EXPANDED PROJECT NOTIFICATION FORM ARTICLE 80B LARGE PROJECT REVIEW

338 Congress Street



SUBMITTED BY

Redgate 100 Franklin Street Boston, MA 02201

SUBMITTED TO

Boston Redevelopment Authority City Hall Square, 9th Floor Boston, MA 02110

4 December 2013

TABLE OF CONTENTS

LETTER OF TRANSMITTAL

<u>1.</u>	PROJECT DESCRIPTION	4
1.1.	Introduction	4
1.2.	PROJECT IDENTIFICATION AND TEAM	4
1.3.	PROJECT DESCRIPTION	6
1.4.	CONSISTENCY WITH ZONING REGULATIONS	8
1.5.	PUBLIC BENEFITS	9
1.6.	PUBLIC REVIEW	10
1.7.	LEGAL INFORMATION	10
<u>2.</u>	TRANSPORTATION	11
2.1.	Traffic, Parking, and Loading	11
2.2.	Transit	11
2.3.	PEDESTRIANS	12
2.4.	BICYCLE ACCESS	12
<u>3.</u>	ENVIRONMENTAL PROTECTION	13
3.1.	WIND	13
3.2.	Shadow	13
3.3.	DAYLIGHT	15
3.4.	Solar Glare	15
3.5.	AIR QUALITY	16
3.6.	WATER QUALITY	16
3.7.	FLOOD HAZARD ZONE / WETLANDS	16
3.8.	GROUNDWATER	16
3.9.	GEOTECHNICAL IMPACTS	17
3.10	. SOLID AND HAZARDOUS WASTES	18
3.11	. Noise	19
3.12	. CONSTRUCTION IMPACTS	20
3.13	. RODENT CONTROL DURING OPERATION	23
3.14	. WILDLIFE HABITAT	23
<u>4.</u>	DESIGN	24
4.1.	Sustainable Design	24
4.2.	URBAN DESIGN	24
5.	HISTORIC RESOURCES AND ARCHAEOLOGICAL RESOURCES	28

6.	<u>INFRAS</u>	TRUCTURE SYS	TEMS	32	
6.1.	WASTI	EWATER		32	
6.2.	WATE	R SYSTEM		33	
6.3.	STORM	I DRAINAGE SYST	ЕМ	34	
6.4.	ELECTE	RIC SERVICE		35	
6.5.	TELECO	OMMUNICATION S	System	35	
6.6.	NATUE	RAL GAS SYSTEM		35	
6.7.	STEAN	I S YSTEMS		35	
7.	COORD	INATION WITH	OTHER GOVERNMENTAL AGENCIES / PUBLIC REVIEW PROCESS	36	
7.1.	Соми	IUNITY OUTREACI	н	36	
7.2.	ARCHI	TECTURAL ACCESS	BOARD REQUIREMENTS	36	
7.3.	ANTIC	IPATED PERMITS	AND APPROVALS	37	
<u>APP</u>	ENDICE:	S		38	
Арре	NDIX A	Ехнівітѕ			
		Ехнівіт 1.	CERTIFIED SITE PLAN		
		Ехнівіт 2.	LOCUS MAP AND EXISTING CONDITIONS PHOTOS		
		Ехнівіт 3.	SITE PLAN		
		Ехнівіт 4.	GROUND FLOOR PLAN		
		Ехнівіт 5.	TYPICAL FLOOR PLAN		
		Ехнівіт 6.	ROOF PLAN		
		Е хнівіт 7А, В.	Sections		
		Ехнівіт 8.	CONGRESS STREET ELEVATION		
		Ехнівіт 9.	FARNSWORTH STREET ELEVATION		
		Ехнівіт 10.	ALLEY ELEVATION		
APPE	NDIX B	LEED CHECKLIST	т		
Appe	ENDIX C CLIMATE CHANGE QUESTIONNAIRE				



Matthew J. Kiefer mkiefer@goulstonstorrs.com (617) 574-6597 Tel (617) 574-7597 Fax

December 4, 2013

BY HAND

Mr. Peter Meade, Director Boston Redevelopment Authority Boston City Hall, 9th Floor Boston, MA 02201

Attention: Lauren Middleton-Pratt

Re: Application for Large Project Review 338 Congress Street, South Boston

Dear Director Meade:

On behalf of Redgate Capital Partners, LLC and its affiliates (collectively the "Proponent") we are pleased to submit the enclosed application for Large Project Review under Article 80B of the Boston Zoning Code for an approximately 26,741 square foot residential and ground floor retail development (the "Project") to be located at 338 Congress Street on the corner of Farnsworth Street (the "Property") in the Fort Point Channel district. We filed a letter of intent for the Project on September 13, 2013 and an application for Small Project Review for the Project on November 1, 2013. After filing our application for Small Project Review, the BRA brought to our attention that the Project is subject to Large Project Review because it is within the South Boston Waterfront Interim Planning Overlay District, which applies the Large Project Review thresholds of the Harborpark. The Harborpark requires Large Project Review for a project over 10,000 square feet.

The Project will replace a surface parking lot of approximately 5,420 square feet with a distinctive mid-rise residential building that will contribute to the vitality of the neighborhood and to the urban design of Congress Street. The Project will include the construction of an approximately 69-foot-high building containing up to approximately nine (9) new residential units with ground-level retail, local service, and/or restaurant uses and approximately ten (10) spaces of accessory residential parking. Zoning relief will be required.

The Project has been designed to be consistent with the guidelines for the Fort Point Channel Landmark District. Prior to filing this submission, the Proponent has engaged in productive discussions with staff at the BRA, local elected and appointed officials, abutters, and members of the surrounding community.

Mr. Peter Meade December 4, 2013 Page 2

Thank you for your consideration of this application. We look forward to working with your staff and the community towards a successful outcome.

If you have any questions, please do not hesitate to contact me.

Very truly yours,

Matthew J. Kiefer

MJK:CM Enclosure

cc: Ms. Lisa S. Serafin

Ms. Julie Zelermyer Ms. Cindy Schlessinger David A. Lewis, Esq.

GSDOCS\16295:0001\2290102.2

1. PROJECT DESCRIPTION

1.1. Introduction

338 Congress Street (the "Project") was originally presented to the Boston Redevelopment Authority under the Small Project Review process. Although the Project is below the 50,000 SF typical project size for Large Project Review, the Project is required to undergo Large Project Review per Section 27P-14 of the Boston Zoning Code ("Code"), which states that the thresholds for Large Project Review within the Harborpark apply to proposed projects within the South Boston Waterfront Interim Planning Overlay District ("SBW IPOD") Area. The Large Project Review thresholds for the Harborpark in Code Section 80B-2.3 further provide that the Transportation Component of the Project Notification Form is required only for proposed projects above 50,000 SF. Although a full transportation analysis is not required, the Expanded Project Notification Form includes the transportation section initially submitted with the November 1, 2013 Application for Small Project Review. The Site Plan Component of Large Project Review is not required because the Project is in neither a Conservation Protection Subdistrict nor a Greenbelt Protection Overlay District. The Tidelands Component of Large Project Review is not required because the Project does not require a license under Chapter 91, and the Project also does not meet the thresholds for the Development Impact Project Component of Large Project Review. In accord with Section 27P-14 and Section 80B-2.3, the Project is herein submitting a Project Notification Form for Large Project Review.

1.2. PROJECT IDENTIFICATION AND TEAM

Project Name 338 Congress Street

Location The site is bounded by Congress Street to the

southwest, Farnsworth Street to the southeast, a passageway/alley to the northeast, and a six-story brick building located at 332-336 Congress Street to

the northwest.

Project Proponent Redgate

Lisa Serafin, Principal 100 Franklin Street Boston, MA 02110 617.904.7013

lisa.serafin@redgate-re.com

Architect CBT Architects

David Nagahiro, AIA, LEED AP

110 Canal Street Boston, MA 02114 617.646.5315

nagahiro@cbtarchitects.com

Construction Management John Moriarty & Associates

Chris Brown

3 Church Street, Suite 2 Winchester, MA 01890

781.729.3900 cbrown@jm-a.com

Legal Goulston & Storrs

Matthew Kiefer, Esq. 400 Atlantic Avenue Boston, MA 02110 617.574.6597

mkiefer@goulstonstorrs.com

Survey Feldman Land Surveyors

Paul Foley, PLS

112 Shawmut Avenue Boston, MA 02118 617.357.9740

prf@harryfeldman.com

Environmental Haley and Aldrich

Maureen Hill Collins 465 Medford St #2200 Charlestown, MA 02129

617.886.7400

mhillcollins@haleyaldrich.com

Wind Rowan Williams Davies & Irwin Inc.

Sonia Beaulieu, M.Sc., P.Eng., Ing.

650 Woodlawn Road West

Guelph, Ontario, Canada N1K 1B8

519.823.1311

Sonia.Beaulieu@rwdi.com

Geotechnical/Environmental McPhail Associates, LLC

Harry Berlis

2269 Massachusetts Avenue Cambridge, MA 02140

617.349.7320

hjb@mcphailgeo.com

Civil Engineering Howard/Stein-Hudson

Richard Latini, P.E., LEED GA

38 Chauncy Street Boston, MA 02111 617.348.3305

rlatini@hshassoc.com

Traffic and Transportation Howard/Stein-Hudson

Guy Busa, Jr.

38 Chauncy Street, 9th Floor

Boston, MA 02111 617.348.3314

gbusa@hshassoc.com

1.3. PROJECT DESCRIPTION

338 Congress Street is a residential project consisting of approximately nine units with ground floor retail use located at the intersection of Congress and Farnsworth Streets. The Project will help further the transformation of the Fort Point Channel district into a vibrant neighborhood characterized by architecturally significant structures and mixed-use buildings that blend residential, retail, restaurant, hotel, office, and arts-related uses.

1.3.1. PROJECT SITE

The approximately 5,420 SF Project Site is located on the corner of Congress and Farnsworth Streets. The site is bounded by Congress Street to the southwest, Farnsworth Street to the southeast, a passageway/alley to the northeast, and a six-story brick building located at 332-336 Congress Street to the northwest.

The Project site is located in the Fort Point Channel neighborhood, one of the most dynamic in Boston. A distinct area within the larger South Boston Innovation District, Fort Point is a true mixed-use neighborhood with an emerging balance of retail, industrial, and residential uses — a key ingredient for sustaining a vibrant retail culture. There is a large daytime office population, primarily employed by financial services and creative consulting firms. The neighborhood has a growing residential population with recent redevelopments such as FP3, Factory 63, and 315 on A. The area also boasts a vibrant artist community.

The Project site is equidistant from Boston's Financial District and the Innovation District's Boston Convention and Exhibition Center, the World Trade Center, Liberty Wharf, and the Seaport Hotel.

1.3.2. HISTORIC SITE USES

A six-story building was constructed at the subject site in 1890 and was utilized for manufacturing until the 1920s. The manufacturing included solid mica insulating joints (1890), shoes (1899), and typewriters (1923). The building occupied the entire site and its height was generally similar to its abutter, 332 Congress Street. According to building permits, the building was razed in 1936 and prior to 1958, the subject site was a vacant lot. Since 1958, the site has been utilized as a surface parking lot.

1.3.3. EXISTING SITE USES

The Project site is currently used as a surface parking lot for approximately 17 parking spaces.

1.3.4. DETAILED PROJECT DESCRIPTION

The Project consists of the construction of a new, six-story residential and retail building on an existing surface parking lot. The Project will complete the street wall from the Hood Milk Bottle at the Children's Museum to 374 Congress Street and reinforce the continuity of the street facades.

Over the course of the past several months, the Proponent has focused on the following issues in developing a design for the Project:

- Respecting the historical integrity of the Fort Point Channel Landmark District;
- Relating the design to the Project's location near FP3, 332 Congress Street, 24 Farnsworth Street, and the Boston Fire Museum;
- Marking the intersection of Congress and Farnsworth Streets;
- Improving the pedestrian experience by removing surface parking and adding in active ground floor uses; and
- Considering pedestrian sightlines from Congress Street.

The mixed-use program consists of upper floor residential units and ground floor retail, both of which will complement and add vitality to the vibrant community in the neighborhood. The Project's residential units will be located on floors two through six of the Project. The active ground floor uses will improve the public realm by filling in this notably empty corner that exists currently. The Project will also include approximately ten enclosed off-street parking spaces supporting the residential use.

Streetscape improvements along Congress Street will focus on quality materials that complement the adjacent buildings and enliven the streetscape. Details of streetscape improvements will be developed in coordination with the City of Boston's Crossroads Initiative, The Artery Business Committee's South Boston Waterfront Gateway Street planning initiative, the Fort Point Channel Sewer Separation Project, and the Fort Point Channel Landmark District Commission.

1.3.5. APPROXIMATE DIMENSIONS

Site Area

Passageway	480 sf
Buildable Lot	<u>4,940 sf</u>
Total Lot Area	5,420 sf

Existing Uses

Parking 17 spaces

Proposed Project

Retail/Lobby (Ground Floor)	2,898 gsf
Residential (Floors 2-6)	22,951 gsf
Roof	892 gsf
Total	26,741 gsf
Parking	10 spaces

Proposed Maximum Building Height 69 ft. 10 in.

Proposed Unit Mix

Three-Bedroom 9 units

1.3.6. SCHEDULE

Construction of the Project is estimated to last approximately thirteen to fifteen months, with initial site work anticipated to begin in the fall of 2014.

1.4. Consistency with Zoning Regulations

1.4.1. ZONING DISTRICT

- 1. M-4 Restricted Manufacturing District
- 2. Area "E" of the Fort Point Waterfront Subdistrict of the South Boston Waterfront Interim Planning Overlay District (SBW IPOD)
- 3. Restricted Parking Overlay District
- 4. Groundwater Conservation Overlay District (GCOD)

1.4.2. ZONING RELIEF

The Project's intention of stitching together the urban fabric along Congress Street is consistent with the civic vision for the Fort Point Channel neighborhood. Zoning relief will be required to achieve this shared vision. Under Boston's zoning code, the Project will require: an interim planning permit under the SBW IPOD; conditional use permits for the primary residential use and the Project's location in the GCOD; and variances from several dimensional requirements including minimum lot width, minimum lot area, front yard, rear yard, side yard, usable open space, parapet setback, and parking space dimensions.

1.4.3. OTHER PUBLIC APPROVALS

The Project will also be subject to review by the Fort Point Channel Landmark District Commission to obtain a Certificate of Appropriateness. Any proposed changes to the public realm will also require Public Improvement Commission review and approval. The Project is subject to South Boston's commercial parking freeze and will contribute most of its currently permitted public parking spaces back to the parking bank. The number of parking spaces at the Project will slightly exceed one space per unit, so the Project will require approval from the Boston Air Pollution Control Commission for any additional non-exempt space or spaces. The Project will need to comply with state building code and federal accessibility requirements and will require a local sewer tie-in permit. A list of anticipated Project approvals is included in Section 7.5.

1.5. Public Benefits

The development of 338 Congress Street will transform the Project site from a parking lot into a vibrant, contemporary mixed-use building with active ground floor uses. Although small, the proposed Project provides numerous public benefits to the City of Boston.

- **Public Realm Enhancement**: The Project will complete the streetscape and improve the pedestrian experience by providing an active ground floor use and sidewalk improvements.
- **Neighborhood Vitality**: The Project's active uses will enliven the neighborhood.
- **Neighborhood Art Display**: The Project will feature an art exhibit wall to animate the first level of the Farnsworth Street façade and will continue the tradition of incorporating locally-created art throughout the neighborhood. The Proponent will work with Fort Point Arts Community and others to design this space for changing exhibits or permanent installations.
- Respectful of Fort Point Channel Landmark District: Set in a historic neighborhood of Boston
 Wharf Company buildings, the Project will respect the intent of the Fort Point Channel District
 Landmark Commission by being compatible with the historic character of the District, while
 reflecting the period in which it is built. The Project will strive to relate to the urban context and
 streetscape without being imitative of the earlier styles and methods of construction.
- Sustainable Design: The Project will comply with the requirements of Article 37 of the Code, Green Buildings. The Project team will use the appropriate USGBC LEED green building rating system to evaluate sustainable design measures and anticipates the Project being LEED certifiable.
- Transit-Oriented Development: The addition of residential units to the neighborhood contributes
 to the neighborhood's mixed-use nature and supports the transit-oriented development goals of
 downtown Boston. The Project's central location provides residents and retail clients with
 convenient access by foot, bus, train, and bike to and from nearby business centers and
 entertainment districts.
- Housing Opportunities: The Project will add to the limited housing stock in the neighborhood, encouraging more investment in the neighborhood.
- **Construction Jobs Creation**: The Project will create approximately 75 unique construction jobs over the thirteen to fifteen month construction period. The Project will promote local employment through good-faith efforts to hire Boston residents, minorities, and women for construction jobs.
- Increased Property Taxes: The Project is expected to generate approximately \$200,000 \$250,000 in additional annual property taxes for the City of Boston over the amount the property currently contributes.

1.6. Public Review

Although the Project is below the typical 50,000 SF threshold requiring Large Project Review, the Project is required to undergo Large Project Review per Section 27P-14, which states that the thresholds for Large Project Review within the Harborpark apply to proposed projects within the SBW IPOD. The Project is within the SBW IPOD, so the Harborpark Large Project Review threshold of 10,000 SF applies. However, pursuant to Section 80B-2.3, the Transportation Component of Large Project Review is not required for a Proposed Project that is subject to the Harborpark thresholds and that is less than 50,000 SF. The Site Plan Component of Large Project Review is not required because the Project is in neither a Conservation Protection Subdistrict nor a Greenbelt Protection Overlay District. The Tidelands Component of Large Project Review is not required because the Project does not require a license under Chapter 91, and the Project also does not meet the thresholds for the Development Impact Project Component of Large Project Review. A Letter of Intent was filed for this Project on September 13, 2013. This expanded Project Notification Form is being submitted to initiate the review and the Proponent requests that the requirements for a Draft and Final Project Impact Report be waived.

1.7. LEGAL INFORMATION

1.7.1. LEGAL JUDGMENTS ADVERSE TO THE PROPOSED PROJECT

The Proponent is not aware of any legal judgments in effect or pending legal actions adverse to the Project.

1.7.2. HISTORY OF TAX ARREARS ON PROPERTY

The Proponent does not have a history of tax arrears on property that it owns in the City of Boston. Any tax arrearage on the subject property will be discharged at closing.

1.7.3. SITE CONTROL / PUBLIC EASEMENTS

The Proponent has entered into a Purchase and Sale Agreement to purchase the subject property, which is not subject to public easements or to other encumbrances that would impair the Proponent's ability to undertake the Project.

2. TRANSPORTATION

The Large Project Review thresholds for the Harborpark in Code Section 80B-2.3 further provide that the Transportation Component of the Project Notification Form is required only for proposed projects above 50,000 SF. Although a full transportation analysis is not required, the Expanded Project Notification Form includes the Transportation section below, which was initially submitted with the November 1, 2013 Application for Small Project Review.

The Project will have minimal impact on area vehicle, transit, pedestrian, and bicycle transportation systems and the Proponent will continue to work with the City of Boston to create a Project that efficiently serves vehicle trips, encourages transit and bicycle use, and improves the pedestrian environment.

This segment of Congress Street has been identified by the Boston Redevelopment Authority (BRA) in their Crossroads Initiative plan. In the Crossroads Initiative, Congress Street will continue to serve as a neighborhood commercial center. Improvements along Congress Street will focus on accessibility, additional lighting, improved pedestrian facilities, and better vehicular access and signalization throughout the corridor. This Project will incorporate elements of the Crossroads Initiative and also conforms to the Boston Complete Streets design guidelines.

2.1. Traffic, Parking, and Loading

The Project will include off-street parking for approximately 10 vehicles in a semi-automated parking structure in order to mitigate potential parking and traffic issues associated with the Project. The Project will also eliminate the 17-space surface public parking lot that is located on the Project site, producing a net reduction in on-site parking. Garage, service, and loading access will occur along the private alley/passageway at the rear of the site with a curb cut provided for the garage. Trash and recycling receptacles will be stored inside the building. The Project will have minimal impact on traffic in the area and may help alleviate existing congestion along Congress Street by removing the curb cut into the existing parking lot. The Project will remove on-street parking along Farnsworth Street adjacent to the Site to allow for the widening of the sidewalk. Farnsworth Street will be striped to accommodate two travel lanes and a parking lane along the side opposite the Project Site.

2.2. Transit

The Project Site is a transit-oriented development, located in the vicinity of several MBTA bus routes and within walking distance of MBTA T stops at South Station and Courthouse Station. MBTA bus routes 448, 449, and 459 travel along Congress Street adjacent to the Site. Routes 448 and 449 provide express service between Downtown Crossing and Marblehead. Route 459 provides service between Downtown Crossing and Salem. MBTA bus routes 4, 7, and 11 run along Summer Street, immediately south of the Project Site. Routes 4 and 7 provide service between the Seaport District, South Boston, and Downtown Crossing. Route 11 provides service between South Boston and downtown Boston.

Two rapid transit stations are also in proximity to the Project site. South Station is located approximately a half-mile west of the Project site along Summer Street, providing access to the MBTA Red and Silver Lines,

commuter rails, and the regional AMTRAK service. The Courthouse Station is located approximately a quarter-mile north of the Project Site along Seaport Boulevard, providing access to the MBTA Silver Line.

2.3. PEDESTRIANS

The Project will be consistent with the concepts outlined in the Crossroads Initiative plan. Specific pedestrian improvements include the installation of bump-outs at the corner of Congress Street and Farnsworth Street, adjacent to the Project site, to reduce the crossing lengths and improve pedestrian safety. The sidewalk along Farnsworth Street, adjacent to the Project site will also be widened and designed in accordance with the Boston Complete Streets guidelines. The widening of the sidewalk will provide consistency with the existing pedestrian facilities along Farnsworth Street to the north of the Project site.

2.4. BICYCLE ACCESS

Secure, covered bicycle storage will be provided for residents of the Project. In addition to the onsite bicycle storage, an existing Hubway station is located just west of the Project site at the Congress Street/Sleeper Street intersection.

3. ENVIRONMENTAL PROTECTION

3.1. WIND

The Proponent engaged Rowan Williams Davies & Irwin, Inc. ("RWDI") to conduct a desktop analysis of wind conditions and the impact of the Project on the pedestrian realm. RWDI found that the Project will not cause any adverse wind impact on the surrounding area due to the similar height of the Project to the surrounding buildings and its limited exposure to prevailing winds. The resultant wind conditions on and around the site are predicted to meet the BRA effective gust criteria throughout the year.

Both the retail (Congress Street) and residential (Farnsworth Street) building entrances are located away from building corners and the residential entrance is recessed from the main façade and installed with a vestibule. As a result, the on-site wind conditions are predicted to be suitable for the entrances and sidewalks in general. Canopies and trees, similar to those installed in the same neighborhood, can be used to reduce the wind activity, if desired.

Future buildings in the surrounding areas will further reduce the wind activity and improve the wind conditions on and around the Project.

3.2. Shadow

The shadow analysis examines the net new shadow impacts for the 9 AM, 12 PM, and 3 PM hours during the Vernal and Autumnal Equinoxes (March 21 and September 21), Summer Solstice (June 21), and Winter Solstice (December 21). Impacts at 6 PM in the summer were also examined.

The analysis focuses in particular on nearby public open spaces and major pedestrian areas as well as sidewalks and bus stops adjacent to and in the vicinity of the Project Site. The net new shadows demonstrate the incremental impact of the Project. For the purposes of clarity, net new shadow on the ground is shown in blue, while net new shadow cast on rooftops is shown in yellow.

3.2.1. VERNAL/AUTUMNAL EQUINOX

In the morning hours of the Vernal and Autumnal Equinoxes, the net new shadow will cover a portion of the roof of 332 Congress Street and a portion of Congress Street. At noon, new shadow from the Project will be cast on a portion of the rear alley as well as a small portion on the roof of 332 Congress Street. In the afternoon, a shadow will be cast along portions of Farnsworth Street, the Farnsworth Street sidewalk, and the rear alley.

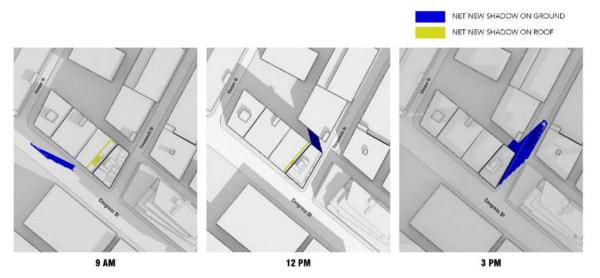


FIGURE 1 VERNAL/AUTUMNAL SHADOW STUDY

3.2.2. SUMMER SOLSTICE

Net new shadow will be cast on portions of Congress Street, the Congress Street sidewalk along the Project site, and the rooftop of 332 Congress Street in the morning of the Summer Solstice. At noon, a net new shadow will fall on a portion of the rear alley and slightly on the rooftop of 332 Congress Street. In the afternoon, the net new shadow will cover parts of Farnsworth Street and the rear alley. Some new shadow will fall on the Farnsworth Street sidewalk. In the evening, net new shadow will be cast on portions of Farnsworth Street and the Farnsworth Street sidewalk. The adjacent Fire Museum at 344 Congress Street will have shadows cast on a portion of its roof at 6 PM.

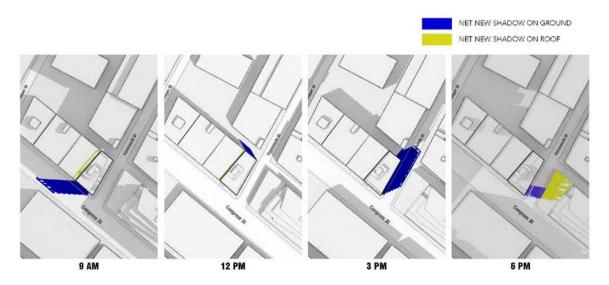


FIGURE 2 SUMMER SOLSTICE SHADOW STUDY

3.2.3. WINTER SOISTICE

During the Winter Solstice, net new shadow cast at 9 AM will fall on a portion of the roof of 332 Congress Street. At midday, net new shadow will be cast on a portion of the rear alley and the rooftop of 332 Congress Street. In the evening, no net new shadow will be cast

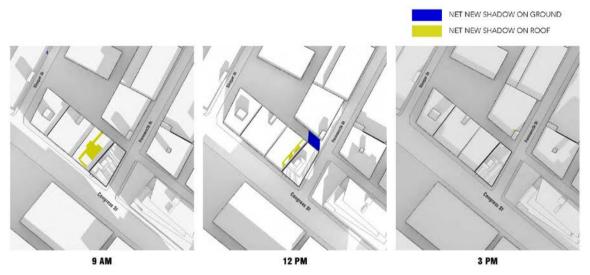


FIGURE 3 WINTER SOLSTICE SHADOW STUDY

3.2.4. Conclusions

Because the Project is in a densely built urban neighborhood, the shadows are minimal and consistent with adjacent buildings. The shadow study indicates that the Project will not cause substantial impacts to the surrounding area. Shadow impacts throughout the year are limited primarily to rooftops, the rear alley, and streets. Some new shadow will fall onto the sidewalk of adjacent streets. No open spaces will be adversely impacted by the net new shadow.

3.3. DAYLIGHT

The Project will replace a surface parking lot with a building of similar size and massing to the building that historically occupied the site. Because it is filling a currently vacant lot, the building will increase daylight impacts. However, because the Project is small (26,741 sf) and will be approximately the same height and mass as the adjacent building at 332 Congress Street and other predominant buildings along Congress and Farnsworth Streets, the daylight impacts will be minimal and will be consistent existing daylight obstruction in the surrounding area.

3.4. SOLAR GLARE

The proposed Project does not include the use of reflective glass or other reflective materials on the building facades that would result in adverse impacts from reflected solar glare from the Project.

3.5. AIR QUALITY

Given the proposed Project's small scale, no adverse air quality impacts are expected. Capacities of existing bus, MBTA transit lines, and Commuter Rail lines are more than sufficient to handle the number of trips expected to be generated by the Project.

3.6. WATER QUALITY

The Project is not expected to impact the water quality of the Boston Harbor or other nearby bodies of water. Erosion and sediment control measures will be implemented during construction in compliance with Leadership in Energy and Environmental Design (LEED) and Article 37 of the Code to minimize the transport of site soils to off-site areas and BWSC storm drain systems and will comply with the U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System program for stormwater discharges.

If necessary, dewatering during construction will be conducted in accordance with applicable MWRA and BWSC discharge permits. Once construction is complete, the Project is expected to be in compliance with local and state stormwater management policies.

3.7. FLOOD HAZARD ZONE / WETLANDS

The Project site is located in Zone X (unshaded) on the September 25, 2009 FEMA flood map 25025C0081G. This area is determined to be outside the 0.2% annual chance floodplain.

FEMA is in the process of updating FIRMS (Flood Insurance Rate Maps) for coastal areas across the country. The preliminary FIRM for Suffolk County dated November 15, 2013 places the Project site within Zone AE.

3.8. GROUNDWATER

Groundwater in the vicinity of the Project site is monitored on a regular basis by the Boston Groundwater Trust (BGwT). BGwT, created by City Ordinance in 1986, maintains a network of groundwater monitoring wells in the City and includes about 15 groundwater monitoring wells within a two block radius of the project site. The proponent will coordinate with BGwT on an as-needed basis during the public review and construction phases of the Project.

3.8.1. GROUNDWATER CONDITIONS

From December 2005 (initial reading) through September 2013, groundwater levels have been measured in a BGwT monitoring well located on the site at levels ranging from approximately Elevation +6.2 (BCB) to Elevation +9.9 (BCB) and from about Elevation +7.5 (BCB) to Elevation +8.3 (BCB) during the past year.

The proponent will consult with Eliot Laffer, the Executive Director of the BGwT, regarding the need for additional groundwater monitoring wells and compliance with the BGwT.

The Project is located in the GCOD, which is governed by Article 32 of the Code. The Project will comply with the standards and requirements set forth in Article 32 of the Code. The Proponent will obtain a written determination from the Boston Water and Sewer Commission (BWSC) as to

whether the Project meets the standards and requirements of Article 32. In addition, the Proponent will demonstrate that the Project meets the requirements of Section 32-6 of the Code by obtaining a stamped certification from a Massachusetts registered engineer that the requirements of Section 32-6 of the Code are met. The Proponent will provide both a copy of the written determination from BWSC and a copy of the stamped certification from a Massachusetts registered engineer to the BRA and the BGwT prior to obtaining a conditional use permit from the Board of Appeal for Article 32 purposes.

3.8.2. GROUNDWATER CONTROL

Construction of the building foundations will consist of the installation of piles, excavation of pile caps, grade beams, and an elevator pit. Excavation depths are anticipated to range from about 4 to 7 feet below the ground surface corresponding to levels ranging from about Elevation +11.5 (BCB) to +7.5 (BCB). Based on the documented groundwater levels at the site, if necessary, construction dewatering during excavation of the building foundations is anticipated to consist of localized sumps in conjunction with on-site recharge of groundwater. A groundwater recharge system as required by Article 32 of the Code will be installed as part the development of the site. Based on the groundwater levels at the site, full-time dewatering is not anticipated, and is only anticipated to be required if localized areas of perched groundwater are encountered during excavation activities.

3.8.3. GROUNDWATER CONCLUSION

Based on the proposed scope of construction and the anticipated depth of excavation for the building foundations consisting of pile caps and grade beams, impacts to the groundwater levels at adjacent properties and buildings are anticipated to be minimal.

3.9. GEOTECHNICAL IMPACTS

This section addresses excavation and below-grade construction work anticipated for the Project. Presented below are descriptions of existing soil conditions; foundation construction methods and excavation work anticipated for the project based on preliminary evaluations completed to date; and potential project impacts and proposed mitigation measures. Mitigation efforts focus on protection of nearby buildings, structures, and utilities.

3.9.1. PROJECT SITE AND SUBSURFACE CONDITIONS

The existing ground surface across the Project site slopes gradually downward from the southwest to the northeast from about Elevation +15.5 FT (BCB) along Congress Street to about Elevation +14.5 (BCB) along the Passageway/Alley across a horizontal distance of about 100 Ft.

Subsurface information gathered in the vicinity of the Project site indicates that the ground surface is underlain by a fill layer that extends to depths ranging from about 20 to 25 feet below the existing ground surface overlying an organic deposit that is anticipated to range from about 20 to 30 feet in thickness. The organic deposit is underlain by a marine clay deposit known locally as Boston Blue Clay that is anticipated to extend to depths ranging from about 100 to 110 feet below the existing ground surface. Underlying the marine clay deposit a glacial till deposit is anticipated to be present which is subsequently underlain by bedrock. The bedrock surface is anticipated to be located at depths ranging from 120 to 130 feet below the existing ground surface. The bedrock is expected to be a shale-like deposit known locally as Cambridge Argillite.

3.9.2. Proposed Foundation Construction and Excavation

Foundation support for the Project is anticipated to consist of a deep foundation system consisting of drilled-in end-bearing mini-piles installed into the glacial till and/or bedrock deposits in conjunction with concrete pile caps and grade beams.

Less than 500 cubic yards of soil is expected to be excavated to construct the building pile cap and grade beam foundations. Temporary earth support along the perimeter of the site is not anticipated to be required.

The Project's geotechnical engineer and construction contractor will work closely together throughout building construction to avoid adverse impacts on adjacent structures and utilities.

3.9.3. Probable Project Impacts and Mitigation Measures

With respect to ground vibrations associated with the installation of the proposed pile foundations, the pile type used on this project is anticipated to consist of drilled-in mini-piles.

The procedures associated with the installation of drilled-in end bearing mini-piles are not anticipated to induce ground vibrations that exceed vibration levels known to cause cosmetic or structural damage to the existing buildings and utilities which surround the project site. See Section 3.12.8. Vibration Control for more information.

3.10. Solid and Hazardous Wastes

3.10.1. Solid and Hazardous Waste during Operation

The Project will generate solid waste typical of other residential/mixed-use projects. Solid waste generated by the Project will be approximately 25 tons per year, based on the number of bedrooms proposed at a generation rate of 4 pounds (lbs) per bedroom per day and commercial, retail, and restaurant space proposed at a generation rate of 5.5 tons per 1,000 square feet per year as shown in Table 3-10 below.

Table 3-10 : Solid Waste Generation					
Unit Type	Program	Number of Bedrooms	Generation Rate	Solid Waste (tons per year)	
Three-Bedroom Units	9 Units	27	4 lbs/bedroom/day	19.71 tons/year	
Commercial / Retail / Restaurant	996 SF		5.5 tons/1,000 SF/year	5.47 tons/year	
Total Solid Waste Generation				25.18 tons/year	

Solid waste will include wastepaper, cardboard, glass, and bottles. A portion of the waste will be recycled as described below. The remainder of the waste will be compacted and removed by a waste hauler contracted by building management. With the exception of "household hazardous wastes" typical of residential and restaurant uses (for example, cleaning fluids and paint), the residential and ground floor commercial uses will not generate hazardous wastes.

All recycling, trash collection, and loading will occur on-site and be contained within the building. No dumpsters will be located on the rear passageway/alley. The Project will be provided with a trash and recycling area on the ground floor for residential and commercial uses. Recyclable materials will be in the trash room handled by the building management for pick-up. A private trash collector will pick up trash as needed.

3.10.1.1. RECYCLING

Recycling by residents and commercial/retail tenants will be encouraged and coordinated. To encourage recycling, the Proponent will implement a recycling program. Recyclable materials are expected to include newspaper, cardboard, cans, and bottles. The residential recycling program will be conducted in accordance with the City of Boston's recycling regulations.

3.10.2. HAZARDOUS WASTES

3.10.2.1. CONTAMINATED SOIL OR GROUNDWATER

The Project site was not identified on the databases searched in the Environmental Data Resources Report during an ASTM Phase I Environmental Site Assessment by Haley and Aldrich. During the review of available information no documents, records, or permits pertaining use of petroleum or hazardous materials at the site were encountered.

3.10.2.2. SITE HISTORY AND COMPLIANCE WITH MASSACHUSETTS CONTINGENCY PLAN

As part of the proposed construction, the Proponent plans to perform soil precharacterization including subsurface investigations and chemical testing to manage the excess soils to be generated from the site during construction which involves the proper documentation, handling, and removal of the materials to maintain site compliance with the Massachusetts Department of Environmental Protection (MA DEP) and the Massachusetts Contingency Plan (MCP).

The construction of the proposed building foundations will require the removal of the site soils to depths ranging up to about 4 to 7 feet below existing grade. It is anticipated that less than 500 cubic yards of excess soil which will be removed from the Project site.

The Proponent will retain a Licensed Site Professional (LSP) to manage the environmental aspects of the project, including proper management and/or off-site disposal of contaminated soil and groundwater encountered during construction. If necessary, the LSP will also prepare required MCP regulatory submittals.

3.11. Noise

During operations, neither the Project's mechanical equipment, nor traffic noise associated with the Project are expected to result in a perceptible change in noise levels. The proposed Project will not have a large-scale noise producing HVAC or other potential noise producing equipment. Each unit will be served by high-efficiency HVAC equipment that will fully comply with sound level limits set by the DEP Noise Policy and the City of Boston Noise Regulations at all times of the day. By locating equipment on the rooftop and behind screen walls, the Project will not have a significant impact on the existing acoustical environment.

3.12. Construction Impacts

A Construction Management Plan in compliance with the City's Construction Management Program (CMP) will be submitted to the Boston Transportation Department (BTD) once final plans are developed and the construction schedule is determined. The CMP will include detailed information on construction activities, specific construction mitigation measures, and construction materials, access, and staging area plans to minimize impacts to abutters and the local community. The construction contractor will be required to comply with the details and conditions of the approved CMP.

3.12.1. CONSTRUCTION SCHEDULE

Construction of the Project is estimated to last approximately thirteen to fifteen months, with initial site work expected to begin in the fall of 2014.

The City of Boston allows construction work from 7:00 AM to 6:00 PM Monday through Friday. Construction outside of those hours requires a permit. Typical construction hours for the Project will be in compliance with the City's regulations with no work anticipated on the weekends. In the event that weekend work is necessary, the Proponent will obtain required City approvals.

The construction contractor will be responsible for coordinating construction activities during all phases of construction with City of Boston agencies in order to minimize potential scheduling and construction conflicts with other ongoing construction projects in the area.

3.12.2. DEMOLITION

The existing parking lot will not require significant demolition. The demolition debris will be disposed of at a properly licensed solid waste disposal facility. During demolition, provisions will be made for the use of water spray to control the generation of dust.

3.12.3. Construction Staging / Public Safety / Access

Construction truck access to the Project site will be outlined in the CMP to be filed with the BTD in accordance with the City's transportation maintenance plan requirements. Staging for the Project is anticipated to start after completion of minor demolition of the parking hut and parking lot.

The Proponent will ensure that staging areas will be located to minimize impacts to pedestrian and vehicular flow. It may be necessary to occupy pedestrian walkways and parking lanes on the Project side of Congress Street as well as portions of Farnsworth Street and the private passageway/alley behind the Project. Secure fencing, signage, and covered walkways may be employed to ensure the safety and efficiency of all pedestrian and vehicular traffic flows. Sidewalk areas and walkways near construction activities will be well marked to protect pedestrians and ensure their safety. Pedestrian protection will be in place early in the construction process and will remain until construction completion. When necessary, police details will be provided to facilitate traffic flow. Construction procedures will be designed to meet all OSHA safety standards for specific site construction activities.

3.12.4. CONSTRUCTION AIR QUALITY

During the construction period of the Project, temporary effects on ambient air quality adjacent to the construction site may occur. The Project does not involve extensive or deep excavations, and therefore air quality impacts associated with fugitive dust and localized increases in particulate levels is anticipated to be minimal.

The construction contract will provide for a number of strictly enforced measures to be utilized by contractors to reduce potential emissions and minimize impacts. These are expected to include:

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

3.12.5. Construction Noise

The Proponent is committed to mitigate noise impacts from the construction of the Project. Increased community sound levels, however, are an inherent consequence of construction activities. Construction work will comply with the requirements of the City of Boston noise ordinance. Every reasonable effort will be made to minimize the noise impact of construction activities.

Mitigation measures are expected to include:

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

3.12.6. Construction Period Transportation Issues

Details of the overall construction schedule, working hours, number of construction workers, worker transportation and parking, number of construction vehicles, and routes will be addressed in detail in the CMP in accordance with the City's transportation maintenance plan requirements.

The number of workers required during the construction period will vary depending on the phase of construction. The number of workers on-site will average between 15 and 40 workers per day. Because the construction workers will arrive and depart prior to peak traffic periods, the construction trips are not expected to impact local traffic conditions.

To reduce vehicle trips to and from the construction site, all workers will be strongly encouraged to use public transportation. Space on-site will be made available for workers' supplies and tools so they do not have to be brought to the site each day.

Specific delivery truck access routes will be established in consultation with the BTD through its approval of the CMP required for the Project. Construction contracts will include clauses restricting truck travel to primary roads. Enforcement of truck routes will be accomplished through clauses in the subcontractors' agreements.

3.12.7. Utility Protection during Construction

The contractor will notify utility companies and call "Dig Safe" prior to excavation. During construction, infrastructure will be protected using sheeting and shoring, temporary relocations, and construction staging as required. The construction contractor will be required to coordinate all protection measures, temporary supports, and temporary shutdowns of all utilities with the appropriate utility owners and/or agencies. The construction contractor will also be required to provide adequate notification to the utility owner prior to any work commencing on their utility. In addition, in the event a utility cannot be maintained in service during switch over to a temporary or permanent system, the construction contractor will be required to coordinate the shutdown with the utility owners and project abutters to minimize impacts and inconveniences.

3.12.8. VIBRATION CONTROL

Means and methods for performing work at the Project site will be evaluated for potential vibration impacts on adjacent buildings and utilities. Drilled-in mini-piles are planned for the foundation in order to minimize vibration impacts.

A preconstruction condition survey will be performed and ground vibration monitoring will be performed during the installation of the pile foundation system. Furthermore, settlement monitoring points will be installed on the buildings and below grade utilities that abut the Project site. These points will be monitored periodically during the pile installations.

3.12.9. GENERATION AND DISPOSAL OF CONSTRUCTION DEBRIS

Solid waste generated by construction will exist primarily of demolition debris related to packaging and scrap materials (such as corrugated cardboard, glass, aluminum, scrap metal, and cable/wire) associated with new construction. Some of this waste will be recycled by waste disposal companies.

Construction waste will be recycled when possible (see below). For those materials that cannot be recycled, solid waste will be transported in covered trucks to an approved solid waste facility, per DEP's Regulations for Solid Waste Facilities, 310 CMR 16.00. This requirement will be specified in the disposal contract.

Removal of any hazardous materials will be treated as special waste in accordance with Massachusetts DEP guidelines and addressed and disposed of accordingly.

3.12.9.1. RECYCLING

The Proponent will take an active role with regard to the reprocessing and recycling of construction waste. An evaluation of the potential for recycling will occur before the construction commences. Construction will be conducted so that some materials that may be recycled are segregated from those materials not recyclable to enable disposal at an approved solid waste facility. A comprehensive recycling program will be included in the final CMP.

3.12.10. RODENT CONTROL DURING CONSTRUCTION

A rodent examination certificate will be filed with the building permit application to the City. Although the details have not yet been finalized, the Proponent fully intends to develop a preventive, safe, cost-effective, and ecologically-sound pest management program.

3.12.11. National Pollution Discharge Elimination System

The proposed Project does not involve the disturbance of over one acre, therefore a National Pollutant Discharge Elimination System permit is not required from the Environmental Protection Agency.

3.13. RODENT CONTROL DURING OPERATION

Operation of the building will focus on a high quality of maintenance. Although the details have not yet been finalized, the Proponent fully intends to use preventive methods to ensure that the commercial component of the Project is not infested with rodents by developing a safe, cost-effective, and ecologically sound integrated pest management program. Homeowners will be responsible for rodent control at their residences.

3.14. WILDLIFE HABITAT

The Project is a parking lot in an established, dense urban neighborhood. As such, the Project will not have impacts on wildlife habitats.

4. DESIGN

4.1. SUSTAINABLE DESIGN

4.1.1. SMART GROWTH

The Project reflects "Smart Growth" principles as follows:

- Develops a vacant lot through infill development in an urban area;
- Concentrates development that integrates uses and fosters a sense of place;
- · Expands housing opportunities; and
- Provides transportation choices through proximity to public transit and central business districts.

4.1.2. LEED

The Proponent will implement sustainable design and energy conservation measures as part of the Project. The Proponent is committed to following U.S. Green Building ("USGBC") Leadership in Energy and Environmental Design ("LEED") certification guidelines for the Project.

The Project team has completed a LEED checklist from the LEED 2009 for New Construction and Major Renovation program and has identified sustainability goals for this Project (Appendix B). The Project will be LEED certifiable at 40 points. The Project team has also identified 33 possible additional points and will continue to work towards achieving some of these points in the "Possible" column of the LEED checklist, so that the Project may be certifiable at LEED Silver.

4.1.3. CLIMATE CHANGE PREPAREDNESS QUESTIONNAIRE

The Proponent understands that the City of Boston is especially interested in the adaptability of the City to long-term climate change. This interest has been manifested already by the Mayor's Executive Order Relative to Climate Change in Boston and the recent convening of the Mayor's Climate Action Leadership Committee.

The BRA recently began asking proponents to complete an online questionnaire regarding their project's climate change preparedness. A copy of the completed questionnaire is included in Appendix E. Given the preliminary level of design, the responses are also preliminary and may be updated as the Project design progresses.

4.2. URBAN DESIGN

4.2.1. DESIGN APPROACH

Located in the heart of the Fort Point Channel neighborhood and the Fort Point Channel Landmark District, the Project is contextual, respectful, and sensitive to the historic urban fabric, yet not imitative of the area buildings' earlier styles and methods of construction. The principal design goal is to celebrate to modern transformation of this neighborhood while still respecting the district's historical integrity. The primary drivers of the Project design are its historic context, corner location, mix of uses, and lot size.

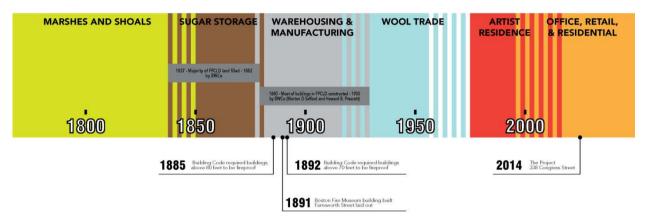


FIGURE 4: FORT POINT CHANNEL TIMELINE

While each building varies in the Fort Point Channel Landmarks District, the collective effect of the late-19th and early-20th century industrial buildings gives the neighborhood its unique character and charm (Figure 4). The historic buildings reflect original manufacturing and warehouse uses through fenestration patterns, material choices, structure, and façade compositions. Along Congress Street, the building facades become more porous and glassy away from Fort Point Channel, reflecting original uses for warehouse closer to the water and progressing to manufacturing uses that required natural daylighting and thus more and larger windows. The Project design becomes part of this historic continuum of expressing interior uses through fenestration, ultimately complementing the timeless quality of its surroundings.



FIGURE 5: CONGRESS STREET NORTH ELEVATION

Since the neighborhood's initial construction, the buildings have undergone continual repurposing, repositioning, and renovation to accommodate the changing needs of the community; once-vital warehouse and manufacturing uses have evolved to encompass office, retail, and residential uses. Given the site's opportunity for new construction amidst a large and well-preserved collection of urban lofts, the Project design is intended as a complement and counterpoint to its historic context, protecting the historic integrity of the district (Figure 5). The Fort Point Channel Landmark District anticipates new construction and directs that a new building should "reflect the period in which it was built and should not necessarily be imitative of an earlier style, period, or method of construction." The design of the new construction respects the existing historical patterns, proportions, scale, and materiality within the Fort Point Channel Landmark District (Figure 6). As the Project design has progressed, it has translated the enduring qualities of the urban lofts into a special and sophisticated Project. The contemporary architectural language of the Project design is strongly influenced by the industrial design and heritage of the historic district.

¹ The Fort Point Channel Landmark District Standards and Criteria (Design Guidelines), 2008: 113.



FIGURE 6: DESIGN PRINCIPLES FROM THE HISTORIC CONTEXT

4.2.2. PROPOSED DESIGN CONCEPT

The Project is new and distinct from adjacent historic structures, but maintains continuity and celebrates the district's industrial past in a modern way through loft-like spaces, pedestrian engagement at the ground floor, outward expression of interior uses, and use of materials and color, which in combination contribute to the building's timeless elegance.

In keeping with the 19th and 20th century industrial buildings along Congress Street, the Project design incorporates ground floor retail space and reflects the building's uses through window patterns. Given the intended residential use of the building, large windows provide natural lighting to residents and outwardly express the interior uses.

The Project juxtaposes exposed metal against a glassy façade, contrasting an industrial-inspired structure against an airy, modern sensibility. Horizontal metal members serve as reference points to cornice lines, floor lines, and architectural details of nearby buildings, while the use of glass in the Project design instills a sense of lightness and museum-like quality in the Project.

The façade's rhythm of metal and glass is punctuated by accent panels. The design process evaluated color schemes for the Project, favoring a darker palette for the exposed metal frame to recede against the historic adjacent masonry structures, yet created interest with color variation. The Project accent colors reference rich shades of materials found within the Fort Point Channel Landmark District, creating a modern interpretation of the industrial loft materials and colors.

The Project acknowledges the importance of the corner location within the neighborhood by creating a unique, but not trendy, building that is both elegant from afar and welcoming to

pedestrians. On a pedestrian scale the Project enhances the streetscape through ground level retail, wrapping the corner and connecting newer retail establishments along Farnsworth with the activity of Congress Street. At an urban scale, the design highlights the evolution of the neighborhood from its industrial past into a lively mixed-use node of urban activity. Ultimately, the Project's location follows Smart Growth principles by concentrating development, integrating uses, expanding housing choices, and fostering a sense of place.

Ultimately, the Project celebrates the neighborhood's transformation with a timeless, understated elegance that enhances, but does not compete with the historic urban fabric.

5. HISTORIC AND ARCHAEOLOGICAL RESOURCES

This section describes the historic and archaeological resources within and adjacent to the Project site and discusses potential project-related impacts to these resources.

5.1.1. HISTORIC RESOURCES

5.1.1.1. HISTORIC RESOURCES WITHIN THE PROJECT SITE

The approximately 5,420 SF Project site consists of a surface parking lot. Located on the corner of Congress and Farnsworth Streets, the Project site is within the Fort Point Channel Landmark District, an area subject to review by the Fort Point Channel Landmark District Commission. The Project site is also located within the Fort Point Channel Historic District, which was listed in the National Register of Historic Places in 2004.

Historically, the Project site was occupied by a six-story masonry building constructed in 1890 by the Boston Wharf Company. The former Boston Wharf Company building housed a variety manufacturing uses until the 1920s, including solid mica insulating joints (1890), shoes (1899), and typewriters (1923). The building was of similar height and masonry construction as the neighboring six-story building at 332 Congress Street. According to City of Boston building permits, the former Boston Wharf Company building was demolished in 1936. Following demolition of the building the site remained vacant until 1958, at which time the site began to be used for surface parking. The site has continued as a surface parking lot to the present day.

5.1.1.2. HISTORIC RESOURCES IN THE VICINITY OF THE PROJECT SITE

As noted above, the Project site is located within the Fort Point Channel Landmark District and National Register Historic District. With slightly different boundaries the Fort Point Channel Landmark District and National Register Historic District, the area was largely developed the Boston Wharf Company, through an ongoing campaign of land filling which began in 1836 and continued until 1882. The Boston Wharf Company was also responsible for erecting nearly all the buildings within the district. These buildings, of which there are approximately 108, were constructed for use as general manufacturing, warehouse, and commercial space, and as shipping and receiving uses for Boston's wool trade. The district is characterized by well-preserved 19th and 20th century masonry buildings which average in height from five to six stories, some taller, and represent a variety of architectural styles including Romanesque Revival, Renaissance Revival, Classical Revival, Queen Anne, Italianate, and Industrial styles. During the period of 1893 to 1917, the Boston Wharf Company employed Morton D. Stafford as staff architect responsible for the designs of the majority of the Boston Wharf Company buildings. Howard Prescott succeeded Stafford as staff architect for the Boston Wharf Company from 1917 to 1939.

Associated with the Landmark district are two adjacent "Protection Areas," the Seaport Boulevard/Boston Wharf Road Protection Area and the A Street Protection Area. The intent of the Protection Areas is to protect view corridors into and out of the adjacent Landmark

district and to ensure that the massing, land coverage, and height of new construction on adjacent lots is compatible with that of the Landmark district.

There are several additional State and National Register-listed properties within the Project's vicinity. One of the more notable historic resources within the Project's vicinity is the Congress Street Fire Station located across Farnsworth Street from the Project Site at 344 Congress Street. Listed individually in the National Register, the Congress Street Fire Station is a unique structure within the Fort Point Channel District both for its use and small scale.

State and National Register-listed properties, and properties included in the Massachusetts Historical Commission's Inventory of Historic and Archaeological Assets of the Commonwealth (the Inventory), within a quarter-mile radius of the Project Site, are listed in Table 5-1 and their locations are depicted on Figure 7.

Table 5-1: Historic Resources						
Map No.	Name	Address	Designation			
1	Fort Point Channel Historic District	Bounded by Fort Point channel seawalls, Northern Ave. bridge, Seaport Blvd, Stillings, Midway and A Sts and Necco Ct	State and National Register-listed			
2	Northern Avenue Bridge	Northern Avenue over the Fort point Channel	State and National Register-listed			
3	Congress Street Fire Station	344 Congress Street	State and National Register-listed			
4	Russia Wharf	Russia Wharf, Atlantic Avenue	State and National Register-listed			
5	Chapel of Our Lady of Good Voyage	65 Northern Avenue	Inventory			
A	Fort Point Channel Landmark District	Bounded by Fort Point Channel seawalls, Seaport Blvd, Stillings, Midway and A Sts and Necco Ct	State Register listed			
В	Seaport Boulevard/Boston Wharf Road Protection Area	Seaport Boulevard/Boston Wharf Road	Inventory			
С	A Street Protection Area	A Street, Wormwood, Melcher Street and West Service Road	Inventory			



FIGURE 7: HISTORIC RESOURCES

5.1.2. ARCHAEOLOGICAL RESOURCES WITHIN THE PROJECT SITE

The proposed Project is located on filled land which has been previously disturbed by the construction of Boston Wharf Company buildings and the current surface parking lot. No previously identified archaeological resources are located within the Project Site or immediate vicinity. No impacts to archaeological resources are anticipated.

5.1.3. VISUAL IMPACTS TO HISTORIC RESOURCES

The Project will fill a gap along the Congress Street streetwall created in 1936 with the demolition of the 1890 Boston Wharf Company building. The reintroduction of the six-story

building to the site will restore the continual building façade height for the Congress Street block between Sleeper and Farnsworth Streets.

To protect the historic integrity of the Fort Point Channel District, the Project design will be both differentiated from the old and compatible with the adjacent architectural features. As noted in Section 4, the design for the new construction is contextual, respectful, and sensitive to the historic urban fabric, yet not imitative of the area buildings' earlier styles and methods of construction.

The use of large windows in the Project will provide a modern interpretation of the district's industrial character while incorporating ground floor retail space will contribute to the ongoing revitalization of the streetscape. The use of exposed metal juxtaposed against a glassy façade further emphasizes the modern industrial character with horizontal metal members serving as reference points to cornice lines, floor lines, and architectural details of nearby buildings, while the use of glass instills a sense of lightness. The use of a darker palette for the exposed metal frame will allow them to recede against the adjacent historic masonry building, while creating interest with color variation. The accent colors reference rich shades of materials found within the district, further emphasizing the modern interpretation of the industrial character of the district.

5.1.4. Shadow Impacts to Historic Resources

While shadow impacts are inevitable given the vacant nature of the Project site, impacts to the Fort Point Channel District will be minimal given the location of the Project site. As discussed in greater detail in Section 3.2, shadow studies were conducted to investigate impacts from the Project at three times of (9:00 a.m., 12:00 noon, and 3:00 p.m.) during each of the vernal autumnal equinoxes (March 21 and September 21), summer solstice (June 21), and the winter solstice (December 21). In addition, shadow studies were conducted for the 6:00 p.m. time period during the summer solstice.

As illustrated in the shadow study diagrams, net new shadow will be limited to paved streets, alleyways, and rooftops. Because the Project is in a densely built urban neighborhood, the shadows are minimal and consistent with adjacent buildings. Only during one of the time periods studied (summer solstice at 6:00 p.m.) was new shadow cast on the Congress Street Fire Station; however, shadows were limited to the building's rooftop and do not compromise the building's historic or architectural integrity.

5.1.5. HISTORIC PRESERVATION AND CONTINUITY: ART, ARTISTS, AND ART USES

The Project will feature an art exhibit wall to animate the ground level of the Farnsworth façade and will continue the tradition of incorporating locally created art throughout the neighborhood. The Proponent will work with Fort Point Arts Community and others to design this space for changing exhibits or permanent installations.

The design of the new construction respects the existing historical patterns within the Fort Point Channel Historic District. The Proponent will seek a Certificate of Appropriateness for the Project by the Fort Point Channel Landmark Commission District.

6. INFRASTRUCTURE SYSTEMS

The existing infrastructure surrounding the site of 338 Congress Street appears of adequate capacity to service the needs of the Project. The following describes the existing utility systems surrounding the site and explains how these systems will service the Project. The analysis also discusses any anticipated project related impacts on the utilities and identifies mitigation measures to address these potential impacts.

The Project is moving into the Design Development phase where a detailed infrastructure analysis will be performed. The Project's team will coordinate with the appropriate utilities to address the capacity of the area utilities to provide services for the new building. A Boston Water Sewer Commission ("BWSC") Site Plan and General Service Application is required for the proposed new water, sanitary sewer, and storm drain connections. In addition, a Storm Water Pollution Prevention Plan will be submitted specifying best management measures for protecting the BWSC drainage systems during construction.

A Drainage Discharge Permit Application will be submitted to the BWSC for any required construction dewatering. A NPDES Dewatering General Permit will be submitted to the U.S Environmental Protection Agency (EPA) if uncontaminated discharge to any Waters of the Commonwealth is anticipated.

6.1. Wastewater

6.1.1. EXISTING SEWER SYSTEM

BWSC owns and maintains the sanitary sewer system adjacent to the Project site (See Figure 6-1, BWSC Sewer System). BWSC records drawings indicate an existing 15-inch sanitary sewer line runs southeasterly along Congress Street, and another 15-inch sanitary sewer line runs southwesterly along Farnsworth Street. These two lines meet at a sanitary manhole at the intersection of Congress Street and Farnsworth Street, due south of the Project site.

The Project site does not have an existing sanitary connection to the BWSC system.

6.1.2. PROJECT GENERATED SANITARY SEWER FLOW

The Project will generate an estimated 3,170 gallons per day (gpd) based on design sewer flows provided in 310 CMR 15.000-The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-Site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage and the proposed building program as summarized in Table 6-1.

Table 6.1: Project Generated Sanitary Sewer Flow					
Use	Quantity	Unit Flow Rate	Estimated Maximum Daily Flow		
Residential Units	27 bedrooms	110 gpd/bedroom	2,970 gpd		
Commercial / Retail / Restaurant	996 sf	50 gpd/1,000 sf (200 gpd minimum for design)	200 gpd		
		Total	3,170 gpd		

6.1.3. SANITARY SEWER CONNECTION

The Project's sanitary services will tie into the 15-inch sanitary sewer main in either Congress Street or Farnsworth Street. It is anticipated that the building will have one 6-inch sanitary service.

The flow full capacity of the 15-inch sanitary sewer in Congress Street adjacent to the site is approximately 5.23 cfs (3.38 MGD). The flow full capacity of the 15-inch sanitary sewer in Farnsworth Street adjacent to the site is approximately 4.35 cfs (2.81 MGD). The projected maximum daily sewer flow for the project is 0.003 MGD, which is less than 1 percent of both lines' capacity.

The Proponent will submit a General Service Application and Site Plan for BWSC review and approval as the project progresses. Based on the proposed estimated sanitary flow, only local review and approval through BWSC is required for the new sanitary sewer connection.

6.1.4. EFFLUENT QUALITY

The Project is not expected to generate industrial wastes. The floor drains servicing the parking area will tie into an oil and grease separator that will in turn tie into the municipal sanitary sewer.

6.1.5. EFFLUENT QUALITY

The Project is not expected to generate industrial wastes.

6.1.6. Sanitary Sewer Mitigation

To help conserve water and reduce the amount of wastewater generated by the Project, the Proponent will investigate the use of water conservation devices such as low-flow toilets and flow-restricting faucets in compliance with all pertinent Code requirements.

6.2. WATER SYSTEM

6.2.1. EXISTING WATER SERVICE

The water distribution system near the Project site is owned and maintained BWSC (see Figure 6-2, BWSC Water System). BWSC record drawings indicate there are two existing 16-inch ductile iron cement-lined (DICL) water mains in Congress Street. One is part of the Southern High service network and the other is part of the Southern Low service network. Both mains were installed in 2007. There is a 12-inch DICL main in Farnsworth Street that is part of the Southern Low service network, and there is an 8-inch DICL water main in Farnsworth Street that is part of the Southern High service network (both installed in 2006). The water mains on Farnsworth Street tie into the water mains on Congress Street at the intersection of the two streets.

The Project site does not have an existing water service connection to the BWSC system.

There are two fire hydrants near the Project site. One is located near the southwest corner of the Project site on the northern side of Congress Street. The other is located on the southern side of Farnsworth Street, southeast of the Project site. It appears that these hydrants will provide sufficient coverage for the Project. The Proponent will confirm this with BWSC and the Boston Fire Department (BFD) during the detailed design phase.

6.2.2. ANTICIPATED WATER CONSUMPTION

The Project's water demand estimate for domestic services is based on the project's estimated sewage generation, plus a factor to account for consumption, system losses, and other usages to estimate an average water demand. The total estimated water demand is 3,500 gpd. The water for the Project will be supplied by BWSC. More detailed water use and meter sizing calculations will be submitted to BWSC as part of the Site Plan approval process.

6.2.3. PROPOSED WATER SERVICE

The proposed building's domestic water service line is expected to tie into the Southern Low service network. Water meters will be of a type approved by BWSC and tied into the BWSC's Automatic Meter Reading System. Fixture counts and water meter sizing information will be provided to BWSC during the Site Plan review process.

The Project anticipates having a dedicated fire protection service that is expected to tie into the Southern High service network. The fire protection service will be provided with a backflow prevention device that will be approved though BWSC's Enforcement Section. The location of hydrants and siamese connections will be reviewed by BWSC and the Boston Fire Department during the design development phase of the Project.

6.2.4. WATER SUPPLY CONSERVATION AND MITIGATION MEASURES

The Proponent is investigating the use of low consumption plumbing fixtures, including low-flow water closets and showers, and aerated faucets.

6.3. STORM DRAINAGE SYSTEM

6.3.1. EXISTING STORM DRAINAGE SYSTEM

According to record drawings, BWSC owns and maintains a 24-inch storm drain in Farnsworth Street. This drain ties into BWSC's 54-inch storm drain in Congress Street, which drains to a storm drain outfall (SDO75) in Fort Point Channel.

The existing Project site consists of an impervious paved parking lot and small parking kiosk. There is no existing on-site drain system, and runoff drains overland to catch basins in Farnsworth Street, Congress Street, and a passageway/alley to the North of the site.

All runoff from the Project site is tributary to the 54-inch Storm Drain in Congress Street.

6.3.1.1. Proposed Storm Drainage System

The Project will attenuate peak flows and improve the quality of stormwater runoff being discharged to BWSC's Storm Drain system through the installation of an on-site infiltration system underneath the building slab. This system will contribute to the goals of the GCOD, which include maintaining and restoring groundwater levels and reduction of surface water runoff and pollution.

BWSC Site Plan requirements provide that a volume of water equal to the first one-inch of rainfall multiplied by the impervious area on site, must be infiltrated prior to discharge to a storm drain or

combined sewer. It is anticipated that this requirement will be met by the installation of the proposed subsurface infiltration system on site. The infiltration system is expected to have an overflow structure allowing larger storm events to bypass the system.

The storm drain system will be designed in accordance with BWSC's design standards and requirements. A Site Plan will be submitted for BWSC approval and a General Service Application will be completed prior to any off-site drain work. Erosion and sediment controls will be used during construction to protect adjacent properties and the municipal storm drain system. A pollution prevention plan will be prepared for use during construction including during demolition activity. An operation and maintenance plan will be developed to support the long-term functionality of the proposed stormwater management system.

6.4. ELECTRIC SERVICE

NSTAR owns and maintains the electrical transmission system located in Congress Street and Farnsworth Street. The actual size and location of the building services will be coordinated with NSTAR during the detailed design phase.

The Proponent will investigate energy conservation measures, including high efficiency lighting.

6.5. Telecommunication System

Comcast currently offers telephone, cable, and high-speed internet services in the area. Verizon currently offers telephone service in the area.

6.6. NATURAL GAS SYSTEM

National Grid owns and maintains a 6-inch, plastic, low-pressure gas main in Farnsworth Street, and a 12-inch, cast iron, low-pressure gas main in Congress Street. The Project is expected to use natural gas for heating and domestic hot water. The actual size and location the building services will be coordinated with National Grid during the detailed design phase.

6.7. STEAM SYSTEMS

There are no steam systems near the Project site.

7. COORDINATION WITH OTHER GOVERNMENTAL AGENCIES / PUBLIC REVIEW PROCESS

7.1. COMMUNITY OUTREACH

The Proponent is committed to effective community outreach and will engage the community to ensure public input on the Project. The Proponent has met with or has been in contact with the Boston Redevelopment Authority, Boston Transportation Department, and the following abutters and neighborhood groups:

- 25 Channel Center Residents
- 355 Congress Street Residents
- Barbara Lynch (various Congress Street restaurants)
- Bee's Knees
- Berkeley Investments
- Boston Harbor Association
- Boston Sparks Association
- Children's Museum
- Clarion Partners
- Crosspoint Associates
- Flour Bakery
- Fort Point Arts Community
- Fort Point Cultural Coalition
- Fort Point Neighborhood Association
- FP3 Residents and the Board of Trustees
- Friends of Fort Point Channel
- Sleeper Street Residents
- Pastoral
- Tavern Road

7.2. ARCHITECTURAL ACCESS BOARD REQUIREMENTS

The Project will comply with the requirements of the Architectural Access Board and will be designed to comply with the standards of the Americans with Disabilities Act.

7.3. ANTICIPATED PERMITS AND APPROVALS

The following Table 7-5 presents a preliminary list of public agency permits and approvals that may be required, based on currently available project information. It is possible that some permits listed below may not be required or that others not listed below will be required.

Table 7-5: Anticipated Permits and Approvals						
Agency	Permit, Review, or Approval					
Federal Agencies						
US Environmental Protection Agency	NPDES Dewatering General Permit, if Required					
State Agencies						
Department of Environmental Protection	Sewer Extension/Connection Self Certification					
City Agencies						
Boston Air Pollution Control Commission	Permit/Exemption					
Boston Civic Design Commission	Design Review, if Required					
Boston Inspectional Services Department	Building Permit					
Boston Fire Department	Approval of Fire Safety Equipment					
Boston Public Improvement Commission / Boston	Street/Sidewalk Repair Plan					
Department of Public Works	Canopies/Cornices					
Department of Fublic Works	Permit for street occupancy and opening permit					
Boston Public Safety Commission, Committee on Licenses	Parking Garage Related Permits					
Boston Transportation Department	Construction Management Plan					
Boston Transportation Department	Transportation Access Plan Agreement					
	Water and Sewer Connection Permits					
Boston Water and Sewer Commission	Temporary Construction Dewatering Permit					
Boston Water and Sewer Commission	General Service Application					
	Site Plan Review					
Fort Point Channel Landmark District Commission	Certificate of Appropriateness					
	Zoning Relief					
Zoning Board of Appeal	Conditional Use Permit					
	Interim Planning Permit					

APPENDIX A: EXHIBITS

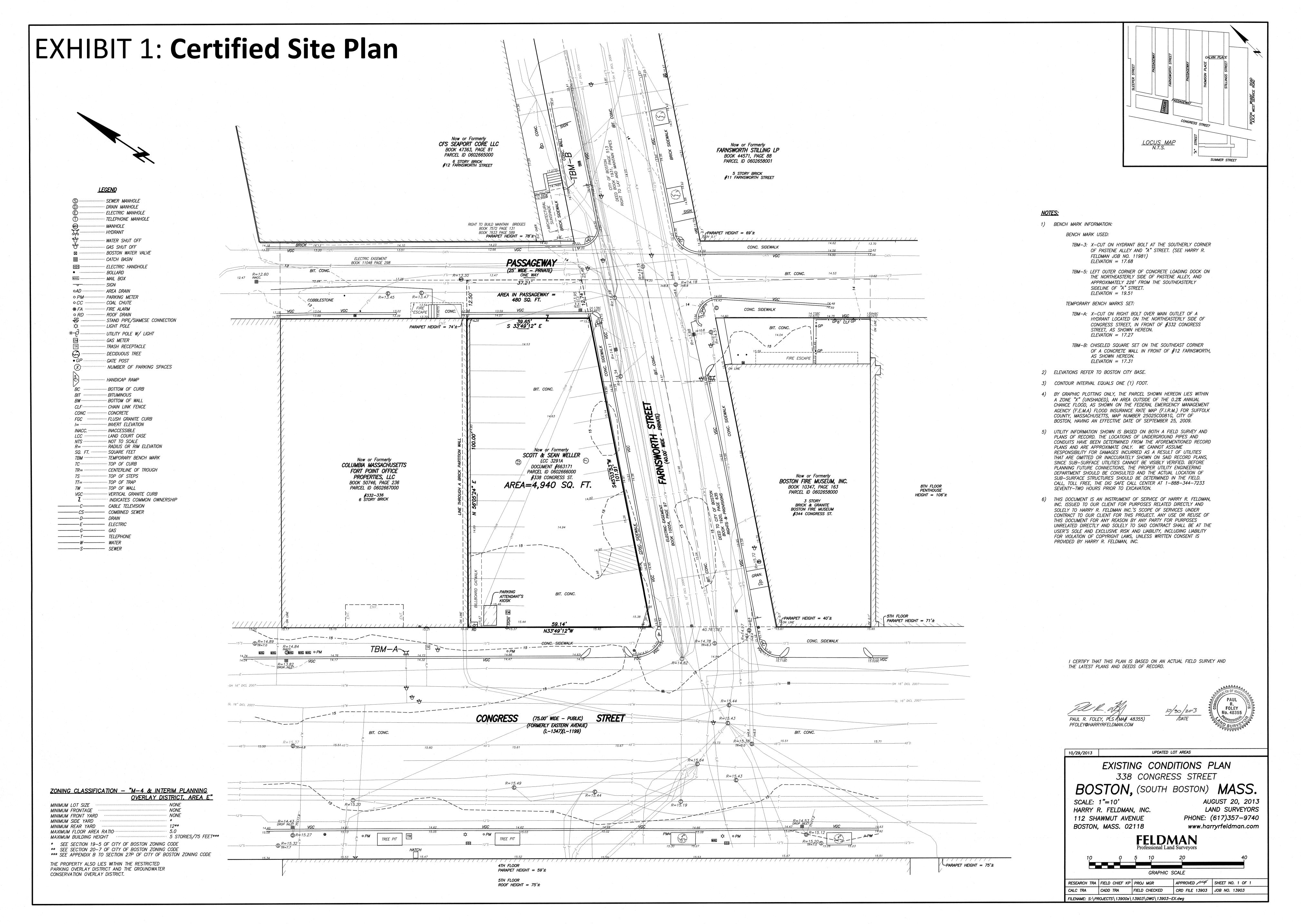


EXHIBIT 2: Locus Map and Existing Condition Photos











EXHIBIT 3: **Site Plan**



EXHIBIT 4: Ground Floor Plan

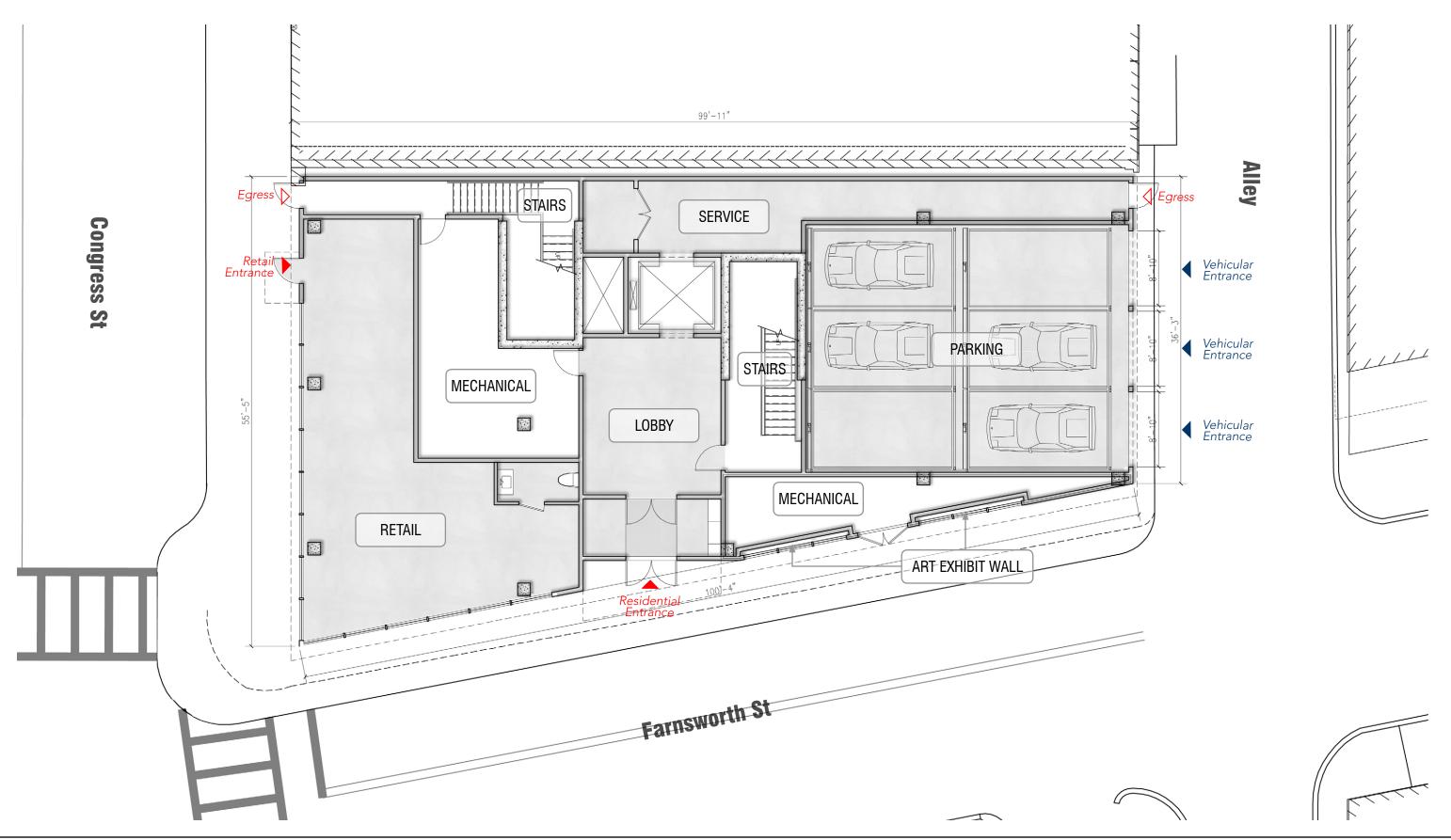


EXHIBIT 5: **Typical Floor Plan**

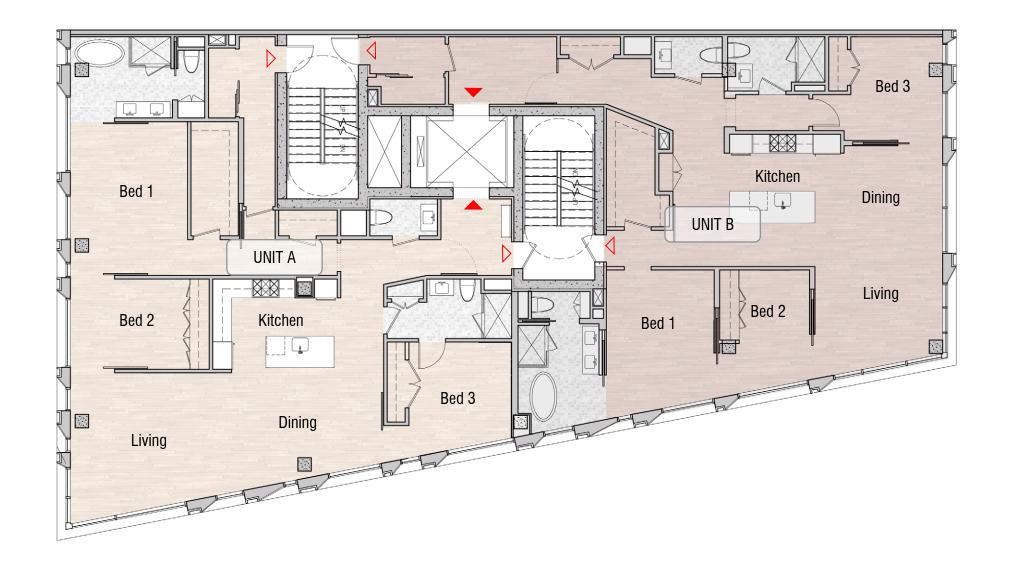


EXHIBIT 6: Roof Plan

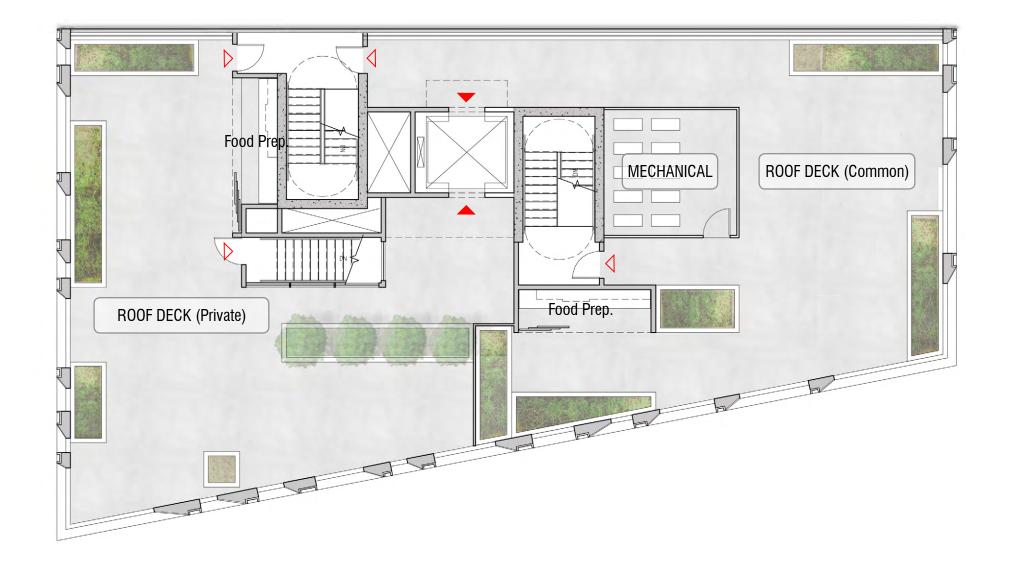


EXHIBIT 7A: Section A

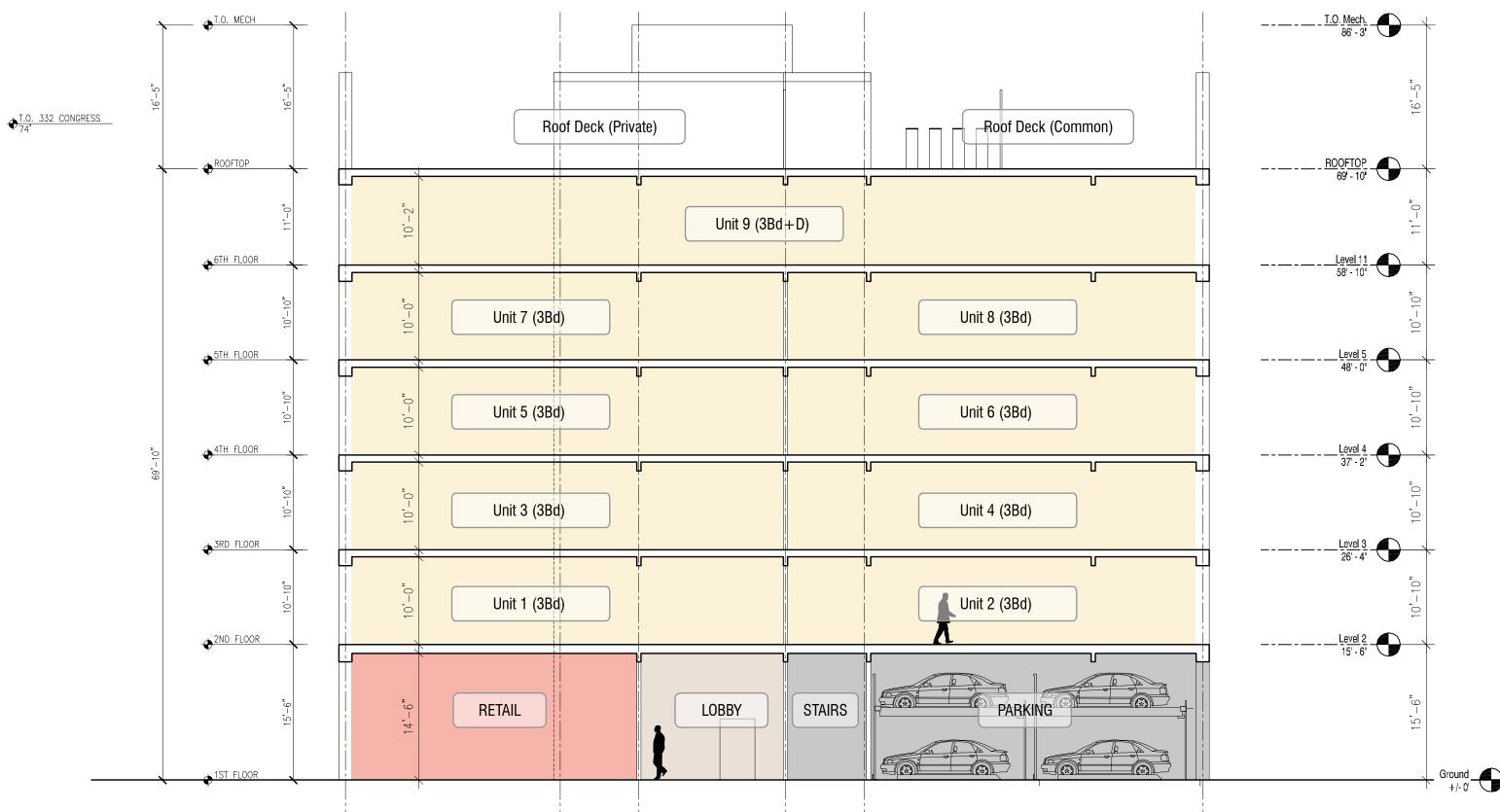


EXHIBIT 7B: Section B

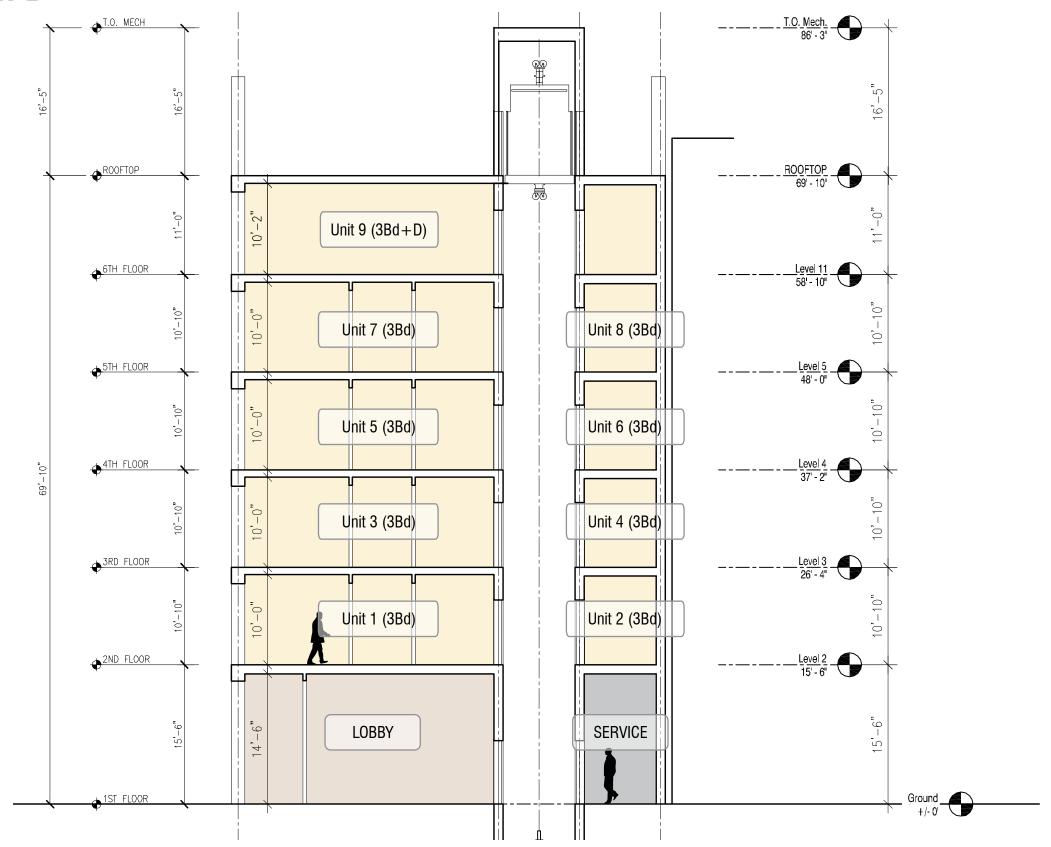


EXHIBIT 8: Congress Street Elevation



EXHIBIT 9: Farnsworth Street Elevation



EXHIBIT 10: **Alley Elevation**



APPENDIX B: **LEED Checklist**

(S (S (S (S (S (S (S (S (S (S	2009 for New Construction and Major Renove to Checklist	ations/			338 Congress Street, Boston, MA	3 Dec 2013
	nable Sites Possible Points:	26	N	Materia	als and Resources, Continued	
Y ? N Prereq 1 1	Construction Activity Pollution Prevention Site Selection Development Density and Community Connectivity Brownfield Redevelopment Alternative Transportation—Public Transportation Access Alternative Transportation—Bicycle Storage and Changing Rooms Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicle Alternative Transportation—Parking Capacity Site Development—Protect or Restore Habitat Site Development—Maximize Open Space Stormwater Design—Quantity Control Stormwater Design—Quality Control Heat Island Effect—Non-roof	1 5 1 6	Y ? N 2	redit 4 redit 5 redit 6 redit 7 ndoor rereq 1 rereq 2 redit 1 redit 2 redit 3.1 redit 3.2	Recycled Content Regional Materials Rapidly Renewable Materials Certified Wood Environmental Quality Possible Points: Minimum Indoor Air Quality Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan—During Construction Construction IAQ Management Plan—Before Occupancy	1 to 2 1 to 2 1 1 1 15
1 Credit 7.2 Credit 8	Heat Island Effect—Roof Light Pollution Reduction	1	1 C	redit 4.2	Low-Emitting Materials—Adhesives and Sealants Low-Emitting Materials—Paints and Coatings Low-Emitting Materials—Flooring Systems	1 1 1
2 2 6 Water	Efficiency Possible Points:	10	1 C		Low-Emitting Materials—Composite Wood and Agrifiber Products	1
Y Prereq 1	Water Use Reduction—20% Reduction Water Efficient Landscaping Innovative Wastewater Technologies Water Use Reduction	2 to 4 2 2 to 4	1 C C C C C C C C C C C C C C C C C C C	redit 6.2 redit 7.1	Indoor Chemical and Pollutant Source Control Controllability of Systems—Lighting Controllability of Systems—Thermal Comfort Thermal Comfort—Design Thermal Comfort—Verification Daylight and Views—Daylight	1 1 1 1 1
5 18 12 Energy	y and Atmosphere Possible Points:	35	1 C	redit 8.2	Daylight and Views—Views	1
Y Prereq 1 Prereq 2 Prereq 3 5 14 Credit 1 Credit 2 Credit 3 Credit 4 3 Credit 5 Credit 6	Fundamental Commissioning of Building Energy Systems Minimum Energy Performance Fundamental Refrigerant Management Optimize Energy Performance On-Site Renewable Energy Enhanced Commissioning Enhanced Refrigerant Management Measurement and Verification Green Power	1 to 19 1 to 7 2 2 3	1 C C 1 C C C C C C C C C C C C C C C C	redit 1.1 redit 1.2 redit 1.3 redit 1.4	Innovation in Design: Walkable Streets Innovation in Design: Specific Title LEED Accredited Professional	1 1 1 1 1
5 4 0 Matori	ala and Descurace Describts Delects	4.4	1 1 2 5	Region	al Priority Credits Possible Points	: 4
Y Prereq 1 3 Credit 1.1 Credit 1.2 Credit 2 Credit 3	als and Resources Storage and Collection of Recyclables Building Reuse—Maintain Existing Walls, Floors, and Roof Building Reuse—Maintain 50% of Interior Non-Structural Elements Construction Waste Management Materials Reuse	1 to 3 1 1 to 2 1 to 2	1 C	redit 1.2 redit 1.3 redit 1.4	Regional Priority: Specific Credit SSc7.1 Regional Priority: Specific Credit SSc7.2 Regional Priority: Specific Credit Regional Priority: Specific Credit Possible Points	1 1 1 1
					40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110	

APPENDIX C: Climate Change Preparedness Questionnaire

Boston Climate Change Preparedness Questionnaire - New Construction

2. Project Information

1. Project Name and Location

Project Name: 338 Congress Street Project Address: 338 Congress Street

2. Project Contact:

Name : Lisa Serafin Title : Principal Company : Redgate

Email Address: lisa.serafin@redgate-re.com

Phone Number: 617.904.7013

3. Project Contact:

Name: Julie Zelermyer

Title: Assistant Project Manager

Company: Redgate

Email Address: julie.zelermyer@redgate-re.com

Phone Number: 617.904.7007

4. Team Description:

Owner / Developer : Redgate Architect : CBT Architects

Engineer (building systems) : RDK Sustainability / LEED : CBT Architects

Construction Management: John Moriarty Associates

Climate Change Expert: Epsilon

3. New Page

5. Is this project a:

Single building

6. At what phase is this project?

PNF Submitted

4. Phased, multi-building project

Project Identification

5. Single building project

7. Project Identification:

Project Name: 338 Congress Street Primary Project Address: Redgate

Additional Project Address: 100 Franklin St, Boston, MA 02110

6. Master Plan

Project Identification

7. Institutional Master Plan

Project Identification

8. Building Classification and Description

8. Building Uses - check all appropriate uses:

Retail

Residential - Multi-unit, Four plus

9. Building First Floor Uses - list all:

Parking, residential lobby, retail

10. Construction Type - select most appropriate type:

Concrete Frame

11. Building Size: do not include commas

Site Area (Square Feet) : Approx. 5,420 SF Building Area (Square Feet) : Approx. 26,741 SF

Building Height (Feet): Approx. 69.8 ft Number of Stories (Floors): 6 Floors

First Floor Elevation (feet above sea level)(Boston City Base Elev.)(Ft.): Approx. 15.5 ft

Number of below grade levels: N/A

9. Green Building

12. Which LEED Rating System(s) has or will your project use (by area for projects using multiple rating systems):

	Rating System
Primary Use	LEED 2009 for New Construction
Secondary Use	
Additional Uses	

13. What are the projected LEED Rating System Outcome(s):

	Rating System
Primary Use	Certified
Secondary Use	
Additional Uses	

14. Is or will the Project Register with the US Green Building Council

No

15. Is or will the Project Seek US Green Building Council Certification:

NΙο

10. Higher Temperatures and Heat Waves - Analysis and General Strategies

16. Analysis Sources:

List Climate Change information sources : Climate Observations and Projects, New York Academy of Sciences; Massachusetts Adaptation Report

17. What time span of Climate Change was considered:

75 Years

18. Analysis Conditions:

What Low Temperature will be used for project planning (degrees): 0 What High Temperature will be used for project planning (degrees): 100

19. What Extreme Heat Event characteristics will be used for project planning:

Peak High (degrees): 95 Duration (days): 7

Number of events per year: 7

20. What measures will the project employ to reduce urban heat-island effect:

21. Will the project be able to manage hotter and more humid summers without increasing its electrical load; if so how?

No

22. Will the building remain operable without utility power for an extended period; if so for how long and by what strategies?

No

11. High Temperatures and Heat Waves - Active and Passive Strategies

23. What will be the overall energy performance of the project or building (percentage above code)

20%

24. How will project energy performance be determined

Whole Building Energy Model

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

High performance lighting Automatic lighting controls EnergyStar equipment / appliances High performance HVAC equipment Energy recovery ventilation

Describe any added measures: High performance building envelope, variable speed motors

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

Describe any added measures: Building automation system, lighting controls

27. Will the project employ Smart Grid Infrastructure and / or Systems

No

28. Describe any non-mechanical strategies that will support building functionality and use during an extended interruption(s) of utility services and infrastructure

Operable windows (including emergency only) Natural ventilation High performance building envelop

29. List the R values for building envelope elements:

Roof: 30 Walls: 19 Floors / Slab: 13

Foundation / Basement : 13

Windows: 3.57 Doors: 1.61

12. Sea-Level Rise and Storms – location analysis and description

30. Location Description:

Site Elevation - low point (feet above sea level)(Boston City Base Elev.)(Ft.) : 14 Site Elevation - high point (feet above sea level)(Boston City Base Elev.)(Ft.) : 15.5 31. Location Classification - is the site or building located in any of the following:

	Yes	No
Coastal Zone	X	
Velocity Zone		Х
Flood Zone		Χ
Area Prone to Flooding		Х

32. Are updates in the floodplain delineation due to climate change likely to change the classification of the site or building location:

Yes

33. What is the project or building proximity to nearest Coastal, Velocity or Flood Zone or Area Prone to Flooding (horizontal distance in feet)

C

13. Sea-Level Rise and Storms - analysis and general strategies

34. Analysis Sources:

List Sea-Level Rise information sources: Boston Harbor Association Preparing for the Rising Tide

35. What time span of Climate Change and Rising Sea-Levels was considered:

75 Years

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

Sea-Level Rise (change in feet): 3-5 Frequency of Storms (number per year): 0.25

14. Sea-Level Rise and Storms - Building Flood Proofing

37. Will the building remain occupiable without utility power during a period of extended inundation:

No

38. Will the proposed ground floor be raised in response to Sea Level Rise:

No

- 39. Will the proposed ground floor be raised in response to Sea Level Rise:
- 40. Will lower building levels be constructed in a manner to prevent water penetration:

If yes, what is the Flood Proof Elevation (height above 100 Year Floorplain) (Boston City Base Elev.)(Ft.):

41. Describe measures and strategies intended to ensure the integrity of critical building systems during a flood or severe storm event:

Storm water back flow prevention

42. Were the differing effects of fresh water and salt water flooding considered:

No

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

No

44. Describe any additional Building Floor Proofing strategies?

15. Sea-Level Rise and Storms - Building Resiliency and Adaptability

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

46. Will the building include additional structural capacity and or building systems to accommodate future on-site renewable and or clean energy sources; if so what:

No

Yes

47. Can the site and building be reasonably modified to increase Building Flood Proofing; if so how:

Nc

48. Describe any additional Building Resiliency and Adaptability strategies: