Student Apartments at 525 Huntington Avenue

Wentworth Institute of Technology

Draft Project Impact Report

September 28, 2012

submitted to Boston Redevelopment Authority
submitted by Wentworth Institute of Technology
prepared by Fort Point Associates, Inc.
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Fort Point Associates, Inc.
Urban Planning Environmental Consulting Project Permitting

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Project Summary

CHAPTER 1: PROJECT SUMMARY

1.1 PROJECT IDENTIFICATION

Project Name: Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue

Address/Location: 525 Huntington Avenue, Boston, MA 02115

Assessor's Parcel #: 0401833000

1.2 PROJECT SUMMARY

This Draft Project Impact Report (DPIR) is being submitted by Wentworth Institute of Technology ("Wentworth") in accordance with Article 80B of the Boston Zoning Code. The purpose of the filing is to complete review of the proposed project under the Article 80B, Large Project Review and to attest to consistency with the Institutional Master Plan (IMP) as approved by the Boston Redevelopment Authority (BRA) and the Boston Zoning Commission on January 20, 2011.

A Project Notification Form (PNF) was submitted to the BRA on July 13, 2012. Following a thirty day comment period, comments were received and the BRA issued a Scoping Determination for the preparation of a Draft Project Impact Report. This DPIR addresses issues identified in the Scoping Determination as well as in comments received on the PNF submittal.

Wentworth Institute of Technology ("the Proponent") is proposing to construct the Wentworth Institute of Technology Student Apartments at 525 Huntington Avenue ("the Project"). The Project will be located at the northwest corner of the Wentworth campus. See Figure 1-1, Locus Map. This site is surrounded by Huntington Avenue, Vancouver Street and Louis Prang Street. Wentworth owns the site, which is presently a landscaped open space which was intended as an interim condition until a permanent use for the site could be identified. The site will be utilized to accommodate the Project and will include a public gathering area/entry plaza as a feature to accommodate entry and exit to the building by students and staff. See Figure 1-2, Project Site Plan.

The Project will expand the current campus life facilities and be designed to enhance the campus experience by motivating and attracting Wentworth Juniors and Seniors to reside in on-campus housing rather than in the surrounding neighborhoods. The proposed new facility will provide housing for Wentworth students by means of 305 beds in apartment style units on seven floors. The program for the 114,944 gross square foot (gsf), seven–story building includes a total of 71 units, which will be organized around an open common space with framed window views of the cityscape. The majority of bedrooms (72%) will be occupied by a single student to provide the residents with an increased degree of privacy and a quality of materials and amenities that many students seek when they opt for off campus housing.

Construction of the new residence hall is anticipated to start in February 2013. Occupancy will commence in the fall semester of 2014.

No off-street parking will be constructed to support this project. As described in the IMP, commuting vehicle trips will be reduced as a result of capturing more of the student population at an on-campus location.

1.3 PROJECT SITE

The Project will be constructed on a site comprised of approximately 0.38 acres (16,355 square feet) at the intersection of Huntington Avenue and Louis Prang Street. Vancouver Street borders the site to the north. The project site was formerly the site of a Shell – branded gasoline station which was decommissioned in February of 2007. The site was developed into a landscaped open space in October/November of 2008, and is currently owned by Wentworth Institute of Technology. See Figure 1-3, Aerial View of Existing Site.

1.4 PUBLIC AND COMMUNITY BENEFITS

The Project will:

- Allow for construction of a new student residence hall, the third major new construction project of the approved Institutional Master Plan.
- Provide high quality on-campus housing for 305 undergraduate students.
- Preserve the academic campus setting with an appropriately designed building, blending with the character of the surrounding Mission Hill neighborhood.
- Provide additional centrally-located housing to retain upper level undergraduate students and reduce traffic trips to the campus.

- Support the City's goals for a sustainable future through the development of an energy-efficient and environmentally-friendly building that will achieve a LEED rating targeted at the silver level.
- Uphold the Wentworth's commitment to implementing the Boston Residents Job Policy and establishing employment goals consistent with that program. Under that policy, a goal of 50% of the construction jobs will be intended for Boston residents, 25% for minorities, and 10% for women during the approximately two year construction period.
- Provide approximately 266 construction-related jobs and stimulate the local and regional economy with an estimated construction cost of $43 million
- Continue to implement an important goal of the IMP, which is to provide 95 – 100% of students seeking local housing with on-campus living facilities.

1.5 PUBLIC REVIEW PROCESS

Wentworth is committed to continuing its public outreach with the Wentworth Community Task Force (the "Task Force"), which includes representatives from various community and civic organizations, academic, and institutional groups. In addition to the neighborhood input provided by the Task Force, the Boston Redevelopment Authority's Article 80 Large Project Review process offers an opportunity for further public review and comment.

1.6 CONSISTENCY WITH ZONING REGULATIONS AND ORDINANCES

According to the City of Boston Zoning Code, the underlying zoning of the Wentworth Institute of Technology Campus property is "Wentworth Institute IMP" in the Mission Hill Neighborhood District.

1.7 CONSISTENCY WITH INSTITUTIONAL MASTER PLAN (IMP)

This project is listed as a Proposed Institutional Project in the approved Wentworth IMP and is fully consistent with the IMP.

The IMP described the new Student Residence at 525 Huntington Avenue as a building limited to 7 stories with a maximum GSF of 119,142, and a maximum height of 84 feet. The Floor Area Ratio (FAR) was proposed at 6.9. The Project is slightly smaller in size, at 114,944 GSF, with an average height of 77 feet, and a FAR of 6.06. The building reaches a height of 84 feet only in locations where a parapet is incorporated to screen HVAC equipment on the roof. The IMP also envisioned an entry plaza/public gathering space with

hardscape and landscape elements. The entry plaza has been located on Huntington Avenue to provide a more welcoming and appropriate entrance on the Avenue of the Arts.

The Project is also consistent with the IMP from the following perspectives;

- The proposed Student Apartments have been specifically designed to attract 305 upper level students back to the Wentworth campus for their local housing accommodations.
- The design of the building *"shall **encourage integration with the surrounding community** through an ease of access, views to building interiors, campus spaces, neighborhoods and other local institutions"*.
- New building along Huntington Avenue *"shall **strengthen the location, identity and campus fabric** of Wentworth through architecture that is expressive of Wentworth's mission of excellence in technology"*.
- The ground level of new building *"will be as **public** as security will allow"*.
- The ground level of the building *"will be as **transparent** as possible to allow a view into the educational, cultural and social activities of The Institute within the campus core and along the urban edges"*.

1.8 ANTICIPATED PERMITS AND APPROVALS

The following is a list of anticipated approvals for this project.

Agency	Approval
Local	
Boston Redevelopment Authority	Article 80 Large Project Review Cooperation and other Article 80 Agreements; Certificate of Consistency with IMP, Certificate of Compliance
Boston Civic Design Commission	Schematic Design Review/Recommendation
Boston Fire Department	Flammable Storage Permit

Boston Public Improvements Commission	Specific Repair Plan
Boston Transportation Department	Transportation Access Plan Agreement; Construction Management Plan
Boston Water and Sewer Commission	Site Plan Approval: Backwater Valve Approval; Cross Connection Approval;
Inspectional Services Department	Excavation/Retention Permit; Building Permit; Certificate of Occupancy
State	
Massachusetts Department of Environmental Protection	Source Registration for Sewer Discharge Notification Prior to Construction or Demolition;
Massachusetts Historical Commission	Determination of No Adverse Effect
Massachusetts Board of Elevator Regulations	Elevator Permit for Installation; Elevator Inspection Certificate

1.9 PROJECT TEAM

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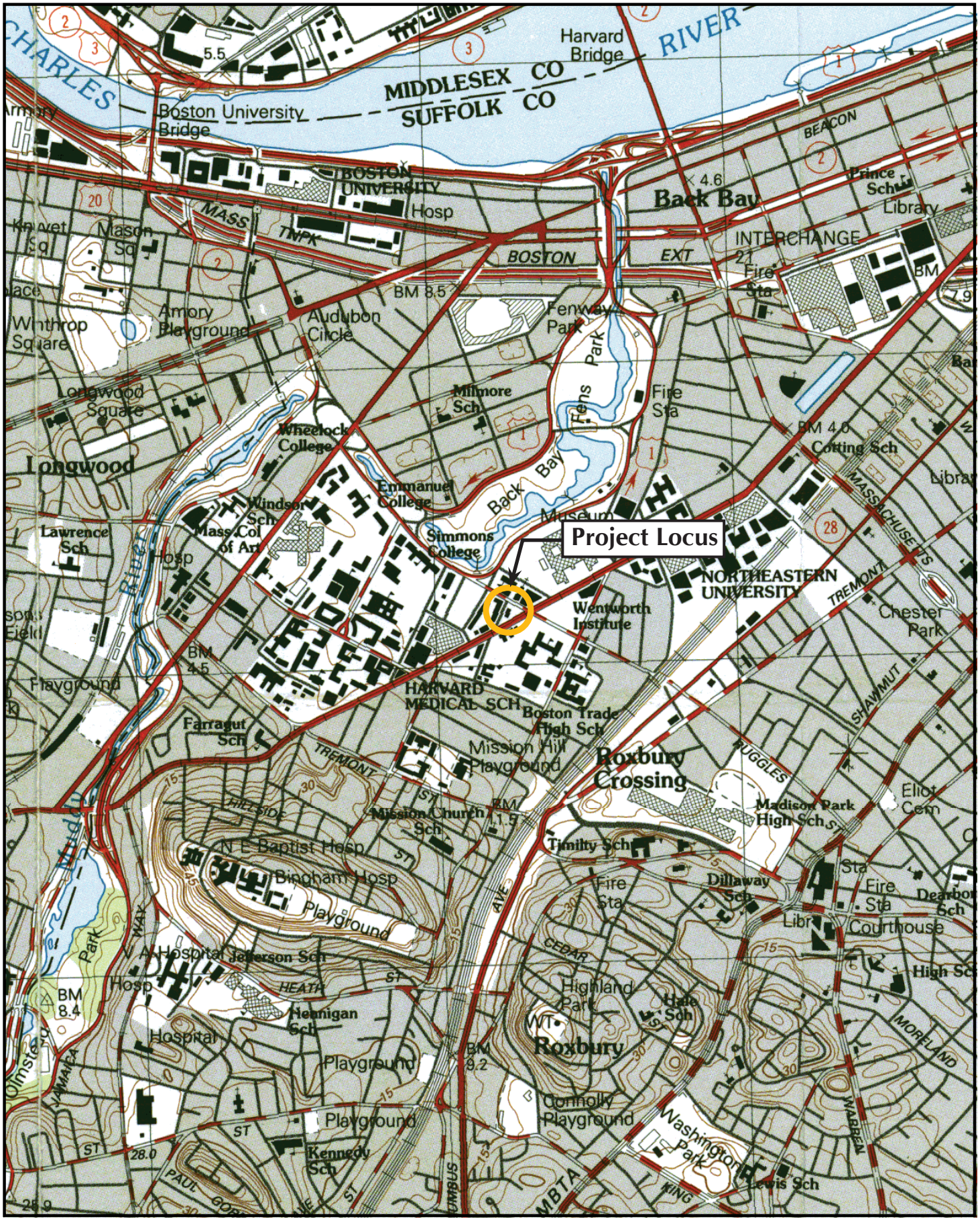

Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
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Figure 1-1
Locus Map
Source: USGS

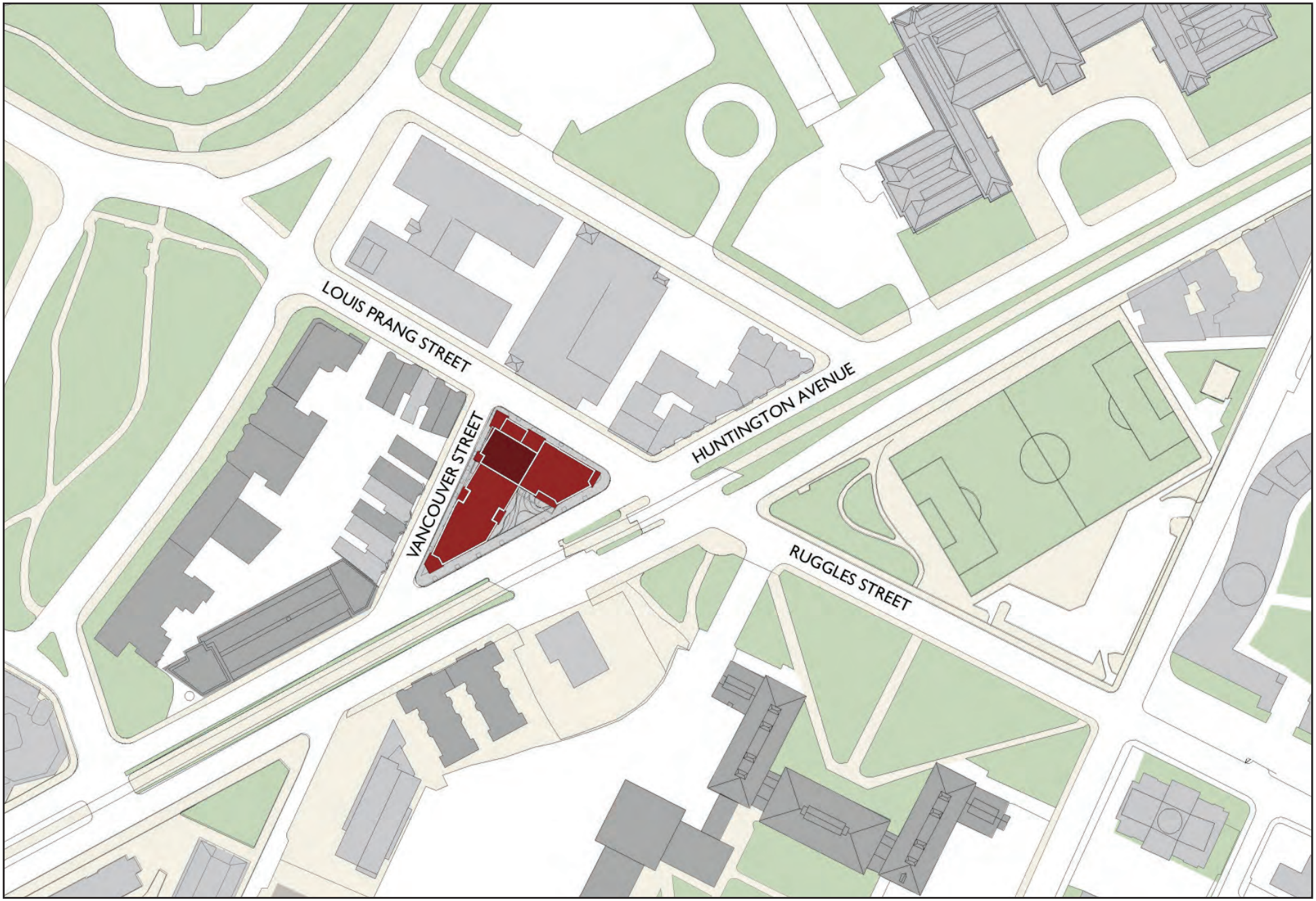

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Figure 1-2
Project Site Plan
Source: Beacon Architectural Associates, 2012

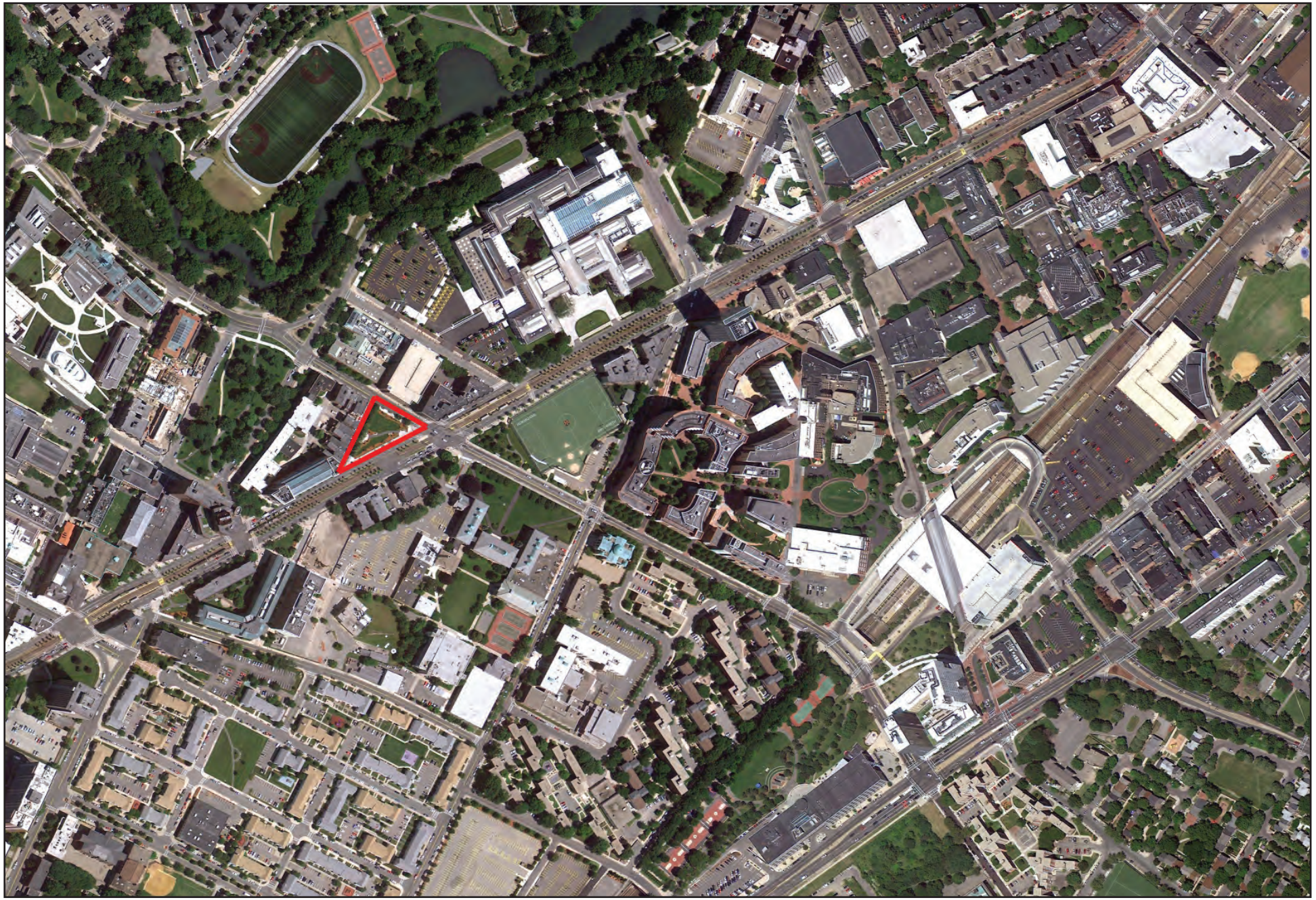

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Figure 1-3
Aerial View of Existing Site
Source: Google, 2011

Chapter 2

Project Description

CHAPTER 2: PROJECT DESCRIPTION

2.1 INTRODUCTION

Wentworth Institute of Technology has described an extensive expansion plan in their Institutional Master Plan (IMP). The proposed project is one of five described in the IMP. The remaining four projects are described in detail in the IMP, and include: the Flanagan Campus Center at Beatty Hall, 18,000 square foot academic addition to the Ira Allen Building at 540 Parker Street, 45,000 sf Center for Engineering and Technology and proposed new soccer field above 330 surface parking spaces.

Twenty-one months into the ten year period of the Wentworth Institutional Master Plan, the Institute has completed the first two Proposed Institutional Projects: namely the Flannagan Campus Center and the Center for Science and Biomedical Engineering. Both projects opened this September. This investment of nearly $40 million provides a significant expansion of student life space to draw students onto campus for their social and cultural activities at the Flannagan Campus Center. The Center for Science and Biomedical Engineering provides state of the art teaching labs and classrooms to support Wentworth's cutting edge curricula in Applied Mathematics, Architecture, Business Management, Computer Science, Construction Management, Design, Engineering and Engineering Technology.

The Wentworth Institute of Technology Student Apartments at 525 Huntington is the third Proposed Institutional Project to be constructed and will be located on a site bounded by Huntington Avenue, Vancouver Street and Louis Prang Street in the northwest corner of the campus. See Figure 2-1, Oblique View of Existing Site.

2.2 PROJECT SITE AND SURROUNDINGS

The 16,355 square foot (sf) site is located on the westbound side of Huntington Avenue, between the two MBTA Green line stops at Longwood Medical and the Museum of Fine Arts. The existing site, which is presently a landscaped open space, will be utilized in its entirety by the Project. See Figure 2-2, Existing Conditions Survey.

Access to the project site is from sidewalks adjacent to the abutting streets. There are no vehicular curb cuts into the Site. Presently the Site is flanked by three-story attached brick multi-family residences on Vancouver Street and two five-story brick structures on Louis

Prang Street. The site is fenced along the Huntington Avenue and Louis Prang Street frontage. Mature street trees line all three streets abutting the project site.

The project site is located in the northwest corner of the Wentworth Institute of Technology Campus, which is bisected by Huntington Avenue. The Wentworth Institute of Technology Campus is located primarily to the south of Huntington Avenue, housed in a number of structures surrounded by Ward Street and Annunciation Road, accessed by Ruggles Street and Parker Street as well as by various mode of public transit. See Figure 2-3, Existing Conditions Photographs.

2.3 PROPOSED PROJECT

The proposed project (the Project) entails the development of a new 114,944 GSF student residence facility planned for Wentworth Institute of Technology. The Project Floor Area Ratio (GSF minus basement and roof spaces) will be 6.06. The Project will be located within the northwest area of the campus amongst an existing cluster of Wentworth residence halls which are located along both sides of Huntington Avenue. In addition, Wentworth maintains student residences across Vancouver Street from the project site.

2.3.1 GROUND FLOOR USES

The proposed building footprint for this new facility is 12,838 sf with transparent gathering and meeting spaces provided for the Institute's student, faculty and administrative staff at the Ground Floor Level along Huntington Avenue and Louis Prang Street to re-activate the street along this area of the building. Wentworth's Housing and Residential Life department shall be relocated to the building's Ground Floor Level at the corner of Huntington Avenue and Vancouver Street. This will provide a more prominent, centralized presence to Wentworth students housed in neighboring residence halls clustered along both edges of Huntington Avenue. An additional 3,517 SF of the site is planned for open public space to enhance the three streetscapes bounding the site. This open space includes a 1,830 sf landscaped entry plaza on Huntington Avenue, consistent with existing campus green/open spaces found along this major transportation pathway. In addition, the building façade along Louis Prang Street will be set back approximately four feet to create a colonnade of additional pedestrian space. The ground floor will also include a mix of student apartments, offices, common areas, bike storage, mail room and recycle/trash as well as loading and service functions along Vancouver Street. See Figure 2-4, Ground Floor Plan. Additional open space will be provided along Vancouver Street in the form of additional pedestrian hardscape and planting beds.

The Project will expand the current campus life facilities and will be designed to enhance the campus experience by motivating and attracting Wentworth Juniors and Seniors to reside in on-campus housing rather than in the surrounding neighborhoods or suburbs of Boston.

2.3.2 RESIDENTIAL UNITS

The proposed new student apartments will provide housing for Wentworth students by means of 305 beds in apartment style units on 7 floors. There will be a total of 71 dwelling units that will consist of 46 four-bed apartments, 24 five-bed apartments and 1 resident director apartment. Each dwelling unit will be organized around an open common space with framed window views of the cityscape. Unlike the majority of the Institute's current housing inventory, 72% of the bedrooms (219 beds) will be occupied by a single student rather than the typical double occupancy bedrooms that are common in existing campus residence facilities. This apartment style layout is intended to provide the residents with an increased degree of privacy and a quality of materials and amenities that many students seek when they opt for off campus housing. See Table 2-1 and Table 2-2 for detailed information.

Table 2-1: Project Program

Level	RD Apt. [1]	4 Bedroom Unit	5 Bedroom Unit	Total Beds	Double Occupancy Rooms	Gross Square Footage
Basement	-	-	-	-	-	13,155
01	1	4	-	17 beds	1 (2 beds)	12,838
02	-	7	4	48 beds	7 (14 beds)	14,386
03	-	7	4	48 beds	7 (14 beds)	14,386
04	-	7	4	48 beds	7 (14 beds)	14,386
05	-	7	4	48 beds	7 (14 beds)	14,386
06	-	7	4	48 beds	7 (14 beds)	14,386
07	-	7	4	48 beds	7 (14 beds)	14,386
Mechanical	-	-	-	-	-	2,675
Total	1	46	24	305 beds	43 (86 beds)	114,944

[1] Resident Director Apartment

Table 2-2 Project Summary

72 Units	24%Double Occupancy Beds
Total Site Area:	16,355 sf
Building Footprint:	12,838 sf
Open Space Area:	3,517 sf

2.3.3 PARKING AND CIRCULATION

Vehicular access to the site will be from existing street circulation. No on-street or off-street parking will be constructed to accommodate the Project. As discussed in the IMP, the construction and occupancy of the student apartments will reduce the demand for on-campus parking by housing students who would otherwise be commuting from off-site locations.

2.3.4 OPEN SPACE AND LANDSCAPING

The Project will include a landscaped urban plaza at the Huntington Avenue entrance. This plaza will provide open space and public gathering areas as well as a permanent location for public art, which will be provided by the Wentworth Institute of Technology School of Industrial Design, in keeping with the goals of the IMP and the neighborhood context. The Building elevation along Vancouver Street will also provide planting beds to add visual interest and to screen service functions.

Open space areas will include additional sidewalks and pavement in the areas between the ground floor and the sidewalks on Louis Prang Street and Vancouver Street. For a more detailed description of the landscape features, see Section 3.4, Streetscape and Landscape. Also, see Figure 2-7, Landscape Plan.

2.3.5 SERVICE FUNCTIONS

The facility's recycle and trash maintenance will be the building's primary service function. Each residential floor is equipped with recycle and trash collection accommodations centrally located near the building core. Maintained by Wentworth's award winning recycling program STRIVE (Supported Training to Reach Independence through Vocational Experience), the building's recycling and

trash will be transported from each floor to the building's Recycle/Trash Room for sorting, compaction and storage.

This Recycle/Trash Room, located on Vancouver Street at the building's northwest corner near Louis Prang Street, is positioned with a roll down door and service drive placed at a 45 degree angle to Vancouver Street for a more efficient vehicular approach to the building for pickup and removal. With the intent to separate service activities away from the facilities living and public occupied spaces, and to locate the service area as far away as possible from the non-Wentworth residential properties, a separate building service entry utilizes this area of the site for loading and delivery requirements while providing a designated unloading/loading area for vehicles to temporarily park in lieu of idling on the street. Since the new facility is not planned for commercial use accommodations, service activities shall be limited and shall be scheduled accordingly to control potential noise issues for the building's residents and Vancouver Street neighbors.

As a student residential building, all utilities, cable, high speed internet, building security, mail services and local telephone service will be provided for the residents.

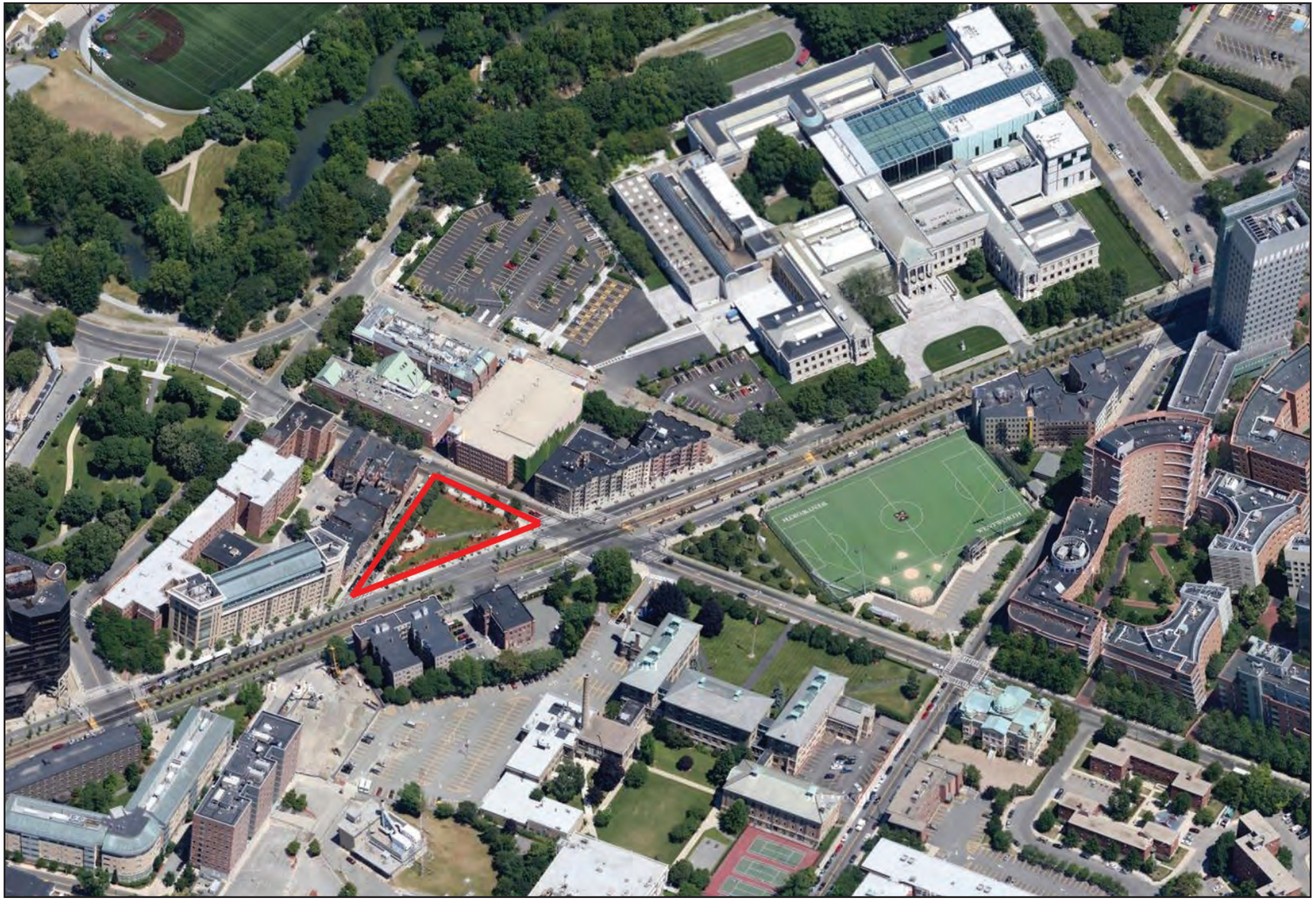

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Figure 2-1
Oblique View of Existing Site
Source: Google, 2011

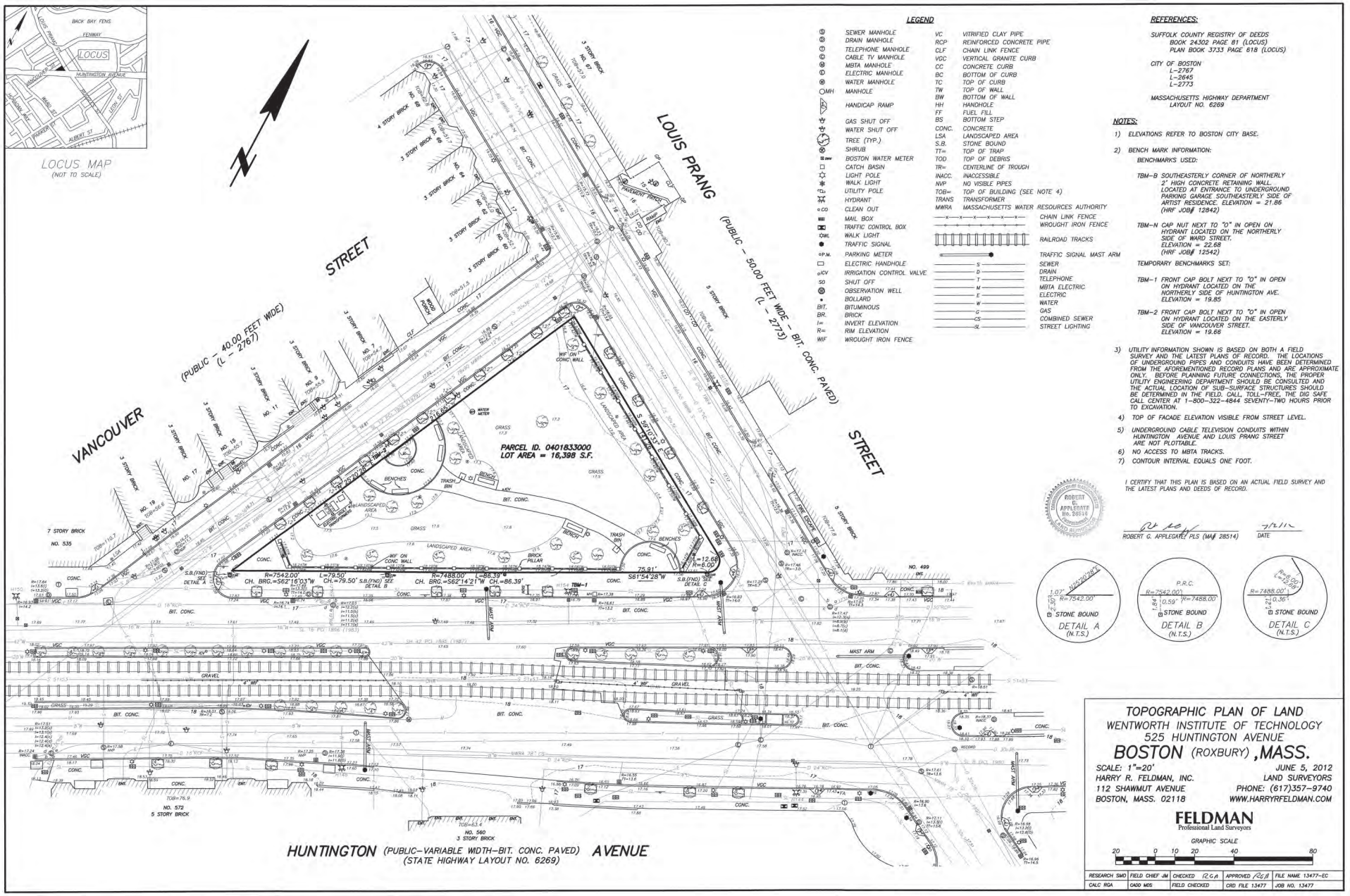

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Figure 2-2
Exusting Conditions Survey
Source: Feldman Professional Land Surveyors, 2012

View Looking West

View Looking Northeast Along Vancouver Street

View of Project Site Along Louis Prang Street

Interior View of Project Site Looking East

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Figure 2-3
Existing Conditions Photographs
Source: Fort Point Associates, Inc., 2012

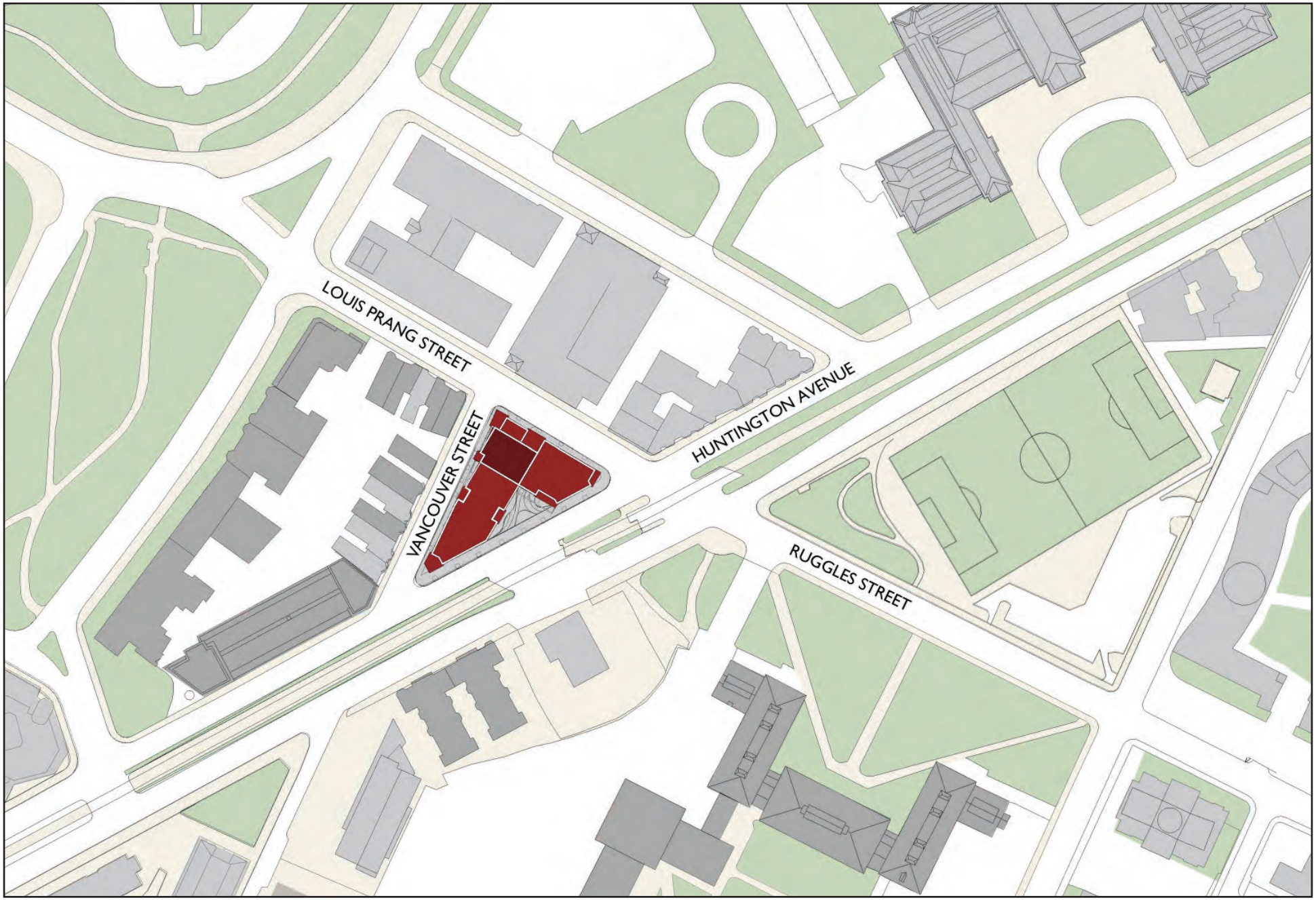

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Figure 2-4
Project Site Plan
Source: Fort Point Associates, Inc., 2012

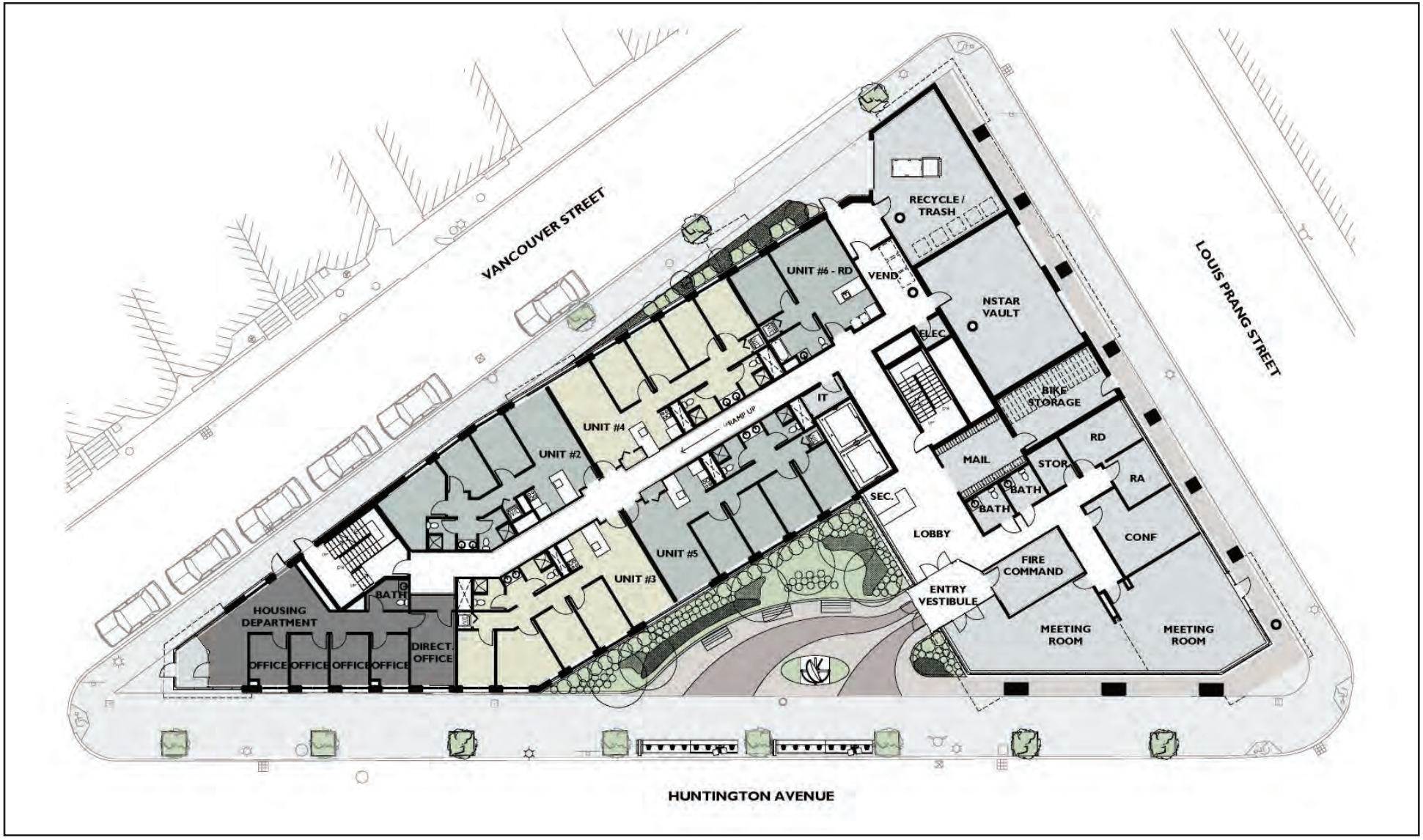

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Figure 2-5
Ground Floor Plan
Source: Beacon Architectural Associates, 2012

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Student Apartments at 525 Huntington Avenue
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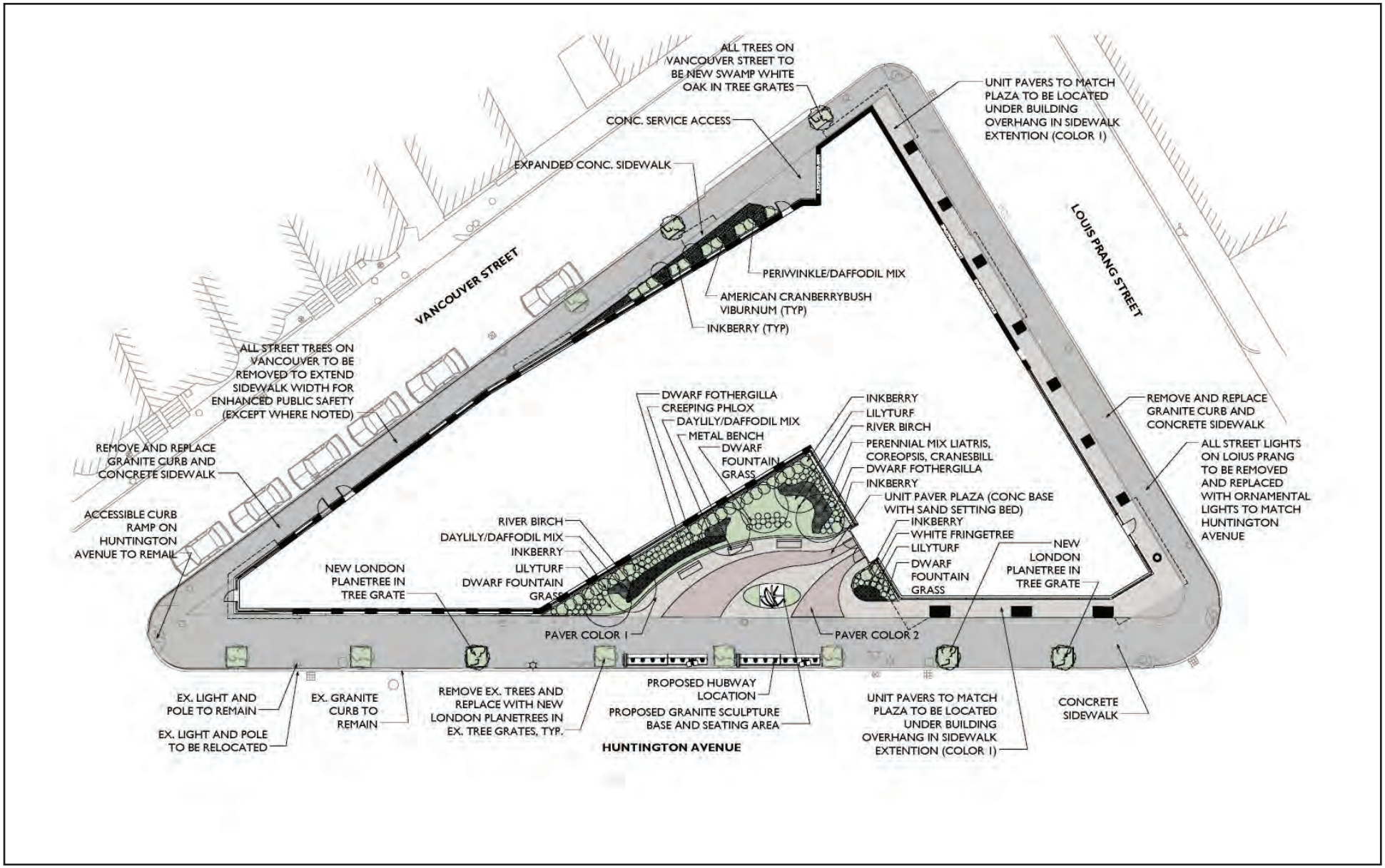
Figure 2-6
Typical Upper Level Floor Plan
Source: Beacon Architectural Associates, 2012



Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
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Figure 2-7
Landscape Plan
Source: Beacon Architectural Associates, 2012

Chapter 3

URBAN DESIGN

CHAPTER 3: URBAN DESIGN

3.1 INTRODUCTION

The Wentworth Institute of Technology Student Apartments at 525 Huntington Avenue (the "Project") has been designed to respect and respond to the physical and operational context of the existing campus facilities, open spaces and surrounding urban fabric. The project site is an existing 16,355 sf lot bound by Huntington Avenue, Louis Prang Street and Vancouver Street. The Project will be located across from and in close proximity to existing student residences along Vancouver and Louis Prang Streets, Evans Way and at 555 Huntington Avenue. See Figure 3-1, Neighborhood Context Map. This siting and the building's 'L'-shaped massing will reinforce Wentworth's emerging campus organization amongst the existing housing facilities within the Northwest area of the campus. The Project will be physically and visually linked to the main campus by its location and entry near the intersection of Louis Prang Street and Huntington Avenue, extending established pedestrian paths through campus to "The Pike", the main pedestrian campus path. The Project, as a seven story residential building, will relate in scale and function to its neighbors. In addition, building materials will be a modern adaptation of established Wentworth materials, similar to the adjacent 555 Huntington Avenue Residence Hall.

The design integrates and welcomes the surrounding community by creating views into the building's interior gathering spaces at the Ground Floor Level and providing an open exterior public gathering plaza adjacent to the building lobby and meeting spaces.. This building transparency and public plaza along Huntington Avenue also strengthens Wentworth's campus identity and improves pedestrian access by activating this urban edge while displaying the educational, cultural and social activities of the Institute along this major city transportation pathway.

With the building's prominent location on Huntington Avenue the design intent is to fortify the existing streetscape theme as the Avenue of the Arts. The siting, scale, massing, materials, form and function of the Project expresses Wentworth's commitment to advanced technology while being respectful of its existing neighborhood surroundings.

3.2 MASSING

The massing for the Project is an expression of the building's function as it relates to its existing surroundings while defining Wentworth's campus organization and identity within

the community. The overall building layout is an 'L'- shaped footprint on a triangular site with two building wings along Louis Prang & Vancouver Streets and with the residual space forming a public gathering area/plaza at the building entrance on Huntington Avenue. This orientation of the building massing intends to enhance the public realm's pedestrian circulation and vistas by redefining and extending existing urban edges. As a prominent feature at the intersection of Huntington Avenue, Louis Prang Street and Ruggles Street, the building reinforces existing pathways and views along Huntington Avenue's east-west corridor and the Ruggles/Louis Prang Street north-south corridor. The Louis Prang Street walk is strengthened by the building's colonnade along this sidewalk directing people to the Isabella Stewart Gardner Museum and the Back Bay Fens to the north and towards the Institute's formal entrance at Wentworth Hall on Ruggles Street to the south. The building also provides a defined edge to Huntington Avenue's north side pedestrian sidewalk while providing a place for people to pause along their travels at the building's Entry Plaza. This open space adds to the procession of existing open public spaces created by similar ceremonial entries for the numerous institutional buildings found marching along Huntington Avenue's east-west city passageway.

As a residential facility the Louis Prang & Vancouver street building masses relate to the existing residential functions along these neighborhood streets. The Louis Prang wing is a continuation of the existing Wentworth residential housing facilities along the south side of the street, strengthening this campus edge. This building mass is organized with residential units facing the street on floors 2-7 and residential support spaces along the street at the Ground Floor Level. These Ground Floor support spaces within the Louis Prang Street wing include generous meeting/display spaces at the corner of Huntington Avenue, resident life offices, resident director apartment, a lounge with vending and mail alcoves, and bike room that will allocate a secured bike storage location for adjacent Wentworth housing facilities in this area of the campus. See Figure 3-2, Ground Floor Plan.

The building wing located across from the Museum Parking Structure along Louis Prang Street adds a mechanical penthouse set back from the building facade allowing the seven story residence levels below to "read" as the building height. The seven story Vancouver Street apartment wing relates in height and use to the existing Wentworth residential buildings located across Vancouver Street and is approximately 25'-30' lower in height than the Tower section of the newly constructed 555 Huntington Avenue Residence Hall at the opposite corner of Vancouver Street and Huntington Avenue. At the mid-section of the Vancouver Street side the building massing recedes back from the edge of the site providing relief to the existing residential buildings across this one-way street. See Figure 3-3, Typical Upper Level Floor Plan, and Figure 3-4, Roof Plan.

The legs of the 'L'- shaped building massing continue to define the Huntington Avenue street edge at both corners of Huntington Avenue/Louis Prang Street and Huntington Avenue/Vancouver Street. The triangular shaped Entry Plaza formed by these two legs defines the building's main entry at Huntington Avenue and provides a more welcoming pedestrian entry sequence to the building. This angled orientation of the massing as it relates to Huntington Avenue also offers privacy to the apartment units located along this side of the building by setting these building façades back from the street edge. The massing is illustrated in the perspective renderings in Figures 3-5 through 3-9.

The modern use of glass bays and masonry clad panels, with punched openings, project and recede along the building façade expressing the functions of the building interior spaces. These varying elements and materials aim to provide a more residential feel to the building massing that relates in scale and function to its neighbors.

3.3 CHARACTER AND MATERIALS

The exterior building materials for the Project continue an existing palette of materials for the Wentworth campus. With the utilization of a modern adaption of these established materials Wentworth's mission of excellence in technology is expressed. This modern function is articulated by eroding the masonry facades to reveal significant areas of glass and/or metal panel as a second skin to the building.

The building fenestration will be organized to reflect the interior planning of spatial relationships. Punched window openings in masonry panel sections of the building face define the individual bedrooms throughout the apartment units. Projecting glass and metal curtain wall bays define the apartment unit common spaces providing an open and more generously sized feel to the units. A recessed glass and metal curtain wall along the Ground Floor Level on Huntington Avenue and Louis Prang Street provides the neighborhood unobstructed views into the building gathering spaces while displaying the Institutes educational, cultural and social activities within this transparent zone. The mechanical penthouse along the Louis Prang Street wing of the building is set back from the building façade to alleviate the height of this additional level while providing a sound and visual impediment in mitigating the roof top mechanical equipment for the surrounding neighborhood. The application and configuration of these materials provide a clear system to give order to the overall building façade. The emphasis on the selection of attractive materials that convey a sense of quality, beauty, and that will maintain their quality over time shall help relate this new construction to other neighboring institutional buildings. See Elevations in Figures 3-11 through 3-14.

3.4 STREETSCAPE AND LANDSCAPE

Within the confines of the block containing the project site, existing sidewalks, including handicap ramps, will be reconstructed as required when impacted by construction activities. All sidewalks will be reconstructed or inspected to ensure compliance with current regulations.

Where possible, existing trees will be protected to remain, transplanted or replaced with new specimens. The existing trees located along on Vancouver Street and Louis Prang Street will be removed. The area along Louis Prang Street will be utilized for trash and recycling removals. Existing light poles on all street fronts and traffic mast arms along Huntington Avenue are to remain, or be replaced if impacted by construction activities.. New light fixtures on Louis Prang Street and Vancouver Street will be similar in style to the ornamental fixtures located along Huntington Avenue.

In instances where the building does not meet the lot line, new paving and/or planting zones will be provided between the building face and existing sidewalk. These zones include the Entry Plaza on Huntington Avenue, the street side colonnade that extends from the east side of the Entry Plaza on Huntington Avenue and wraps along the entire length of Louis Prang Street, and the area created by the building setback along a portion of the Vancouver Street sidewalk. Empty tree grates or openings in the sidewalks will be planted with new street trees where feasible. All plant materials will be selected from indigenous species based on urban hardiness to minimize the irrigation requirements. See Figure 3-17, Landscape Plan for detailed information regarding hardscape materials, trees and plantings proposed for the Project.

Huntington Avenue is a major vehicular, pedestrian and public transportation spine through the city with Massachusetts Bay Transportation Authority (MBTA) Green Line service running along the median. This thoroughfare will retain its urban character while benefitting from active visible meeting/gathering spaces located at the Ground Floor of the building and the development of a the landscaped entry plaza. Huntington Avenue is also known as the Avenue of the Arts for its many significant artistic venues and educational building's that include Symphony Hall, Horticultural Hall, New England Conservatory, Museum of Fine Arts, Wentworth Institute of Technology, Massachusetts College of Art, Northeastern University, the Massachusetts College of Pharmacy and the Boston University Theatre. Other institutions in close proximity to the Project include the Longwood Medical area that is home to many of Boston's major teaching and research hospitals as well as Harvard

Medical School, the Colleges of the Fenway consortium including Wheelock College, Simmons College, and Emmanuel College within the nearby Back Bay Fens, the Isabella Stewart Gardner Museum, and the Greek Orthodox Cathedral of the Annunciation. Although diverse in character, each of these existing buildings marks their location along Huntington Avenue by ceremonial entries with a mixture of defining elements which include: signage, plantings, lawns, sculptures, seating and distinguishing paving materials and patterns. In fortifying Huntington Avenue's streetscape theme as the Avenue of the Arts, Wentworth's new residence facility shall also mark its presence within this existing context by its Entrance Plaza with a mixture of these same elements while defining the building's entrance. The Entry Plaza will include a mix of landscaped zones, hardscape materials, a central sculpture and site furnishings that evoke a pedestrian scale while providing a sense of arrival to the building and visual amenity to the apartment units that overlook it. This urban plaza will also provide a buffer between the resident units and the activities associated with Huntington Avenue. By enhancement of this common streetscape theme, the new plaza provides another public gathering space along this busy thoroughfare for those to pause and take notice of Wentworth as a prominent and engaged member of the community. Although the Wentworth campus already has a significant frontage along Huntington Avenue the Institute's formal entrance is along the less-prominent Ruggles Street. This new facility willll provide a more recognizable "face" for Wentworth at an important campus gateway while strengthening its address and identity along the Avenue of the Arts.

3.5 SUSTAINABILITY

3.5.1 ARTICLE 37

As a signatory to the American College and University Presidents' Climate Commitment (ACUPCC), Wentworth Institute of Technology employs sustainable design and construction techniques in their development of all new facilities. Wentworth's approach to sustainability aspires to simultaneously improve environmental, social, and economic performance. This mandate is reflected in the Wentworth Creed, dating back to the Institute's founding in 1904, including the following principle of "Economy":

We seek to use our resources wisely at all times. We accept our obligation to safeguard the earth, its resources, its life, and its energy for the benefit of future generations.

Wentworth has emerged as a leader in campus sustainability as exemplified by its initiatives which have been nationally recognized as best practices. For example its award-winning recycling program, in existence for over 20 years, has trained and employed 1,500 Boston

Public School (BPS) students with special needs to collect and sort campus recyclables. Wentworth is also among only 80 institutions nationwide to have achieved recognition for their support of alternate modes of transportation in the U.S. Environmental Protection Agency (EPA) "Best Workplace for Commuters" Program. In 2007 Wentworth joined the top 15% of colleges and universities seeking to aggressively cut greenhouse gas ("GHG") emissions and publicly reported its progress through the American College and University Presidents' Climate Commitment ("ACUPCC"). Led by the Wentworth Sustainability Committee, appointed in 2008, the Institute continues to build on past successes and existing initiatives to further embrace a more sustainable campus.

Wentworth adopts a green purchasing policy. This project shall pursue a goal of seeking environmentally preferred goods and materials wherever financially feasible. The selection of building materials and systems shall be made after evaluation of their estimated lifecycle and carbon footprint. This shall include interior materials with high percentage of recycled content and the use of adhesives and sealants with low volatile organic compounds wherever utilization is feasible. In addition it is the projects intent to select glazing that will maximize daylight effectiveness, occupant comfort, and minimize energy use to the greatest extent feasible.

To comply with Article 37, Wentworth intends to measure the results of its sustainable initiatives using the framework of the LEED (Leadership in Energy and Environmental Design) rating system. The LEED rating system tracks the sustainable features of the project by achieving points in the following categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor environmental Quality, and Innovation In Design.

The project team will demonstrate certifiable status under the LEED rating system through the submission of a LEED scorecard which will include an explanation of the project's approach to achieving each of the individual LEED points. The scorecard shall be updated regularly as the design develops and engineering assumptions are substantiated.

The Proponent will engage in an environmentally responsible construction process, which in turn will yield a building that reduces its environmental impact in an ongoing way. Consistent with the Wentworth Institute of Technology Institutional Master Plan 2010-2020, the project shall be designed as LEED certifiable at a minimum LEED Silver Rating status as defined by the U.S. Green Building Council, which will meet and exceed the requirements of Article 37 (Green Building) of the Boston Zoning Code. See Figure 3-21, LEED Scorecard.

3.5.2 SUSTAINABLE SITES

In order to comply with the City of Boston Green Building Prerequisites, retrofitted diesel construction vehicles, or vehicles that use alternate fuels, will be used wherever feasible. The Project will implement an outdoor construction management plan that includes provisions for wheel washing, site vacuuming, truck covers, and anti-idling signage. The Project will also implement a comprehensive integrated pest management plan.

Further, at this early stage of the design process, the Project will evaluate achieving two of the four available Boston Green Building credits:

Groundwater Recharge

The Project will capture stormwater and, through irrigation and other means, achieve greater recharge than required.

Modern Mobility

Since the Project Site is an urban location in close proximity to both the Green Line MBTA Museum of Fine Arts station and the numerous bus lines that travel Huntington Avenue, there are obvious strategies to take advantage of available public transportation access. To satisfy the prerequisites for this credit, the building management will be responsible for coordinating and posting transportation information (i.e. public transportation, shuttle services). Secured bicycle storage facilities will be provided. The Proponent has a well established Transportation Demand Management ("TDM") program, which is described in Chapter 4, Transportation.

The following LEED-NC v.2009 Prerequisites and Credits are also targeted for investigation:

Sustainable Sites

1. Construction Activity (Prerequisite)
   A management plan will enforce measures to protect adjacent areas from pollution.

2. Site Selection (Credit 1)
   The Project Site had previously been completely developed and is located in an urban area. This development does not violate any of the established criteria. This credit is expected to be achievable.

3. Development Density (Credit 2)
   The density of the Project development is compatible with surrounding sites. This credit is expected to be achievable.

4. Brownfield Redevelopment (Credit 3)
   Soil contamination remediation from the previous site use as a gas station is expected to be needed prior to demolition activity. This credit is expected to be achievable.

5. Alternative Transportation (Credits 4.1, 4.2, 4.3, 4.4)
   Public transportation access and bicycle storage are included in the Boston Green Building credits. This credit will be achievable.

6. Stormwater Design (Credits 6.1, 6.2)
   The site is currently completely impervious. The Project proposes to pursue a groundwater recharge program and a stormwater treatment program for removal of total suspended solids per the credit requirements. The recharge system will include a water quality treatment unit before discharging into the main drainage trunk line. These credits are expected to be achievable. Heat Island Effects (Credits 7.1, 7.2)

   7. A "green/high-emissivity" roof system will be evaluated for covering all areas of the roof. These credits are expected to be achievable.

Water Efficiency

1. Water Efficient Landscaping (Credit 1.1)
   Utilization of captured rainwater and high-efficiency irrigation technology will be investigated to reduce potable water consumption. This credit is expected to be achievable.

2. Water Use Reduction (Prerequisite 1, Credits 3.1, 3.2)
   Appropriate low-flow and low consumption plumbing fixtures are anticipated to achieve a reduction in water usage of 30 – 40% over the baseline.

Energy and Atmosphere

1. Fundamental Commissioning (Prerequisite 1)
   Mechanical and Electric building systems will be Commissioned.

2. Minimum Energy Performance (Prerequisite 2)
   The energy code utilized for the Project will be the Massachusetts Building Code, Article 13, at a minimum, and ASHRAE Standard 90.1-2007.

3. Refrigerant Management (Prerequisite 3)
   Non-CFC-based refrigerants will be utilized for the Project.

4. Optimize Energy Performance (Credit 1)
   Preliminary calculations show it is possible that the building will perform approximately 21% better than Energy Code minimum requirements in order to comply with Massachusetts and City of Boston "Stretch" Energy Code requirements.. This goal will be investigated further as building systems are evaluated and selected. A chilled water/hot water HVAC system is expected to be used which will incorporate high-efficiency equipment and control strategies.

5. Enhanced Commissioning (Credit 3)
   An independent commissioning authority will be investigated to perform on-board design reviews and re-commission the building systems after a period of occupancy.

6. Enhanced Refrigerant Management (Credit 4)
   Air conditioning equipment refrigerant options will be evaluated to optimize the balance between ozone-depletion and global warming/greenhouse gas production effects. This credit is expected to be achievable.

7. Measurement and Verification (Credit 5)
   The appropriate use of measurement and verification equipment will be evaluated as building systems are selected. Property management is expected to perform on-going reviews of system operation, environmental conditions and indoor air quality, energy and water use, and the potential for improvements and innovations.

Materials and Resources

1. Storage and Collection of Recyclables (Prerequisite)
   Facilities are expected to be provided at each residential floor level and in the parking garage for collection of recyclable materials.

2. Construction Waste Management (Credits 2.1, 2.2)
   The Construction Manager will implement a waste management plan that will seek to divert at least 75% of construction and demolition waste material removed from the site from landfills through recycling and salvaging. This credit is expected to be achievable, and may be pursued aggressively in an opportunity to gain an exemplary performance credit of 95% construction waste recycling.

3. Recycled Content (Credits 4.1, 4.2)
   Project Specifications will encourage provision and tracking of materials with recycled content where practical. Structural steel, gypsum wallboard, and metal studs are all expected to contribute greatly to this credit.

5. Regional Materials (Credits 5.1, 5.2)
   Project Specifications will encourage provision and tracking of materials that have been manufactured and extracted/harvested within 500 of the project site. Poured-in-place and pre-cast concrete are expected to contribute greatly to this credit.

4. Certified Wood (Credit 7)
   Project Specifications will encourage provision and tracking of these materials where practical.

Indoor Environmental Quality

1. Minimum IAQ Performance (Prerequisite 1)
   The ventilation code utilized for the Project will be ASHRAE Standard 62.1-2007, as required by the present Massachusetts Building Code.

2. Environmental Tobacco Smoke Control (Prerequisite 2)
   The Proponent intends to designate the entire building as a non-smoking facility.

3. Increased Ventilation (Credit 2)
   The building is expected to be served by both mechanical ventilation (common areas) and natural ventilation (apartment units). Calculations will be performed as the design progresses to determine if it is feasible to exceed the ASHRAE 62.1-2007 ventilation requirements by more than 30% in the occupied areas.

4. Construction IAQ Management Plan (Credit 3.1)
   Indoor Air Quality Management plans are expected to be implemented during the construction phase per the requirements of this credit.

5. Low-Emitting Materials (Credits 4.1, 4.2, 4.3, 4.4)
   Adhesives, sealants, paint, and carpet are expected to be specified with low VOC content limits as prescribed by the respective applicable standards. Composite wood products with no added urea-formaldehyde will be investigated further during design. These credits are expected to be achievable.

6. Indoor Chemical and Pollutant Source Control (Credit 5)
   A permanent entryway system is expected to be installed at high-volume building entrances to prevent air contaminants from entering the building. Housekeeping and laundry areas are expected to be separated and exhausted to outside to comply with the requirements of this credit. Air handling units are expected to be provided with appropriate filtration to meet the credit. This credit is expected to be achievable.

7. Controllability of Systems (Credits 6.1, 6.2)
   Individual lighting and temperature controls are expected to meet the minimum requirements of these credits. These credits are expected to be achievable in the residential areas of the building.

8. Thermal Comfort (Credit 7.1)
   The building envelope and HVAC systems are expected to be designed to meet the requirements of ASHRAE 55-2004.

9. Daylight and Views (Credits 8.1, 8.2)
   Daylight exposure will be investigated in detail during the design to determine compliance with the requirements of the credit. Exterior views are expected to be maximized to the extent practical.

Innovation and Design Process

1. Construction Waste Management (Credits 1.1)
   As stated above, the Construction Manager will implement a waste management plan that will seek to divert at least 75% of construction and demolition waste material removed from the site from landfills through recycling and salvaging. This credit may be pursued aggressively in an opportunity to gain an exemplary performance credit of 95% construction waste recycling.

2. Green Housekeeping (Credit 1.2)
   The Proponent intends to engage in a green housekeeping policy wherein all cleaning chemicals and equipment used in common areas shall comply with the Green Seal standard GS-37.

3. Tenant Education and Guidelines (Credit 1.3)
   The Proponent intends to develop Green tenant guidelines and educational programs and resources for residents within the building.

4. Energy Star Appliances
   The Project will seek to reduce overall non-regulated energy use by utilizing Energy Star appliances in the apartment units.

5. Development Density
   The project will seek to show compliance with both parts of credit SSc2, due to project size and project location. This will allow the project to achieve an additional point for exemplary performance.

6. Public Transportation

The project is located across the street from the Museum of Fine Arts MBTA station, which is a green line stop and also has multiple bus line stops. The project will show compliance with the exemplary performance credit requirements by combining all the possible public transportation rides daily.

3.6 ACCESSSIBIITY

The Project will meet or exceed compliance requirements with all local, state and federal accessibility regulations that govern the built environment.

There will be (7) accessible units, or (1) accessible unit per floor. This equates to approximately 10% of the 71 total units exceeding the MAAB requirement of 5% accessible units. In addition, the entirety of the project site and surrounding sidewalk will be designed to be accessible.

No on-site parking is provided as part of this project. There is a public parking garage with accessible parking across the street from the site on Louis Prang Street.

The Project will provide all required provisions of the Massachusetts Architectural Access Board (MAAB) for the inclusion of people with disabilities as a general priority of the project.

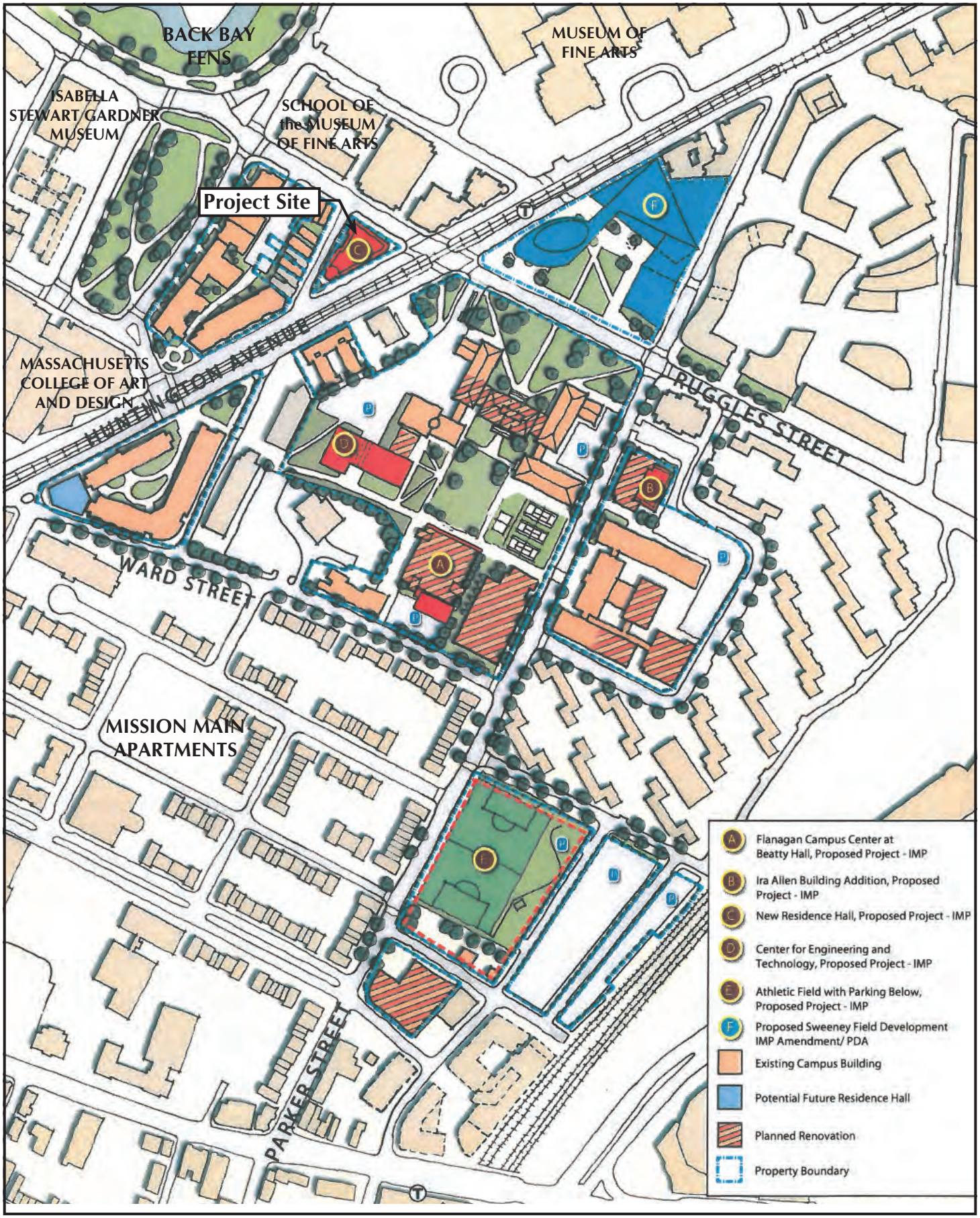
All entries, circulation and common spaces will be accessible.

The entirety of the project site and surrounding sidewalks will be accessible.

All pedestrian sidewalk ramps, including those located at crosswalks across from Louis Prang Street and Vancouver Street will be made accessible.

All slopes, ramps and surface materials will be designed to meet all required provisions of the MAAB, including:

- Provide accessible entries, circulation, and common spaces;
- Provide accessible housing units;
- Provide accessible outdoor access
- Provide accessible HP parking spaces, if any (presently no project parking is proposed);
- Provide accessible public sidewalks and pedestrian ramps;
- Provide accessible slopes and materials in the paths of travel; and
- Meet and/or exceed compliance requirements.



Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Project Impact Report

Figure 3-1
Neighborhood Context
Source: Perkins + Will, 2012

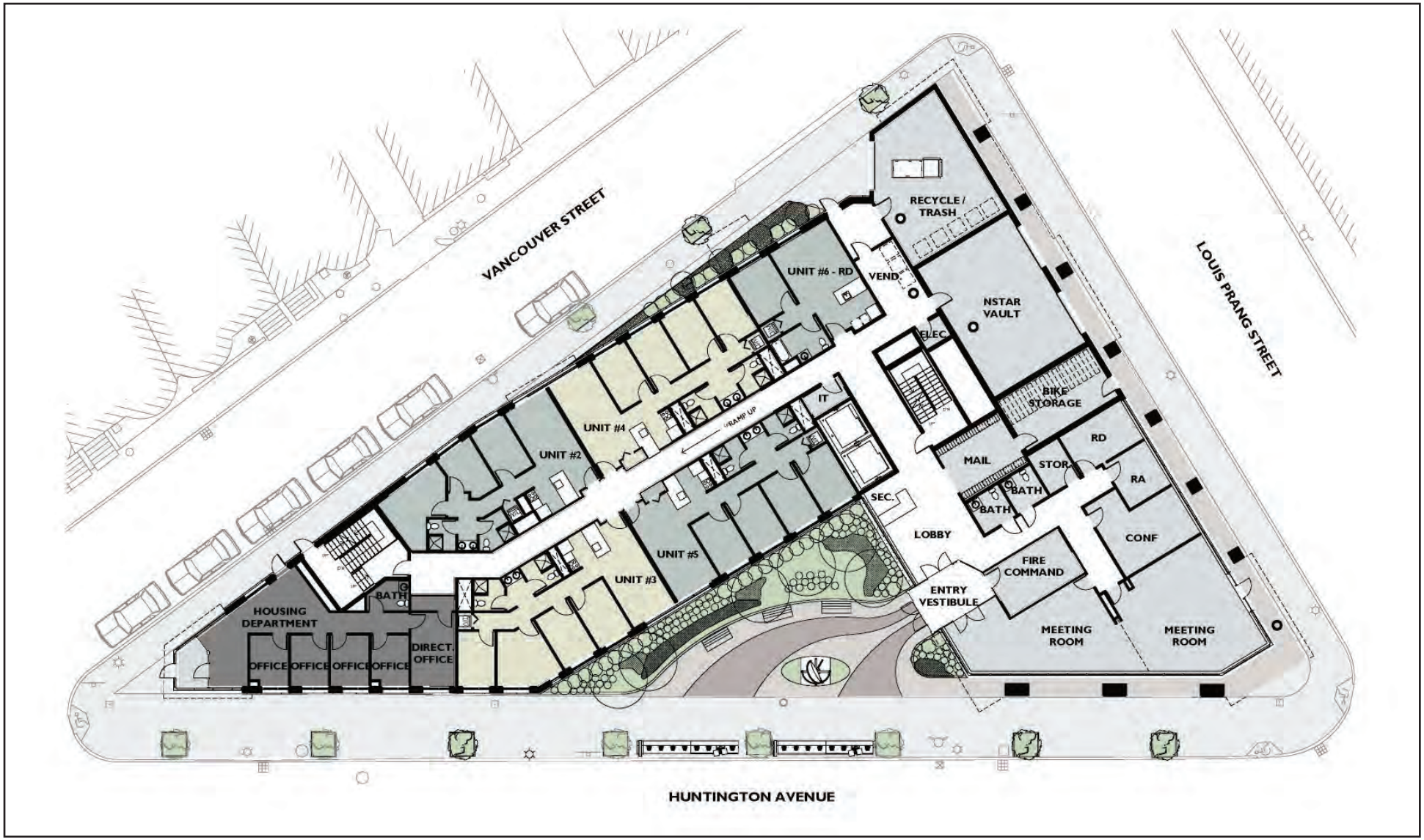


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Figure 3-2
Ground Floor Plan
Source: Beacon Architectural Associates, 2012

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Student Apartments at 525 Huntington Avenue
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Figure 3-3
Typical Upper Level Floor Plan
Source: Beacon Architectural Associates, 2012

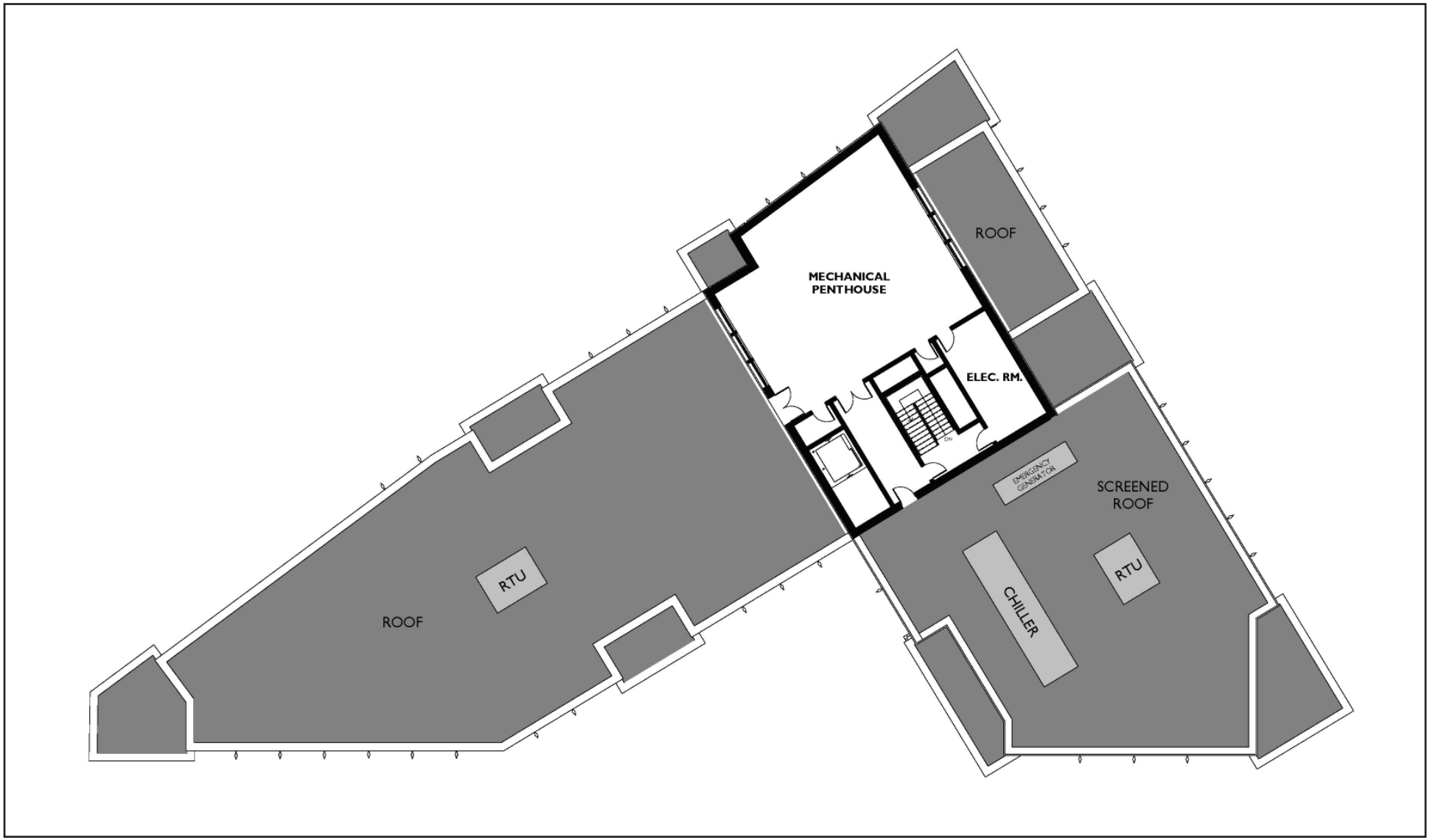

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Figure 3-4
Roof Plan
Source: Beacon Architectural Associates, 2012

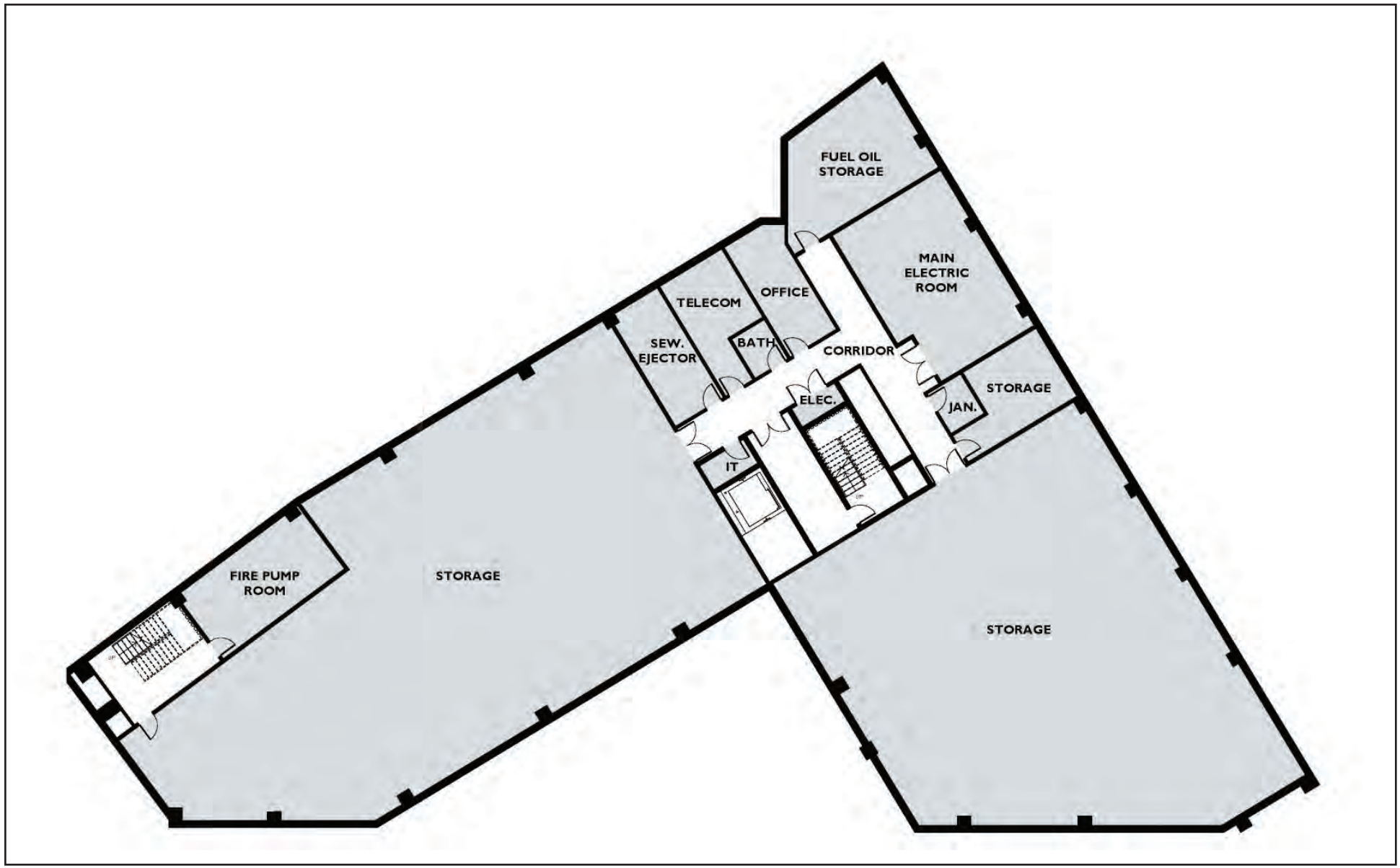

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Figure 3-5
Basement Level Plan
Source: Beacon Architectural Associates, 2012

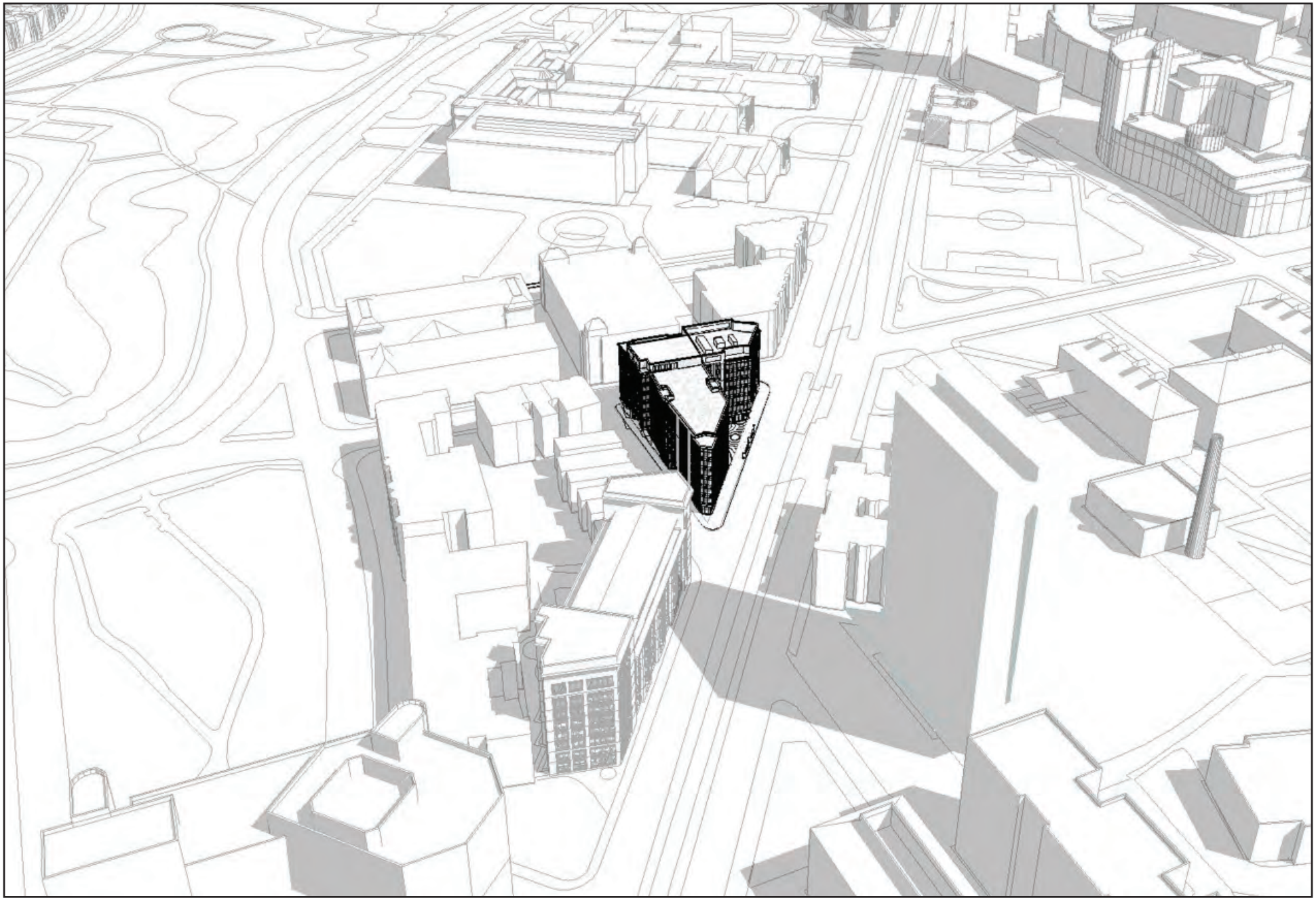

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Figure 3-6
Proposed Oblique Views with Neighborhood Context
Source: Beacon Architectural Associates, 2012

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Student Apartments at 525 Huntington Avenue
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Figure 3-7
Proposed Oblique View Looking Northwest
Source: Beacon Architectural Associates, 2012

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Figure 3-8
Perspective Looking Northeast
Source: Beacon Architectural Associates, 2012

Figure 3-9
Perspective Looking North
Source: Beacon Architectural Associates, 2012

Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
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Figure 3-10
Perspective Looking Northeast Along Huntington Avenue
Source: Beacon Architectural Associates, 2012

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Student Apartments at 525 Huntington Avenue
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Figure 3-11
Perspective Looking Southwest
Source: Beacon Architectural Associates, 2012

Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
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Figure 3-12
Perspective Looking South
Source: Beacon Architectural Associates, 2012

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Student Apartments at 525 Huntington Avenue
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Figure 3-13
Perspective Looking Northeast
Source: Beacon Architectural Associates, 2012

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Student Apartments at 525 Huntington Avenue
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Figure 3-14
Elevation - Huntington Avenue
Source: Beacon Architectural Associates, 2012

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Student Apartments at 525 Huntington Avenue
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Figure 3-15
Elevation - Vancouver Street
Source: Beacon Architectural Associates, 2012

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Student Apartments at 525 Huntington Avenue
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Figure 3-16
Elevation - Louis Prang Street
Source: Beacon Architectural Associates, 2012

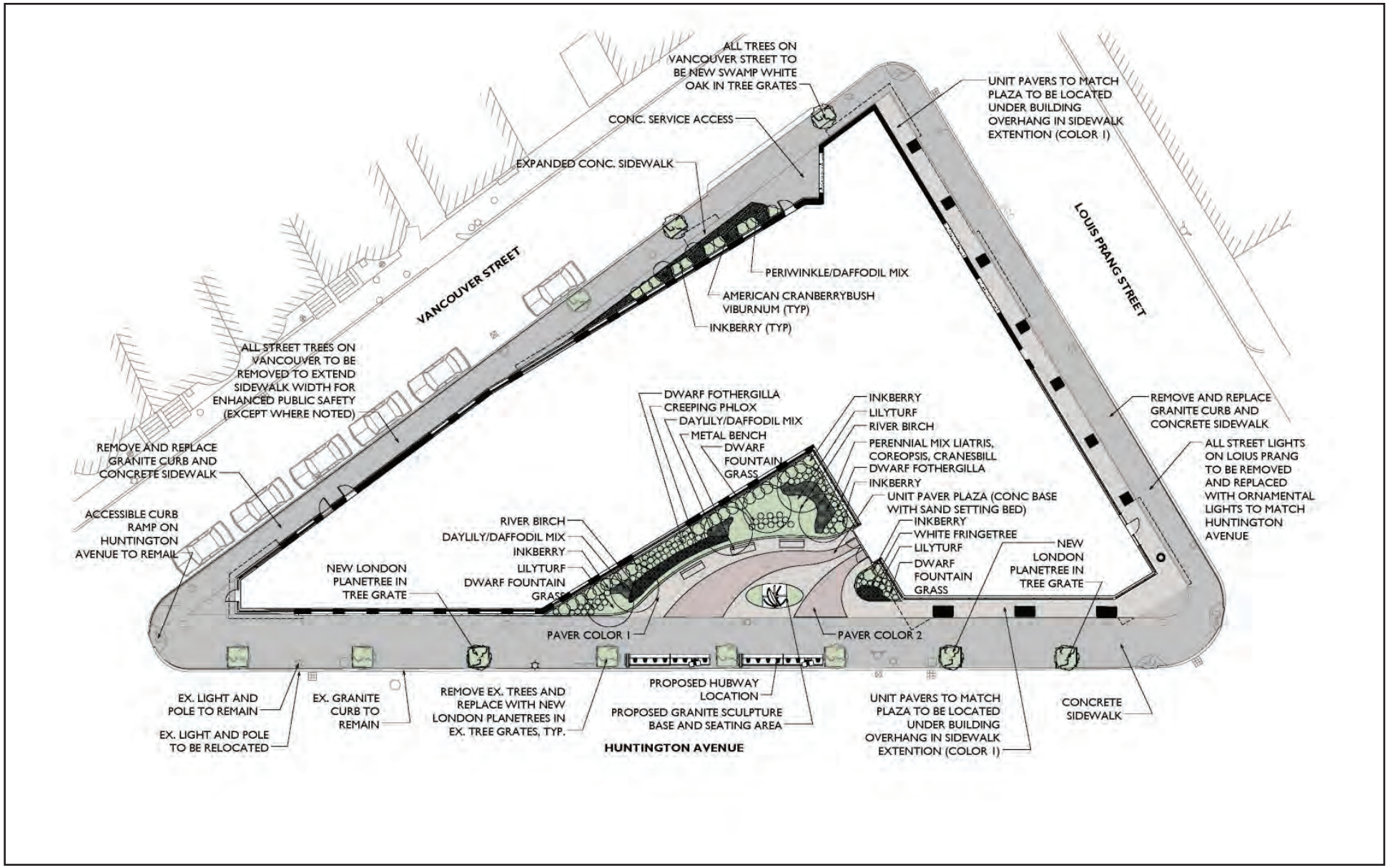

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Figure 3-17
Landscape Plan
Source: Beacon Architectural Associates, 2012

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Student Apartments at 525 Huntington Avenue
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Figure 3-18
Context Perspective - Huntington Avenue
Source: Beacon Architectural Associates, 2012

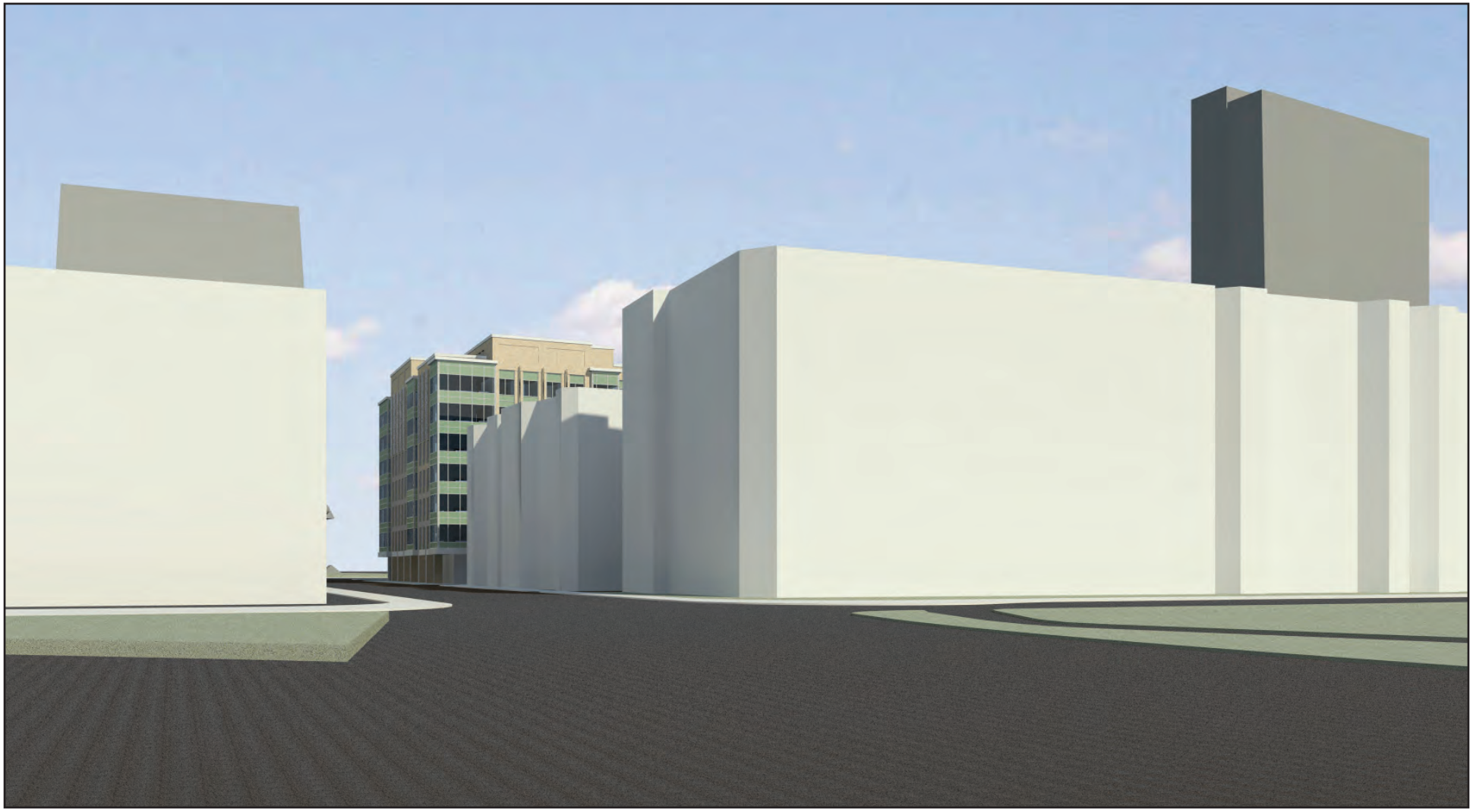
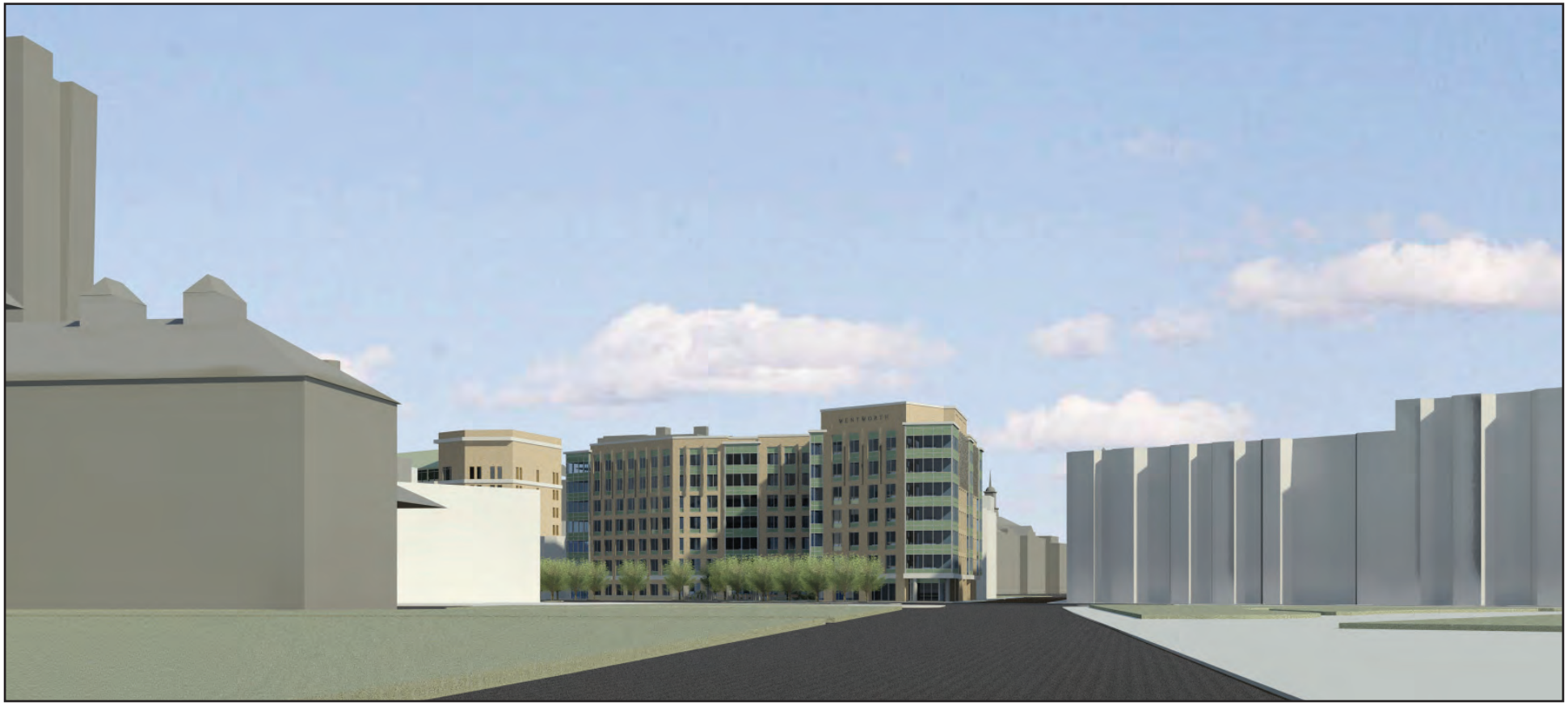


Figure 3-19
Context Perspective - Louis Prang
Source: Beacon Architectural Associates, 2012



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Student Apartments at 525 Huntington Avenue
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Figure 3-20
Context Perspective - Ruggles Street
Source: Beacon Architectural Associates, 2012

LEED 2009 for New Construction and Major Renovations

Project Checklist

Wentworth Student Residence, 525 Huntington Ave., Boston, MA 02115

Scorecard for PNF, July 2, 2012

Y	?	N			
21	**4**	**1**	**Sustainable Sites**	Possible Points:	**26**
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
1			Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
	1		Credit 5.1	Site Development—Protect or Restore Habitat	1
	1		Credit 5.2	Site Development—Maximize Open Space	1
	1		Credit 6.1	Stormwater Design—Quantity Control	1
1			Credit 6.2	Stormwater Design—Quality Control	1
	1		Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
		1	Credit 8	Light Pollution Reduction	1
5	**3**	**2**	**Water Efficiency**	Possible Points:	**10**
Y			Prereq 1	Water Use Reduction—20% Reduction	
2	2		Credit 1	Water Efficient Landscaping	2 to 4
		2	Credit 2	Innovative Wastewater Technologies	2
3	1		Credit 3	Water Use Reduction	2 to 4
11	**8**	**16**	**Energy and Atmosphere**	Possible Points:	**35**
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
6	4	9	Credit 1	Optimize Energy Performance	1 to 19
		7	Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
	2		Credit 4	Enhanced Refrigerant Management	2
3			Credit 5	Measurement and Verification	3
	2		Credit 6	Green Power	2
4	**3**	**7**	**Materials and Resources**	Possible Points:	**14**
Y			Prereq 1	Storage and Collection of Recyclables	
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
		2	Credit 3	Materials Reuse	1 to 2

Y	?	N			
			Materials and Resources, Continued		
1	1		Credit 4	Recycled Content	1 to 2
1	1		Credit 5	Regional Materials	1 to 2
		1	Credit 6	Rapidly Renewable Materials	1
	1		Credit 7	Certified Wood	1
9	**5**	**1**	**Indoor Environmental Quality**	Possible Points:	**15**
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
	1		Credit 1	Outdoor Air Delivery Monitoring	1
	1		Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
	1		Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
	1		Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
		1	Credit 7.2	Thermal Comfort—Verification	1
	1		Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1
3	**3**		**Innovation and Design Process**	Possible Points:	**6**
	1		Credit 1.1	Innovation in Design: Exceed MRc2 to >95%	1
1			Credit 1.2	Innovation in Design: Exceed requirements of SSc4.1	1
1			Credit 1.3	Innovation in Design: Green Housekeeping	1
	1		Credit 1.4	Innovation in Design: Exceed MRc4 to >30%?	1
	1		Credit 1.5	Innovation in Design: Exceed MRc5 to >30%?	1
1			Credit 2	LEED Accredited Professional	1
1	**2**	**1**	**Regional Priority Credits**	Possible Points:	**4**
1			Credit 1.1	Regional Priority: SSc3	1
	1		Credit 1.2	Regional Priority: SSc7.1	1
	1		Credit 1.3	Regional Priority: SSc6.1; SSc7.2	1
		1	Credit 1.4	Regional Priority: EAc2 (1%); MRc1.1 (75%)	1
54	**28**	**28**	**Total**	Possible Points:	**110**

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

Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Project Impact Report

Figure 3-21
LEED Scorecard
Source: AHA Consulting Engineers, 2012

Chapter 4

TRANSPORTATION

CHAPTER 4: TRANSPORTATION

4.1 INTRODUCTION

The transportation analysis contained in the 2010 – 2020 Institutional Master Plan describes existing roadway and intersections, traffic volumes and traffic operations and levels of service. Details provided for the roadway network serving the campus included number of lanes, traffic volumes from 48-hour traffic recorder counts, and circulation. Traffic volumes, and traffic operations and level of service analyses were presented for eleven intersections. The Project as proposed is consistent with the analyses presented in the IMP, and therefore will not generate additional or unanticipated impacts.

The Wentworth Institute of Technology campus is served by a transportation system which provides good vehicular and transit access, and pedestrian and bicycle accommodations. In addition, Wentworth provides a comprehensive transportation demand management (TDM) program to encourage use of alternative modes of travel instead of driving alone.

4.2 EXISTING CONDITIONS

The Wentworth campus is located at the intersection of Huntington Avenue, a major east-west corridor through the city, and Ruggles Street, a major north-south corridor that connects I-93 with the Longwood Medical and Academic Area (LMA). As part of the IMP, traffic operations were analyzed at ten signalized and one unsignalized intersection adjacent to, and near, the Wentworth campus.

The current use of the site is pedestrian open space and a temporary, publicly accessible park. The uses of the existing site do not currently generate traffic trips or any transportation related impacts. See Figure 4-1, Transportation Context, for an illustration of these conditions.

4.2.1 ROADWAY SYSTEM

The most significant roadways serving the Wentworth campus include two regional arterial roadways, one collector roadway, and streets providing local circulation.

Huntington Avenue

Huntington Avenue is a four-lane median divided highway, which borders the Wentworth campus on the north. It is designated as Route 9, a major east-west corridor between downtown Boston and communities to the west, through economically significant urban centers such as Framingham and Natick. The median contains the MBTA's E Branch of the Green Line. Each side of the roadway provides two travel lanes and no parking is allowed on either side.

Ruggles Street

Ruggles Street is part of a major north-south corridor that connects I-93 to the south with the Longwood Medical and Academic Area to the north. It separates the main part of the Wentworth campus on the west from Sweeney Athletic Field on the east. Adjacent to the Wentworth campus it provides three lanes, one in the southbound direction and two northbound. Ruggles Street ends at Huntington Avenue, north of which it is called Louis Prang Street. No parking is allowed on Ruggles Street.

Parker Street

Parker Street is a two-way, two-lane roadway between Huntington Avenue and Tremont Street. It separates the main campus on the north from the Annex buildings on the south. Metered parking is provided on both sides between Huntington Avenue and Ruggles Street. West of Ruggles Street unrestricted parking is generally allowed on both sides adjacent to the Wentworth campus.

Ward Street

Ward Street forms the western boundary of the Wentworth campus. It is a two-way, two-lane roadway connecting Huntington Avenue with Parker Street. No parking is allowed on either side of the roadway.

4.3 PROJECT IMPACTS

The Transportation and Parking Management/Mitigation Plan chapter of the Wentworth Institutional Master Plan (IMP) evaluated the impacts of the five projects proposed in the 2010 – 2020 horizon. The Wentworth Institute of Technology Student Apartments at 525 Huntington Avenue (the "Project") was included in this analysis. It was determined that the new student residence will add to the on-campus population, increasing the size of the resident community and reducing off- site commuter travel to the campus.

4.3.1 VEHICULAR TRAFFIC

The IMP concluded that a reduction in student vehicular trips resulting from an increase in on-campus housing and a decline in the number of commuting students is expected to offset a projected increase in employee vehicles trips generated by projects studied in the IMP by 2020. Therefore there will be no additional vehicle trips to the area as a result of the IMP projects and Build condition traffic operations will be the same as the No-Build condition. The proposed project will have no impact on traffic in the area, and will in fact be expected to reduce commuter trips by encouraging upper classmen to live on-campus. The Project is a text-book example of the principles of "smart growth" providing state of the art on-campus housing with excellent pedestrian and public transit access.

Construction Traffic Impacts

Construction of the project is expected to take approximately 18 months. All off-site construction activities will be coordinated the City of Boston and the Massachusetts Department of Transportation (Mass DOT).

The Institute has considered the potential for short-term construction related transportation impacts during the development of this project, including construction vehicle traffic and parking. The Institute and its contractors will work with the Boston Transportation Department (BTD) to develop and implement a detailed Construction Management Plan (CMP) to address all of these impacts.

A detailed Draft Construction Management Plan is included in Section 5.9.1.

4.3.1 PARKING

The on-campus parking supply includes nine parking areas with 1,133 spaces. Of that total, 813 spaces are reserved for use by Wentworth staff, students and visitors and 320 spaces are leased to Medical Academic and Scientific Community Organizations (MASCO) to serve the Longwood Medical Area (LMA). Peak utilization of parking provided for Wentworth users occurs at 11 AM, when approximately 82 percent of the spaces are occupied.

The parking supply available to Wentworth users is expected to increase by 133 net new spaces. The 403-space Parker Street Lot, which is currently used partially by Wentworth (282 spaces) and partially used by MASCO (116 spaces), will be replaced by a 330-space facility under the proposed soccer field. The entire new facility will be available for Wentworth users. The 204-space Halleck Street Lot, which is leased to MASCO, will be made available to Wentworth users.

Because of these two changes, 320 spaces will no longer be available for lease to MASCO. The current parking available to Wentworth users will see a net reduction of 197 spaces because of the proposed future projects. To accommodate the planned IMP projects, the West Lot will eliminate 80 spaces, the Parker Street Lot will eliminate 73 spaces, the Annex Lot was reduced by 30 spaces, and the Beatty Lot eliminated 14 spaces. The elimination of these 197 spaces, however, will be more than offset by the return to Wentworth use of 320 spaces in the Parker Street and Halleck Street Lots currently leased to MASCO.

The change in future parking demand by Wentworth users is expected to be small. Based on an average vehicle mode share of 49 percent for faculty and staff, the 111 new employees expected on campus by 2020 would generate a maximum parking demand of 54 parking spaces. The reduction of 305 commuting students effectuated by the construction of the Project would result in a reduction in commuter student parking demand of about 32 spaces based on an average vehicle mode share of 10 percent. The net change in parking demand for commuting students and employees would be about 22 spaces. No significant change in resident student parking demand is expected because freshmen and sophomores are not allowed to park overnight on campus and the amount of overnight parking is limited. Based on current peak utilization and the additional demand for 22 spaces, the future parking supply would be about 74 percent utilized at peak times.

The change in future parking demand by Wentworth users is expected to be small because the decline in commuter student parking will offset much of the increase in faculty and staff parking generated by projects described in the IMP. In addition, the number of spaces available to Wentworth users will increase. As a result, there will continue to be sufficient parking on the Wentworth campus.

4.3.2 PUBLIC TRANSPORTATION

As with future traffic, there will be no significant increase in the number of transit trips and no significant impacts on transit services from the Wentworth IMP projects, including the Student Apartments at 525 Huntington Avenue. The Project will provide housing within walking distance of classroom facilities, and will therefore reduce the number of transit trips otherwise induced by residents of off-campus housing commuting by automobile or other vehicles to their classes.

The Wentworth campus is readily accessible by public transportation, including rapid transit, bus service, and commuter rail. Two E Branch Green Line stations (Museum of Fine Arts and Longwood) are located on Huntington Avenue within a 5 to 10 minute walk of the entire campus. Two Orange Line stations at Ruggles and Roxbury Crossing

are within a half mile of most buildings on campus. Ruggles Station also provides access to three commuter rail lines serving Massachusetts and Rhode Island communities, and about a dozen bus routes.

Five MBTA bus routes traverse Ruggles Street through the Wentworth campus. A bus stop and shelter are located on the northbound side of Ruggles Street just before the intersection with Huntington Avenue. A bus stop is located on the southbound side of Ruggles Street in front of Wentworth Hall.

4.3.3 PEDESTRIANS

Wentworth is a compact campus with all of its facilities located within a 5 to 7 minute walk of each other. For students, faculty, staff, and visitors the primary mode of transportation while on campus is walking. Wentworth Pike (the Pike), which runs through the campus in an east/west direction between Parker Street and Huntington Avenue, is Wentworth's primary pedestrian spine and a path heavily traveled each day by those making their way on to, and through, the campus. In most places on campus the Pike is about 12 feet wide although a short section near the West Lot entrance is approximately 9 feet wide.

The building will strengthen pedestrian circulation from Ruggles Street to Louis Prang Street and along Huntington Avenue by redefining these urban edges. As a prominent feature at this intersection, the building enforces pathways and views along Huntington Avenue's east-west corridor and the Ruggles/Louis Prang Street north-south corridor. The Louis Prang Street walk is strengthened by the building's colonnade at this sidewalk directing people to the Isabella Stewart Gardner Museum and the Back Bay Fens to the north and towards the Institute's formal entrance at Wentworth Hall on Ruggles Street to the south. The building also provides a defined edge to Huntington Avenue's north side pedestrian sidewalk while providing a place for people to pause along their travels at the building's Entry Plaza.

Pedestrians will be discouraged from jaywalking by the proposed Hubway bicycle stations, as well as by the base of the public art planting bed. The entrance to the building has been located close to Louis Prang Street to further reinforce desired pedestrian movements. Pedestrian movements are projected to be over 95% directed to the intersection of Louis Prang Street and Huntington Avenue. Projected student pedestrian traffic is depicted on Figure 4-2.

4.3.4 BICYCLES

Pedestrian and bicycle counts taken along the Pike show that it is used extensively.

Bicycle volumes between 9:00 a.m. and 4:00 p.m. ranged from 32 at the West Lot entrance to 49 at Huntington Avenue.

Wentworth provides 160 bicycle spaces at outdoor racks distributed throughout the campus.

In addition the Project will include a bicycle storage unit on the first floor to accommodate bicycles belonging to the resident population. Wentworth has also committed to participating in the Colleges of the Fenway bike-sharing program, and is exploring the addition of Boston Hubway bicycle stations at the Huntington Avenue entrance to the Project

4.3.5 LOADING AND SERVICE

The project will be accessed for loading, service and recycling/trash removal on Vancouver Street via a new service access apron constructed of reinforced concrete at the Louis Prang end of this one way street. Although this area of the sidewalk will be crossed by vehicular maintenance access to the building through a secured overhead door, the sidewalk will maintain pedestrian accessibility, and will not exceed maximum longitudinal or cross slopes as identified in the federal or MA ADA guidelines. The pavement scoring pattern may differ from the sidewalk scoring pattern to distinguish this service area of the site.

This access point is intended for maintenance and deliveries and will be utilized on an as-needed basis. It is intended that small to mid-sized service and delivery vehicles, which will enter Vancouver Street via Louis Prang Street, will be transitory and will not remain for any extended length of time. Whenever possible, loading and service activities will take place during off-peak hours and permanent "No Idling" signs will be posted in this area to alleviate disturbances to the project and neighborhood residents. While some delivery vehicles may make short term stops at the building on Vancouver Street, at no time will permanent or long-term parking be allowed. Deliveries and service functions will not be permitted to occur on Huntington Avenue or Louis Prang Street.

4.3.6 MOVE-IN/MOVE-OUT

The one-day move-in/move-out for third and fourth year students at the planned student residence will be conducted in the same fashion as for the upper level students at Louis Prang and Vancouver Apartments. Families will move-in from their cars on Vancouver Street. Students will be allowed to load one vehicle on Vancouver Street. A color-coded parking pass is required and only one vehicle per student is allowed.

After moving in is complete, vehicles must be relocated to the Parker Street Lot. During move-in and move-out periods, access and egress to Vancouver Street will be controlled and monitored by Campus Police and Boston Police officers. The timing of the move-in and move-out activities is proposed to be staggered for the upper level students in order to reduce impacts to the surrounding streets and neighbors.

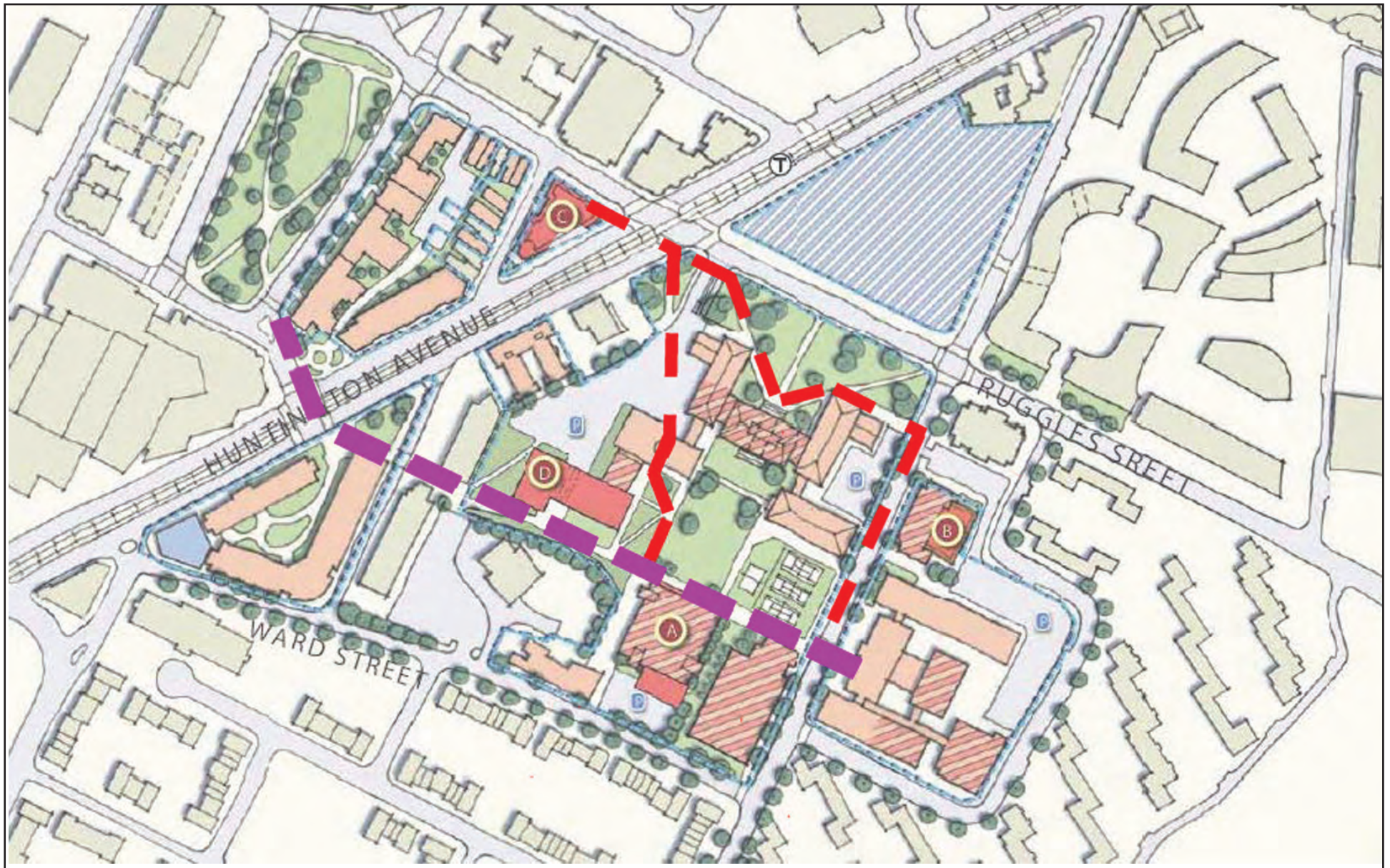
4.3.7 TRANSPORTATION DEMAND MANAGEMENT

Wentworth continues to employ a number of extremely effective transportation demand management (TDM) strategies, which include the following:

- A $72 per month MBTA Charlie Card subsidy to employees
- Participation in the MBTA Corporate Pass Program, providing tax-free withholding from employees' pay for transit passes
- Participation in MBTA Student Semester Pass program
- Membership in the MASCO Transportation Management Association (TMA) "CommuteWorks" Program
- Financial support for MASCO shuttle service to campus
- Carpool/vanpool matching through MASCO TMA
- Fees for parking for staff, faculty and students
- 160 bicycle spaces at racks distributed throughout the campus
- Participation in the Bike Week Commuter Challenge via MASCO's CommuteWorks Program
- Providing transit schedules and route information via links to MBTA website
- Provisions for motorcycle parking
- Emergency Ride Home via MASCO's CommuteWorks Program
- Additional on-campus residential beds

Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Project Impact Report

Figure 4-1
Transportation Context
Source: Wentworth Institute of Technology IMP, 2012



Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Project Impact Report

Figure 4-2
Pedestrian Circulation
Source: **Beacon Architectural Associates, 2012

Chapter 5

ENVIRONMENTAL

CHAPTER 5: ENVIRONMENTAL

5.1 INTRODUCTION

The Wentworth Institute of Technology Student Apartments at 525 Huntington Avenue ("the Project") will be built in full compliance with local, state, and federal environmental regulations. The Project will incorporate the latest in building design methods and technology to ensure minimal impact to the environment. In addition, this previously developed site is well-served by extensive utility, transportation, and transit infrastructure.

5.2 WIND

The Project will replace an existing landscaped open space. The seven story, L-shaped structure will cover approximately 78 percent of the project site. Publicly accessible areas, including sidewalks, will remain unchanged following construction. The Project is not expected to change wind levels in the vicinity due to the similarity in form and proximity to adjacent buildings on Louis Prang and Vancouver Streets. The Project's longest elevation, which is broken by a pedestrian level plaza, fronts on Huntington Avenue, a wide boulevard which does not function as a wind tunnel in the area.

As a result of the proposed condition, Pedestrian Level Winds (PLWs) along adjacent sidewalks are not anticipated to exceed the BRA guidelines of wind speeds of 31 miles per hour.

5.3 SHADOW

The following is in reference to the shadow study images shown in Figures 5-1 through 5-4. All new shadows projected from the Project are indicated in light red with existing building shadows shown in light grey. See Figures 5-1 through 5-4.

5.3.1 VERNAL EQUINOX – MARCH 21ST

At 9AM, the new building's shadow is cast in a northwesterly direction onto the existing residential buildings across from the site on Vancouver Street. All of Vancouver Street and a portion of the south side sidewalk along Louis Prang Street are impacted by shadow. The remainder of Louis Prang Street and all of Huntington Avenue, including the building's entry plaza, are completely in sunlight.

At 12PM, shadow is cast in a northerly direction extending to the middle of Vancouver Street and across Louis Prang Street to the face of the existing Museum Parking building. The western side of Vancouver Street and all of Huntington Avenue, including the building's entry plaza, are in natural light.

At 3PM, the building's shadow falls to the northeast leaving all of Vancouver Street and Huntington Avenue in sunlight. The shadow extends across Louis Prang Street and on to the neighboring buildings across this street, including a portion of the Museum Parking structure. The shadow projection also places the new facilities triangular shaped Huntington Avenue side entry plaza in shadow.

5.3.2 SUMMER SOLSTICE – JUNE 21ST

At 9AM, the proposed building shadow is cast in a westerly direction onto the face of the existing residential buildings across from the site on Vancouver Street placing all of Vancouver Street in shadow. The remainder of Louis Prang Street and all of Huntington Avenue, including the building's entry plaza, are entirely in sunlight.

At 12PM, shadow is cast from the new development directly north extending to the middle of Louis Prang Street while producing a shadow on the project site sidewalk along Vancouver Street. There are no neighboring building's impacted by the building's shadow. All of Vancouver Street and Huntington Avenue, including the building's entry plaza, are bathed in sunlight.

At 3PM, shadow falls to the east extending across Louis Prang Street to the opposite street side sidewalk towards the Huntington Avenue corner. The shadow projection also places the new facilities Huntington Avenue sidewalk and entry plaza under shadow.

At 6PM, long shadows are cast to the southeast clear across Huntington Avenue and extending down Ruggles Street. Only landscaped and hardscape areas are altered by this shadowing as no buildings are affected.

5.3.3 AUTUMNAL EQUINOX – SEPTEMBER 21ST

The shadow studies for this autumnal equinox are identical to those described under the vernal equinox except for the observance of daylight savings time where at 6PM the sun will be setting to cast less visible shadows in an easterly direction from the site onto Huntington Avenue towards Ruggles Street.

At 9AM, the new building's shadow is cast in a northwesterly direction onto the existing residential buildings across from the site on Vancouver Street. All of

Vancouver Street and a portion of the south side sidewalk along Louis Prang Street are impacted by shadow. The remainder of Louis Prang Street and all of Huntington Avenue, including the building's entry plaza, are completely in sunlight.

At 12PM, shadow is cast in a northerly direction extending to the middle of Vancouver Street and across Louis Prang Street to the face of the existing Museum Parking building. The western side of Vancouver Street and all of Huntington Avenue, including the building's entry plaza, are in light.

At 3PM, the building's shadow falls to the northeast leaving all of Vancouver Street and Huntington Avenue in sunlight. The shadow extends across Louis Prang Street and on to the neighboring buildings across this street, including a portion of the Museum Parking structure. The shadow projection also places the new facilities triangular shaped Huntington Avenue side entry plaza in shadow.

5.3.4 WINTER SOLSTICE – DECEMBER 21ST

At 9AM, long shadows extend in a northwesterly direction over the neighboring buildings across from the site on both Vancouver Street and Louis Prang Street. The remainder of Louis Prang Street and most of the Huntington Avenue side of the site, except for the westerly portion the building's entry plaza under shade from the existing fire station, are sunlit.

At 12PM, shadow is cast directly north across Vancouver Street and Louis Prang Street and onto the existing Museum Parking building. All of Huntington Avenue, including the building's entry plaza, is in sunlight.

At 3PM, extensive shadows ascends to the northeast across Louis Prang Street and onto the neighboring buildings across this street, while also placing a portion of the new facilities triangular shaped Huntington Avenue entry plaza in shadow. The building site along both Vancouver Street and Huntington Avenue remains in sunlight.

5.3.5 CONCLUSIONS

The urban block formed by Huntington Avenue, Louis Prang Street and Evans Way is situated within an area of substantial building infill. This "block" contains taller buildings which create existing shadow effects on most of the area. The proposed seven story building will exert slight impacts on portions of Vancouver Street, Louis Prang Street, and Huntington Avenue. These impacts will be scarcely perceptible to residents of adjacent buildings and pedestrians, due to both the substantial width of these streets which allows for the diffusion of indirect sunlight and as the proposed

structure's similar scale and height to existing structures. The creation of the active and well lighted entry plaza will also provide visual mitigation to the shadow impacts on Huntington Avenue.

5.4 DAYLIGHT AND SOLAR GLARE

Methodology

Using the Boston Redevelopment Authority Daylighting Analysis (BRADA)[1] program, the following Daylight Analysis was performed for the Project. Data are presented to portray the potential daylight obstruction based on a silhouette view of the proposed building from the centers *of* Vancouver Street, Louis Prang Street, and Huntington Avenue. The BRADA program calculates daylight obstruction as a percentage, factoring the width of view, the distance between the viewpoint and the building, and the massing and setbacks incorporated into the design of the building.

As no buildings are present on the project site, existing conditions were not modeled.

The BRADA model data input utilized an average roof height of 77 feet, and modeled the Huntington Avenue façade as a continuous face. Therefore the daylight exposure on Huntington Avenue will be penetrated by the open entry plaza. This condition has not been reflected in the analysis. Thus the percentage obstruction on Huntington Avenue is an extremely conservative number.

The findings of this study are presented in Table 5-1, below, and in Figure 5-5, Daylight Impact Analysis.

Table 5-1, Daylight Analysis Results

Viewpoint	Daylight Obstruction (as a percentage)
Vancouver Street	85.8 %
Louis Prang Street	81.9 %
Huntington Avenue	57.4 %

[1] Method developed by Harvey Bryan and Susan Stuebing, computer program developed by Ronald Fergle, Massachusetts Institute of Technology, Cambridge, MA, September 1985.

Conclusions

The Project will result in greater daylight obstruction than the existing conditions, extending horizontally from the base of the building, and descending from the roof down across Louis Prang Street, Huntington Avenue and Vancouver Street. While the addition of a seven story building will reduce the daylight penetration to all three streets, the building design is consistent with the surrounding urban neighborhood context, which has a figure/ground density and edges on all surrounding streets.

The building will contribute to the increased street activity and to the public realm by adding a residential building to the neighborhood, with an illuminated public gathering area on the Avenue of the Arts, and an active interface with all three street facades.

Building glazing will be selected to reduce solar glare and increase the efficiency of the building envelope. It is anticipated that there will little or no perceptible impact from solar glare.

5.5 AIR QUALITY

The project area is currently a non-attainment area for ozone (stationary sources) and an attainment maintenance area for carbon monoxide (vehicular traffic). There will be no air quality impact from vehicular traffic from the proposed residence hall because it will reduce traffic to the Wentworth campus. In addition, the proposed building is not expected to result in any adverse air quality impacts from building operations. The building HVAC systems and the emergency generator will be required to meet the Department of Environmental Protection (DEP) operating requirements. DEP requirements are commensurate with the attainment status of the area. The DEP has established an Environmental Results Program (ERP) that 1) requires HVAC equipment and emergency generators to meet strict Environmental Protection Agency (EPA) standards when purchased and 2) requires that they be operated with clean fuels and in a manner that ensures that the equipment will meet the National Ambient Air Quality Standards (NAAQS). For example, the emergency generator must run on ultra low sulfur diesel fuel and only during times that the power is out or for testing.

The Project is not expected to adversely impact air quality in the Project area. The Project will conform to National Ambient Air Quality Standards (NAAQS). Sources of activities that may potentially affect air quality are discussed below.

5.5.1 TRAFFIC SOURCES

There will be no long-term air quality impacts from pollutant emissions as the Project will not generate vehicular traffic. No reduction in levels of service of surrounding intersections is expected, as no parking on the site will be provided. In fact, a net decrease in vehicular traffic is expected.

5.5.2 BUILDING OPERATION SOURCES

The building is designed to incorporate strategic energy conservation measures in order to achieve a targeted energy savings of a minimum of 21% from the baseline energy conservation code. Wentworth has committed to construct an energy efficient building at LEED Silver certifiable levels.

The proposed building will include new building systems that may affect air quality. With respect to indoor air, the building HVAC systems will be built to code compliant systems that will provide a significantly greater rate of air exchange over existing conditions. A variety of air handling systems will be placed within the attic mechanical rooms that will service common areas, mechanical rooms, residential suites, and the health services facility.

Installation of a new emergency generator will involve some increase in emissions from a diesel powered engine. However, the generator will be operated only sporadically during emergencies and for routine operational testing, and will be in conformance with current standards for air emissions regulated by the state Department of Environmental Protection.

5.6 NOISE

The primary sources of external mechanical noise will include air ventilations systems that are part of the project mechanical systems. It is not anticipated that the rooftop equipment will exceed maximum sound levels. This equipment will be enclosed in a penthouse or screened which will provide maximum noise mitigation. During the final design of the project, appropriate low-noise mechanical equipment in the mechanical penthouse and noise control measures will be selected for all sensitive locations to ensure compliance with the City of Boston and DEP noise regulations.

The Residential portion of the building as well as Common areas are to be heated and air conditioned by means of 4-pipe fan coil units. The system will require a 240-ton air cooled chiller which will be located on the roof. Heating hot water will be supplied via two (2) 1,500 CFH gas-fired condensing boilers.

The roof level Penthouse will contain boilers, HW pumps, CHW pumps and hydronic accessories. We will utilize two (2) energy recovery units (exhaust from the toilets; supply for makeup to the common corridors). There will also be some additional equipment on the roof, such as a kitchen and electric room exhaust fans, and stairwell pressurization fans.

There will be a diesel fired 250 kW life safety emergency generator to serve the building. The unit will be located in a sound attenuated acoustical enclosure mounted on the roof.

5.7 GROUNDWATER

The project site is located within the Groundwater Conservation Overlay District (GCOD) as outlined in Article 32 of the City of Boston Zoning Code. Because of the site's location in a GCOD, the project plans to promote infiltration of rainwater into the ground and the proponent has certified that the project will not negatively impact groundwater levels on the site or on adjacent lots pursuant to the provisions of Article 32, Section 6. See Appendix B, Engineer's Certification.

The below-grade construction will be performed within a continuous temporary steel sheet pile cofferdam driven into the impervious clay deposit. The perimeter steel sheet piling will provide a positive groundwater cut-off during the construction phase of the project which will minimize the impact of temporary construction dewatering performed within the limits of the project site on adjacent properties.

The excavation to construct the below-grade level will require temporary dewatering to construct the proposed structure in-the-dry. The dewatering will be short-term and the effluent will be discharged legally off-site. If the temporary dewatering is observed to have a negative impact on groundwater levels in the vicinity of the site, a temporary groundwater recharge system would be installed which utilizes the water collected in the construction dewatering system to restore the groundwater condition by means of recharge wells located outside of the steel sheet pile wall.

The proposed below-grade perimeter foundation walls and foundation will be protected against groundwater intrusion by the utilization of a membrane type waterproofing. Note that continuous pumping of groundwater for the permanent building condition will not be performed, and therefore the project is not anticipated to have an adverse impact on the groundwater level within or adjacent to the site.

The project will coordinate with the Boston Groundwater Trust to protect groundwater levels in the area, and it will include the installation of groundwater observation wells in

the vicinity of the site before site excavation to facilitate monitoring of the groundwater level before, during, and following construction.

5.8 GEOTECHNICAL

This section of the DPIR addresses the below-grade construction activities anticipated for the Project. It discusses existing soil and groundwater conditions; anticipated foundation construction methods; and excavation work anticipated for the Project based on subsurface information obtained from the site and a preliminary foundation design study.

Based on subsurface explorations completed at the project site, the existing ground surface is underlain by a 12 to 13-foot thickness of fill. The upper 2 to 4 feet of the fill consists of Aclean@ fill that was imported to the site as a result of the response actions which are discussed in Section 5.12.1. The lower 6 to 9.5 feet of fill consists of urban fill. The fill is underlain by an organic deposit that ranges from 16.5 to 18 feet in thickness. Below the organic layer, a 3 to 10.5-foot thick natural outwash deposit consisting of dense sand and gravel is present. The surface of the outwash deposit ranges from depths of about 29 to 31.5 feet below ground surface. The outwash deposit is underlain by a deposit of very stiff to very soft marine clay that extends to a depth of about 105 feet below the existing ground surface. A compact to dense marine sand deposit underlies the marine clay.

The stabilized groundwater level in observation wells located at the site was observed to range from depths of about 9.6 to 9.9 feet below existing ground surface, corresponding to Elevation +8.1 to Elevation +7.9 on the Boston City Base (BCB). Groundwater observation wells operated by the Boston Groundwater Trust in the vicinity of the site indicated stabilized groundwater levels ranging from Elevation +7.2 to Elevation +8 on the BCB between 2005 and 2012.

Foundation support for the one level below-grade basement and overlying seven-story structure will be provided by a pile supported, waterproofed structural mat foundation. The piles will consist of pressure-injected footings (PIFs) which derive their capacity in the outwash deposit.

Construction of the below-grade level will require an excavation approximately 15 feet deep. The lateral earth support system consisting of interlocking steel sheet piling, which will extend as much as 5 feet into the relatively impervious clay deposit, will remain in-place and be cut down to a depth of about 6 feet below ground surface following the completion of construction.

Ground vibrations will be produced as a result of the PIF and steel sheet pile installation procedures. Based on our experience, impacts from these vibrations are not anticipated to result in structural damage to existing, adjacent structures. Vibration monitoring with seismographs will be performed during the PIF and sheet pile installation activities.

5.9 CONSTRUCTION IMPACTS

A Final Construction Management Plan will be filed after a Construction Manager is selected for the project. Wentworth expects that that the draft Construction Management Plan be reviewed and finalized by the selected Construction Manager in consultation with Boston Transportation Department (BTD).

5.9.1 DRAFT CONSTRUCTION MANAGEMENT PLAN

Scope

The Wentworth Student Apartments @ 525 Huntington Avenue will provide housing to 305 Wentworth Students in a seven story apartment style student residence building of approximately 114,944 gross square feet. The scope of the project will also include the re-construction of the sidewalks along the perimeter of the site.

Schedule

The expected duration of the project will be approximately 18 months - from February 1, 2012 to July 31, 2014. Wentworth plans on utilizing this new space for the fall semester of 2014.

Hours of Operation

Construction activity is planned for the hours of 7:00 AM to 3:30 PM on weekdays. Work hours shall include any time necessary to perform equipment warm-up and no warm-up period shall occur before the 7:00 AM starting time. The completion of the project for summer 2014 is a critical goal for Wentworth. Several work activities may be scheduled for certain Saturdays. This work will be scheduled as required, and the proper permits will be obtained from BTD where applicable.

Site Logistics Plan & Drawings

Location

The project is located at 525 Huntington Avenue and is bounded by Huntington Avenue, Louis Prang Street and Vancouver Street.

Site Fencing/Construction Limits

Prior to commencing building construction, concrete barriers and a 6 foot high chain-link construction fence of sectional panels with screening will be installed along the perimeter of the construction site. As currently envisioned, the construction site will include100% of the sidewalk area on the west side of Louis Prang Street, 50% of the sidewalk abutting the site on Huntington Avenue, and 50% of the roadway on Vancouver Street including the sidewalk on the south side of Vancouver Street. A thirteen-foot six-inch right of way will be maintained on Vancouver Street during the term of construction, and all of the current 22 unregulated parking spaces will be temporarily eliminated on both sides of Vancouver Street during the construction period. A seven and one-half foot covered sidewalk will be maintained along Huntington Avenue for the duration of construction. Signs will be posted at all the intersections of Huntington Avenue and Louis Prang Street, Vancouver Street and Louis Prang Street and Vancouver Street and Huntington Avenue advising pedestrians to utilize sidewalks on the east side of Louis Prang Street and the north side of Vancouver Street. Residents of #11, 17 and 19 Vancouver Street (properties not owned by Wentworth) will be provided with complimentary parking in Wentworth parking lots for the duration of the construction period. See Figure 5-6, Construction Management Plan.

Entry and Exit Gates

Workers will enter and exit through two gates on Vancouver Street.

Staging Area

The staging area for a temporary construction field office trailer, truck queuing and lay down of materials will be within the fenced in area at the rear. The Construction Manager will use off-site storage for most of the construction materials. The Contractor will intermittently use on site storage for minimal time durations. Concrete, steel, and other delivery trucks will be staged offsite. They will be called in for "live" off-loading as required.

Steel Erection Crane Locations

A Hydraulic Crane will be used for erection of steel and decks as well as any rigging of equipment later on in the project. These cranes will be sized accordingly and will always be set up within the limits of construction fencing.

Concrete Truck and Pump Locations

Concrete Pump and Truck Locations will be set up at the rear of the building within the limits of the construction fencing. Concrete trucks feeding the pumps will be entering from the rear of the site off of Vancouver Street.

Safety & Security

The Construction Manager will work with the Boston Police Department and Wentworth's Public Safety Department to ensure the safety of the public and student population around the project. There are also plans to install cameras on the annex building to monitor the site during construction as well as after hours. This monitoring will be from the start of construction up until completion.

Truck Routes / Parking

Route to and from site for deliveries:

The specific route for deliveries will be set after a Construction Manager is selected. It is expected that trucks will come off of Route I-93 at Exit 18 and cross Massachusetts Avenue and continue down Melnea Cass BLVD. to the end and then turn left onto Tremont Street. At the second set of lights they will turn right onto Ruggles Street. From Ruggles they will continue down to the intersection of Huntington and cross the intersection Vancouver where they will enter the site. There will be an entrance and exit to efficiently get vehicles back onto Vancouver Street to exit onto Huntington Avenue (Vancouver Street is ONE WAY).

Upon exiting Vancouver Street, trucks will take a right onto Huntington Ave. At the second set of lights trucks will take a left onto Longwood Avenue. Shortly thereafter they will bear right onto St. Alphonsus Street. They will continue up St. Alphonsus Street to the next set of lights. At these lights trucks will take a left onto Tremont Street. Trucks will continue to follow Tremont Street towards Roxbury Crossing and continuing to follow Tremont Street to the corner of Melnea Cass Boulevard, where they will take a right onto Melnea Cass. Following Melnea Cass Blvd. trucks will cross Massachusetts Ave and continue to follow all signage to Route I-93.

Major deliveries / Truck Queuing

Truck Queuing, Entrance and Exit Plan

During the excavation and concrete foundation portion of the project, trucks for earth removal as well as trucks for major deliveries will enter the site at the Vancouver Street entrance. Trucks will exit the site at the gate after wheel wash down.

No queuing of trucks on Tremont, Ruggles or Louis Prang Streets. Trucks will be queued within the approved staging area.

No truck idling or queuing will be permitted on the job site or on any community streets prior to 7:00 AM.

Any trucking unable to immediately access the job site upon arrival shall be directed to an off-site staging area that is NOT on a public way.
Subcontractor's contracts shall include the requirement to retain off site staging if needed.

Parking

Parking will not be provided to construction workers on the site. Construction worker will be encouraged to utilize public transportation as the site is well served by MBTA via the Green Line, bus routes and the Orange Line.

Because the construction workers will arrive and depart during off-peak traffic periods, they are not expected to significantly affect traffic conditions in the project area.

Personnel will arrive at the job site either by MBTA or by personal vehicles. There are several public parking lots around the site; however the contractor will encourage the use of public transportation as a component of each of its subcontracts. This is typical in downtown Boston projects, and workers are generally aware that carpooling and public transportation are the preferred modes of transportation for access to construction sites in this area.

Roadway Maintenance

Fire Lanes

A thirteen-foot six-inch travel lane will be maintained along Vancouver Street.

Street Sweeping

Street Cleaning shall be provided by mechanical street sweeper on an as needed basis. A company will be kept on call for any clean up necessary during all phase of construction.

Wheel Washing

Upon mobilization and before any site excavation work and trucking commences, a wheel wash station will be established to accommodate all traffic exiting to Vancouver Street from inside the construction fence. The wheel washing will be maintained to minimize the transfer of site soil to the area roadways and will be supplemented as required by the street sweeper, which will be on call.

Noise and Dust Control

The site contractor will be required to maintain dust control measures during the establishment of foundations and structural steel. Dust control during site work will be achieved using water sprayed on grade as required.

All equipment will be maintained and inspected on a daily basis to insure that it is operating within the manufacturer's specifications relative to engine mufflers and alarm devices.

Snow Removal

Trucking of snow offsite will follow the truck routes outlined previously. Snow from the site will not be stockpiled in the public way. All site personnel will adhere to the city of Boston Snow Emergency guidelines when they are invoked.

Snow accumulated on the public sidewalks abutting the project shall be shoveled by the Physical Plant staff from Wentworth.

Police Details

Police Details shall be provided on an as needed daily basis at all active construction gates during deliveries, and or equipment egress/access.

Police details will be posted during all utility connections in Vancouver.

Nuisance Odor Control

Methods that shall be used by the Contactor to control nuisance odor emissions associated with earthwork include:

- Improving site drainage in order to minimize standing water from remaining in excavated areas, and pumping collected groundwater to sump locations.
- Covering stockpiles of excavated material with polyethylene sheeting and securing it with sandbags or an equivalent method to prevent the cover from being dislodged by the wind. As needed, deodorant foams will be utilized to reduce the odor from organic soil layers.
- Reducing the amount of time that excavated material is exposed to the open atmosphere.
- Maintaining the construction site free of trash, garbage, and debris.

Methods that shall be used by the Contactor to control nuisance odors associated with diesel emissions from construction equipment include:

- Turning off diesel combustion engines on construction equipment not in active use and on dump and delivery trucks waiting to load or unload material

- Locating combustion engines away from sensitive receptors such as fresh air intakes, air conditioners, and windows

Rodent Control

The City of Boston has declared that the infestation of rodents in the city is a serious problem. In order to control the infestation, the City enforces the requirements established under the Massachusetts State Sanitary Code, Chapter 11, 105 CMR 410.550 and the State Building Code, Section 108.6. Policy Number 87-4 established that the extermination of rodents shall be required for the issuance of permits for demolition, excavation, foundation, and basement rehabilitation. The construction manager will implement a rodent control program for the project area prior to construction start.

Location of New Utility Connections.

There are five utility connections anticipated in the Vancouver Street right of way.
The utility connections on Vancouver Street will be as follows:

- 6″ Fire Protection
- 4″ Domestic Water
- 2″ Gas
- NSTAR Electric
- Sewer Connection

A ten inch storm drain connection will be made on Louis Prang Street. Traffic will be maintained in service during these connections. Police details will be required to assist with traffic flow around the construction equipment and safety apparatus.

Street plates, as approved by city, will cover all openings before permanent replacement is completed.

Construction Air Quality

Short-term air quality impact from fugitive dust may be expected during the removal of soil materials and during the early phases of the Project site preparation activities. 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, minimizing exposed construction debris stored on-site, monitoring construction practices to ensure that

unnecessary transfers and mechanical disturbances of loose materials are minimized, locating aggregate storage piles away from areas having the greatest pedestrian activity where and when possible, and periodic cleaning of streets and sidewalks to reduce dust accumulations.

Sediment Control Measures

During demolition and construction, erosion and sediment control measures will be implemented to minimize the transport of Project site soils to off-site areas and BWSC storm drain systems. The existing catch basins will be protected with filter fabric or silt sacks to provide for sediment removal from runoff. These controls will be inspected and maintained throughout the construction phase until all areas of disturbance have been stabilized through the placement of pavement, structure or vegetative cover.

Other sediment controls, which will be implemented as needed during construction, will include the following:

- Stacked hay bales and/or silt fence barriers will be installed at the base of stockpiled soils and at erosion-prone areas throughout the construction phase of the Project. The erosion controls will be maintained and replaced as necessary to ensure their effectiveness.
- Where necessary, temporary sedimentation basins will be constructed to prevent the transport of sediment off-site.
- Measures to control dust will be implemented during renovations. All debris will be properly contained on the Project site.

Erosion controls will be maintained and replaced as necessary until the installation of pavement and the establishment of stabilized vegetation at the Project site.

5.10 WILDLIFE HABITAT

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

5.11 FLOOD HAZARD DISTRICT/WETLANDS

It is not anticipated that the Project area will be susceptible to conditions of flooding. The Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Map ("FIRM")

indicates the FEMA Flood Zone Designations for the Project Site (City of Boston, Community-Panel Numbers 25025C0078G). The FIRM for the Project site does not show the Project lying in any flood zone areas, nor does the Project site contain any wetlands.

5.12 SOLID AND HAZARDOUS WASTE

Based on the results of subsurface explorations completed at the site, soil and groundwater at the site are impacted by the historic release of petroleum and gasoline. Contamination is generally confined to soils, at depths of 4 to 13-feet below existing surface grade and in groundwater.

The project will involve the excavation of organic soils, which will generate hydrogen sulfide odors. Hydrogen sulfide is a colorless gas with an offensive odor similar to rotten eggs. Furthermore, the excavation of petroleum contaminated soils will also generate odors. During excavation of the organic and petroleum-impacted soils, odor control will be performed to minimize the impacts of the hydrogen sulfide odors to the surrounding areas. Also, air monitoring will be performed during excavation to confirm that airborne hydrogen sulfide and petroleum contamination are below levels that might pose a health and safety concern.

5.12.1 SITE HISTORY AND COMPLIANCE WITH THE MASSACHUSETTS CONTINGENCY PLAN

Historically the site operated as a petroleum-filling station and a convenience store from approximately 1930 through 2007. The site is the location of two Massachusetts Contingency Plan (MCP) disposal sites referenced as Release Tracking Numbers (RTN) 3-11149 and 3-15055 which have been linked under RTN 3-11149. It is understood that surficial releases of petroleum occurred as a result of filling activities and additional petroleum releases to soil and groundwater occurred as a result of leaking underground storage tanks (USTs). Contaminants in site soil and/or groundwater are understood to include petroleum-related constituents such as extractable petroleum hydrocarbons (EPHs), volatile petroleum hydrocarbons (VPHs), polycyclic aromatic hydrocarbons (PAHs), and total lead.

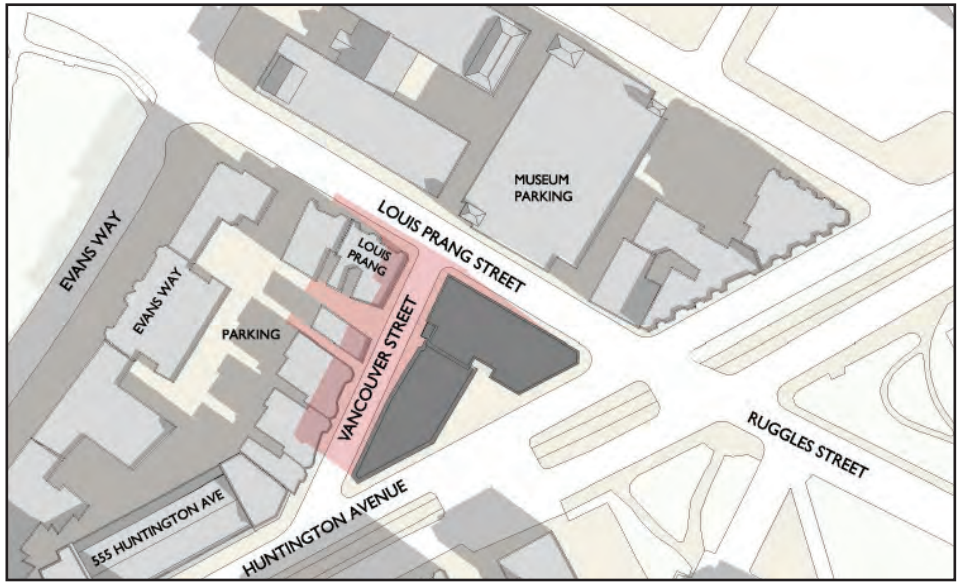
Various response actions were completed at the subject site from 1994 through 2008 to address the releases to site soil and groundwater. As part of response activities, it is understood that the upper 3.5 feet of soil was removed from the site and replaced with "clean" gravel fill underlain by a marker barrier. On January 22, 2009, an Activity and Use Limitation (AUL) was recorded for the facility under RTN 3-11149 at the Suffolk County Registry of Deeds. It is understood that the current AUL prohibits use of the site for residential purposes. The response actions

completed to date culminated in the submittal of a Class A-3 Response Action Outcome (RAO) Statement in December 2011.

Additional remediation would be completed during construction under a Release Abatement Measure (RAM) Plan in conjunction with the foundation excavation for the new building as described in Section 5.8 - Geotechnical. Upon completion of the RAM, a RAM Completion Report, a Risk Characterization and a Revised RAO Statement will be prepared and submitted to the Massachusetts Department of Environmental Protection (DEP) indicating that a Permanent Solution was achieved and that a Condition of No Significant Risk exists at the site. Further, the current AUL will be retracted and a revised AUL which permits residential use will be filed.

Pre-characterization of site soils for off-site disposal has been performed in accordance with current DEP Policy within the planned depth of excavation. The fill soils that were chemically analyzed are considered to be "regulated" for off-site disposal and will require implementation of a Massachusetts DEP Bill of Lading (BOL) for disposal. In general, the chemical testing results indicate that the majority of the soils to be excavated meet the criteria for re-use at an unlined landfill facility or recycling at an asphalt batch plant.

A temporary groundwater dewatering discharge permit(s) from the Environmental Protection Agency (EPA), DEP, Massachusetts Water Resource Authority and/or the Boston Water and Sewer Commission will be obtained for temporary pumping and discharge of site groundwater from within the steel sheet pile cofferdam during construction.



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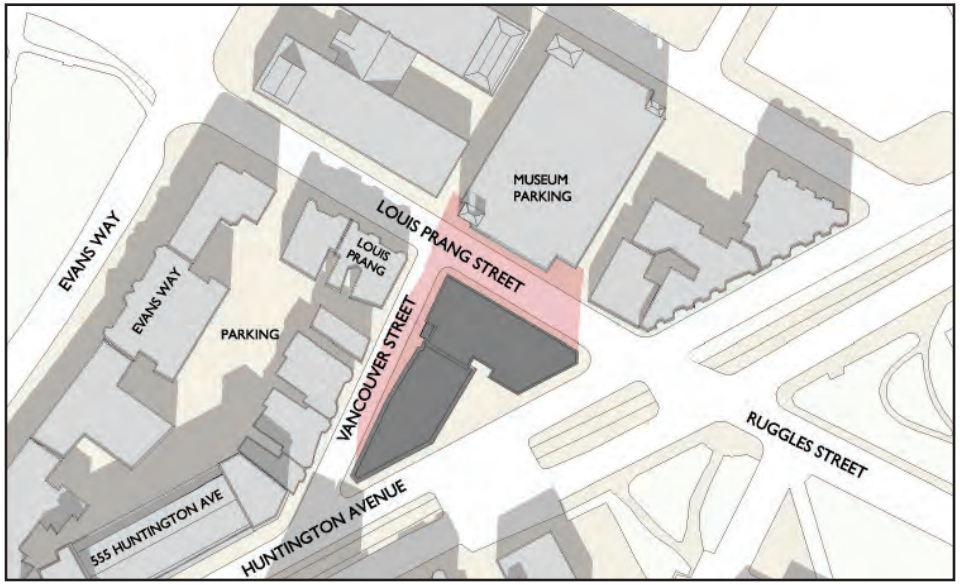

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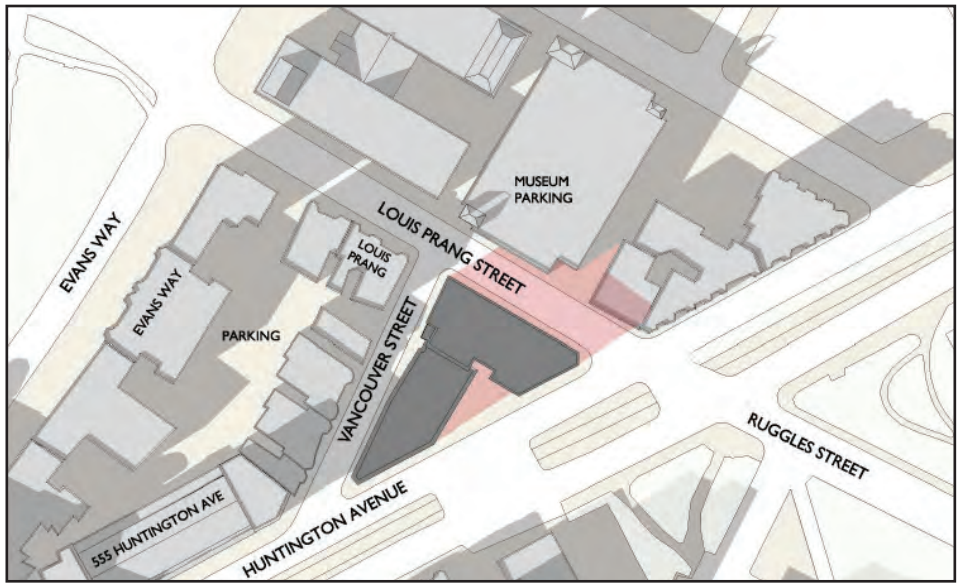

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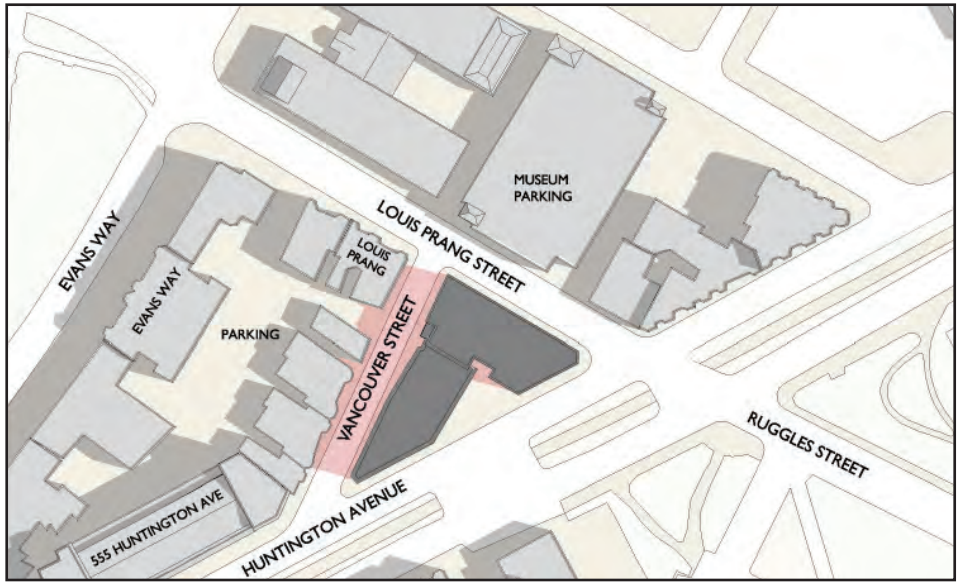
Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Project Impact Report

Figure 5-1
Shadow Studies, March 21
Source: Beacon Architectural Associates, 2012



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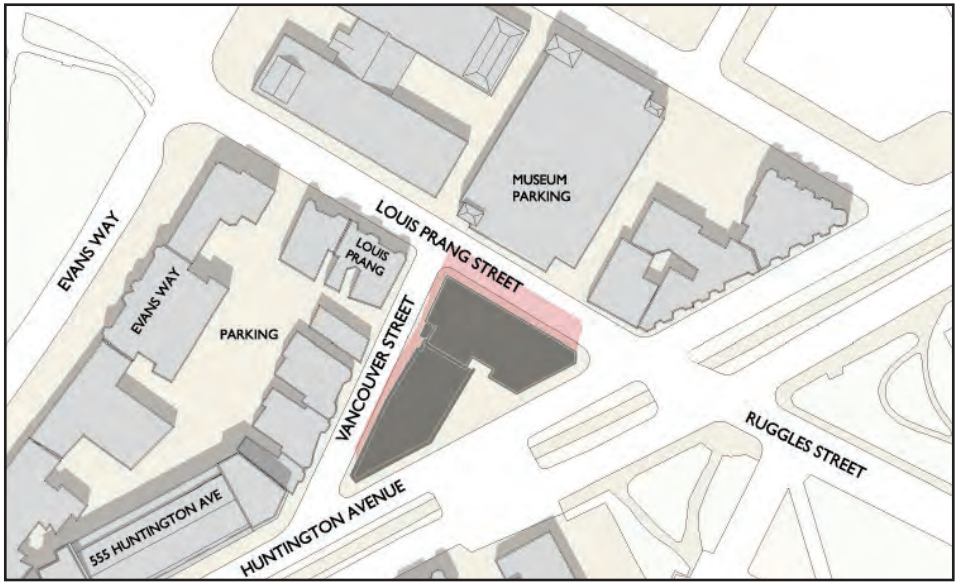

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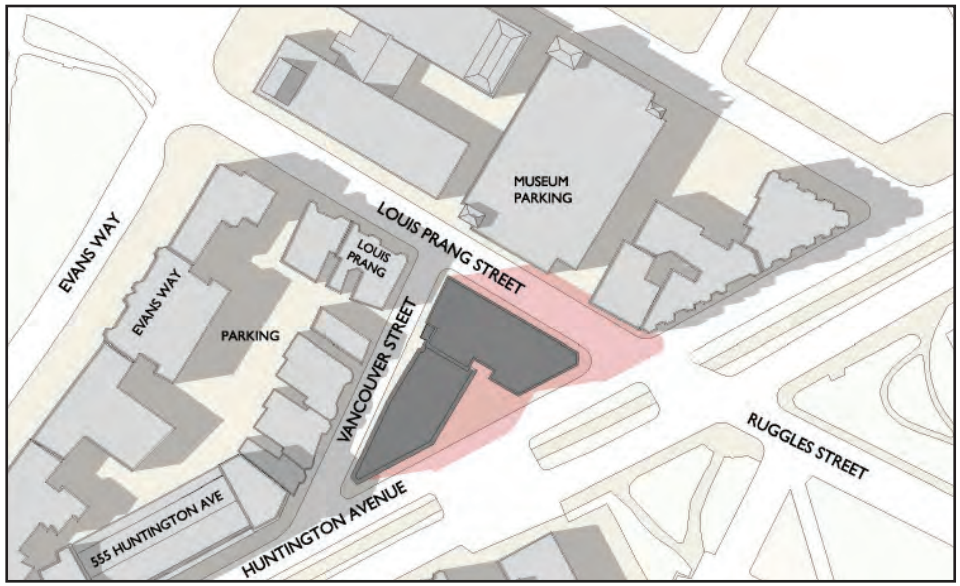

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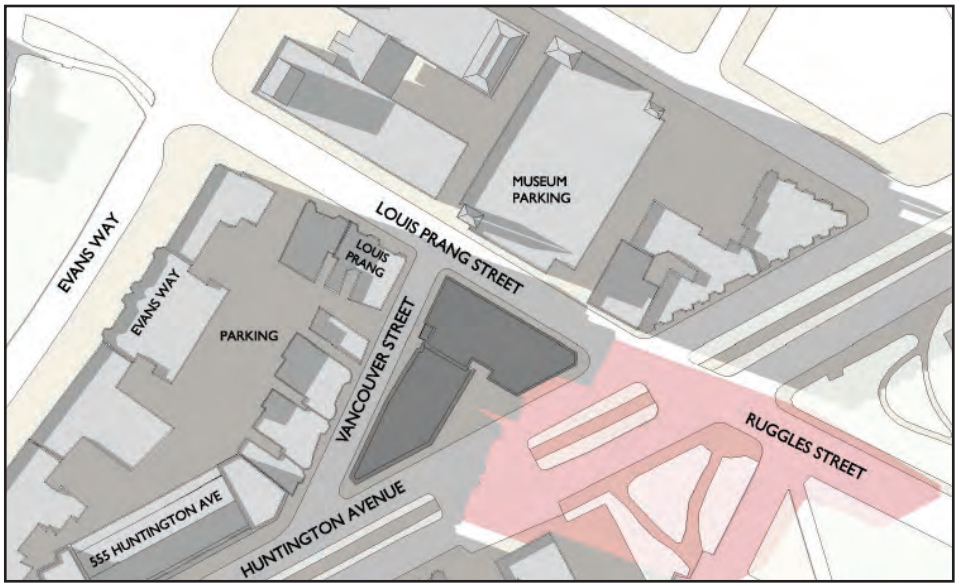

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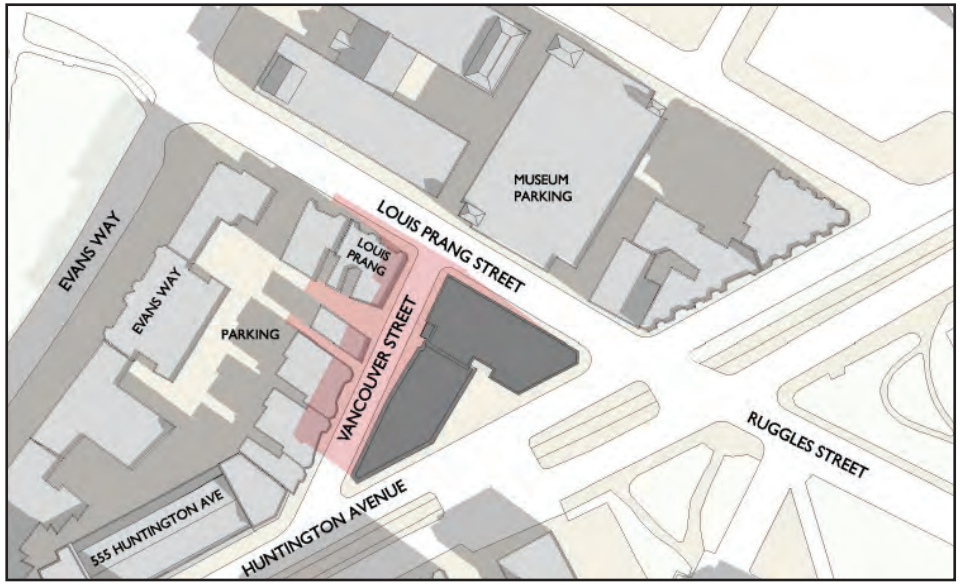
Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Project Impact Report

Figure 5-2
Shadow Studies, June 21
Source: Beacon Architectural Associates, 2012



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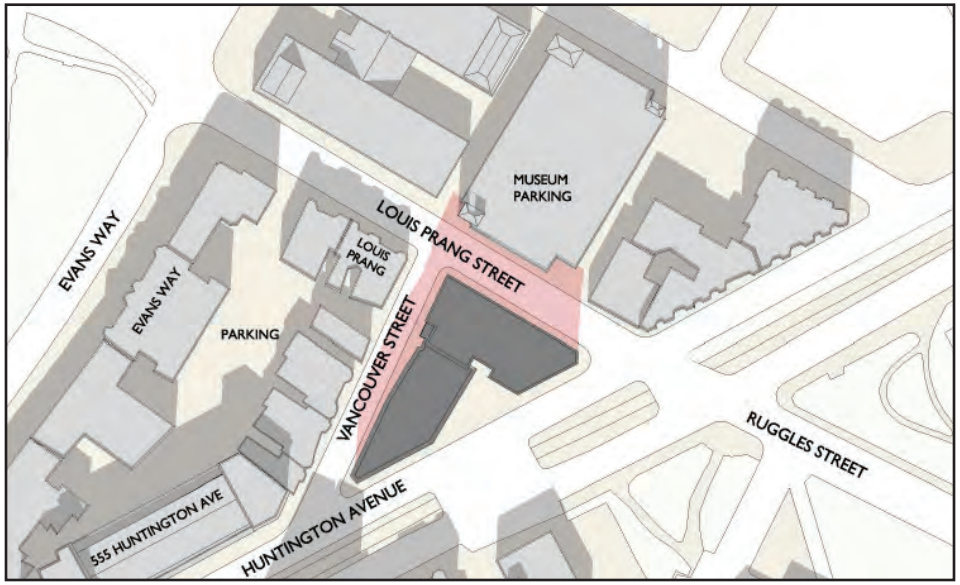

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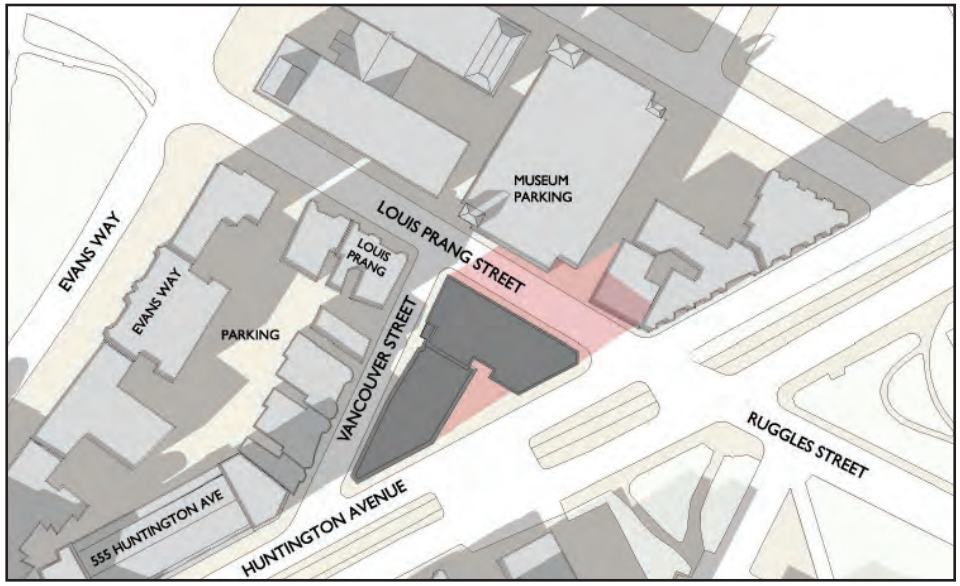

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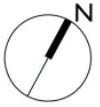
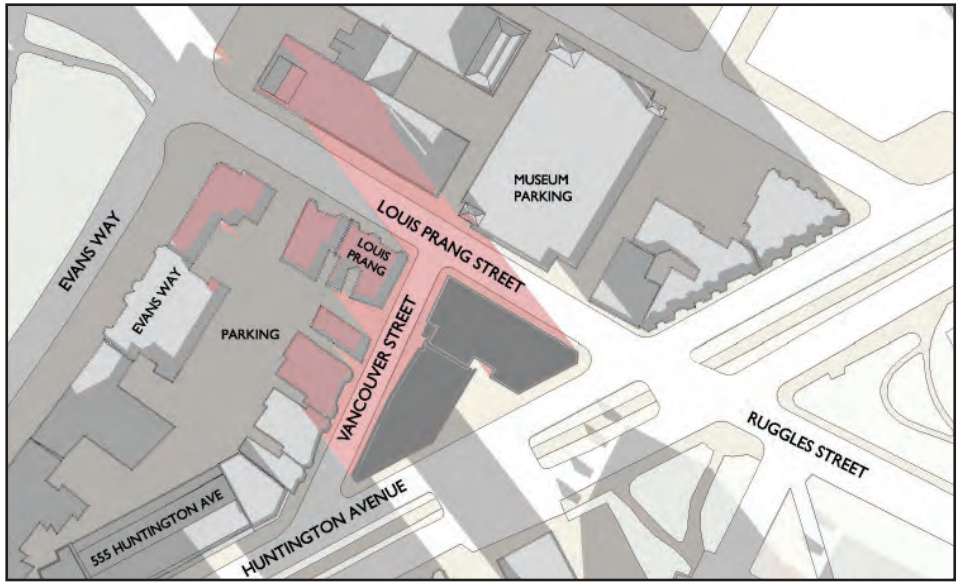


Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Project Impact Report

Figure 5-3
Shadow Studies, September 21
Source: Beacon Architectural Associates, 2012



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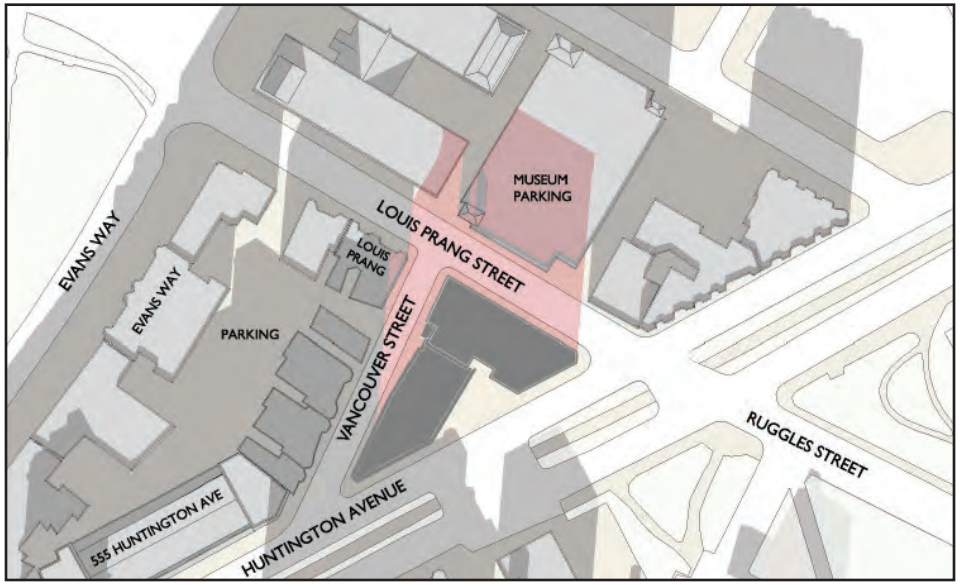

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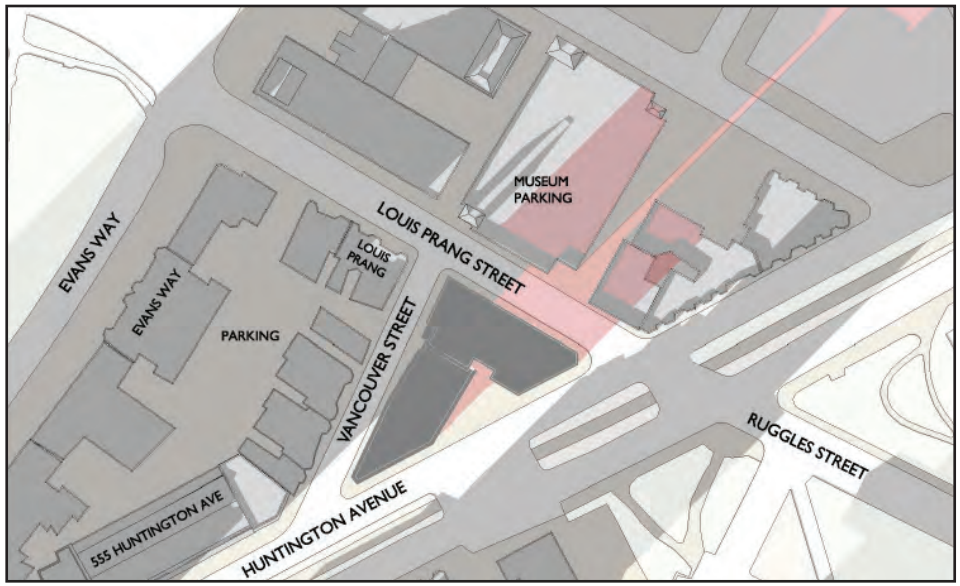

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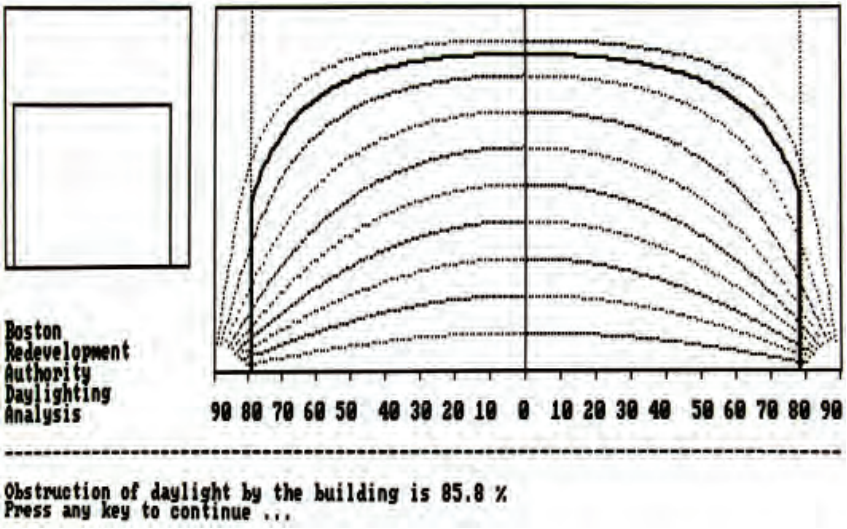
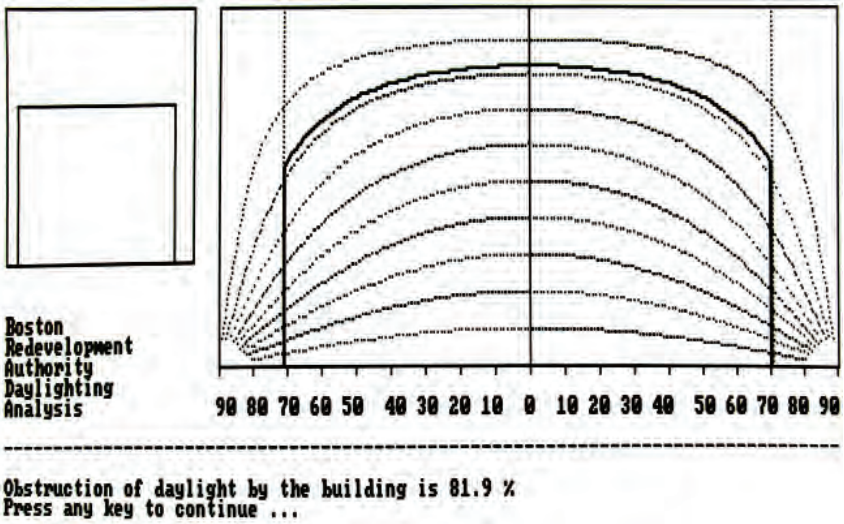
Student Apartments at 525 Huntington Avenue
Project Impact Report

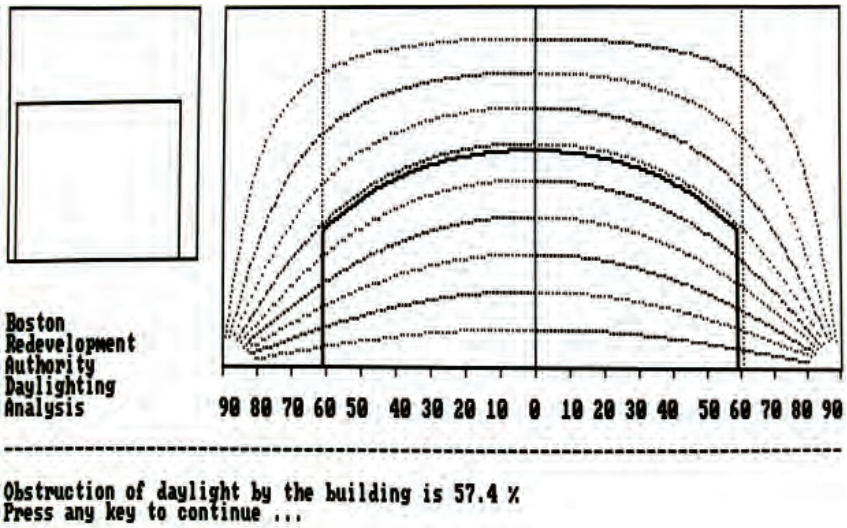
Figure 5-4
Shadow Studies, December 21
Source: Beacon Architectural Associates, 2012



Vancouver Street

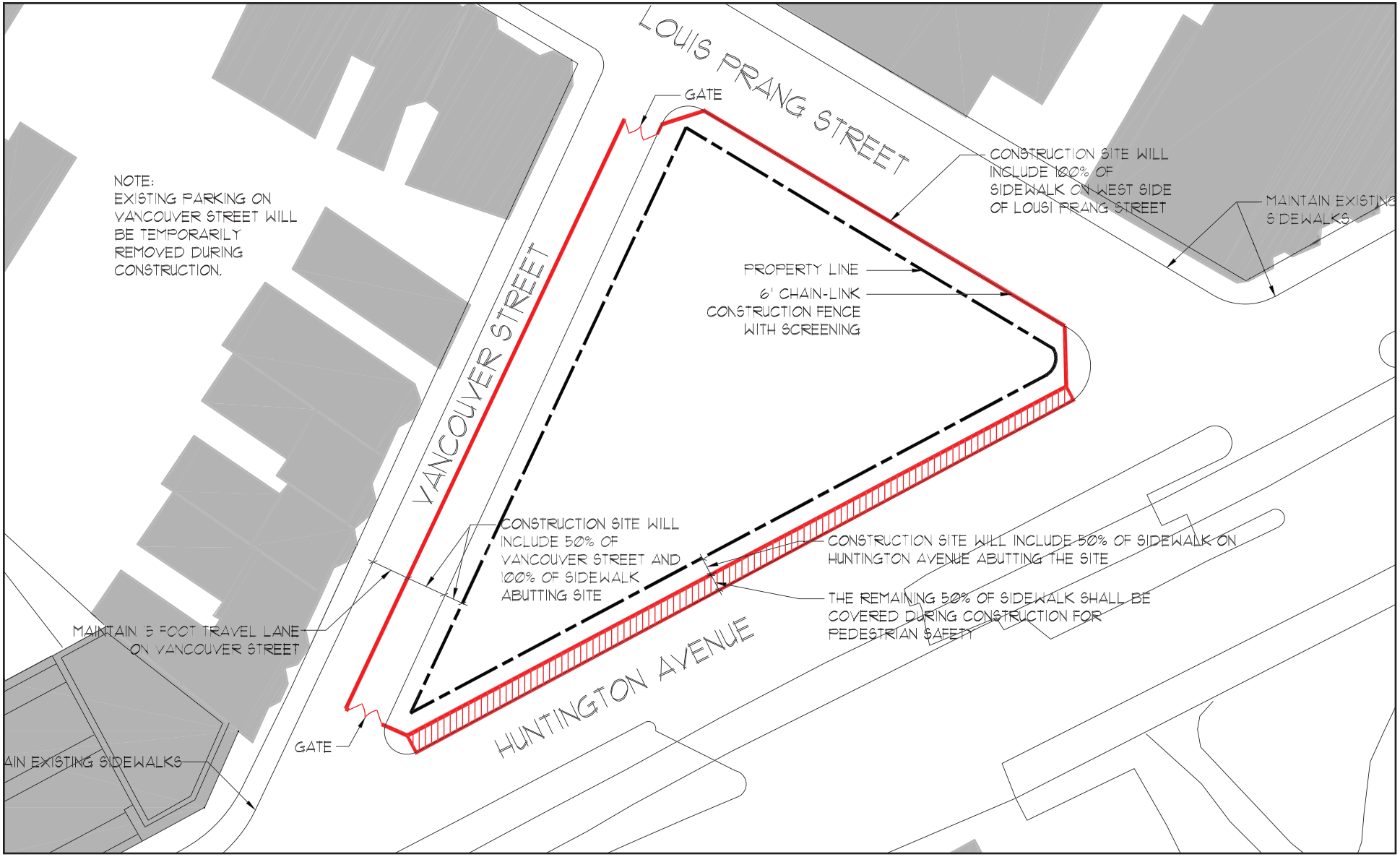


Louis Prang Street



Huntington Avenue

Figure 5-5
Daylight Analysis Results
Source: BRA; Fort Point Associates, 2012



Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Project Impact Report

Figure 5-6
Construction Management Plan
Source: Beacon Architectural Associates, 2012

Chapter 6

INFRASTRUCTURE

CHAPTER 6: INFRASTRUCTURE

6.1 INTRODUCTION

This chapter describes the existing utilities surrounding the project site, the proposed connections required to provide service to the new structures, and any impacts on the existing utility systems that may result from the construction of the Project.

6.2 SANITARY SEWER SYSTEM

Boston Water and Sewer Commission (BWSC) record drawings indicate that a 66-inch Metropolitan Water Resources Administration (MWRA) combined sewer and a 30-inch by 36-inch sewer main exist in Louis Prang Street. The site survey shows a 66-inch by 55-inch MWRA sewer main and a 30-inch by 36-inch combined sewer in Louis Prang Street.

The BWSC drawings show a 78-inch MWRA sewer main in Huntington Avenue. The site survey indicates that the 78-inch main is a combined sewer.

The BWSC drawings show a 78-inch by 84-inch MWRA sewer main in Vancouver Street and a 30-inch by 36-inch BWSC sewer main in Vancouver Street. The BWSC sewer and the MWRA sewer appear to connect to the 66-inch MWRA combined sewer in Louis Prang Street. The site survey shows a 78-inch by 90-inch MWRA sewer main and a 30-inch by 36-inch sewer main in Vancouver Street. The survey shows the 30-inch by 36-inch main connects to the 30-inch by 36-inch combined sewer in Louis Prang street. The survey shows the 78-inch by 90-inch MWRA sewer connects to the 66-inch by 55-inch MWRA sewer in Louis Prang Street. The MWRA sewer appears to flow southwest down Vancouver Street to the Ward Street Headworks Sewer Station south of Huntington Avenue. The BWSC sewer appears to connect to a 51-inch by 53-inch Massachusetts Bay Transportation Authority (MBTA) sewer in Huntington Avenue, and direct flows northeast along Huntington Avenue.

The existing sewer system adjacent to the site is illustrated in Figure 6-1, BWSC Sewer System Map. The project site does not have any existing sewer connections to the BWSC system and there are no sanitary sewage discharges from the existing site.

6.2.1 WASTEWATER GENERATION

The Project's sewage generation rates were estimated using the Massachusetts Division of Water Pollution Control Sewer System Extension and Connection Permit

Program section 314 CMR 7.00, and the proposed building program. 314 CMR 7.00 lists typical generation values for the sources listed in Table 6-1 for the Proposed Project. Typical generation values are generally conservative values for estimating the sewage flows from new construction. 314 CMR 7.00 sewage generation values are used to evaluate new sewage flows or the increase in flows to existing connections. Table 6-1 describes the increased sewage generation in gallons per day (gpd) for each phase of the Proposed Project.

Table 6-1, Existing and Proposed Project Sewage Generation

Existing Flows

Room Use	Size	310 CMR Value (gpd/unit)	Total Flow (gpd)
Undeveloped Site			
		Total Existing Flows	0

Proposed Flows

Room Use	Size	310 CMR Value (gpd/unit)	Total Flow (gpd)
Residential Units	262 bedrooms	110/ bed	33,440
		Total Proposed Flows	33,440

6.2.2 SEWAGE CAPACITY & IMPACTS

The Proposed Project's impacts to the existing BWSC sewer systems in the adjacent streets were analyzed. The new building is expected to connect to the 30-inch by 36-inch sewer main in Vancouver Street. The existing sewer main capacity calculations are presented in Table 6-2.

Table 6-2 , Sewer Hydraulic Capacity Analysis

Sewer System	Distance (feet)	Invert Elevation (Up)	Invert Elevation (Down)	Slope (%)	Diameter (inches)	Manning's Number	Flow Capacity (cfs)	Flow Capacity (MGD)
Vancouver Street (30″x36")	206	7	6.7	0.15%	30	0.013	15.65	10.12
Louis Prang Street (30"x36")	177	6.80	6.70	0.06%	30	0.013	9.75	6.30

Notes: 1. Information taken from site survey
2. Flow Calculations based on Manning Equation
3. Pipe diameter set to 30″ to be conservative.

The existing adjacent roadway sewer systems in Huntington Avenue, Louis Prang Street, and Vancouver Street were analyzed for impacts due to the potential building service connections as part of the Proposed Project.

Results shown in Table 6-2 indicate the minimum hydraulic capacity of the 30-inch by 36-inch sewer main within Louis Prang Street near the Proposed Project is 6.30 million gallons per day (MGD) or 9.75 cubic feet per second (cfs). Capacity problems are not expected within the 30-inch by 36-inch sewer main in in Louis Prang Street based on the average daily flow estimate for the Proposed Project of 33,340 gpd or 0.033 MGD, (including a factor of safety of 10, total estimate = 0.033 MGD x 10 = 0.33 MGD).

6.2.3 PROPOSED CONDITIONS

Sanitary sewage generated by the Proposed Project will be discharged to the adjacent BWSC sanitary sewer system. It is anticipated that the proposed building will discharge sanitary sewage to the 30-inch by 36-inch sanitary sewer main in Vancouver Street based on the available sewer mains. This will be reviewed and approved by the BWSC engineering staff as part of the design process and the BWSC Site Plan Approval process for the Proposed Project.

The Proponent will coordinate with the BWSC on the design and capacity of the proposed connections to the sewer system. In addition, the Proponent will submit a General Service Application and site plan for review as the project progresses. The Proposed Project will generate new wastewater flows exceeding 15,000 gallons per day but less than 50,000 gpd, which will require the completion of a Department of Environmental Protection Compliance Certification BRP WP 73, Sanitary and Industrial Connections Greater than 15,000 gpd but less than or equal to 50,000 gpd.

All improvements and connections to BWSC infrastructure will be reviewed as part of the BWSC's site plan review process for the Proposed Project. This process includes a comprehensive design review of the proposed service connections, an assessment of project demands and system capacity, and the establishment of service accounts.

6.3 WATER SUPPLY SYSTEM

Water for the project site will be provided by the BWSC. There are five different water systems within the city, and these provide service to portions of the city based on ground surface elevation. The five BWSC water systems are southern low (commonly known as low

service), southern high (commonly known as high service), southern extra high, northern low, and northern high.

BWSC record drawings indicate a 12-inch ductile iron southern low service exists in Vancouver Street (installed in 1979) and an 8-inch ductile iron southern low service in Louis Prang Street (installed in1984). These mains connect to a 16-inch pit cast iron (PCI) main in Huntington Avenue (installed in 1896 relined in 1983). Huntington Avenue also contains a southern high 42-inch PCI main (installed in 1895 relined in 1987), a 20-inch southern high 20-inch ductile iron main (installed in 1980), and an 8-inch southern low ductile iron main (installed in 1980).

The existing water system is illustrated in Figure 6-2, BWSC Water System Map. The Proposed Project Site does not have any existing water connections to BWSC systems.

6.3.1 WATER CONSUMPTION

The Project's water demand estimate for domestic services is based on the proposed project's estimated sewage generation, described above. A conservative factor of 1.1 (10%) is applied to the estimated average daily wastewater generation calculated with 314 CMR 7.00 values to account for consumption, system losses and other usages to estimate an average daily water demand. The total estimated water demand due to the Proposed Project is approximately 36,905 gpd (based on a total sewage generation of 33,550 gpd) of domestic water. The water for the Proposed Project will be supplied by the BWSC system.

The project will incorporate reasonable effort to reduce water consumption. Aeration fixtures and appliances will be chosen for water conservation qualities. In public areas, sensor operated faucets and toilets will be installed.

New water services will be installed in accordance with the latest Local, State, and Federal codes and standards. Backflow preventers will be installed at both domestic and fire protection service connections. New meters will be installed with Meter Transmitter Units (MTU's) as part of the Boston Water and Sewer Commission's Automatic Meter Reading (AMR) system.

6.3.2 EXISTING WATER CAPACITY AND IMPACTS

BWSC record flow test data containing actual flow and pressure for a hydrant within the vicinity of the project site was not available. Hydrant flow testing will be performed as needed once the design progresses.

6.3.3 PROPOSED PROJECT

The domestic and fire protection water service connections required by the Project will meet the applicable City and State codes and standards, including cross-connection backflow prevention. Compliance with the standards for the domestic water system service connection will be reviewed as part of BWSC's Site Plan Review Process. This review includes, but is not limited to, sizing of domestic water and fire protection services, calculation of meter sizing, backflow prevention design, and location of hydrants and siamese connections that conform to BWSC and Boston Fire Department requirements.

6.3.4 PROPOSED IMPACTS

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

6.4 STORMWATER SYSTEM

A 12-inch vetrified clay stormwater main is located in Vancouver Street. A 15-inch vetrified clay stormwater main exists in Louis Prang Street. Two 24-inch Reinforced Concrete Pipe (RCP) stormwater mains exist in Huntington Avenue. The BWSC drawings indicate that the stormwater mains are owned by the MBTA. Stormwater from the site appears to be directed northeast along Huntington Avenue. The existing storm drainage system is illustrated in Figure 6-1, BWSC Sewer System Map.

The existing project site does not currently contain any stormwater infrastructure. Stormwater from the site generally appears to flow overland to Vancouver Street and Louis Prang Street.

6.4.1 PROPOSED PROJECT

Stormwater runoff generated from the roof of the Project building, landscaped and paved areas will be collected, treated, and conveyed through a closed drainage system to a groundwater recharge system that will overflow to the BWSC storm system in the adjacent streets in large storm events. This system will likely be located outside the building footprint. The groundwater recharge systems will have the capacity to collect, store and recharge 1-inch of stormwater at a minimum to comply with the requirements of the Groundwater Conservation Overlay District. An overflow from the site stormwater system will likely be directed to the 15-inch stormwater main in Louis Prange Street.

The Project is expected to increase the amount of impervious area at the site compared to the existing condition. Any required site closed drainage systems will

be designed so there will be no increase in the peak rate of stormwater discharge from the Proposed Project in the developed condition compared to the existing condition.

All improvements and connections to BWSC infrastructure will be reviewed as part of the Commission's site plan review process. This process includes a comprehensive design review of the proposed service connections, assessment of project demands and system capacity, and compliance with required phosphorus mitigation for projects in the Charles River Watershed.

6.4.2 PHOSPHORUS MITIGATION

The project site is located within the Charles River Watershed and therefore the project is required to capture and treat at least 1/2-inch of stormwater runoff from impervious areas to provide phosphorus mitigation. Because the project is located within the Groundwater Conservation Overlay District (GCOD), the project is required to capture at lease 1-inch of stormwater runoff from impervious areas, and will exceed this requirement. Stormwater Best Management Practices (BMPs) that provide phosphorus treatment include groundwater recharge and mechanical devices (manufactured by Imbrium and Contech). Table 6-4 below, indicates the anticipated volume of runoff required for recharge the Proposed Project. The stormwater management system for the proposed building will include a groundwater recharge system. It is anticipated that the stormwater recharge systems will work to passively infiltrate site runoff into the ground with a gravity overflow to the stormwater systems in adjacent roadways.

Table 6-4, GCOD/Phosphorus Mitigation Volume Calculations (1-inch of runoff)

	Site Area (sf)	Total Storage required (cf)	Total Storage required (gallons)
Assumed Site Impervious Areas	15,500 +/-	129	966

6.5 WATER QUALITY IMPACT

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

All necessary dewatering will be conducted in accordance with applicable MWRA and BWSC discharge permits. Once construction is complete, the Proposed Project will each be in compliance with all local and state stormwater management policies. See below for additional information.

6.5.1 DEP STORMWATER MANAGEMENT POLICY STANDARDS

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

The Project will be designed to comply with all requirements of the DEP Stormwater Policy.

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

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

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

Standard #2: *Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.*

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

Standard #3: *Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable. The annual recharge from the post development site should approximate the annual recharge from the pre-development or existing site conditions, based on soil types.*

Compliance: The Project will meet this standard to the maximum extent practicable. The Project will at a minimum comply with requirement to treat 1-inch of stormwater over the entire impervious area of the site for GCOD and phosphorus mitigation with groundwater recharge systems.

Standard #4: *For new development, stormwater management systems must be designed to remove 80% of the average annual load (post-development conditions) of Total Suspended Solids (TSS). It is presumed that this standard is met when: Suitable nonstructural practices for source control and pollution prevention are implemented; Stormwater management best management practices (BMPs) are sized to capture the prescribed runoff volume; and Stormwater management BMPs are maintained as designed.*

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

Standard #5: *For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If, through source control and/or pollution prevention, all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L.c. 21, §§ 26-53 and the regulations promulgated there under at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.*

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

Standard #6: *Stormwater discharge to critical areas must utilize certain stormwater management BMPs approved for critical areas. Critical areas are Outstanding Resource Waters (ORWs), shellfish beds, swimming beaches, cold-water fisheries and recharge areas for public water supplies.*

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

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

Compliance: The proposed design will comply with this standard. The proposed project is not a redevelopment.

Standard #8: Erosion and sediment controls must be implemented to prevent impacts during construction or land disturbance activities.

Compliance: The Proposed Project will comply with this standard. Sedimentation and erosion controls will be incorporated as part of the design of these projects and employed during construction. This project is expected to disturb greater than one acre of land and will require a NPDES NOI filing with EPA. This project will be required to meet the requirement put forth by the 2012 Construction General Permit.

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

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

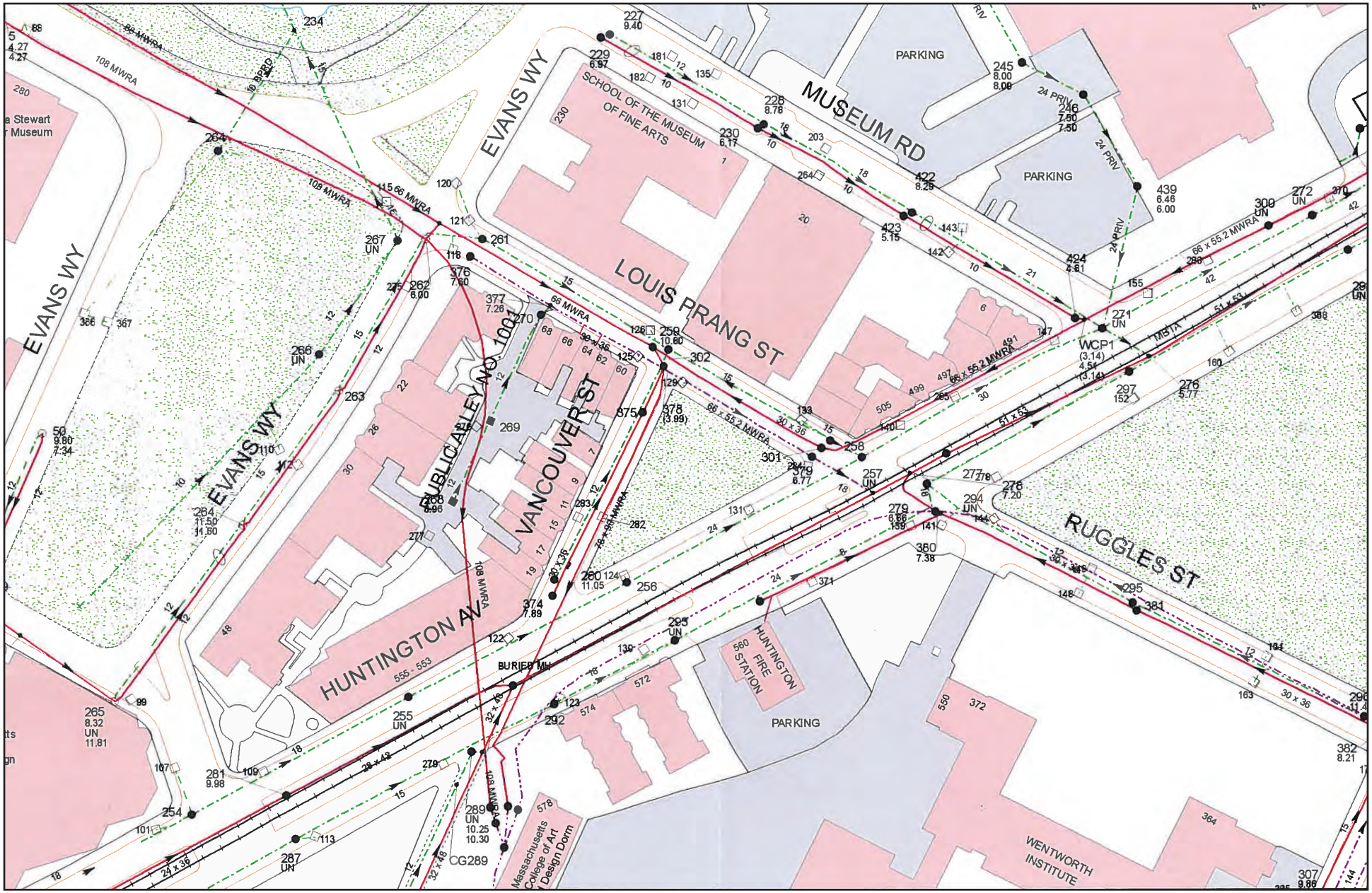
Standard 10: All illicit discharges to the stormwater management system are prohibited.

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

6.6 UTILITY PROTECTION PROPOSED DURING CONSTRUCTION

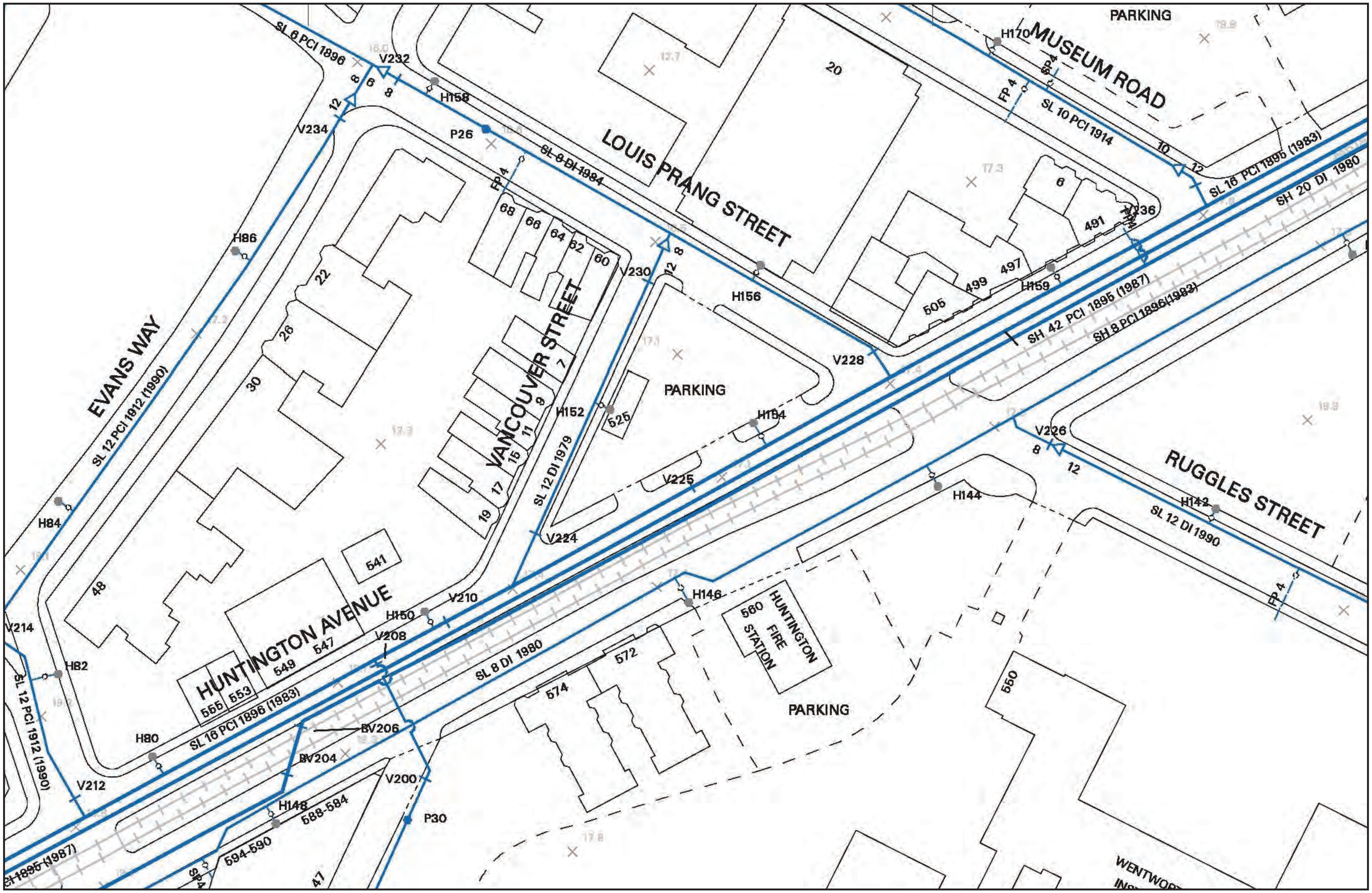
Existing public and private infrastructure located within nearby public rights-of-way will be protected during construction of each component of the Project. The installation of proposed utility connections within public ways will be undertaken in accordance with BWSC, Boston Public Works Department,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

The Proponent will continue to work and coordinate with the BWSC and the utility companies to ensure safe and coordinated utility operations in connection with the Project. A more detailed description of utility protection during construction is provided in Section 5.9., Draft Construction Management Plan.



Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Project Impact Report

Figure 6-1
BWSC Sewer System Map
Source: Nitsch Engineering, Inc., 2012



Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Project Impact Report

Figure 6-2
BWSC Water System Map
Source: Nitsch Engineering, Inc., 2012

Appendix A

Boston Redevelopment Authority Scoping Determination/Responses to Comments on the Project Notification Form

Boston Redevelopment Authority

Boston's Planning & Economic Development Office

Thomas M. Menino, *Mayor*
Clarence J. Jones, *Chairman*
Peter Meade, *Director*

One City Hall Square
Boston, MA 02201-1007
Tel 617-722-4300
Fax 617-248-1937

August 29, 2012

Mr. David A. Wahlstrom
Vice President, Business
Wentworth Institute of Technology
550 Huntington Avenue
Boston, MA 02115

Re: Scoping Determination: Project Notification Form ("PNF) for the Student Apartments at 525 Huntington Avenue Project

Dear Mr. Wahlstrom,

Please find enclosed a Scoping Determination in response to the Project Notification Form ("PNF") for the Student Apartments at 525 Huntington Avenue Project, submitted to the Boston Redevelopment Authority on July 13, 2012.

Please feel free to contact me at 617-918-4425 if you have any questions.

Sincerely,

Katelyn Sullivan
Project Manager

Cc: Peter Meade, BRA
Brenda McKenzie, BRA
Linda Kowalcky, BRA

BOSTON REDEVELOPMENT AUTHORITY

SCOPING DETERMINATION

FOR

WENTWORTH INSTITUTE OF TECHNOLOGY

PROPOSED PROJECT: STUDENT APARTMENTS AT 525 HUNTINGTON AVENUE

Wentworth Institute of Technology ("Wentworth") is located in Boston's Mission Hill neighborhood and offers cooperative baccalaureate programs, as well as associate degree and certificate programs in the disciplines of science, design, engineering, management and technology. Wentworth serves 3,527 full-time students on campus. Wentworth has an approved Institutional Master Plan that became effective on January 20, 2011.

The Boston Redevelopment Authority ("BRA") is issuing this Scoping Determination pursuant to Section 80B-5 of the Boston Zoning Code (the "Code") in response to a Project Notification Form ("PNF") which Wentworth ("Proponent") filed on July 13, 2012 for the Student Apartments at 525 Huntington Avenue Project (the "Proposed Project"). Notice of the receipt by the BRA of the PNF ("Notice") was published in the Boston Herald on July 13, 2012 initiating a public comment period that ended on August 13, 2012. A Scoping Session was held on August 7, 2012 with the City's public agencies, BRA review staff and Wentworth where the PNF was reviewed and discussed. The BRA also held a public meeting on July 31, 2012 to present and discuss the Proposed Project. The community will continue to have an opportunity for input during the Article 80 review process.

The PNF describes the Proposed Project which received 80D approvals through the approved Institutional Master Plan that became effective on January 20, 2011. The Proposed Project will provide housing for Wentworth students by means of 305 beds in apartment style units on seven floors. The program for the 118,140 gross square foot (gsf), seven-story building includes a total of 72 units, which will be organized around open common space.

The BRA has determined that supplemental information is required in the form of a Draft Project Impact Report ("DPIR"). Written comments in response to the PNF that were received by the BRA are included in **Appendix A** and **Appendix B**. Comments are incorporated herein by reference and are to be responded to by Wentworth. The BRA has identified and summarized the following issues for which specific responses are required in connection with the Article 80 review process:

1. *Urban Design:*
   Wentworth is required to continue to meet with the BRA Urban Design staff and carry on the Boston Civic Design Commission process for the Proposed Project. Wentworth is required to respond to the attached comment letter from BRA Urban Design staff including responses on how the Proposed Project will affect the public realm, Avenue of the Arts and pedestrian networks.

2. *Air Quality:*
   Wentworth is required to provide a description of the existing and projected future air quality in the vicinity of the Proposed Project as well as demonstrate that the Proposed Project will conform to the National Ambient Air Quality Standards (NAAQS).

3. *Accessibility:*
   As brought forth by the Mayor's Commission for Persons with Disabilities, Wentworth is required to address items such as accessible entries, circulation and common spaces as well as outdoor access.

4. *Construction*
   The BRA requests that a Construction Management Plan in compliance with the City's Construction Management Program be submitted for the Proposed Project.

5. *Transportation*
   Wentworth is required to continue dialogue with the Boston Transportation Department as well as the Public Works Department on requirements related to streets, crosswalks and bike parking.

In response to this Scoping Determination, Wentworth is required to submit 60 copies and a CD of a DPIR pursuant to Section 80B-5 of the Boston Zoning Code to the BRA for the Proposed Project which shall initiate a forty-five (45) day public comment period.

APPENDIX A: Comments from Public Agencies

A

BRA MEMORANDUM

TO: Katelyn Sullivan, Project Manager
FROM: David Grissino, Senior Architect/Urban Designer
DATE: August 28, 2012
SUBJECT: Wentworth Institute of Technology (WIT)
Student Apartments at 525 Huntington Avenue
Scoping Comments

URBAN DESIGN COMPONENT

Background

The Wentworth Institute of Technology's campus continues to thrive, grow, and positively contribute to the Avenue of the Arts and the greater Fenway and Mission Hill neighborhoods. Building on the success of other recent investments along Huntington Avenue, WIT has an opportunity with new projects to strengthen the urban fabric along the corridor, enhance the public realm, and increase public awareness about the institution and its mission.

In its Institutional Master Plan (IMP), which was approved in January of 2011, a new residence hall was contemplated for the site bound by Vancouver Street, Louis Prang Street, and Huntington Avenue. This project was defined in a Project Notification Form submitted on July 13, 2012. The proposed Student Apartments at 525 Huntington Avenue (the Project) is a 118,140 gross square foot, seven-story building with 72 units which will house approximately 305 students in apartment style units.

For the proposed Project, we suggest submitting the following urban design materials for the schematic design massing and uses. These items are in addition to any described in the submission requirements outlined in the BRA Development Review Guidelines (subject to BRA Design Review Staff discussion) found at:
http://www.bostonredevelopmentauthority.org/pdf/documents/Development Review Guidelines - Final Version (April 2006).pdf

Urban Design

Framework and Vision
The Project is one of many changes occurring along the evolving Avenue of the Arts, with major developments recently completed, underway, or contemplated at the Christian Science Center, Northeastern University, MassArt, The Museum of Fine Arts, WIT, the New England Conservatory, and the edge of the Longwood Medical area. The PNF states that that with "the building's prominent location on Huntington Avenue the design intent is to fortify the existing streetscape theme as the Avenue of the Arts" and define "Wentworth's campus organization and identity within the community.

Detailed information should be provided in analytical graphic and narrative forms which define these broad urban design concepts, depict how they are currently applied in the area, and how the Project intends to support and enhance them. The area of study should include, at a minimum, the section of Huntington Avenue from Forsyth Street to Longwood Avenue. 1

Public Realm

Unlike many sites throughout Boston, the Project has three distinct streetscapes on the three sides of the site. Huntington Avenue is a major city transit and vehicular arterial lined with the ceremonial front entrances and landscapes of major institutions; Vancouver Street is a very narrow residentially scaled street; and Louis Prang Street serves as a connector and gateway to the Back Bay Fens and Emerald Necklace. The PNF provided very little information about the modifications to the surrounding streets, including parking, landscape, sidewalks, and crosswalks. This is also true regarding the "public gathering space at the Entry Plaza".

Figure 3-2 from the PNF submission should be updated and expanded with more detailed information about these elements and describe all site landscaping, furnishings, and materials that will comprise the public realm. In addition, site sections should be provided which depict the proposed public realm improvements and illustrate the scale of the building relative to the width of the street. The sections should extend from the edge of the building through each street to the edge of the building on the opposite side. For the Huntington Avenue portion of the building, one section should be cut through the "Entry Plaza" and one section should be cut through the west end of the building. 2

The Entry Plaza is described as an "open exterior gathering space" and as a "buffer between the resident units and the activities associated with Huntington Avenue". The current design seems to suggest a space which is solely for moving through in order to access the front door to the residence hall, emphasized by a undulating curb, landscape, and paving pattern which has no relationship to the surrounding sidewalk. Additional conceptual clarity about the opportunities for the space should be investigated. Figure 3-13 should be updated and supplemented with other 2D or 3D graphics and narrative which give a stronger sense of how the space is configured in plan and section, as well as how the space is intended to be used. 3

Architectural Design

The PNF states that the overall approach to the building's character is one which uses the existing palette of materials of WIT buildings to relate to the existing campus, while using curtainwall glass and metal panel to suggest an attitude toward WIT's "mission of excellence in technology". This approach has great potential to successfully integrate the Project into the campus and surrounding context.

However, information should be provided which investigates alternatives to the building's architectural expression to reflect the very diverse urban contexts on each of the three sides of the building while still achieving a unified whole. Currently, there is no differentiation between them or between the different massing volumes. These 4

alternatives can be defined by modifying and updating the perspective views and elevations as provided in the PNF. All of the perspective views should be taken from a point 5'-0" above the sidewalk or from an aerial location above the highest point on the building. Views should also include as much of the surrounding context as possible, including buildings and landscape elements. 5

In addition, streetscape elevations should be provided which show the Project in relation to its immediate context on either side. Due to the fact that there is no building on either side of the Vancouver Street façade, the ground level perspective view for Vancouver Street should include additional architectural information for the existing buildings on the opposite side of the street in order to evaluate the relationship. 6

Pedestrian Circulation

While the PNF states that the Wentworth Pike is the primary pedestrian spine for the WIT campus as it is currently configured, information should be provided which addresses how this project will influence existing patterns and create new ones in the area. Recognition should be made to the fact that pedestrians other than WIT students use the sidewalks as connections to points east, west, and to the Fens. Potential circulation along Ruggles Street, Louis Prang Street, and Huntington Avenue should be discussed in the context of the public realm enhancements. 7

Environmental Impacts

The PNF included a discussion of many environmental impacts as part of Chapter 5. As part of the submission were detailed shadow studies. Updated information should be provided for Figure 5-2, Shadow Studies, June 21, for the 6pm time due to the fact that no shadows are being shown cast from the proposed building. 8

In addition, a Daylight Analysis should be conducted in accordance with the BRA Development Review Guidelines referenced above. Section IV.B.3 describes the requirements for the analysis, except that no "no-build" or "existing conditions" analysis will be required due to the temporary nature of the existing open space. 9

A		BRA Urban Design	Response
	1		Huntington Avenue is also known as the Avenue of the Arts for its many significant artistic venues and educational building's that include Symphony Hall, Horticultural Hall, New England Conservatory, Museum of Fine Arts, Wentworth Institute of Technology, Massachusetts College of Art, Northeastern University, Massachusetts College of Pharmacy and the Boston University Theater. Other institutions in close proximity to the building site include the Longwood Medical area that is home to many of Boston's major teaching and research hospitals as well as Harvard Medical School, the Colleges of the Fenway consortium including Wheelock College, Simmons College, and Emmanuel College within the nearby Back Bay Fens, the Isabella Stewart Gardner Museum, and the Greek Orthodox Cathedral of the Annunciation. Although diverse in character, each of these existing buildings mark their place along Huntington Avenue by their ceremonial entries with a mixture of defining elements including signage, plantings, lawns, sculptures, seating and distinguishing paving materials and patterns. In fortifying Huntington Avenue's streetscape theme as the Avenue of the Arts, Wentworth's new residence facility will also mark its presence within this existing context by its Entrance Plaza with a mixture of these same elements while defining the building's entrance. By enhancement of this common streetscape theme, the new plaza provides another public gathering space along this busy thoroughfare for those to pause and take notice of Wentworth as a prominent and engaged member of the community. Although the Wentworth campus already has a significant frontage along Huntington Avenue, the Institute's formal entrance is along the less-prominent Ruggles Street. One can see Wentworth Hall from this Huntington Avenue site but Sweeney Field, surrounded by a tall wrought iron fence, is in many ways a barrier between this prominent street and the Institute's front door. This new facility will provide a more recognizable "face" for Wentworth at an important campus gateway while strengthening its address and identity along the Avenue of the Arts.
	2		Within the confines of the block containing the project site, existing sidewalks and curbing, including handicap ramps, will be reconstructed in kind where disrupted by construction activities. The sidewalks on Huntington Avenue, adjacent to the project are in very good condition as they had been recently constructed as part of the site remediation and park construction. All sidewalk facilities will be in compliance with

			current ADA standards and guidelines. Street trees currently line the sidewalks immediately surrounding the project site, and on Vancouver and Louis Prang Streets. Existing trees will be replaced with new specimens on Huntington Avenue and Vancouver Street. Where feasible, trees will be replaced in the locations of currently vacant tree pits. Existing tree locations indicate areas clear of underground utilities and will remain except where elimination is required for permanent building access. London Planetrees line Huntington Avenue and were part of an overall streetscape plan for the street. These trees will remain or will be replaced with appropriate alternatives. The trees lining Vancouver and Louis Prang Streets are Lindens. It is expected that the new building will cast shade for some portions of the day on these streets. Linden trees as well as Maple and Oak are tolerant of shade and urban conditions and may be considered for replacement. Plantings on Vancouver Street will include understory trees that will not provide pedestrian obstruction, but will soften the face of the service area. This area will be utilized for trash and recycling removals. Existing light levels on all street fronts will be maintained. Construction may necessitate the removal and replacement of fixtures in kind. Traffic mast arms, light poles and fixtures, and the sign kiosk along Huntington Avenue are to remain. A 'Hubway' bicycle station is being considered along the stretch of Huntington Avenue adjacent to the plaza. This would provide an amenity to students not owning their own bicycles, provide an alternate method of transit, and the location would help direct pedestrian traffic flow away from the potential shortcut through the fire access in the median. In instances where the building does not abut the lot line, new paving and/or planting zones will be provided between the building face and existing sidewalk. On Huntington Avenue, this pavement will match the existing sidewalk materials with the exception of the plaza area. On Vancouver Street, the service access apron will be constructed of reinforced concrete, maintain pedestrian accessibility, and will not exceed maximum longitudinal or cross slopes as identified in the federal or MA ADA guidelines. Pavement scoring pattern may differ from the sidewalk scoring pattern as a visual reminder of the dual use of this area. The sidewalk along Louis Prang will extend beyond the existing

			sidewalk and roadway Right of Way. Pedestrians travelling within this extended walkway area will be protected from the elements by the building overhang.
	3		The Project will maintain existing streetscape elements and will include a landscaped urban plaza at the Huntington Avenue entrance and plantings along the Vancouver Street facade. The landscaped plaza at the main building entrance on Huntington Avenue will include a sculptural element, seating areas, paved areas suitably sized for small gatherings, and plantings. It is expected that this area will provide an area of respite for pedestrians on Huntington Avenue, an area for congregation for members of the community utilizing the meeting room spaces within the building, and outdoor space to serve the building residents and their guests. Pavements will be fully accessible. The curvilinear design is intended to provide a respite from the rigid urban geometry while providing a slightly more intimate and embracing area for gathering and sitting. The curves within the hardscape are intended to draw attention to the sculptural element within the plaza. This sculptural piece may be an opportunity for Wentworth to exhibit student work on a rotating basis. The south/west orientation of the plaza will provide a warm, sunny space for gathering during the cooler months, and the solar gain should help with snow and iced melt in the winter. The street trees and plantings within will provide shade during the summer. Plant materials will include native trees, shrubs, and perennials that have proven tolerance in urban environments requiring minimal maintenance and irrigation once established. Plants will be selected for specific locations based on sun or shade preferences. Plantings may include, but are not limited to Birch, Serviceberry, Viburnum, ornamental grasses, daylilies, sedum, etc. Irrigation will be provided by drip or low shrub spray heads to minimize evaporation and overspray. Paving units and attractive site furnishings will be chosen to be suitable for the pedestrian traffic patterns and use of an urban environment. Metal benches with curved seats provide comfortable seating, while drying quickly. The sculpture base will include skate stops similar to the system used at the Wentworth leopard sculpture on 'The Pike' to minimize the hazard that skateboarders pose to pedestrians in public plazas. Pavers will be unit pavers with sand joints over a rigid base

			containing weep holes for infiltration. Paving unit colors will be chosen to compliment the building façade and to meet LEED requirements for reflectivity. The Vancouver Street sidewalk will be crossed by vehicular maintenance access to the building. This access is intended for maintenance and deliveries and will be utilized on an as-needed basis. It is intended that service and delivery vehicles will be transitory and will not remain for any extended length of time. A planting area will be provided between the new building and the existing sidewalk area on Vancouver Street to provide additional green space, and privacy to the residential units within the building which will be adjacent to the service area. This planting area will include small understory trees/large shrubs in an elevated planting area closest to the service entrance. The raised planting area will allow understory vegetation to exist without competing with the adjacent street trees, or providing a barrier to pedestrian access on the street. The planting area will transition to smaller shrubs further away from the loading area, and all planting areas on Vancouver street will include evergreen groundcovers and shade tolerant materials. For a more detailed description of the landscape features, see Section 3.4 Streetscape and Landscape. Also, see Figure 2-5 Ground Floor Plan, Figure 2-6 Landscape Plan, Figures 3-8 and 3-13 Building Perspectives.
	4		The exterior building materials for the Project continue an existing palette of materials for the Wentworth campus. By the utilization of a modern adaption of these established materials Wentworth's mission of excellence in technology is expressed. This modern function is articulated by eroding the masonry facades to reveal significant areas of glass and/or metal panel as a second skin to the building. The building fenestration will be organized to reflect the interior planning of spatial relationships. Punched window openings in masonry panel sections of the building face define the individual bedrooms throughout the apartment units. Projecting glass and metal curtain wall bays define the apartment unit common spaces providing an open and more generously sized feel to the units. A recessed glass and metal curtain wall along the Ground Floor Level on Huntington Avenue and Louis Prang Street provides the neighborhood unobstructed views into the building gathering spaces while displaying the Institutes educational, cultural and social activities within this transparent zone. The mechanical penthouse along the Louis Prang wing of the

			building is set back from the building façade to alleviate the height of this additional level while providing a sound and visual impediment in mitigating the roof top mechanical equipment for the surrounding neighborhood. The application and configuration of these materials provide a clear system to give order to the overall building façade. The emphasis on the selection of attractive materials that convey a sense of quality, beauty, and that will maintain their quality over time shall help relate this new construction to other neighboring institutional buildings. Throughout the design evolution of the building materials have been considered for their response to the context of the Avenue of the Arts as well as approrpate response to surrounding buildings, including 555 Huntington Avenue, and numerous buildings on the Wentworth Campus. See Section Three for a more detailed discussion of building context and massing volumes, as well as revised Elevations in Figures 3-12 through 3-14. And Perspective views in Figures 3-8 through 3-13
	5		All perspective views are either taken from a vantage of 5 feet above the sidewalk or from above the roof line.
	6		Street elevations and perspective views which include adjacent buildings are included as Figures 3-18 - 3-20.
	7		Common pedestrian patterns on the WIT campus are primarily originating on "The Pike" which acts as a spine through the campus. New patterns are expected to emerge and existing patterns will be enforced after the Project is constructed and occupied. Information regarding pedestrian circulation and new routes from the Project is included in Section 4.3.4. and on figure 4-2.
	8		The shadow study for June 21 has been updated, and is included on figure 5-2.
	9		A daylight analysis has been completed for the project. Results of the analysis are described in Section 5.4 and depicted on Figure 5-5.

B

August 17, 2012

Peter Meade, Director
Boston Redevelopment Authority
Boston City Hall, Room 925
Boston, MA 02201
Attention: Katelyn Sullivan, Project Manager

Re: Wentworth Institute of Technology, Student Apartments at 525 Huntington Avenue
East Fenway/Mission Hill
Project Notification Form

Dear Director Meade:

The City of Boston Environment Department has reviewed the Project Notification Form (PNF) filed by Wentworth Institute of Technology (Wentworth/Proponent) and offers the following comments.

Project Site
The 0.38-acre project site is at NW corner of the Wentworth campus and is bounded by Huntington Avenue, Louis Prang Street and Vancouver Street.

Proposal
The project is an L-shaped, 118,140 gross square foot, seven-story plus mechanical penthouse, 84-foot high building with the following ground-floor uses: bike storage; trash, loading and service functions; an NSTAR vault; fire command center; common/gathering spaces, offices and student apartments. The upper levels will be student residences. The PNF indicates that the total number of beds will be 305 for occupancy by Wentworth Juniors and Seniors. The project program list shows a 13,670 square foot basement area with no identified use. A paved service entry curb will be located on Vancouver Street. No on- or off-street parking is included in the project. The PNF references a separate plan to construct parking for students and faculty beneath proposed, elevated soccer fields.

The two-year construction is expected to begin during Fall semester 2014. 1a.

Environmental Protection
Section 5.8, Geotechnical, describes only anticipated conditions.

The property, formerly used as a gasoline station and car wash is contaminated. Two locations are identified as disposal sites under the Massachusetts Contingency Plan (MCP) - Release Tracking Numbers (RTN) 3-15055, opened in 1997 and shown as closed on the MassDEP Waste Site/Reportable Release Searchable Database, and 3-11149, initially opened in 1994 under other ownership and presently subject to an Activity and Use Limitation(AUL) which prohibits the proposed use. A Class A-3 Response Action Outcome (RAO) Statement was submitted to MassDEP in December 2011. Additional remediation is required and will be conducted during construction.

Although no regulatory limits have yet been set on Ultra-Fine Particulates (UFP), their effect on human health is not at issue. It is essential that the buildings and systems be designed to allow for minimum pathways to exposure. Some effective measures include the installation of state-of-the-art air conditioning and filtration systems effective in trapping UFP (along with measures to maintain these systems), modifying building design

features and locating intake vents as far as possible from sources of pollutants, including exhaust vents or structures at the project and adjacent buildings. 1

We request that "No Idling" signage be posted in the service/loading area. 2

Wentworth has developed a move-in/move-out plan for all of its student residences. Vehicles will be parked on Vancouver Street for unloading/loading and then, if parking is desired, moved to the Parker Lot. There will be a marshaling area for vehicles waiting to unload/load on Vancouver Street. This department requested at the August 8, 2012 Scoping Session that a method for ensuring compliance with the Commonwealth's anti-idling law (MGL 90 s16A and 310 CMR 7.11) be implemented; the Proponent plans to do so. 3

The PNF states that the project will generate no negative shadow or window impacts. 4

Loading, service, trash removal and other activities should be scheduled so that noise is not an issue for project residents or neighbors. Mechanical equipment, as well, must comply with the City's Regulations for the Control of Noise if the City of Boston, implemented by the Boston Air Pollution Control Commission (APCC). 5

Many mature trees line the length of the east side of Vancouver Street with two mature trees on Louis Prang Street nearest to Huntington.

Grow Boston Greener, a collaboration between the City of Boston and its partners in the Boston Urban Forest Coalition, is a campaign to plant 100,000 new trees in the City by the year 2020. Increasing Boston's tree canopy cover by 20% will make our City a healthier place to live and visit by improving air quality, shading and cooling our neighborhoods, and, through the resulting reduction in energy consumption, lowering carbon emissions. We ask that the Proponent save, remove and re-plant or plant new mature trees so that there is no net loss of mature trees. 6

We also suggest the following measures that contribute to environmental protection:

- the installation on sidewalks adjacent to all existing, modified and new catch basins permanent plaques which state, "Don't Dump - Drains to Charles River;"
- the use of LED lighting for outside lighting and common area lighting;
- the use of permeable bricks/paving in walkways;
- a drip irrigation system with tensiometers if irrigation is necessary; and
- consideration of adding organics recycling to the current plan. 7

<u>American College and University President's Climate Commitment (ACUPCC)</u>

As a signatory to the ACUPPC, Wentworth has committed to:

- the development of a Climate Action Plan and submission to the ACUPCC;
- the adoption of a policy requiring the purchase of Energy Star-certified products in all areas for which such ratings exist;
- encouraging the use of and providing access to public transportation for all faculty, staff and visitors to the Institution; and
- participation in the Waste Minimization component of the national RecycleMania competition and adoption of three or more associated measures to reduce waste.

Progress Reports and a Climate Action Plan are to be submitted to the AUPCC. 8

<u>Greenhouse Gases and Green Building</u>

The PNF includes a July 2, 2012 LEED Green Building Design and Construction (GBDC) checklist and include text discussing briefly how credits may be implemented for Sustainable Sites (SS), Water Efficiency (WE) and Energy and Atmosphere (EA). No such discussion is offered for Materials and Resources (MR), 9

Indoor Environmental Quality (IEQ), Innovation in Design (ID) and Regional Priority (RP). The checklist shows that Wentworth has chosen for implementation credits totaling 54 points, designated 28 as questionable and 28 not chosen for implementation. The raw percentage of available points chosen for implementation by LEED categories are as follows:

- SS - 85 percent
- WE – 50 percent
- EA – 31 percent
- MR – 30 percent
- IEQ – 60 percent
- ID – 50 percent
- RP – 25 percent

The PNF indicates that the project will include gray water harvesting systems integrated with irrigation, water closets and urinals. 10

This department recommends LEED credits that advance Mayor Thomas M. Menino's ongoing, multi-faceted plan to make Boston a national leader in clean energy generation, energy efficiency, green building and sustainability. Energy-efficient systems, the on-site generation of renewable energy and green power will help conserve limited natural resources, improve outdoor environmental quality, minimize impacts on the local electrical grid, provide for a healthy living environment, reduce greenhouse gas emissions and reduce operating costs over traditionally-heated, cooled and lighted buildings.

Human greenhouse gas (GHG) emissions come primarily from burning fossil fuels - oil, gasoline, natural gas and coal. EA Credit 2, On-Site Renewable Energy, would contribute greatly to the Mayor's goal to reduce GHG emissions 25 percent by 2020 as would EA Credit 6, Green Power. EA Credit 3, Enhanced Commissioning, designed to ensure that investments in infrastructure and systems result in buildings that performs as expected, is a powerful adjunct to EA Credit 5, Measurement and Verification, which focuses on the measurement of energy performance. We applaud Wentworth for choosing EA Credits 3 and 5 and encourage additional consideration of the operational and environmental advantages inherent in EA Credits 2 and 6. We also note that the percentage of improvement in the building performance rating compared with the baseline for EA Credit 1, Optimize Energy Performance, is the minimum required by the Stretch Code. 11

<u>Climate Change and Adaptation</u>
Climate change is likely to increase average summer temperatures, the number of days over 90 or 100 degrees, and the number of consecutive high-heat days leading to increased stress on buildings, their occupants, and the electrical grid. We ask that Wentworth assess the sufficiency of planned project systems and green infrastructure (e.g., a green roof) to increase energy efficiency and keep the project and its occupants safe during heat waves without the use of life-safety/emergency systems (e.g., generators) that may add to ozone pollution levels and increase the heat island effect. Natural ventilation, which can be provided by operable windows, can play a role in risk management if all ventilation and passive cooling elements are sufficient in combination to result in the necessary level of benefit. We suggest the implementation of SS 7.1, Heat Island Effect: Non- Roof along with SS 7.2, Heat Island Effect: Roof, which the Proponent has chosen to implement. 12

As a result of the potential for flooding from more intense storms, stormwater management systems may need to be sized for higher precipitation levels than the current design standards. Even when buildings are not compromised during a storm, roadways may flood, making them impassable. So, the potential effects on transportation accessibility must also be assessed. These two aspects of stormwater management speak to the benefits of a broad response; we recommend the choice of SS 6.1, Stormwater Design: Quantity Control, and SS 6.2, Stormwater Design: Quality Control which the Proponent has chosen to implement. 13

The Proponent should determine the project's vulnerability to increased levels of flooding from both a structural and operational standpoint with an emphasis on low-level, above- and below-grade elements

including storage areas, utility and mechanical system installations and other infrastructure components. The storage locations of materials that might be harmful to human health and welfare and to water quality should be carefully considered. 14

Please see *A Climate of Progress*, the City of Boston's Climate Action Plan, available at http://www.cityofboston.gov/climate, for more information on climate change and adaptation.

Climate Change and Transportation

Minimizing vehicle trips in Boston is a measure necessary to achieve Mayor Menino's GHG reduction goal. As the Climate Action Plan states, "Reducing Boston's greenhouse gas emissions will involve all segments of the Boston community. Nearly half of the reductions would come from sources largely under the control of individual residents and commuters." The report shows that, in regard to fuel type, 19 percent of GHG emissions are associated with gasoline use. A 31 percent reduction in GHG emissions from the transportation sector overall and a 29 percent reduction in the use of gasoline will be necessary. Eight percent will have to come from a combination of the following vehicle-miles-traveled reductions: mass transit/parking, car sharing and bike programs. As such, Transportation Demand Management (TDM) measures that minimize vehicle use are essential for all projects constructed in Boston. 15

Wentworth provides 160 bicycle spaces at outdoor racks throughout the campus. Showers and lockers for cyclists and those who walk to Wentworth are available in the athletic center and fitness center.

The measures included in Wentworth's TDM plan are:

- a $72/month Charlie Card subsidy for employees; Wentworth's representative at the Scoping Session indicated that the subsidy is offered to full-time, part-time and contract employees.
- participation in the MBTA's Corporate Pass Program which allow for pre-tax withholding for the purchase of Charlie Cards;
- membership in CommuteWorks, the Medical, Academic and Scientific Community Organization's (MASCO) TMA;
- financial support for MASCO shuttle service to the campus;
- carpool/vanpool matching through CommuteWorks;
- Emergency Ride Home through CommuteWorks;
- participation in the Bike Week Commuter Challenge via CommuteWorks;
- offering links from the Wentworth Web site to the MBTA Web site;
- parking fees for staff, faculty and students; and
- provisions for motorcycle parking.

We applaud Wentworth's efforts in this regard. Transit subsidies for all categories of employee and an Emergency Ride Home program are powerful incentives to use transportation methods other than a single-occupant vehicle. We note that charging market rates for parking and constraining the parking supply are equally important.

Construction

Staff of the Boston Landmarks Commission (BLC) staff agrees with BRA Urban Design staff that projects in the City should be constructed with traditional building materials and techniques rather than synthetic composite materials. Simulated materials such as exterior insulated finish systems (EIFS) and glass fiber reinforced concrete (GFRC) are inconsistent with Boston architecture and are unlikely to withstand decades of the City's freeze-and-thaw climate. 16

The BLC requests that dated cornerstones be incorporated into all new construction. This element will allow those who are attentive to and value the architecture of the City to appreciate the historical context in which structures were conceived. 17

According to the Massachusetts Department of Environmental Protection (DEP), about 33 percent of mobile source particulate matter (PM) and ten percent of all nitrogen oxide (NO_x) pollution in the northeast is caused by construction vehicles. More than 90 percent of diesel engine particulate emissions are highly respirable and carry toxins deep into the lung, exacerbating human respiratory ailments. The U. S. Environmental Protection Agency (EPA) has proposed classification of diesel exhaust as "highly likely to be carcinogenic in humans." It estimates that diesel engines currently on the road can run for 1,000,000 miles and remain in operation for as long as 20 to 30 years. This amounts to 160 to 240 tons of pollution over the life of each engine.

Beginning with model year 2007, on-road diesel vehicles have been required to comply with strict EPA emissions requirements. Standards for new engines in non-road equipment will be phased in starting with the smallest engines in 2008 until all but the very largest diesel engines meet both NOx and PM standards in 2014. Some of the largest engines, 750+ horsepower (hp), will have one additional year to meet the emissions standards.

The use of flow-through filters and diesel particulate filters on pre-2007 diesel vehicles can reduce air quality degradation caused by emissions of carbon monoxide (CO), volatile organic compounds (VOC), NO_x and air toxins generated by heavy-duty equipment. Oxidation catalysts and catalyzed particulate filters reduce toxic emissions of formaldehyde, benzene, acrolein and 1-3 butadiene by as much as 70 percent, decrease localized adverse impacts and reduce dust and odor complaints from project abutters and regulatory agencies. We ask that all pre-2007 diesel construction vehicles working on the project and all off-road diesel equipment in excess of 50 hp be retrofitted using retrofit technologies approved by the United States Environmental Protection Agency (EPA) and that contractors be required to use ultra-low-sulfur diesel (ULSD) fuel (15 ppm), in all off-road construction equipment. 18

To prevent the deposition of construction-related dirt and other materials on roadways and transfer into the stormwater system, wheel washes should be placed at each site egress and their use by all exiting vehicles required. To the greatest extent possible, aggregate piles and excavated materials should not be on the site overnight. Regular vacuum cleaning of sidewalks in the project area should be employed to ensure that they remain free streets of dust and debris. 19

Some excess building materials may be suitable for donation to the Boston Building Resources (formerly the Boston Building Materials Resource Center). The Re-Use Center is a non-profit charity that sells new and high-quality used materials to the public with discounts based upon income eligibility. We request that the Proponent consider donations to the Re-Use Center (617-442-2262). 20

Thank you for the opportunity to comment and for your consideration.

Sincerely,

Maura T. Zlody
Senior Environmental Policy Analyst

B		Boston Environment Department	Response
	1 a		The correct construction Start date is February, 2013
	1		Most equipment requiring intake and exhaust venting will be located at the roof, and will be designed to meet and, where feasible, exceed all regulations regarding air quality.
	2		The Proponent agrees to provide "no idling' signage at the service/loading area.
	3		The Proponent will enforce "no idling' provisions on move in/move out days by informing Institute personnel and Boston Police Details if applicable.
	4		This is correct. See section 5.3 for additional information regarding shadow impacts.
	5		The Proponent concurs with this suggestion. A discussion of service functions can be found in Section 2.3.5
	6		Please see response A2.
	7		The Proponent will install the "Don't Dump – Drains to Charles River" plaques at all drainage inlet structures within the project limits. The Proponent will also explore the feasibility of implementing the following measures: LED lighting, permeable walkways, Drip irrigation system with tensiometer (if irrigation is necessary) and an organic recycling plan.
	8		WIT will continue to participate in the ACUPCC, and submit reports and plans as described.
	9		Please see Section 3.5 for a discussion of Greenhouse Gasses and Green Building measures. Wentworth adopts a green purchasing policy. This project will pursue a goal of seeking environmentally preferred goods and materials wherever financially feasible. The selection of building materials and systems shall be made after evaluation of their estimated lifecycle and carbon footprint. This shall include interior materials with high percentage of recycled content and the use of adhesives and sealants with low volatile organic compounds wherever utilization is feasible.
	10		Harvesting of roof & site drainage will be utilized only for irrigation.
	11		The Proponent concurs with this suggestion.
	12		Implementation of SS 7.1 Heat Island Effect: Non-Roof along with SS 7.2 Heat Island Effect: Roof, which the Proponent has chosen to implement " will be taken under advisement.
	13		The Proponent will design the stormwater management system to meet the goals of SS 6.1: Stormwater Design Quaintly Control and SS6.2, Stormwater Design: Quality Control to the fullest extent possible. The project is committed to capturing and recharging one-inch of stormwater runoff from the new impervious areas per the requirements of Article 32 of the Boston Zoning Code. The Proponent will explore the feasibility of placing the storage areas, mechanical systems, and other infrastructure components above the

			basement level.
	14		Wentworth's aspires to simultaneously improve environmental, social and economic performance as reflected in the Wentworth Creed: *"We seek to use our resources wisely at all times. We accept our obligation to safeguard the earth, its resources, its life, and its energy for the benefit of future generations."*
	15		The Proponent will continue to implement measures to respond to climate change as described in the DPIR and in this comment.
	16		Particular emphasis will be placed on traditional building materials and techniques, utilizing attractive materials that convey a sense of quality, beauty, and that will maintain their quality over time. These materials can also help relate new construction to other neighboring institutional buildings.
	17		The Proponent will be pleased to include dated cornerstones on the building at the ground floor level.
	18		The Proponent will include elective provisions for alternative emissions reduction measures in the Project bid documents.
	19		See response B-18.
	20		The Proponent will evaluate the feasibility of donating excess building materials during the course of project construction activities.

C

BRA MEMORANDUM

TO: Katelyn Sullivan

FROM: Katie Pedersen

DATE: August 13, 2012

RE: Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Boston, Massachusetts
Comments on the Project Notification Form

I have reviewed the Project Notification Form (PNF) dated July 13, 2012 and submit the following comments for the Environmental Protection Component. Wentworth Institute of Technology (the "Proponent") is proposing to construct a 7 story, 305 bed, apartment-style student housing facility (the "Proposed Project") at 525 Huntington Avenue (118,140 gross square foot).

Wind

The Proponent shall not be required to conduct a qualitative pedestrian level wind study, as the Proposed Project will be of similar height and scale to the adjacent existing buildings. Accordingly, it is not likely that the Proposed Project will have an adverse wind impact on adjacent buildings or open space areas.

Shadow

The results of the shadow impact analysis include net new shadow from the Proposed Project as well as the existing shadow. The shadow impact study area included the entire area to be encompassed by the maximum shadow expected to be produced by the Proposed Project. The build condition(s) included all buildings under construction and any proposed buildings anticipated to be completed prior to the completion of the Proposed Project. Shadows from all existing buildings within the shadow impact study area were shown.

The Proponent has stated that the Proposed Project's seven story building will put forth minor impacts on segments. However, the Proponent has stated that the minor impacts that are anticipated will be mitigated due to the considerable width of the adjacent streets which will allow for the flow of indirect light. Accordingly, no further investigation is required.

Daylight

(Please refer to Urban Design comments)

Solar Glare

The Proponent has stated that the glazing selected for the Proposed Project building, will be one that reduces the potential solar glare. As a result, the Proponent expects that there will be little or no perceptible impact from solar glare. 1

The Proponent is encouraged to select a glazing that will maximize daylight effectiveness, occupant comfort, and minimize the Proposed Project's energy use.

Air Quality

The Proponent shall be required to provide a description of the existing and projected future air quality in the vicinity of the Proposed Project as well as demonstrate that the Proposed Project will conform to the National Ambient Air Quality Standards (NAAQS). 2

The Proponent shall not be required to conduct a future air quality (carbon monoxide) analysis, as the Proposed Project is will not be generate vehicular traffic. Accordingly, it is not expected that there will be a reduction in level of service in the surrounding intersections, as there will be no parking on the site. The Proponent has further stated that there will likely be a net decrease in vehicular traffic.

Noise

The Proponent has stated that the principal sources of external mechanical noise will consist of air ventilations systems. The Proponent has further stated that the rooftop equipment is anticipated to exceed the maximum sound levels but, that the equipment will be enclosed in a penthouse or screened, so as to provide maximum noise mitigation. However, the Proponent shall be required to provide a comprehensive description of the aforementioned, once the final design is complete, thus demonstrating compliance with the City of Boston and DEP noise regulations. 3

Groundwater

The Proposed Project is located in the Groundwater Conservation Overlay District (Article 32 of the City of Boston Zoning Code). The Proponent has stated that the Proposed Project will include a recharge system with the capacity to capture, store, and recharge at least one inch of stormwater. However, the Proponent shall be required to submit Plans for the system to the Boston Water and Sewer Commission for review and approval (please provide a copy to the Boston Groundwater Trust). 4

The Proponent shall be required to submit a letter, stamped by a professional engineer registered in the Commonwealth of Massachusetts, describing the steps (that the Proponent intends to take to assure that the Proposed Project will not cause a reduction in area groundwater levels), in more detail and shows that the construction will not cause a reduction in groundwater levels, per the Groundwater Conservation Overlay District requirements. 5

Geotechnical Impacts

The Proponent has provided a description and analysis of the existing sub-soil conditions, including the potential for ground movement and settlement during excavation and potential impact on adjacent buildings and utility lines has been provided. The analysis a included a description of the foundation construction methodology, the amount and method of excavation. Mitigation measures to minimize and avoid damage to adjacent buildings and infrastructure have also been described.

Sustainable Design/Green Buildings

The purpose of Article 37 of the Boston Zoning Code is to ensure that major buildings projects are planned, designed, constructed and managed to minimize adverse environmental impacts; to conserve natural resources; to promote sustainable development; and to enhance the quality of life in Boston. Any proposed project subject to the provisions of Article 37 shall be (at a minimum) LEED Certifiable (U.S. Green Buildings Council) under the most appropriate LEED rating system. Proponents are encouraged to integrate sustainable building practices at the pre-design phase. Proposed projects which are subject to comply with Section 80B of the Boston Zoning Code, Large Project Review, shall be subject to the requirements of Article 37.

Any project subject to Article 37 shall contact the NSTAR Account Sales Executive in the pre-design stage and utilize either the Comprehensive Design or Advanced Building Programs. The Proposed Project shall target at least a 25% combined electric and gas savings over the current Massachusetts Building Code. The Comprehensive Design Program is for commercial buildings over 100,000 sf. The program is designed to incorporate an integrated approach to building design that may offer higher custom incentives based on the interactive building model required for the program. The Advanced Building program targets commercial building between 10,000 and 100,000 sf based on a prescriptive set of requirements with no modeling required and an incentive of $1.50 a sf.

6

The Proposed Project's LEED Checklist indicates that the Proposed Project is striving to attain a minimum of a Silver rating with 54 points using the LEED 2009 for New Construction and Major Renovations Project Checklist.

It is important to note, that the Proponent has demonstrated a commitment to sustainability-2007 the Proponent was recognized as being in the top 15% of colleges and universities seeking to aggressively cut greenhouse gas ("GHG") emissions and publicly reported its progress through the American College and University Presidents' Climate Commitment "ACUPCC"). This effort was led by the Wentworth Sustainability Committee, a committee that was appointed in 2008, the Proponent has stated that the Institute continues strive to do better and create a more sustainable campus. Accordingly, the Proponent is asked to consider the following: waterless urinals, elimination of plastic trays in the dining halls, as they require the use of a large quantity of water to clean and

sanitize expansion of locally grown food and composting as well as research innovative strategies to address the students' energy consumption and thus increase awareness to environmental concerns. The Proponent has demonstrated that the Proposed Project has meet the requirements of Article 37 to date and will be subsequently required to submit a Final Article 37 Submission, which includes the most up to date LEED Checklist with appropriate supporting documentation and by certification from a LEED Accredited Professional.

C		Boston Redevelopment Authority	Response
	1		It is the project's intent to select glazing that will maximize daylight effectiveness, occupant comfort, and to minimize energy use to the greatest extent feasible.
	2		The Project is expected to conform to National Ambient Air Quality Standards. For additional information about this topic, refer to Section 3.5.
	3		The Proponent concurs with this comment. The Project will be designed to meet or exceed all City of Boston and MA DEP noise regulations.
	4		The Proponent concurs with this comment. The Proponent will submit endorsed engineered plans to the Boston Water and Sewer Commission (BWSC) and the Boston Groundwater Trust for their review and approval of the proposed below grade groundwater recharge system as part of the projects BWSC Site Plan Approval process for all water, sewer, and stormwater improvements.
	5		The Proponent concurs with this comment. A copy of a letter signed and stamped by a Professional Engineer is included as Appendix C.
	6		The Proponent concurs with this comment.
	7		The proponent will consider these suggestions when they are feasible to implement. A final Article 37 Submission will be provided during the project review process with the BRA.

D

MAYOR'S COMMISSION FOR PERSONS WITH DISABILITIES

Boston City Hall • Room 967 • Boston, MA • 02201 • 617-635-3682 • 617-635-2541 TTY • 617-635-3290 Fax

THOMAS M. MENINO
Mayor

KRISTEN McCOSH
Commissioner

DATE: August 13, 2012

RE: Wentworth Institute of Technology
Student Apartments at 525 Huntington Avenue
Notice of Project Notification Form
Boston Redevelopment Authority

As Disability Commissioner for the City of Boston, I would like to offer my comments on potential accessibility issues in the Wentworth Institute of Technology Student Apartments at 525 Huntington Avenue Project Notification Form.

The Wentworth Institute of Technology Student Apartments at 525 Huntington Avenue Project Notification Form (PNF) is a general overview of the proposed project of one of the five described projects of the Institutional Master Plan. As such, it is lacking detail in the area of accessibility for persons with disabilities. The Student Apartments propose housing by means of 305 apartment style units on 7 floors, but does not illustrate the number or design of the units that are accessible, the accessible route through and around the site, or the proximity of handicap parking to the building.

1

In an effort to promote ease of access and create an accessible pedestrian environment, a description of the inclusion of persons with disabilities as a general priority of this project needs to be incorporated at the forefront of design. This can be accomplished through a review of accessibility conditions on sidewalks and intersections adjacent to the site, desire lines in and around the site for any deficiencies, architectural or transportation barriers and signal information. The evaluation of material selections, signage and way-finding means should also be articulated. Accessibility features need to be designed and integrated at the beginning of projects to strive for an inclusive environment and experience. As this project is student housing for Wentworth Institute of Technology, the design should respond to all the needs of the student population.

In order for my Commission to give its full support to this project, I would ask that the following accessibility issues be explained in detail with narrative and data:

- Inclusion of people with disabilities as a general priority of this project
- Accessible entries, circulation and common spaces
- Accessible housing units
- Outdoor access
- HP Parking spaces, if any – number, location and proximity
- Sidewalk and curb cut (pedestrian ramp) details
- Slopes and surface materials

2

The accessible experience should encourage full and equal participation through means of ideal design by meeting and exceeding compliancy requirements.

Commission's General Statement on Access:

The Mayor's Commission for Persons with Disabilities (the Commission) supports barrier-free design and construction in all buildings throughout Boston, including renovation projects as well as new structures.

Universal accessibility is a priority of the Commission in all places that are open to the public, such as: municipal buildings, public rights of way (sidewalks, crosswalks, and streets), parks, schools, multi-unit housing developments, restaurants, museums, hospitals, and any other place of public accommodation.

The Commission works with City of Boston departments and private developers to ensure compliance with local, state, and federal regulations that govern the built environment, including the Boston Zoning Code, Massachusetts Architectural Access Board Regulations (MGL, 521 CMR) and the Americans with Disabilities Act Accessibility Guidelines (ADAAG, 28 CFR). It is a violation of the law to design or construct projects that are non-compliant with any accessibility and usability requirements unless it can be definitively demonstrated that it would be structurally impractical to meet such requirements. 3

Priorities for accessibility other than design and construction include: using poured concrete instead of brick pavers on all walkways and curb ramps, creating accessible paths of travel leading up to and throughout buildings, ensuring maintenance and upkeep of accessibility features, posting signage for way-finding, utilizing compliant barricades throughout construction, designating appropriate location and amount of accessible parking spaces, and removing barriers in existing buildings wherever "readily achievable" (*"easily accomplishable and able to be carried out without much difficulty or expense"*). 4

The Commission is available to assist with training, technical assistance, and design review to help achieve accessibility compliance, and to ensure that all buildings, sidewalks, parks, and open spaces are usable and welcoming to all of Boston's diverse residents, including those with physical, sensory, intellectual, and communication disabilities.

Thank You.

Kristen McCosh

Kristen McCosh, Commissioner
Mayor's Commission for Persons with Disabilities
kristen.mccosh@cityofboston.gov
617-635-3682

Reviewed by:
Kathryn Aldrich, Architectural Access Specialist
Mayor's Commission for Persons with Disabilities
kathryn.aldrich@cityofboston.gov
617-635-2529

D		Mayor's Commission for Persons with Disabilities	Response
	1		There will l be (7) accessible units or (1) accessible unit per floor. This equates to approximately 10% of the 71 total units, exceeding the MAAB requirement of 5% accessible units. The entirety of the project site and surrounding sidewalk shall be accessible. No on-site parking is provided as part of this project. There is a public parking garage with accessible parking across the street from the site on Louis Prang Street.
	2		It is this projects intent to provide all required provisions of the MAAB for the inclusion of people with disabilities as a general priority of the project. All entries, circulation and common spaces shall be made to be accessible. See Response D1 for accessible housing units provided (+/- 10%) There will be (7) accessible units or (1) accessible unit per floor. This equates to approximately 10% of the 71 total units exceeding the MAAB requirement of 5% accessible units. The entirety of the project site and surrounding sidewalk will be accessible. No on-site parking is provided as part of this project. A public parking garage with accessible parking is located across the street from the project site on Louis Prang Street. All pedestrian ramps will be made accessible. All slopes and surface materials will be designed to meet required provisions of the MAAB.
	3		It is the Proponent's intention to meet or exceed compliance requirements with all local, state and federal regulations that govern the built environment
	4		The Proponent concurs with this comment and appreciates the availability of the Commission to provide assistance.

E

Boston

Katelyn Sullivan
Project Manager
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201-1007

July 19, 2012

Dear Ms. Sullivan:

Regarding the Project Notification Form for Wentworth Institute Student Apartments 525 Huntington Ave. project submitted to the BRA on July 13, 2012 the Boston Fire Department requires the following issues addressed by a qualified individual.

1. Emergency vehicle site access to the new buildings as well as existing buildings that might be affected.
2. Impact on availability and accessibility of hydrant locations for new buildings as well as for any existing buildings that might be impacted.
3. Impact on availability and accessibility to siamese connection locations for new buildings as well as for any existing buildings that might be impacted.
4. Impact that a transformer vault fire or explosion will have on the fire safety of the building. Particularly as it relates to the location of the vault.
5. Need for Boston Fire Department permit requirements as outlined in the Boston Fire Prevention Code, the Massachusetts Fire Prevention Regulations (527 CMR), and the Massachusetts Fire Prevention Laws (MGL CH148).
6. For projects involving air-supported structures, it is critical that the impact of the design has on fire safety relative to the interaction of the area underneath the structure to the structure as well as to the interaction of the structure to the area underneath the structure.

1 2 3 4 5 6

These items should be analyzed for all phases of the construction as well as the final design stage. This project will need permits from the Boston Fire Department as well as the Inspectional Services Department.

Respectfully,

Bart J. Shea
Fire Marshal

E		Boston Fire Department	Response
	1		Emergency vehicle site access to the Project, as well as existing buildings adjacent to the site will be maintained. All streets will be maintained and will be accessible at current levels.
	2		Existing hydrants will be retained. Sidewalks and streets surrounding the project site will remain accessible for future hydrants. The proponent will explore the location of existing fire hydrants and will provide new hydrants as deemed necessary to meet code requirements.
	3		The Proponent will provide accessible Siamese connections within 100 feet of new or existing hydrants.
	4		The NSTAR vault will be designed and constructed in accordance with all State and Local requirements for interior vaults. The Proponent is coordinating the design with NSTAR at all stages.
	5		The Proponent concurs with this comment. The Project will be designed and constructed in accordance with all applicable. State and Local requirements.
	6		See response E-5.

APPENDIX B: Comments from Public

F

Fenway Civic Association – P.O. Box 230435 – Astor Station – Boston, MA 02123

August 21st, 2012

Katelyn Sullivan
Project Assistant, Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201-2040

Re: 525 Huntington Avenue, Wentworth Institute of Technology Student Apartments

Dear Ms. Sullivan,

The Fenway Civic Association is the Fenway neighborhood's oldest and only all-volunteer neighborhood group that accepts no public or developer funds. Founded in 1961, our mission is to promote a safe and vital neighborhood that serves the interest of its residents.

Upon review of Wentworth Institute of Technology's Project Notification Form submitted on July 13, 2012, FCA has several comments:

It is FCA's understanding that this project will provide beds in excess of those estimated by Wentworth to be required for their on-campus housing needs. We would strongly urge that Wentworth capitalize on this surplus internally, rather than subletting to other institutions, and require a larger portion of their student body to reside on campus. FCA also strongly suggests utilizing surplus space provided in this project to cease use of neighboring WIT-owned townhouses as student housing, permanently converting those properties to faculty and staff housing. These suggestions aim to alleviate market pressures on local housing stock, reduce potential quality of life issues in the neighborhood, and incorporate professional staff from Wentworth into the demographic fabric of the neighborhood. <u>This request by FCA and others has been made repeatedly; it is time for WIT to implement this benefit for the faculty/staff and the neighborhood.</u>

As with any increase in density of students, FCA strongly suggests to construct commensurate facilities on Wentworth's campus to accommodate social interaction and recreation. These facilities should be prioritized concurrently with the construction of student housing, and be paired with collaborative maintenance of neighborhood parks proportional to utilization by students.

The height and massing of the proposed building is acceptable given the developed nature of Huntington Avenue and the presence of similarly scaled buildings along the avenue and in similar relationships to the smaller scale townhouses in the vicinity. It is preferable to have tall, dense buildings with on-campus housing to allow institutions to grow up rather than sprawl out into our neighborhood, particularly in this case- where the proposed building abuts a major avenue and public transportation.

FCA suggests an additional ground level setback fronting Louis Prang Street, as the sidewalk is already

narrow and the pedestrian crossing treacherous. A wider sidewalk alone is preferred, as the ability for landscaping to survive in the proposed lighting conditions is questionable. Having the proposed volume unchanged as a cantilever over the suggested widened sidewalk setback such that it functions as shelter would be an improvement over the originally proposed streetscape condition. Please also consider adding sufficient ground level building and site lighting fronting Louis Prang Street to increase safety and visibility on the street at night, with specific care to design the lighting scheme to "cut off" in a way, which does not create excess light pollution above ground level. 2

As currently proposed, the loading dock and NSTAR vault are poorly located on a corner, creating a dead space at the intersection with Vancouver Street and a dead space fronting an existing dead space across from the rear of the MFA garage. Both infrastructural elements could be shifted towards the mid-block of Vancouver Street. It would be preferable to maintain "eyes on the street" at both ends of Vancouver Street by locating residential programs at the corners and burying infrastructure midblock. FCA also wishes an effort be undertaken to preserve mature street trees whenever possible in the final design, with a commitment made by the university to replace any removed street trees on-site or nearby. 3

As currently designed, the outdoor plaza lacks a compelling reason to occupy it. Please consider some sort of feature, which will invite students to occupy and activate the plaza, rather than have it exist as a passive pass-through space to the main entry.

Please take into special consideration that the abutting Back Bay Fens is a major bird migration route, and the nearby parkland is a year round habitat for over-wintering birds. Measures should be taken to incorporate bird safe glazing and other features into the design of the project. We urge the developer to acquire the LEED standards for bird safe buildings in Pilot Credit 55: Bird Collision Deterrence. http://www.usgbc.org/ShowFile.aspx?DocumentID=10402. 4

Regarding transportation, FCA requests that Wentworth lobby the Boston Transportation Department to establish resident sticker parking on Vancouver Street. This will shift unrestricted use of the residential street to resident's benefit as neighborhood specific parking. 5

We are pleased that this project does not add any additional automotive parking, which would induce further demand in an already congested area well served by public transportation. The only personal parking provided on site, for bicycles, should be quantified and proportional to the number of dorm beds provided. It is also highly recommended that WIT provide on-campus bike repair stations similar to those pioneered by the Massachusetts Institute of Technology. This will serve to reduce street clutter, abandonment of bicycles, and use of cars by Wentworth students within The Fenway & Mission Hill neighborhoods. 6 7

FCA hopes these comments, concerns, and suggestions will be addressed and have been constructive in further developing the project.

Sincerely,

Matthew A Brooks

Matthew A. Brooks, Board Member, Fenway Civic Association

CC: City Councilor Michael Ross

F		Fenway Civic Association	Response
	1		The Project will provide housing for third through fifth year students who have expressed the desire to live on-campus with state of the art apartment style residences. These students would otherwise seek housing off-campus. The Project has been specifically designed to provide the amenities sought by third through fifth year students, with over 70% of the bedrooms planned for single occupants. The Project is fully consistent with the Institutional Master Plan, and further supports the requests of the neighborhoods and the Mayor to reduce the number of students residing off-campus. Beginning in 2011 Wentworth sophomores who were not living at home were required to live on-campus.
	2		In response to comments received, the Proponent has provided an additional 4 foot setback on the Louis Prang Street sidewalk by setting the ground floor of the building back under a colonnade. Lighting will be designed to avoid excess light pollution above ground level and to enhance safety. See Chapter 3 for additional information about the building design and massing.
	3		Due to design constraints within the building, the NSTAR vault will remain on the Louis Prang Street façade. This location is preferable to Vancouver Street, which is residential, and Huntington Avenue, which is a prominent street on the Avenue of the Arts. The service entry has been reconfigured from the PNF design drawings to facilitate loading and unloading and also allow for additional distance from non-Wentworth residences as well as landscape screening on Vancouver Street. See Section 2.3.5 for additional information about service functions.
	4		The proposed entry plaza has been redesigned. It responds to the street with a centrally located area designated for public art. See Section 3.4 for additional information about the revised entry plaza design.
	5		LEED standards for bird safe buildings (Pilot Credit 55: Bird collision) will be incorporated into the Project if feasible.
	6		The Proponent has initiated discussions with the Boston Transportation Department, and will continue to work with the BTD and their neighbors to facilitate an appropriate solution to concerns regarding the status of parking on Vancouver Street.
	7		The Proponent plans to provide sufficient bicycle storage for residents of the Project. In addition, the Proponent is proposing to provide a Boston Hubway station on Huntington Avenue.

G

81 Lawn St.
Roxbury, MA 02120
August 13,2012

B.R.A.

2012 AUG 14 P 12:28

Katelyn Sullivan, project manager
BRA
Boston City Hall 02201

re: WIT/525 Huntington Ave PNF

Dear Ms. Sullivan,
I read Wentworth Institute's filings for their Master Plan and now the proposed 525 Huntington Ave dormitory. I submitted comments in 2009 on the IMPNF and again in 2010 on the IMP, my concerns remain the same related to the Vancouver St. rowhouses.

Other schools, for example Boston University's dormitories on Buswell St and Bay State Rd., manage to co-exist with privately owned residences. There are compromises that have to be made when campus buildings share a public street with non -school uses. Wentworth however has not found a satisfactory solution.

1

The proposed building is too tall; the 84' height does not relate to the 3 story rowhouses, the impacts on the abutting neighbors are all negative. Whether that will influence the approval process seems to depend on political will.

In 2009, the IMPNF described a potential dorm at 525 as 66'- 99', the top 3 floors were to be for non-WIT students, a proposal that was not acceptable. The college has rented dorm rooms to other institutions for years and unless all WIT students are required to live on campus (which is unlikely to happen) there is no certainty that WIT will fill the 305 beds in this new dorm with only WIT students. In 2009 the stated need was for 260 beds.

2

A 66' height, 6 floor building would be a compromise solution that does not destroy a neighborhood asset that should be valued by the city and the college, a historic block of masonry residences occupied not just by transient students or luxury apartments but genuine long time Bostonians who deserve respect. A lower scale building with a smaller footprint would be more contextual with the neighboring apartment buildings at Huntington and Museum Rd. and those on Evans Way and Louis Prang.

3

The IMP showed a triangular planted entranceway facing Vancouver, now that design is altered and the green space faces Huntington with the result of walling off Vancouver St. This design canyonizes that narrow street. Then there is the loading dock and the loss of several mature, healthy street trees. The brick rowhouses deserve better.

4

Relevant comments from my earlier letters in italics-
Parking on Vancouver and Parker between Ruggles and Ward is currently unregulated, often occupied by out of state vehicles for days, should be restricted, ie, meters or 2 hr only M-F unless MH resident parking sticker.

5

Juniors and seniors are allowed to bring cars to campus [and often need to have vehicles for their coops]; the impact of more cars on Vancouver has not been analyzed at all. The potential for westbound vehicles from Louis Prang turning into Vancouver would be a traffic disaster at most times of day. This is an important concern because trucks are not allowed on the parkways, so the travel route for construction traffic and service vehicles needs to be monitored. Evans Way is an historic parkway and deserves special consideration. The Boston Parks Department should be reviewing this project.

We should see passive solar and green roofs, especially for all flat roofed structures, Wentworth should model for the city, [and enhance the environment]. All surface parking areas need shade trees to avoid heat island effect and porous pavement for walkways. 6

Sidewalks should be pedestrian friendly, size and detailing of future bldg should be pedestrian oriented. 7

Provide a green buffer between street and sidewalk along Louis Prang in order to provide a more comfortable and safer walking environment and sidewalk width should be minimum of 12 ft. 8

Shadow studies for the future 525 Huntington Ave dorm show nearly yr round afternoon shade over the adjacent sidewalks, important to counteract this negative impact. 9

Open space is important for informal activities especially for residential campus, increased density of student pop. w/o corresponding addition of open space creates negative impact on the public.
There will be increased density of student pop. in a very small area -
305 @ 525 Huntington (on .38 acres), 100 possible future addition to existing WIT dorm
493 new MASSART dorm, total= 898 10

Community concern about height of proposed 525 Huntington dorm, now 84 ft vs IMPNF stated range of 66'-99'. Will it be visible from the BB Fens? Nearby historic rowhouses are 38' high, Future canyonization of narrow Vancouver and Louis Prang Streets.

4/22/2009 Wentworth TF mtg minutes stated policy for 1st and 2nd yr student residency requirement would begin fall 2010, instead an increased # were rented to others (266 up from 165 the previous yr., IMP page 54)

There was an odd response [WIT was interested in acquiring more property on Vancouver!?] to my April 2009 comment that **the WIT owned rowhouses** *on Vancouver and Louis Prang would be ideal for faculty and I reassert my original point.*
Many higher education institutions find positive value- environmental, academic and social aspects to housing some faculty on campus.

Overall development goals for sustainability and enhancing the quality of life experienced by urban residents should be universally shared between the college, city agencies and the neighborhood, what is good for the community is also good for the

school. With the gas station closed, potentially Wentworth can do the right thing - a smaller building, keep some green space and trees and wider sidewalks along Louis Prang.

Sincerely,

Alison Pultinas

cc: CC Michael Ross
State Rep. Jeffrey Sanchez
State Senator Sonia Chang Diaz
Brian McLaughlin/Boston Parks
Charlotte Fleetwood/BTD
David Carlson/BCDC
Maura Zlody/Environment Dept.
MH NHS

G		Alison Pultinas	Response
	1		The building height is 77 feet. A parapet of 84' has been incorporated to screen HVAC units on a portion of the building roof. The building height is lowered to 74' at the corner elevations. The height of the building is fully compliant with zoning and with the IMP, which describes a seven story building. In response to concerns from the community regarding the potential height of the building, the proposed project was limited to seven stories, and will provide housing solely for Wentworth students. The Proponent will continue to work with the abutting property owners to mitigate potential impacts from the Project.
	2		The size and capacity of the Project is consistent with the IMP, current and projected enrollment, as well as the Proponent's stated goals to accommodate 100% of those upper level students who wish to reside on-campus. See Response F-1.
	3		See response G-1.
	4		The current building and plaza configuration responds appropriately to the Project's face on Huntington Avenue, and position on the Avenue of the Arts. Were the plaza to face Vancouver Street, a disproportionate amount of activity would impact the neighborhood residents on that street.
	5		See response F-6. Travel routes for construction vehicles have been described in Section 5.9. The Proponent will work with vendors to identify truck routes when applicable. Finally, city agencies have been apprised of the Project via the BRA Article 80B process.
	6		Passive solar and green roofs will be considered for future projects where appropriate. No surface parking will be provided for the Project. Porous paving is under consideration for reconstructed sidewalks as well as the plaza area. Sidewalks will be reconstructed or maintained per all requirements of the City of Boson. Also see Response L-5.
	7		A building setback on Louis Prang Street has been incorporated into the revised building design. See response F-2.
	8		A shadow study is incorporated in Section 5.3.
	9		Appropriate open space has been provided on the pedestrian entry plaza located off of Huntington Avenue.
	10		See response G-1. The Proponent has undertaken studies to determine if the Project is visible from the Fens. A narrow band at the top of the building may be partially visible during winter months. The views of the Project are obscured by a number of taller buildings located between Huntington Avenue and the Fenway.

H

Boston Groundwater Trust

229 Berkeley St, Fourth Floor, Boston, MA 02116
617.859.8439 voice – 617.266.8750 fax
www.bostongroundwater.org

August 8, 2012

Ms. Katelyn Sullivan, Project Manager
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201-1007

Subject: Wentworth Institute of Technology, 525 Huntington Ave

Dear Ms. Sullivan:

Thank you for the opportunity to comment on the Project Notification Form for Wentworth's Student Apartment project. The Boston Groundwater Trust was established by the Boston City Council to monitor groundwater levels in sections of the city where the integrity of building foundations is threatened by low groundwater levels and to make recommendations for solving the problem. Therefore, my comments are limited to groundwater related issues.

As the proponent notes in the PNF, the project is located in the Groundwater Conservation Overlay District established under Article 32 of the Zoning Code. I appreciate the proponent's commitment, stated in the PNF and reiterated at the scoping session, to meet all of the requirements for construction in the GCOD. As stated in the document, the project will include a recharge system with the capacity to capture, store, and recharge at least one inch of stormwater. Plans for the system must be submitted to BWSC for approval; a copy of the plans should also be furnished to the trust.

The PNF includes a brief description of steps the proponent plans to take to assure that the project cannot cause a reduction in area groundwater levels, as required under GCOD and particularly important in a neighborhood in which nearby buildings are supported on wood pilings. As required under the GCOD, the proponent should submit a letter, stamped by a professional engineer registered in Massachusetts, that describes these steps in more detail and shows that the construction will not cause a reduction in groundwater levels. This letter should be submitted before final approvals are granted under Article 80. 1

I am pleased with the proponent's plans, as stated in the PNF, to coordinate with the Trust to protect groundwater levels, including the possible installation of new groundwater observation wells in the vicinity of the project. As discussed in the scoping session, addition of two wells at locations chosen in consultation with the Trust will help assure that the project doesn't cause groundwater problems. These wells should be constructed according to Trust standards. They should be monitored regularly for several months before construction to establish a baseline condition and at least weekly during underground construction to make sure that levels are maintained. Results should be reported to the Authority and the Trust shortly after they are taken.. 2

Wentworth has long been an active participant in efforts to identify and overcome low groundwater problems in Boston. I look forward to working with them and their team, as well as the Authority, to assure that this project can have only positive impacts on area groundwater levels.

Very truly yours,

Elliott Laffer
Executive Director

Cc: Kathleen Pedersen, BRA
Maura Zlody, BED

H		Boston Groundwater Trust	Response
	1		The Proponent concurs with this comment. A copy of a letter signed and stamped by a Professional Engineer is included as Appendix C.
	2		The Proponent concurs with this comment, and will incorporate monitoring wells as requested.

I

GPK Alumni Association

11 Vancouver Street
Boston MA 02115

Cell: 617-413-0846 E-mail: dave.tamasy@yahoo.com

August 13, 2012

Ms. Katelyn Sullivan
Boston Redevelopment Authority
One City Hall Square
Boston MA 02201

Re: Student Apartments at 525 Huntington Avenue

Dear Ms. Sullivan:

I am writing in response to the proposed construction of Student Apartments at 525 Huntington Avenue by the Wentworth Institute of Technology ("the Project").

The GPK Alumni Association has owned a 3-story brick building at 11 Vancouver Street, directly across from the proposed project site, since 1965. Our organization has more than 300 members and guests who visit our building. We also have 8 tenants who live in two apartments on the top two floors of our three-story building. There are several issues in the Project Notification Form ("PNF") that will have a negative impact on us and our neighbors.

Among other things, we and our non-Wentworth neighbors are concerned about potential disruption to the foundations of our respective properties arising from large-scale construction. The buildings in our neighborhood are built on landfill and have wooden pilings that support their foundations. We recommend that Wentworth pay particular attention to this in order to ensure that there is no damage to adjoining foundations. We would like to know to know how damage to our foundations will be prevented during the Project.

1

4.3.7 MOVE-IN/MOVE-OUT

It is expected that 305 students will be housed in the proposed apartment building. During this period, as many as 610 separate cars could be on Vancouver St. The PNF does not mention how existing Vancouver Street neighbors' access to our narrow, one-way street will be facilitated.

To quote the PNF: "During move-in and move-out periods, access and egress to Vancouver Street will be controlled and monitored by Campus Police and Boston Police officers."

This ongoing aspect of new building will cause significant annual access problems for us and our neighbors who are not affiliated with Wentworth. We suggest this period be communicated to all non-

Wentworth neighbors and our street access and access to parking remain unrestricted during move-in/move-out periods. If possible, such periods should not take place during the August 31 and September 1 moving periods used in most Boston rental leases. 2

2.3.3 PARKING AND CIRCULATION

We and our neighbors use Vancouver Street for parking. The PNF does not mention how or where 305 students, many if not all of whom will have access to cars, will park. From our reading of the PNF, the proposed residence will exponentially increase the need for parking on Vancouver Street and simultaneously reduce the number of parking spaces. 3

We are particularly concerned about emergency vehicle access to our narrow one-way street. This will be more of an issue during winter months when Vancouver Street will have snow banks, delivery vehicles and potentially double-parked cars from 305 new residents. 4

As long time observers of college students in general, and Wentworth students in particular, we know that while Wentworth officials may discourage students from using cars, students do, in fact, use cars and parking spaces. One simply needs to walk or drive by any of the existing Wentworth dormitories during the school year on Evans Way or Huntington Avenue to observe evidence of this. Indeed, the existing dormitory students use Vancouver Street as overflow parking when they cannot find open parking spaces on Evans Way. Even if one assumes only one student per floor uses a car and a parking space, competition for parking spaces on Vancouver Street will be keen and will have a negative impact on our neighborhood.

Existing residents of our and our neighbors' buildings, along with our respective visitors, need both short-term and long-term parking; the proposed reduction of parking spaces caused by the paved service entry curb cut on Vancouver Street for deliveries and trash removals will make a challenging situation worse. 5

4.3.6 LOADING AND SERVICE

As a result of the proposed building, it is also likely that Vancouver Street will experience increased traffic due to delivery and trash pickup vehicles. All delivery and pickup service to 525 Huntington will be via Vancouver Street, thereby increasing traffic volume on a scale that has not been quantified in the PNF.

We ask Wentworth to ensure views of loading and trash be carefully hidden. 6

5.2 WIND

All the buildings nearest to the proposed project are three-story buildings. The proposed seven-story building will generate more wind than any other structure in the neighborhood, as the next tallest structure is one block away. Because the face of the proposed building is flush with Vancouver Street, the wind force generated for pedestrians will be great. We encourage Wentworth to use a break in the proposed building's plane (in the form of a base or podium) as it reaches street level. 7

We specifically question the following quote from the PNF: "The Project is not expected to change wind levels in the vicinity due to the similarity in form and proximity to adjacent buildings on Louis Prang and Vancouver Streets. The Project's longest elevation, which is broken by a pedestrian level plaza, fronts on Huntington Avenue, a wide boulevard which does not function as a wind tunnel in the area."

We agree that the Project may not act as a wind tunnel for Huntington Avenue, but Vancouver Street is likely to suffer from a wind tunnel effect since the proposed building's height is more than twice the height of its closest Vancouver Street and Louis Prang Street neighbors.

5.4 DAYLIGHT AND SOLAR GLARE

We agree with the PNF statement: "Following construction the Project, some daylight obstruction will occur along Vancouver Street, Louis Prang Street, and Huntington Avenue. A separation of approximately sixty feet between buildings at the street face will significantly reduce the perception of diminished daylight."

In particular, we noticed during winter mornings the 9:00 AM Shadow Study shows significant reduction of natural light. Our organization is planning to install solar panels and the loss of morning sunlight due to the Project adversely affects our ability to use and generate "green" energy. 8

As stated above, if Wentworth uses a break in the plane of the building as it reaches the street level with some kind of base or podium, it might allow us to use solar panels effectively and avoid a Vancouver Street wind tunnel.

Chapter 3 Urban Design

We are concerned about issues involving the height and bulk of the proposed building. The proposed building design unduly affects the existing scale of our neighborhood on Vancouver Street and the west side of Louis Prang Street. The Building height is more than twice as tall as any building on Vancouver Street. The next tallest building in the neighborhood is more than a block away. Despite Wentworth's

belief that the existing park is not an efficient use of the property, the large footprint of the proposed building (13,679 square feet on a 16,355 square foot lot) is an over-development of our neighborhood. Moreover, the current use of the property in the form of a park significantly enhances the aesthetic environment of the entire community. 9

Lastly we have been informed by real estate professionals that our property value and rental income potential will decrease due to the loss of direct sunlight. In essence, the front of our building will be an 'alley apartment' due to the loss of natural light. 10

We thank you for your attention to our concerns.

Yours Truly,
GPK Alumni Association
Dave Tamásy
President

I		GPK Alumni	Response
	1		The Proponent will ensure that no impacts occur outside of the Project boundaries. See Sections 5.8 and 5.9 for a description of construction mitigation practices.
	2		The Proponent has a well coordinated move in/move out system. See section 4.3.7 for a description of this process.
	3		The Proponent monitors student automobile permits, and provides opportunities for those upper-level students who require cars on campus to park in Wentworth lots with a student permit. A discussion of the expected reduction in parking demand is provided in the IMP and in Chapter 4.
	4		See response E-1. The Proponent has made a commitment to continue to work with the neighbors on Vancouver Street to ensure that the street remains open and accessible under all conditions. The Proponent has a proven record of providing services to the neighbors on the street during snow events.
	5		See response F-6.
	6		See response F-3.
	7		A discussion of wind impacts is included in Section 5.2.
	8		A discussion of shadow impacts and daylighting is included in Section 5.3 and 5.4.
	9		The Project is fully compliant with zoning and with the IMP, which describes a seven story building of a larger size than proposed. The Proponent will continue to work with the abutting property owners to mitigate potential impacts from the Project.
	10		See Response I-9.

J

Sullivan, Katelyn

From: Wade Phillips [wdjphillips@yahoo.com]
Sent: Monday, August 13, 2012 10:54 AM
To: Sullivan, Katelyn
Cc: Mayor; Shiana.Aubourg@CityofBoston.gov; Ross, Michael (City Council); dave.tamasy@yahoo.com; David Wahlstrom; Sandra Pascal; Esther Wong; Joyce Phillips
Subject: 525 Huntington Ave Proposal
Attachments: Vancouver St.pdf; 525Huntington Ave.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Katelyn Sullivan, Project Manager
Boston Redevelopment Authority
Katelyn.Sullivan.BRA@cityofboston.gov
One City Hall Square
Boston, MA 02201

Dear Ms. Sullivan:

Monday, August 13, 2012

As 50 year residents of Vancouver Street we are writing to express our objections regarding the construction of 525 Huntington Ave Wentworth Dormitories. Before beginning there is two important points that need to be clear: Wentworth always sites that this street has only one family on it- The Wongs. These two building have six residences, NOT ONE. There are other private residents on this street as well, specifically #11. Wentworth always states that their actions are in keeping with Mayor Menino's mandate to get more students into school housing. I refuse to believe that the Honorable Mayor intended to forsake the local residents so that Wentworth could monopolize this entire area for themselves. Two pdf images have been attached to help guide our points. 1

The overwhelming height of the building imposes several real concerns from winter snow to television signal obstruction to increased home heating cost. The design will eliminate critical resident parking. Finally, the design dangerously invites students and their guest to use the firehouse and trolley intersection as a crossing point. 2

- The residents of Vancouver Street have long endured the lack of several basic city services. One being snow removal. In the more than 30 years of living here never once has the street been plowed or accumulated snow removed. Wentworth's own ***shadow studies Figure 5-4*** shows that with all the recent tall building constructions there will be no direct sun on Vancouver Street from December to March. The street will retain accumulated snow and ice longer and our homes will be colder all winter long costing us more in heating expense. 3

- During the winter months with the snow and ice historically narrows Vancouver Street to a mere path, traveling up the street is dangerous enough and now Wentworth wants to maneuver, back-up and drive a dumpster truck down it along with other service vehicles. The claim Wentworth makes that it will use little dumpster truck is bunk. It is absurd to believe that 300 students will require a small dumpster and a small dumpster truck to get it in and out. In all my years of living here in Boston I have never seen a SMALL dumpster truck, only small dumpsters on very large trucks. 4

- Wentworth's dumpster bay and loading dock access will result in the loss of at least five or more critical resident parking space. Considering there are a meager 22 spaces on the entire street, a 20% loss is severe. To further exacerbate the problem Wentworth students and facility who have valid Wentworth parking stickers prefer to park on Vancouver St. because it is closer to the dorms and school rather than walk two or three blocks away to their parking lots. Once a student occupies a resident space on Vancouver Street they leave the cars in place and unused for weeks on end. **Vancouver Street must be designated for resident parking only.** 5

- I use a roof antenna to receive free local television rather than pay for cable. With the new building in place I will lose my television signal path. I and other local residents should not be required to pay $1200 for cable when free television signal is available to other Boston residents? 6

- Between Northeastern U, Mass College of Art and Wentworth, students walk across Huntington Ave to and from the dorms by the thousands every day with their headphones on or heads down while texting. They are indifferent to the risk they create or simply mindless of their surroundings. They have little or no regard for traffic safety. Allowing the students to exit the building in front of Huntington Ave and right into the driveway of one of Boston's busiest firehouse's blatantly dangerous. Add to that a fast moving trolley with limited braking capability in both direction and **it is not a matter of IF someone is going to get killed but WHEN**. 7

In closing:
The building is too tall and the footprint too large. Such a tall building will block out the winter sun which in turn will prohibit snow and ice melting on the street and higher home heating cost for residents.
The dumpster bay is poorly planned resulting in the loss critical resident parking spots. Building owners need resident parking spaces to attract tenants. As a taxpayer resident parking is available throughout ALL of Boston. We need Vancouver Street to be RESIDENT PARKING ONLY.
The loss of public antenna television is not a service we should have to lose. We should not force to buy cable because Wentworth wants another dorm.
The 525 dorm front entrance design will instinctively filter students to use the firehouse turn-a-round and trolley tracks as a crosswalk. Streams of students will interfere with traffic flow. Sooner than later a student will be struck by a trolley or fire truck all because someone refused to plan appropriately. 8

The over-all theme of the plan is utopian. I am disappointed that we are expected to drink this Kool-Aid and go away silently. This building does nothing good for the neighborhood. It does nothing for the academic progress of Wentworth. The only purpose this building accomplishes is to allow Wentworth to become a leader in student housing for themselves and the other surrounding institutions that lease/rent Wentworth dorms.

Respectfully,
Esther Wong
Joyce Phillips
Wade Phillips
19 Vancouver Street
Boston MA 02115
Home 617.541.4707

Electronic Copy:

Mayor@CityofBoston.gov
Shiana.Aubourg@CityofBoston.gov
Michael.Ross@CityofBoston.gov
GPK Alumni Association: dave.tamasy@yahoo.com
David Wahlstrom: wahlstromd@wit.edu
Sandra Pascal: pascals@wit.edu

Mail
Boston Fire Department, Facilities Department
1010 Mass Ave
Boston, MA

J		Wong/Phillips	Response
	1		Wentworth recognizes that 19 Vancouver Street is an owner-occupied building consisting of three units. As such it is the only owner-occupied building on Vancouver Street. The Proponent also understands that the residency of the non-Wentworth buildings on Vancouver Street is predominantly student rental units. The Proponent will continue to work with the abutting property owners to mitigate potential impacts from the Project. In addition, consistent with the Mayor's commitment to local neighborhoods, the Project will provide on-campus housing to those upper level students who are currently living off-campus.
	2		The Project is fully compliant with zoning and with the IMP, which describes a seven story building of a larger size than proposed. See Response G-1.
	3		See response E-1. The Proponent has made a commitment to continue to work with the neighbors on Vancouver Street to ensure that the street remains open and accessible under all conditions. The Proponent has a proven record of meeting with the neighbors to address their concerns, and for providing services to the neighbors on the street during snow events.
	4		A discussion of shadow impacts and daylighting is included in Section 5.3. See Response J-2.
	5		The Proponent has initiated discussions with the Boston Transportation Department, and will continue to work with the BTD and their neighbors to facilitate an appropriate solution to concerns regarding the status of Vancouver Street Parking. See Responses M-3 and M-5.
	6		The Project will not obstruct the street façade of the residence. During and post construction, the Proponent will work with the commenter to identify and mitigate those stated impacts if they are verified.
	7		The Proponent has included a number of additional measures to reduce potential jaywalking at the project site. See Section 3.4 for a description of these measures. Curb ramps and striping will be clearly identified to encourage crossing at traffic lights and crosswalks. In addition, identified pedestrian patterns show that over 90 percent of students cross at Huntington Avenue and Louis Prang street to reach campus destinations. See section 4.3.4 and Figure 4-2 for a description of pedestrian movements.
	8		See Responses J-3 and J-7.

K

NHS
MISSION HILL
NEIGHBORHOOD HOUSING SERVICES

Tel 617-566-6565
Fax 617-566-1440

August 13, 2012

Katelyn Sullivan
Project Manager
Boston Redevelopment Authority
Boston City Hall, 9th Floor
Boston, MA 02201

RE: Wentworth Dorm Project: *Apartments at 525 Huntington*

Dear Ms. Sullivan:

Mission Hill Neighborhood Housing Services has reviewed and discussed the Project Notification Form (PNF) submitted by Wentworth Institute of Technology. Following several meetings with WIT responding to earlier concerns raised by Mission Hill NHS, participation in the WIT task force meetings, and community presentations by WIT, Mission Hill NHS voted in 2010 to go on record in support of the Wentworth Institutional Master Plan with comments. Mission Hill NHS's support for the WIT Master Plan included support for an additional dorm project to be located at 525 Huntington Ave.

Mission Hill NHS's Neighborhood Planning and Review Committee recently voted on behalf of the organization to support the Wentworth Dorm Project as presented in the July 2012 Project Notification Form.

Mission Hill NHS supports the construction of additional dormitory space and is pleased that the project was moved forward as a priority project within the first 5 years of the IMP.

Mission Hill NHS commends Wentworth's commitment to house 97% of its students on campus as part of this Master Plan. We are pleased that Wentworth has met an earlier commitment requiring freshmen and sophomores to live on campus starting with the 2010 class, and we acknowledge Wentworth's recent efforts to aggressively market the benefits of on-campus housing to parents. WIT must put in place a similarly aggressive policy requiring the remainder of their non-commuter students to live on campus.

The design of the 305 bed dorm as 72 apartment-style units is thoughtful and addresses the desire of juniors and seniors to want to live in nontraditional dorm settings. Amenities provided including kitchens, in-unit laundry, dishwashers, high quality finishes, private bedrooms as well as utilities, cable, security, internet, and 12 month leases address many of the issues raised by community members to provide attractive and financially competitive alternatives to off campus housing.

The seven story building reflects comments put forth by Mission Hill NHS and the design acknowledges the context and provides for some continuing open space. Given the concern raised by the remaining abutting residents, we encourage Wentworth to work with them and provide solutions to issues of noise, trash and snow/ice removal.

Wentworth has worked closely with the Mission Hill community over the past 10 years to first understand the negative impacts of their students housed in our neighborhood and then to address the need to provide adequate infrastructure on campus to mitigate that burden. We acknowledge the significant efforts on the part of the leadership team at Wentworth and we trust that we will continue to work together as neighbors to ensure designs that are transparent to the surrounding residential neighborhood and opportunities that are open to our youth.

Thank you for your consideration of our comments. Should you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,

James Hoffman
Executive Director
Mission Hill NHS

Patricia Flaherty
Senior Project Manager
Mission Hill NHS
WIT Task Force Member

Cc: Senator Sonia Chang Diaz
State Representative Jeffrey Sanchez
City Councilor Michael Ross
Shaina Aubourg, Mayor's Office of Neighborhood Services

K		Mission Hill NHS	Response
	1		The Proponent appreciates the comment. Wentworth has made a commitment to continue to work with the neighbors to ensure that potential impacts are addressed. The Proponent has a proven record of meeting with the neighbors to address their concerns, and for providing services to the neighbors.

70 Burbank Street
Boston, MA02115
617-267-4637
www.fenwaycdc.org

August 3, 2012

Katelyn Sullivan
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Comments on Wentworth Institute of Technology "Student Apartments at 525" PNF

Dear Katelyn:

We submit this letter on behalf of the Fenway Community Development Corporation (Fenway CDC), a 39-year-old, community-based organization that builds and preserves affordable housing and promotes projects that engage our full community in enhancing the neighborhood's diversity and vitality. We reviewed Wentworth Institute of Technology's Project Notification Form (PNF) for the Student Apartments at 525 Huntington against our vision for the neighborhood as a smart-growth-oriented community that welcomes the broadest spectrum of residents.[1]

We write in **support** of Wentworth's PNF with the following considerations:

Sufficient and Varied Housing Supply:

> We would like to commend Wentworth Institute of Technology's effort to preserve neighborhood housing by creating new dormitory space, with a goal to house 97% of students on campus. This project at 525 Huntington will house 305 of the remaining 375 students currently living in neighborhood housing. We hope that Wentworth will continue this trend to eventually house 100% of students on campus. When institutions do not provide enough dormitory space, students are forced to find housing in the surrounding residential areas, which increases rents and drives permanent residents out. We are glad to see that Wentworth has made a commitment to provide their fair share of housing in the neighborhood, and hope other institutions follow this lead.

[1] http://www.fenwaycdc.org/programs/urban-village

A Healthy Business Community and Jobs for Residents:

As discussed in the June Task Force meeting, Wentworth should ensure that local Fenway and Mission Hill residents are employed by this project, both in construction jobs and in on-going on-campus jobs. We request that Wentworth report employment figures by zip code in order to track what percentage of employees are from the two affected neighborhoods.

WIT commented at the June meeting that the Institute would work with Sandy Pascal and the City of Boston with regards to job creation. We would like to encourage WIT to also utilize the Fenway CDC's "Walk to Work" program to connect local Fenway residents with the jobs created by this project. Our employment specialist is Kris Anderson (Kanderson@fenwaycdc.org, 617-267-4637 x29). We request that Wentworth post jobs through Walk to Work and other local employment programs. 2

Community Benefits:

We are pleased that Wentworth plans to make conference rooms and other facilities in the proposed new campus center available to the community. As discussed in past Task Force meetings, we encourage WIT to allow neighborhood groups to utilize computer lab and other facilities for youth and adult programs. 3

Urban Design and Pedestrian Experience:

The proposed design of the Apartments at 525 is in scale with the surrounding buildings and fits within the context of the neighborhood. The use of an infill site is efficient and completes the street frontage along Huntington Avenue. The seven-story height of the proposed building will nicely continue the street-wall along Huntington, and will not overwhelm the block with height or density. The combination of masonry and glass will provide an attractive blend of modern aesthetic with the historic brick material that comprises the rest of the WIT campus.

The proposed landscaped plaza at the entrance along Huntington will enhance the pedestrian environment and provides a space for students and Fenway residents alike to gather. It also serves as a nod to the landscaped parcel that currently exists at this site. We would like Wentworth to ensure that street trees are planted along the sidewalks, and seating is provided in the plaza. 4

Environmental Sustainability and Transportation

Wentworth's commitment to environmental sustainability is commendable, and we are pleased to see their goal of achieving LEED Silver certification. We appreciate the use of energy efficient appliance, but would also like to see a feasibility analysis completed for a green roof, as requested in the June Task Force Meeting. 5

We respect the decision not to provide off-street parking space for this project, given that the building will reduce the number of commutes to campus by housing more students nearby. This decision is also a progressive and sustainable move away from vehicular traffic towards alternative modes of transportation. We encourage Wentworth to provide ample, first-rate bicycle facilities for students at this site. 6

Construction Mitigation Efforts:

The construction of this project will undoubtedly have a significant impact on the surrounding neighborhood, especially in terms of noise, circulation, dust, and air quality. We want to ensure that Wentworth takes the appropriate measures to mitigate these potential negative impacts. We expect Wentworth to compile a detailed construction management plan, and to include community input during the creation of the plan. Once construction begins, we would like to see reliable communication with the community, including notification of construction progress, schedules, changes, or delays. 7

Overall, Wentworth has proposed a project that will benefit the neighborhood. On future projects, we would like to see more outreach to the Fenway neighborhood in terms of community engagement. We hope Wentworth will follow through on our requests as listed above.

Sincerely,

Dharmena Downey
Fenway CDC Executive Director

Sheneal Parker
Fenway CDC, Wentworth Task Force Member

cc: Steve Wolf, Fenway CDC Board President; Senator William Brownsberger; Senator Sonia Chang-Diaz; Representative Gloria Fox; Representative Byron Rushing; City Councilor Mike Ross; City Councilor Tito Jackson

L		Fenway CDC	Response
	1		The Proponent is committed to attracting 95% to 100% of our students to campus for their living accommodations. With the addition of the new residence the Institute will have sufficient housing supply and variety to house up to 100% of the students seeking local housing in the City of Boston. Each year a very small percentage of students will tend to opt out of student residences due to cultural, religious medical and other valid personal factors.
	2		The Proponent will work with the Fenway CDC employment specialist to attract local residents to employment opportunities at Wentworth.
	3		We are pleased to continue our efforts to make Wentworth facilities available to local residents for cultural, social, educational and other civic purposes.
	4		Seating will be provided on the plaza, and trees will be planted along the sidewalks as shown on Figure 2-3, 2-7 and Figure 3-2.
	5		The Institute is interested in developing a green roof on campus in the very near future. A green roof is not planned for the Student Apartments at 525 Huntington due to the concern that it would attract Wentworth's architectural and engineering students to the roof of the residence hall for unsupervised visits giving rise to safety concerns. A green roof is under study for a portion of Beatty Hall where it can be safely located and observed as a demonstration project.
	6		A bicycle storage area has been included within the facility
	7		A draft Construction Management Plan has been included in the DPIR. When a Construction Manager is selected for the project, this plan will be reviewed and finalized by the Construction Manager and BTD.

From: Fleetwood, Charlotte
Sent: Tuesday, August 28, 2012 12:28 PM
To: Sullivan, Katelyn
Cc: Gupta, Vineet; Egan, William; Carter, Kristopher; Grissino, David; Aubourg, Shaina
Subject: Comments on Wentworth 525 Huntington Ave. PNF

1. Please consult Boston's Complete Street guidelines and City of Boston Bike Parking guidelines for current requirements related to streets, sidewalks, and bike parking.
http://bostoncompletestreets.org/

2. BTD concurs with the suggestion to consider locating the future bus stop on Huntington Avenue close to Louis Prang Street, versus more toward Vancouver Street, so that the stop would be adjacent to a crosswalk. We would support discussing this with the MBTA.

3. As requested, BTD will consider regulating the currently unregulated parking on Vancouver Street.

4. The sidewalk on Vancouver Street meets the minimum 7' requirement, however a more comfortable sidewalk width should be considered.

5. As noted, approximately 4 parking spaces will need to be removed to support access to loading on Vancouver Street. Removal of the remaining ~6 spaces would make it easier to plow the street and could possibly provide space to widen the sidewalk on Vancouver Street. If the community is supportive, BTD is willing to explore this with Public Works.

6. Wentworth should work with Boston Bikes and BTD to determine an appropriate location for a Hubway Station on this site.

Charlotte Fleetwood
Transportation Planner

Boston Transportation Department
Boston City Hall, Room 721
Boston, MA 02201
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Boston
Complete
Streets

M		Boston Transportation Department	Response
	1		The Proponent has done so.
	2		The Proponent has been in discussions with BTD and the MBTA to determine an appropriate location for a future bus stop.
	3		The Proponent will continue to work with the neighbors and BTD to determine the most appropriate treatment for Vancouver Street.
	4		The Proponent will reconstruct the Vancouver Street sidewalk, and has undertaken design measures to increase the accessibility of the entire sidewalk area while maintaining the street width, with parking on both sides.
	5		The Proponent will continue to work with the neighbors and BTD to determine the most appropriate treatment for Vancouver Street.
	6		The Project will include a Hubway station on Huntington Avenue.

Appendix B

Engineer's Certification

McPHAIL ASSOCIATES, LLC

September 21, 2012

Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Attention: Ms. Katelyn Sullivan

Reference: Wentworth Institute of Technology Student Apartments Project @ 525 Huntington Avenue
525 Huntington Avenue; Boston, Massachusetts
Boston Zoning Code Article 32 Requirements Regarding Groundwater Levels

Dear Katelyn:

We have prepared the following letter to address the requirements of Article 32 of the Boston Zoning Code entitled "Groundwater Conservation Overlay District" regarding the proposed below-grade construction at the proposed Wentworth Institute of Technology (WIT) Student Apartments project to be located at 525 Huntington Avenue in Boston, Massachusetts.

The development site occupies an approximate 16,355 square-foot parcel bounded by Huntington Avenue to the south, Vancouver Street to the west, and Louis Prang Street to the northeast. The site is currently utilized as a green space and primarily consists of grassed areas with scattered trees and other landscaping. Existing ground surface across the site is relatively level at about Elevation +17 on the Boston City Base Datum (BCB).

The proposed development includes the construction of a seven-story steel-framed building with one below-grade level, occupying an approximate 13,155 square-foot plan area. The lowest level slab of the one level below-grade basement will be located about 10 feet below grade at about Elevation +7. A stormwater recharge structure will also be constructed as part of the project. The stormwater recharge structure will be located on the south side of the site, outside the building footprint, adjacent to Huntington Avenue and will located up to about 8 feet below ground surface.

As indicated above, the project site is located within a Groundwater Conservation Overlay District (GCOD). GCODs have been established in sections of the City to protect wood pile foundations of buildings from being damaged by lowered groundwater levels. Furthermore, the purpose of the GCODs is to assure that construction projects do not cause reduction in groundwater levels on the construction site or on adjacent lots and also to recharge stormwater into the ground to help to raise the level of groundwater to a safe level.

The stabilized groundwater level in observation wells located at the site was observed to range from about Elevation +8.1 to Elevation +7.9 on the BCB. Groundwater observations wells operated by the Boston Groundwater Trust in the vicinity of the site indicate stabilized groundwater levels ranging from Elevation +7.2 to Elevation +8 on the BCB between 2005 and 2012.

Foundation support for the one level below-grade basement and overlying seven-story structure will be provided by a pile supported, waterproofed structural mat foundation. Utilization of a membrane-type waterproofing which underlies the structural mat and extends up the exterior perimeter walls to the finished ground surface will be provided to protect the below-grade space against groundwater intrusion.

GEOTECHNICAL AND GEOENVIRONMENTAL ENGINEERS
2269 Massachusetts Avenue
Cambridge, Massachusetts 02140
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McPHAIL ASSOCIATES, LLC

Construction of the below-grade level will require an excavation approximately 15 feet deep. The lateral earth support system consisting of interlocking steel sheet piling, which will extend as much as 5 feet into the relatively impervious clay deposit, will remain in-place and be cut down to a depth of about 6 feet below ground surface following the completion of construction. Following construction of the perimeter walls and the below-grade slab, the annulus between the perimeter foundation wall and the steel sheet pile cofferdam will be backfilled with a low permeability soil or flowable fill.

The excavation to construct the below-grade level will require temporary dewatering to construct the proposed structure in-the-dry. The dewatering will be short-term and the effluent will be discharged legally off-site. If the temporary dewatering is observed to have a negative impact on groundwater levels in the vicinity of the site, a temporary groundwater recharge system would be installed which utilizes the water collected in the construction dewatering system to restore the groundwater condition by means of recharge wells located outside of the steel sheet pile wall.

The project will include coordination with the Boston Groundwater Trust to protect groundwater levels in the area, and it will include the installation of up to two (2) groundwater observation wells in the vicinity of the site before site excavation to facilitate monitoring of the groundwater levels before, during, and following construction. The monitoring wells will be turned over to the Boston Groundwater Trust at the completion of the construction work.

In conclusion, the proposed below-grade construction at 525 Huntington Avenue is not anticipated to have a negative impact on groundwater levels within the lot in question or adjacent lots before, during, or following construction.

We trust that the above is sufficient for your present requirements. Should you have any questions, please call us.

Very truly yours,

McPHAIL ASSOCIATES, LLC

Jonathan W. Patch, P.E.

c: Boston Groundwater Trust (Mr. Elliott Laffer)
Boston Redevelopment Authority (Ms. Katie Peterson)

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JWP/ajd