops on the C and D Branches of the Green Line. In 2010, the University instituted a pre-tax T-pass sales program for full-time employees. Students can purchase a semester pass through the University and receive an 11 percent discount on MBTA passes.

- **Ride Matching:** In conjunction with MassRIDES, Boston College assists in the creation of carpools and vanpools, providing employees with a cost-effective and ecologically friendly alternative to drive-alone commutes. A discounted parking permit rate is available for those who sign up for the ride matches. Carpoolers are guaranteed a prime parking location on campus.

- **Shuttle Bus System:** Boston College operates and promotes a free 13-bus shuttle system to link the campus with the Green Line at the Cleveland Circle and Reservoir stops.

- **Guaranteed Ride Home:** Pre-registered employees who utilize alternative transportation can take advantage of a guaranteed ride home when a personal or family illness or unplanned overtime interrupts their regular commute.

- **Eagle Escort Service:** Operated by the Boston College Police, the Eagle Escort service transports individual members of the Boston College community who are concerned for their safety and well being. The service operates throughout campus, 24 hours a day, 7 days a week, except for school holidays and breaks of four or more days.

- **Bicycle Incentives:** As described earlier, Boston College has numerous safe, clean, and conveniently placed bicycle racks throughout its campus. Approximately 445 bicycle spaces are available in 28 locations on the Chestnut Hill Campus and approximately 80 spaces are provided on the Newton Campus. Shower facilities are available near many of these locations. Boston College participates in the MassRIDES Bike to Work Week (BTWW) Challenge to promote bicycling as a viable commute option. Boston College promotes biking as an alternative to driving, as identified on the Transportation website, and distributes promotional material and incentives for its employees to participate in the BTWW Challenge.

- **Car Sharing:** Boston College currently has a relationship with Zipcar, providing employees and students a significant discount on the membership rates and convenient access to eleven cars at the locations shown in Figure 5-2, Zipcar Facilities.
5.6 LOADING AND SERVICE

Loading and servicing for 2000 Commonwealth Avenue will take place at the side entrance on the east side of the building. It will consist primarily of package and supplies deliveries for the residence hall, trash and recycling removal, and move-in, move-out for students. Except for move-in and move-out, the proposed uses will have similar loading requirements as the existing residential use on site. Student move-in and move-out will be planned and managed by the Office of Residential Life and coordinated with all other move-in and move-out activities at other residence halls. A major emphasis of the process is to minimize impacts on the Commonwealth Avenue traffic flow during peak loading times.
Chapter 6

ENVIRONMENTAL PROTECTION
CHAPTER 6: ENVIRONMENTAL PROTECTION

6.1 INTRODUCTION

The Project will be built in full compliance with local, state, and federal regulations. The Project will incorporate the latest in building design methods and technology to ensure minimal impact to the environment. The Project includes the renovation of an existing apartment building into student housing. The environmental impacts of the Project are minimal and confined to the immediate building envelope. Due to the nature of the Project as a renovation of an existing building, no pedestrian-level wind analyses, daylight studies, solar glare, or shadow impact studies are necessary.

6.2 AIR QUALITY

The Project will include upgrades to building systems that may affect air quality. With respect to indoor air, the building HVAC systems will be upgraded to code compliant systems that will provide a significantly greater rate of air exchange over the existing conditions. To prevent heat/AC loss due to increased air exchanges, a heat/AC recovery unit will be installed to reduce energy consumption.

6.3 NOISE

Intermittent increases in noise levels will occur in the short term during renovation to the building. The primary sources of exterior sound for the Project will include heating and cooling systems. Construction work will comply with the requirements of the City of Boston Noise Ordinance.

Efforts will be made to minimize the noise impact of renovation activities, including the use of mufflers on heavy equipment, turning off idling equipment, replacing specific operations and techniques with less noisy ones, and scheduling equipment operations to synchronize the noisiest operations with times of highest ambient noise levels. In addition, construction hour restrictions will be used to minimize noise impacts to nearby residents.

6.4 WATER QUALITY

Based on the scope of the project and limited construction, there will be no stormwater or water quality impacts.
6.5 FLOOD ZONES

In the past decade, climate change adaptation has gained national attention as a critical environmental factor that must be addressed in new development projects. In Boston, sea level rise has become a serious concern as recent weather patterns and future modeling are demonstrating that storms impacting the city are likely to continue to intensify.

As part of its administration of the National Flood Insurance Program (NFIP), the Federal Emergency Management Agency (FEMA) publishes flood hazard maps, called Flood Insurance Rate Maps (FIRM). The purpose of a FIRM is to show the areas in a community that are subject to flooding and the risk associated with these flood hazards. The latest map was published in 2009 and updated the flood zones for this area. According to FEMA, the Project Site is not located within a flood zone.

6.6 GEOTECHNICAL

Based on the scope of the Project, there will be no geotechnical impacts.

6.7 CONSTRUCTION IMPACTS

This section discusses potential construction impacts from the renovation of the building.

6.7.1 CONSTRUCTION MANAGEMENT PLAN

A Construction Management Plan (CMP), in compliance with the City of Boston’s Construction Management Program, will be submitted to the Boston Transportation Department. It will include detailed information on construction activities, specific construction mitigation measures and construction materials access and staging plans to minimize impact on the surrounding neighborhood.

Construction methodologies that ensure public safety and protect nearby residents will be employed. Techniques such as barricades, walkways and signage will be used. Construction management and scheduling will minimize impacts on the surrounding neighborhood and environment. The plan will address construction worker parking, routing plans for trucks and deliveries and control of noise and dust.

6.7.2 CONSTRUCTION SCHEDULE

The construction period for the proposed Project is expected to last approximately 11 months, beginning in September of 2015 and reaching completion by July of 2016.

6.7.3 CONSTRUCTION HOURS OF OPERATION

Construction working hours will be 7:00 a.m. to 4:30 p.m. Monday through Friday and on
Saturday as needed per authorization by the City of Boston Inspectional Services Department.

6.7.4 CONSTRUCTION ACCESS AND DELIVERIES

Construction vehicles will access the Site from the inbound side of Commonwealth Avenue or from the rear of the building across adjacent Department of Conservation and Recreation (DCR) property in order to minimize disruption to Commonwealth Avenue. A Construction Access Permit from DCR will be obtained should crane or delivery access from the rear of the building be needed. Emergency vehicles will have full access to the Site at all times during the building renovation.

6.7.5 CONSTRUCTION SAFETY AND MITIGATION

- The Commonwealth Avenue sidewalk will remain in use for pedestrians and have overhead protection in place for the duration of the project.

- Appropriate signage, temporary safety lighting, and visual aids will be used to warn pedestrians of vehicles entering and exiting should site access be from Commonwealth Avenue.

- No equipment will be left unattended or unsecured either inside or outside the building after hours of operation.

- As needed, a police detail will be utilized to safely direct and manage construction-related traffic.

6.7.6 CONSTRUCTION NOISE IMPACTS

Intermittent increases in noise level will occur in the short term during the renovation of the existing building. Work will comply with the requirements of the City of Boston Noise Ordinance. Efforts will be made to minimize the noise from the renovation project, including appropriate mufflers on all equipment such as air compressors and welding generators, maintenance of intake and exhaust mufflers, turning off idling equipment, replacing specific operations and techniques with less noisy ones, and scheduling equipment operations to synchronize the noisiest operations with the times of highest ambient noise levels.

6.7.7 CONSTRUCTION AIR QUALITY

The construction contract for the Project will require the contractor to reduce potential emissions and minimize air quality impacts. Mitigation measures are expected to include the use of wetting agents where needed on a scheduled basis, covered trucks, storage of
excess material inventory inside the building, and periodic cleaning of streets and sidewalks as needed to reduce dust accumulations.

6.7.8 CONSTRUCTION WORKER PARKING

The number of construction workers required for the renovation of the Project will vary depending upon the stage of renovation. Construction workers will typically arrive and depart prior to peak traffic conditions and their trips are expected to have minimal impact on traffic conditions. The general contractor will be responsible for educating all construction workers about convenient public transit options (Green Line-B Branch). Workers will be strongly encouraged to utilize mass transit and ridesharing options to access the site and to minimize vehicular traffic and parking on local streets at meters, in resident parking, or restricted areas.

6.7.9 RODENT CONTROL

The contractor will file a rodent extermination certificate with the building permit application at ISD. Rodent inspection, monitoring and treatment, if needed, will be carried out over the duration of the Project in compliance with City requirements. A fully licensed rodent control contractor will treat both the exterior and interior of the Project prior to commencing the renovation work and periodic service visits will be made to maintain effective rodent controls.

6.8 WILDLIFE HABITAT

The Site is fully developed with urban landscape materials and the Project will not impact any important wildlife habitat. According to the latest Natural Heritage & Endangered Species Program maps, no Priority or Estimated Habitats are located on or near the Site.

6.9 HISTORIC RESOURCES ON THE PROJECT SITE

The existing building is not listed on the Inventory of Historic Assets of the Commonwealth, nor has it been determined by the Massachusetts Historical Commission (MHC) to be eligible for listing on the State or National Register of Historic Places.

6.10 HISTORIC RESOURCES IN THE VICINITY OF THE PROJECT SITE

Several historic resources are within a quarter-mile radius of the Site. Historic resources in the vicinity of the Site are described below and are shown on Figures 6-1, Historic Resources from the Massachusetts Cultural Resources Inventory System, and 6-2, National, State and Local Designated Historic Resources. No significant alterations or additions to the exterior of the existing building are included as part of the Project, therefore, no adverse impacts to the historic resources in the surrounding area will result from the Project.
Aberdeen Architectural Conservation District

The Aberdeen Architectural Conservation District was established by the Boston Landmarks Commission in 2001. The district is comprised largely of multi-family residential structures in the Colonial Revival, Georgian Revival, Queen Anne, and Shingle styles. An application for a Certificate of Exemption will be filed with the district commission prior to construction and demolition activities.

Evergreen Cemetery (BOS.ZJ)

The Evergreen Cemetery is an approximately 20-acre site located to the west of the Project Site just beyond Wade Street and consists of a number of structures, objects, and buildings. It was listed in the National Register of Historic Places in August 2009. Approximately one-third of the cemetery land area, generally located in the southwestern portion of the cemetery, is considered non-contributing since it was added to the original cemetery in 1970.

Upper Chestnut Hill-Evergreen Area (BOS.JX)

The Upper Chestnut Hill-Evergreen Area consists of a number of residential structures and the Evergreen Cemetery, and is adjacent to the west side of the Project Site. The Boston Landmarks Commission determined this area to be eligible for listing in the National Register of Historic Places.

Chancery-St. John’s Seminary Complex (BOS.JW)

The Chancery-St. John’s Seminary Complex is located down the street and northwest of the Project Site. The MHC has determined it to be eligible for listing in the National Register of Historic Places as a historic district that contains a number of contributing elements. The majority of the Brighton campus overlaps with the Chancery-St. John’s Seminary Complex.

Commonwealth Avenue-Brighton (BOS.YY)

The segment of Commonwealth Avenue right-of-way from Packard’s Corner to the Newton City line was documented in 2007 by the MHC. It does not include any flanking buildings, structures, or other properties. It is the opinion of the MHC that this segment of Commonwealth Avenue is eligible for the National Register of Historic Places under Criteria A and C in the significance areas of community planning and development, engineering, landscape, architecture, and transportation. A portion of the segment is adjacent to the north side of the Site.
Upper Foster Street Area Brighton (BOS.JY)

The Upper Foster Street Area contains several residential subdivisions that date between 1914 and 1940, as well as a small number of nineteenth century homes primarily on Foster Street that predate this period. This area is eligible for listing in the National Register of Historic Places. The Upper Forest Street Area will not be adversely affected by the Project.

Pama Gardens (BOS.JZ)

The Pama Gardens consists of nine residential apartment buildings constructed around the 1920s. This small stock of suburban housing represents a late addition to the homes on Foster Street. The Project will not adversely affect the Pama Gardens area.
Figure 6-1

Historic Resources from the Massachusetts Cultural Resource Information System

Source: Fort Point Associates, Inc., 2014; MACRIS, 2014
Figure 6-2

National, State, and Local Designated Historic Resources

Chapter 7

INFRASTRUCTURE
CHAPTER 7: INFRASTRUCTURE

7.1 INTRODUCTION

The Project Site is currently served by existing utility infrastructure. The infrastructure to support this building is in place and is sized appropriately for the support of this building and the occupants. The renovation of the building will not significantly alter the utility demands or flows. All water, sewer and storm drainage lines in the area of the Project will be adequate to meet the demands of the Project.

7.2 WASTEWATER

This section describes existing and proposed wastewater conditions on the Project Site.

7.2.1 EXISTING SEWER SYSTEM

Wastewater is currently discharged from the building to the Boston Water and Sewer Commission (BWSC) sewer system on Commonwealth Avenue. See Figure 7-1, Drain and Wastewater Systems Map. No changes are planned to the existing sewer system.

7.2.2 PROJECTED SANITARY SEWER FLOW

Wastewater flow is not anticipated to increase and will remain below the capacity of the piping system now in place.

7.2.3 SANITARY SEWER CONNECTION

No changes are planned.

7.3 WATER SYSTEM

This section describes existing and proposed water conditions on the Project Site.

7.3.1 EXISTING WATER SYSTEM

The water supply for domestic use and fire protection services is supplied by the Massachusetts Water Resources Authority (MWRA) and distributed by the (BWSC) via water mains on Commonwealth Avenue. See Figure 7-2, Water Distribution System Map.

Similar to the wastewater use, the increase of water use is not anticipated to increase. No additional uses are being programmed that would increase water
usage beyond the current load. Street connections will remain as currently installed.

7.4 STORM DRAINAGE SYSTEM

BWSC owns and maintains the stormwater systems in the public streets surrounding the campus. There are no exterior changes to the storm drainage systems or impervious areas of the site. Therefore, there are no changes proposed to the existing storm drainage system.

7.5 ELECTRICAL SERVICES

No changes are planned for the electrical infrastructure beyond the replacement of the existing emergency generator and local distribution changes. The incoming service size is not anticipated to change.

7.6 TELECOMMUNICATION SYSTEM

There are no plans to modify these systems beyond distribution within the building.

7.7 NATURAL GAS SYSTEM

The anticipated load is within the current supply capacity of the existing natural gas service. Therefore, no changes are expected beyond distribution within the building to new air handlers for fresh air systems and boiler replacement.

7.8 UTILITY PROTECTION DURING CONSTRUCTION

There are no plans for any underground work on the Site or the street, and therefore no protection of utilities within the area will be required.
Climate Change Preparedness and Resiliency Checklist for New Construction

In November 2013, in conformance with the Mayor's 2011 Climate Action Leadership Committee's recommendations, the Boston Redevelopment Authority adopted policy for all development projects subject to Boston Zoning Article 80 Small and Large Project Review, including all Institutional Master Plan modifications and updates, are to complete the following checklist and provide any necessary responses regarding project resiliency, preparedness, and to mitigate any identified adverse impacts that might arise under future climate conditions.

For more information about the City of Boston's climate policies and practices, and the 2011 update of the climate action plan, A Climate of Progress, please see the City's climate action web pages at http://www.cityofboston.gov/climate

In advance we thank you for your time and assistance in advancing best practices in Boston.

Climate Change Analysis and Information Sources:
1. Northeast Climate Impacts Assessment (www.climatechoices.org/ne/)
2. USGCRP 2009 (http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/)

Checklist
Please respond to all of the checklist questions to the fullest extent possible. For projects that respond “Yes” to any of the D.1 – Sea-Level Rise and Storms, Location Description and Classification questions, please respond to all of the remaining Section D questions.

Checklist responses are due at the time of initial project filing or Notice of Project Change and final filings just prior seeking Final BRA Approval. A PDF of your response to the Checklist should be submitted to the Boston Redevelopment Authority via your project manager.

Please Note: When initiating a new project, please visit the BRA web site for the most current Climate Change Preparedness & Resiliency Checklist.
Climate Change Resiliency and Preparedness Checklist

A.1 - Project Information

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>2000 Commonwealth Avenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Address Primary:</td>
<td>2000 Commonwealth Avenue</td>
</tr>
<tr>
<td>Project Address Additional:</td>
<td></td>
</tr>
<tr>
<td>Project Contact (name / Title / Company / email / phone):</td>
<td></td>
</tr>
</tbody>
</table>

A.2 - Team Description

<table>
<thead>
<tr>
<th>Owner / Developer</th>
<th>Boston College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architect</td>
<td>DiMella Shaffer</td>
</tr>
<tr>
<td>Engineer (building systems)</td>
<td>Fitzemeyer &amp; Tocci</td>
</tr>
<tr>
<td>Sustainability / LEED:</td>
<td></td>
</tr>
<tr>
<td>Permitting:</td>
<td>Fort Point Associates, Inc.</td>
</tr>
<tr>
<td>Construction Management:</td>
<td></td>
</tr>
<tr>
<td>Climate Change Expert:</td>
<td></td>
</tr>
</tbody>
</table>

A.3 - Project Permitting and Phase

At what phase is the project – most recent completed submission at the time of this response?

<table>
<thead>
<tr>
<th>PNF / Expanded PNF Submission Draft / Final Project Impact Report Submission</th>
<th>BRA Board Approved</th>
<th>Notice of Project Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Development Area</td>
<td>BRA Final Design Approved</td>
<td>Under Construction</td>
</tr>
</tbody>
</table>

A.4 - Building Classification and Description

List the principal Building Uses: Residential
List the First Floor Uses: Residential & Parking garage
What is the principal Construction Type – select most appropriate type?

<table>
<thead>
<tr>
<th>Wood Frame</th>
<th>Masonry</th>
<th>Steel Frame</th>
<th>Concrete</th>
</tr>
</thead>
</table>

Describe the building?

<table>
<thead>
<tr>
<th>Site Area:</th>
<th>29,174 SF</th>
<th>Building Area:</th>
<th>287,920 SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Height:</td>
<td>153 Ft.</td>
<td>Number of Stories:</td>
<td>17 Flrs.</td>
</tr>
<tr>
<td>First Floor Elevation (reference Boston City Base):</td>
<td>Elev.160’- 4”(lobby)</td>
<td>Are there below grade spaces/levels, if yes how many:</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of Levels</td>
<td></td>
</tr>
</tbody>
</table>
A.5 - Green Building
Which LEED Rating System(s) and version has or will your project use (by area for multiple rating systems)?

Select by Primary Use:  
<table>
<thead>
<tr>
<th>New Construction</th>
<th>Core &amp; Shell</th>
<th>Healthcare</th>
<th>Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>Homes Midrise</td>
<td>Homes</td>
<td>Other</td>
</tr>
</tbody>
</table>

Select LEED Outcome:  
| Certified | Silver | Gold | Platinum |

Will the project be USGBC Registered and / or USGBC Certified?

<table>
<thead>
<tr>
<th>Registered</th>
<th>Certified</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

A.6 - Building Energy
What are the base and peak operating energy loads for the building?

Electric: 149.8(kW)  
Heating: 1.10(MMBtu/hr)

What is the planned building Energy Use Intensity?

1.55(kbut/SF or kWh/SF)

Cooling: 230(Tons/hr)

What are the peak energy demands of your critical systems in the event of a service interruption?

Electric: (kW)  
Heating: (MMBtu/hr)

Cooling: (Tons/hr)

What is nature and source of your back-up / emergency generators?

Electrical Generation: 600(kW)

System Type and Number of Units:  
Combustion Engine  
Gas Turbine  
Combine Heat and Power

<table>
<thead>
<tr>
<th>Fuel Source</th>
<th>Diesel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Unit</td>
<td></td>
</tr>
</tbody>
</table>

B - Extreme Weather and Heat Events
Climate change will result in more extreme weather events including higher year round average temperatures, higher peak temperatures, and more periods of extended peak temperatures. The section explores how a project responds to higher temperatures and heat waves.

B.1 - Analysis
What is the full expected life of the project?

This project is a renovation of a structure built in 1984. The original design analysis is unknown.

Select most appropriate:  
| 10 Years | 25 Years | 50 Years | 75 Years |

What is the full expected operational life of key building systems (e.g. heating, cooling, and ventilation)?

This project is a renovation of a structure built in 1984. The original design analysis is unknown.

Select most appropriate:  
| 10 Years | 25 Years | 50 Years | 75 Years |

What time span of future Climate Conditions was considered?

This project is a renovation of a structure built in 1984. The original design analysis is unknown.
Select most appropriate:  

<table>
<thead>
<tr>
<th>10 Years</th>
<th>25 Years</th>
<th>50 Years</th>
<th>75 Years</th>
</tr>
</thead>
</table>

Analysis Conditions - What range of temperatures will be used for project planning – Low/High?

This project is a renovation of a structure built in 1984. The original design analysis is unknown.

<table>
<thead>
<tr>
<th>Deg.</th>
<th>Days</th>
<th>Events / yr.</th>
</tr>
</thead>
</table>

What Extreme Heat Event characteristics will be used for project planning – Peak High, Duration, and Frequency?

This project is a renovation of a structure built in 1984. The original design analysis is unknown.

<table>
<thead>
<tr>
<th>Deg.</th>
<th>Days</th>
<th>Events / yr.</th>
</tr>
</thead>
</table>

What Drought characteristics will be used for project planning – Duration and Frequency?

This project is a renovation of a structure built in 1984. The original design analysis is unknown.

<table>
<thead>
<tr>
<th>Days</th>
<th>Events / yr.</th>
</tr>
</thead>
</table>

What Extreme Rain Event characteristics will be used for project planning – Seasonal Rain Fall, Peak Rain Fall, and Frequency of Events per year?

This project is a renovation of a structure built in 1984. The original design analysis is unknown.

<table>
<thead>
<tr>
<th>Inches / yr.</th>
<th>Inches</th>
<th>Events / yr.</th>
</tr>
</thead>
</table>

What Extreme Wind Storm Event characteristics will be used for project planning – Peak Wind Speed, Duration of Storm Event, and Frequency of Events per year?

This project is a renovation of a structure built in 1984. The original design analysis is unknown.

<table>
<thead>
<tr>
<th>Peak Wind</th>
<th>Hours</th>
<th>Events / yr.</th>
</tr>
</thead>
</table>

B.2 - Mitigation Strategies

What will be the overall energy performance, based on use, of the project and how will performance be determined?

Building energy use below code:  

| % |

How is performance determined:

What specific measures will the project employ to reduce building energy consumption?

Select all appropriate:

- High performance building envelop
- High performance lighting & controls
- Building day lighting
- Energy recovery ventilation
- HVAC equipment
- Energy recovery
- No active cooling
- No active heating

Describe any added measures: New insulating windows and Rooftop Energy Recovery Units for fresh air to the residential units.

What are the insulation (R) values for building envelop elements? The (R) values for the existing elements to remain are unknown. However, the windows will be replaced. The anticipated U value is listed below.

<table>
<thead>
<tr>
<th>Roof:</th>
<th>$R = \text{ }$</th>
<th>Walls / Curtain Wall Assembly:</th>
<th>$R = \text{ }$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation:</td>
<td>$R = \text{ }$</td>
<td>Basement / Slab:</td>
<td>$R = \text{ }$</td>
</tr>
<tr>
<td>Windows:</td>
<td>$U = 0.30$</td>
<td>Doors:</td>
<td>$R = \text{ }$ / $U = \text{ }$</td>
</tr>
</tbody>
</table>

What specific measures will the project employ to reduce building energy demands on the utilities and infrastructure?

On-site clean energy / CHP system(s) | Building-wide power dimming | Thermal energy storage systems | Ground source heat pump
C - Sea-Level Rise and Storms

Rising Sea Levels and more frequent Extreme Storms increase the probability of coastal and river flooding and enlarging the extent of the 100 Year Flood Plain. This section explores if a project is or might be subject to Sea-Level Rise and Storm impacts.
C.1 - Location Description and Classification:

Do you believe the building to susceptible to flooding now or during the full expected life of the building?

No

Describe site conditions?

Site Elevation – Low/High Points: **160' - 4" Elev. (Ft.)**

Building Proximity to Water: **Ft.**

Is the site or building located in any of the following?

- Coastal Zone: **No**
- Flood Zone: **Yes / No**
- Velocity Zone: **Yes / No**
- Area Prone to Flooding: **Yes / No**

Will the 2013 Preliminary FEMA Flood Insurance Rate Maps or future floodplain delineation updates due to Climate Change result in a change of the classification of the site or building location?

- 2013 FEMA Prelim. FIRMs: **Yes / No**
- Future floodplain delineation updates: **Yes / No**

What is the project or building proximity to nearest Coastal, Velocity or Flood Zone or Area Prone to Flooding?

**Ft.**

*If you answered YES to any of the above Location Description and Classification questions, please complete the following questions. Otherwise you have completed the questionnaire; thank you!*

C - Sea-Level Rise and Storms

This section explores how a project responds to Sea-Level Rise and / or increase in storm frequency or severity.

C.2 - Analysis

How were impacts from higher sea levels and more frequent and extreme storm events analyzed:

- Sea Level Rise: **Ft.**
- Frequency of storms: **per year**

C.3 - Building Flood Proofing

Describe any strategies to limit storm and flood damage and to maintain functionality during an extended periods of disruption.

What will be the Building Flood Proof Elevation and First Floor Elevation:

- Flood Proof Elevation: **Boston City Base Elev. (Ft.)**
- First Floor Elevation: **Boston City Base Elev. (Ft.)**

Will the project employ temporary measures to prevent building flooding (e.g. barricades, flood gates):

- Yes / No
- If Yes, to what elevation: **Boston City Base Elev. (Ft.)**

If Yes, describe:

What measures will be taken to ensure the integrity of critical building systems during a flood or severe storm event:
Were the differing effects of fresh water and salt water flooding considered:

Yes / No

Will the project site / building(s) be accessible during periods of inundation or limited access to transportation:

Yes / No

If yes, to what height above 100 Year Floodplain:

Boston City Base Elev. (Ft.)

Will the project employ hard and / or soft landscape elements as velocity barriers to reduce wind or wave impacts?

Yes / No

If Yes, describe:

Will the building remain occupiable without utility power during an extended period of inundation:

Yes / No

If Yes, for how long:

days

Describe any additional strategies to addressing sea level rise and or sever storm impacts:

C.4 - Building Resilience and Adaptability

Describe any strategies that would support rapid recovery after a weather event and accommodate future building changes that respond to climate change:

Will the building be able to withstand severe storm impacts and endure temporary inundation?

Select appropriate:

Yes / No

Hardened / Resilient Ground Floor Construction

Temporary shutters and or barricades

Resilient site design, materials and construction

Can the site and building be reasonably modified to increase Building Flood Proof Elevation?

Select appropriate:

Yes / No

Surrounding site elevation can be raised

Building ground floor can be raised

Construction been engineered

Describe additional strategies:

Has the building been planned and designed to accommodate future resiliency enhancements?

Select appropriate:

Yes / No

Solar PV

Solar Thermal

Clean Energy / CHP System(s)

Potable water storage

Wastewater storage

Back up energy systems & fuel

Describe any specific or additional strategies:

Thank you for completing the Boston Climate Change Resilience and Preparedness Checklist!

For questions or comments about this checklist or Climate Change Resiliency and Preparedness best practices, please contact: John.Dalzell.BRA@cityofboston.gov
Appendix B

ACCESSIBILITY CHECKLIST
Accessibility Checklist
(to be added to the BRA Development Review Guidelines)

In 2009, a nine-member Advisory Board was appointed to the Commission for Persons with Disabilities in an effort to reduce architectural, procedural, attitudinal, and communication barriers affecting persons with disabilities in the City of Boston. These efforts were instituted to work toward creating universal access in the built environment.

In line with these priorities, the Accessibility Checklist aims to support the inclusion of people with disabilities. In order to complete the Checklist, you must provide specific detail, including descriptions, diagrams and data, of the universal access elements that will ensure all individuals have an equal experience that includes full participation in the built environment throughout the proposed buildings and open space.

In conformance with this directive, all development projects subject to Boston Zoning Article 80 Small and Large Project Review, including all Institutional Master Plan modifications and updates, are to complete the following checklist and provide any necessary responses regarding the following:

- improvements for pedestrian and vehicular circulation and access;
- encourage new buildings and public spaces to be designed to enhance and preserve Boston's system of parks, squares, walkways, and active shopping streets;
- ensure that persons with disabilities have full access to buildings open to the public;
- afford such persons the educational, employment, and recreational opportunities available to all citizens; and
- preserve and increase the supply of living space accessible to persons with disabilities.

We would like to thank you in advance for your time and effort in advancing best practices and progressive approaches to expand accessibility throughout Boston's built environment.

Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design
2. Massachusetts Architectural Access Board 521 CMR
3. Boston Complete Street Guidelines
4. City of Boston Mayors Commission for Persons with Disabilities Advisory Board
5. City of Boston – Public Works Sidewalk Reconstruction Policy
6. Massachusetts Office On Disability Accessible Parking Requirements
   a. www.mass.gov/anf/docs/mod/hp-parking-regulations-mod.doc
7. MBTA Fixed Route Accessible Transit Stations
   a. http://www.mbta.com/about_the_mbta/accessibility/
## Project Information

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>2000 Comm Ave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Address Primary:</td>
<td>2000 Commonwealth Avenue</td>
</tr>
<tr>
<td>Project Contact (name / Title / Company / email / phone):</td>
<td>Thomas J. Keady, Jr. VP for Governmental and Community Affairs (617) 552-4787/Thomas.keady@bc.edu</td>
</tr>
</tbody>
</table>

## Team Description

<table>
<thead>
<tr>
<th>Owner / Developer:</th>
<th>Boston College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architect:</td>
<td>DiMella Shaffer</td>
</tr>
<tr>
<td>Engineer (building systems):</td>
<td>Fitzemeyer &amp; Tocci</td>
</tr>
<tr>
<td>Permitting:</td>
<td>Fort Point Associates</td>
</tr>
<tr>
<td>Construction Management:</td>
<td></td>
</tr>
</tbody>
</table>

## Project Permitting and Phase

At what phase is the project – at time of this questionnaire?

<table>
<thead>
<tr>
<th>PNF / Expanded PNF Submitted</th>
<th>Draft / Final Project Impact Report Submitted</th>
<th>BRA Board Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRA Design Approved</td>
<td>Under Construction</td>
<td>Construction just completed:</td>
</tr>
</tbody>
</table>
Building Classification and Description

What are the principal Building Uses - select all appropriate uses?

<table>
<thead>
<tr>
<th>Residential – One to Three Unit</th>
<th>Residential - Multi-unit, Four +</th>
<th>Institutional</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>Office</td>
<td>Retail</td>
<td>Assembly</td>
</tr>
<tr>
<td>Laboratory / Medical</td>
<td>Manufacturing / Industrial</td>
<td>Mercantile</td>
<td>Storage, Utility and Other</td>
</tr>
<tr>
<td>First Floor Uses (List)</td>
<td>Residential &amp; Parking garage</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is the Construction Type – select most appropriate type?

<table>
<thead>
<tr>
<th>Wood Frame</th>
<th>Masonry</th>
<th>Steel Frame</th>
<th>Concrete</th>
</tr>
</thead>
</table>

Describe the building?

Site Area: 29,174 SF  Building Area: 287,920 SF
Building Height: 153 Ft. Number of Stories: 17 Flrs.
First Floor Elevation: Elev. 160'-4" (lobby) Are there below grade spaces: Yes

Assessment of Existing Infrastructure for Accessibility:

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

Provide a description of the development neighborhood and identifying characteristics.

The neighborhood is generally characterized by three to six-story residential brick buildings. The Green Line (B-line) runs down the center of Commonwealth Avenue.

List the surrounding ADA compliant MBTA transit lines and the proximity to the development site: Commuter rail, subway, bus, etc.

South Street stop is located diagonally across Commonwealth Avenue and provides Green Line train service.

List the surrounding institutions: hospitals, public housing and elderly and disabled housing

Chestnut Hill Reservoir, Evergreen Cemetery, Boston College Brighton Campus, Boston College Chestnut Hill Campus
developments, educational facilities, etc.

Is the proposed development on a priority accessible route to a key public use facility? List the surrounding: government buildings, libraries, community centers and recreational facilities and other related facilities.

No. Surrounding buildings are primarily private residential apartment / condo buildings.

Surrounding Site Conditions – Existing:

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

Are there sidewalks and pedestrian ramps existing at the development site?

If yes above, list the existing sidewalk and pedestrian ramp materials and physical condition at the development site.

Yes

The existing sidewalk material is concrete with granite curbing. The physical condition of the existing sidewalk is average.

Are the sidewalks and pedestrian ramps existing-to-remain? If yes, have the sidewalks and pedestrian ramps been verified as compliant? If yes, please provide surveyors report.

Yes. The sidewalks along Commonwealth Ave are outside the scope of work, therefore compliance is unknown.

Is the development site within a historic district? If yes, please identify.

No, the Site is not located in a historic district.

Surrounding Site Conditions – Proposed

This section identifies the proposed condition of the walkways and pedestrian ramps in and around the development site. The width of the sidewalk contributes to the degree of comfort and enjoyment of 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. Typically, a five foot wide Pedestrian Zone supports two people walking side by side or two wheelchairs passing each other. An eight foot wide Pedestrian Zone allows two pairs of people to comfortable pass each other, and a ten foot or wider Pedestrian Zone can support high volumes of pedestrians.
Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? See: www.bostoncompletestreets.org

*If yes above*, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, Boulevard.

No new sidewalks are proposed for this project.

<table>
<thead>
<tr>
<th>Street Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
</tr>
</tbody>
</table>

What is the total width of the proposed sidewalk? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone.

<table>
<thead>
<tr>
<th>Widths</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
</tr>
</tbody>
</table>

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?

If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the City of Boston Public Improvement Commission?

<table>
<thead>
<tr>
<th>Easement</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
</tr>
</tbody>
</table>

Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way?

*If yes above*, what are the proposed dimensions of the sidewalk café or furnishings and what will the right-of-way clearance be?

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Clearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

### Proposed Accessible Parking:

See Massachusetts Architectural Access Board Rules and Regulations 521 CMR Section 23.00 regarding
accessible parking requirement counts and the Massachusetts Office of Disability Handicap Parking Regulations.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the total number of parking spaces provided at the development site parking lot or garage?</td>
<td>6</td>
</tr>
<tr>
<td>What is the total number of accessible spaces provided at the development site?</td>
<td>NA</td>
</tr>
<tr>
<td>Will any on street accessible parking spaces be required? If yes, has the proponent contacted the Commission for Persons with Disabilities and City of Boston Transportation Department regarding this need?</td>
<td></td>
</tr>
<tr>
<td>Where is accessible visitor parking located?</td>
<td>In the parking garage</td>
</tr>
<tr>
<td>Has a drop-off area been identified? If yes, will it be accessible?</td>
<td>NA</td>
</tr>
</tbody>
</table>

A diagram indicating the accessible routes to and from the accessible parking in the garage entry locations is included. Route distances are also included.

**Circulation and Accessible Routes:**

The primary objective in designing smooth and continuous paths of travel is to accommodate persons of all
abilities that allow for universal access to entryways, common spaces and the visit-ability* of neighbors.

*Visit-ability – Neighbors ability to access and visit with neighbors without architectural barrier limitations

Provide a diagram of the accessible route connections through the site.

Describe accessibility at each entryway: Flush Condition, Stairs, Ramp Elevator.

Are the accessible entrance and the standard entrance integrated?

If no above, what is the reason?

Will there be a roof deck or outdoor courtyard space? If yes, include diagram of the accessible route.

Has an accessible route way-finding and signage package been developed? If yes, please describe.

### A diagram of the accessible route connections through the Site is included.

Flush condition at existing main entrance.

Yes.

Yes. Please see attached diagram.

No; however as part of the further development of the design and the eventual development of the plans and specifications way-finding and signage packages will be developed.

### Accessible Units: (If applicable)

In order to facilitate access to housing opportunities this section addresses the number of accessible units that are proposed for the development site that remove barriers to housing choice.

What is the total number of proposed units for the development?

182 of the existing units will remain.

How many units are for sale; how many are for rent? What is the market value vs. affordable breakdown?

NA. This facility will become a Residence Hall for Boston College.

How many accessible units are being proposed?

10 existing units will be renovated to become accessible.

Please provide plan and diagram of the accessible units.

A floor plan and diagram of the accessible units is included.
How many accessible units will also be affordable? If none, please describe reason.

NA. This facility will become a Residence Hall for Boston College.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs at entry or step to balcony. If yes, please provide reason.

Has the proponent reviewed or presented the proposed plan to the City of Boston Mayor’s Commission for Persons with Disabilities Advisory Board?

Did the Advisory Board vote to support this project? If no, what recommendations did the Advisory Board give to make this project more accessible?

Thank you for completing the Accessibility Checklist!

For questions or comments about this checklist or accessibility practices, please contact:

kathryn.quigley@boston.gov | Mayors Commission for Persons with Disabilities
LEGEND

- 1 BEDROOM
- 1 BEDROOM ADA
- 2 BEDROOM
- 2 BEDROOM ADA
- RD/RA
- SUPPORT

ONE BEDROOM ACCESSIBLE UNITS ON LEVELS 3, 4, 14, 15, 16

TWO BEDROOM ACCESSIBLE UNITS ON LEVELS 3, 4, 14, 15, 16

2000 COMMONWEALTH AVE
ADA UNIT LOCATIONS
10.21.14   SCALE: 1" = 20'-0"