Institutional Master Plan Notification Form / Project Notification Form

Submitted Pursuant to Article 80 of the Boston Zoning Code

Massachusetts General Hospital 125 Nashua Street

Submitted to:
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Submitted by:
Massachusetts General Hospital
55 Fruit Street
Boston, MA 02114

Prepared by:
Epsilon Associates, Inc.
3 Clock Tower Place, Suite 250
Maynard, MA 01754

In Association with:
Goulston & Storrs
Leggat McCall Properties
Linea 5, Inc.
Thompson Consultants, Inc.
Vanasse Hangen Brustlin, Inc.

November 10, 2014

Epsilon ASSOCIATES INC.

Institutional Master Plan Notification Form/
Project Notification Form

Massachusetts General Hospital
125 Nashua Street

Submitted to:

Boston Redevelopment Authority
One City Hall Square
Boston, Massachusetts 02201

Prepared by:

Epsilon Associates, Inc.
3 Clock Tower Place, Suite 250
Maynard, MA 01754

Submitted by:

Massachusetts General Hospital
55 Fruit Street
Boston, MA 02114

In Association With:

Goulston & Storrs
Leggat McCall Properties
Linea 5, Inc.
Thompson Consultants, Inc.
Vanasse Hangen Brustlin, Inc.

November 10, 2014

Table of Contents

Table of Contents

Table of Contents (Continued)

Table of Contents (Continued)

List of Appendices

List of Figures

List of Tables

Chapter 1.0
Introduction and General Information

1.0 INTRODUCTION AND GENERAL INFORMATION

1.1 Introduction

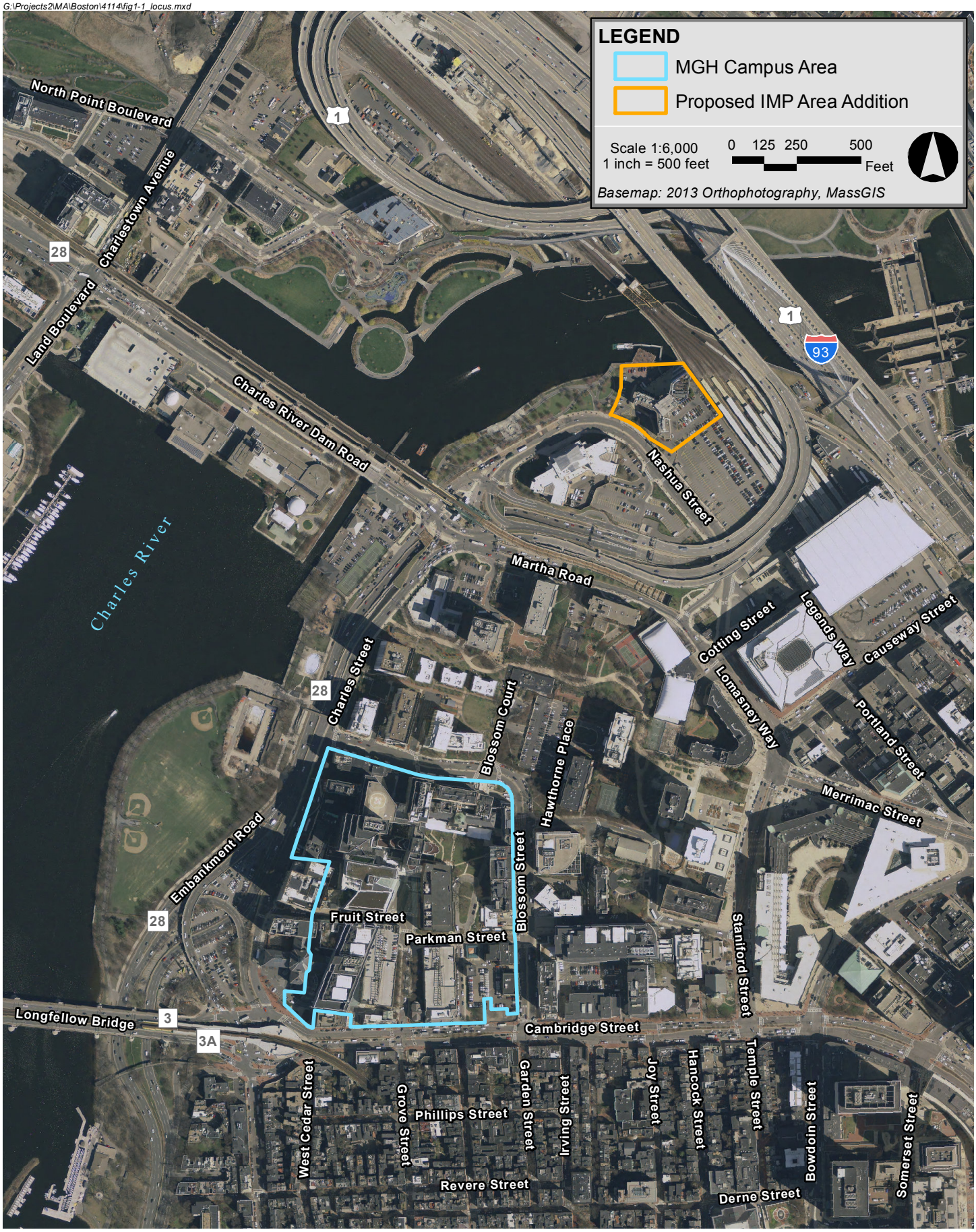
Founded in 1811, Massachusetts General Hospital (MGH or the Proponent) is the third oldest general hospital in the United States, and the oldest and largest in New England. The 999-bed, world-renowned medical center offers sophisticated diagnostic and therapeutic care in virtually every specialty and subspecialty of medicine and surgery. MGH repeatedly is named one of the country's top hospitals by U.S. News and World Report, ranking in the top three nationwide for several years. The hospital's main campus is in downtown Boston (Figure 1-1). The MGH main campus has an Institutional Master Plan that was approved in 2006 and amended in 2010 (IMP).

MGH assumed responsibility for the property at 125 Nashua Street (see Figure 1-2) in July 2013[1] after Spaulding Rehabilitation Hospital vacated the site for their new location in Charlestown. After careful consideration regarding the potential short and long term use of the 125 Nashua Street site, MGH decided to renovate the existing building for use as an administration building, allowing MGH to consolidate existing administration employees from other MGH-owned and leased locations into the Spaulding building (the Project).

MGH is submitting this Institutional Master Plan Notification Form/Expanded Project Notification Form (IMPNF/PNF) to amend its existing IMP pursuant to Article 80D of the Boston Zoning Code (Code) and initiate Large Project Review pursuant to Article 80B of the Code for the Project. The Expanded PNF component of this IMPNF/PNF provides information on the anticipated environmental impacts of the renovation of the existing building, and it is the desire of the Project team that the BRA, after reviewing public and agency comments on this IMPNF/PNF and any further responses to comments made by the Project team, issue a Scoping Determination Waiving Further Review pursuant to the Article 80B process and a separate Scoping Determination for the IMPNF component pursuant to Article 80D.

[1] Spaulding Rehabilitation Hospital transferred title to the Property to MGH's affiliate, The General Hospital Corporation, in August 2013. MGH has been treated as the Proponent in this filing.

G:\Projects2\MA\Boston\4114\fig1-1_locus.mxd



125 Nashua Street Boston, Massachusetts

Epsilon Associates Inc.

Figure 1-1

MGH Campus Area and Proposed IMP Area

125 Nashua Street Boston, Massachusetts

Figure 1-2
Site Plan

1.2 Mission and Objectives

1.2.1 Mission & Guiding Principles

MGH's mission is as stated below:

> *"Guided by the needs of our patients and their families, we aim to deliver the very best health care in a safe, compassionate environment; to advance that care through innovative research and education; and, to improve the health and well-being of the diverse communities we serve."*

MGH sustains synergy among the four components of its mission – patient care, teaching, research and the community. While patient care is the primary mission, the integration of research and teaching programs is critical in both advancing the quality of patient care and distinguishing MGH as a provider. MGH adheres to the following guiding principles as it adapts to further challenges and opportunities.

World Class Patient Care – MGH's 999-bed medical center, located in the heart of Boston, offers sophisticated diagnostic and therapeutic care in virtually every specialty and subspecialty of medicine and surgery. MGH offers high-quality care and services in four health centers in the Boston area. The hospital also holds concurrent Level 1 verification for adult and pediatric trauma and burn care.

MGH's five multidisciplinary care centers – known worldwide for innovations in cancer, digestive disorders, heart disease, transplantation and vascular medicine – unite specialists across the hospital to offer patients comprehensive, state-of-the-art medical care and the best possible outcomes.

In addition, through MassGeneral Hospital for Children, MGH provides a full range of pediatric health care services, from primary care to cutting-edge treatments of complex and rare disorders.

A Research Leader – MGH has long been a leader in successfully bridging innovative science with state-of-the-art clinical medicine. With an annual research budget of approximately $786 million, MGH conducts the largest hospital-based research program in the United States - a program that spans more than 20 clinical departments and centers across the hospital. This funding drives discoveries and breakthroughs in basic and clinical research, which translate into new and better treatments that transform medical practice and patient care.

An Emphasis on Teaching – MGH is the original and largest teaching hospital of Harvard Medical School, where nearly all of its staff physicians serve on the faculty. Since the hospital's founding, MGH has been committed to training and mentoring the next generation of international leaders in science and medicine, providing a wealth of opportunities for physicians, nurses, allied health professionals, physical, occupational and

speech and language therapists and other health professionals. These talented men and women, in turn, lend fresh and innovative perspectives on how to treat and care for patients.

Reaching Out to the Community - MGH's work has always been guided by the needs of patients and their families. MGH partners with communities to build, improve and sustain health care delivery, and increase the health and well-being of those who live and work in these communities.

At its main campus MGH annually:

- Admits almost 48,000 inpatients;
- Handles over 1.5 million outpatient visits;
- Records 100,000 emergency room visits;
- Performs more than 42,000 operations; and
- Delivers almost 3,600 babies.

In addition to the elements of the Mission stated above, MGH has a stated commitment to quality and safety as described below:

Setting the Bar for Quality & Safety - Safety, effectiveness, patient centeredness, timeliness, efficiency and equity – these six tenets established by the Institute of Medicine are the foundation of MGH's approach to quality and safety. MGH measures its performance, sets high goals and tracks its progress in relation to those goals. MGH compares itself against local and national benchmarks in key quality and safety areas to ensure they deliver the highest quality and safest care possible.

The elements of the MGH mission are clearly interrelated. MGH's commitment to patient care enhances the need for cutting edge technology and expertise. This commitment drives the need to maintain state-of-the art facilities, research space, and top-notch educators on campus. Research is critical to making advances in patient care. Medical education (both undergraduate, graduate and post graduate) enhances patient care by providing multiple levels of checks and balances and maintaining the highest academic standards in practice, and facilitating 24-hour on-site coverage of inpatient units with multiple specialists. This is an advantage unique to teaching hospitals. Providing educational facilities on campus also enhances the need to provide students and researchers with state-of-the-art facilities that support cutting-edge technology, allowing students to receive the best and most modern education possible. In addition, the fact that MGH is a premier research institution enhances the public awareness that the best and latest in patient care is available at the hospital. The research, education and patient care all further MGH's commitment to help build and sustain a healthier community.

1.3 Community Benefits

1.3.1 Community Benefit Program

MGH's Community Benefit Program comprises over 25 programs. The Community Benefit Program began as a series of discrete programs to improve health care more than ten years ago. Now the program has evolved into a comprehensive set of partnerships to reduce violence, improve access to care, and reduce and prevent substance abuse among youth.

Partnership is at the heart of the mission of the MGH Community Benefit Program:

> *The MGH Community Benefit Program collaborates with the community and hospital partners to build and sustain healthier communities, and to enhance the hospital's responsiveness to patients and community members from diverse cultural and socioeconomic backgrounds.*

As a member of the Partners HealthCare System, MGH is committed to working with community residents and organizations to make measurable sustainable improvements in the health and status of underserved populations. The vision of the community benefit program and health centers goes far beyond providing excellent, accessible care in a manner that is responsive to patient need; the vision includes collaboration with local partners to create healthier communities.

Special Populations and Health Care Needs

Some of the hospital's community benefit programs targeting special populations and health care needs are summarized below.

- **Committee on Racial and Ethnic Disparities in Health and Health Care** – MGH has taken a leadership role to address health care disparities and educate the hospital community about its detrimental effect on some patients. In 2003, as part of a citywide effort convened by former Boston Mayor Thomas Menino on exploring hospitals' role in eliminating disparities in health and health care among racial and ethnic minorities in Boston, MGH established a Disparities Committee. The committee was charged with identifying and addressing disparities wherever they might exist at MGH. In 2004, the committee established a quality subcommittee, a patient experience and access subcommittee, and an education and awareness subcommittee to evaluate potential disparities at MGH. In July 2005, the MGH launched a first-of-its-kind national center dedicated to developing policies and changing the delivery of care to help eliminate racial and ethnic differences - or disparities - in health care. The Disparities Solutions Center has the potential to change the way minorities receive medical care locally, regionally and nationally and serves as a resource for hospitals, health insurers, physicians and other caregivers, community health centers, health professions schools, consumer organizations and state and local governments.

- **HAVEN** – MGH established the HAVEN (Hospitals Helping Abuse and Violence End Now) program to address the growing concerns related to domestic violence. The mission of HAVEN is to "work as part of a broader community response to end intimate partner abuse by improving and enhancing the institutional response and care to patients and employees whose lives have been impacted by domestic violence." HAVEN trains doctors, nurses, social workers, and other health care providers to ask patients about partner abuse sensitively and effectively. If a patient discloses abuse, the clinician offers the services of a HAVEN advocate. Since 1997, HAVEN has provided advocacy to more than 7,000 clients.

- **Charlestown Substance Abuse Coalition** – In response to alarming trends regarding rates of hospital admissions for treatment of heroin abuse in Charlestown, community leaders, police, social service agencies, the MGH-Charlestown health center and providers, residents, and others came together in the winter of 2004 to form the Charlestown Substance Abuse Coalition (CSAC). Convened by MGH Charlestown and MGH Community Benefits, the CSAC is working together to reduce substance abuse. CSAC is currently engaged in a comprehensive community assessment and will conduct focus groups, key informant interviews and will co-sponsor a community forum. The data collected from these activities will contribute to a comprehensive prevention plan for the group. MGH has also made a $2 million capital grant to the Charlestown Recovery House to build a 25-bed halfway house for men.

- **YouthCare Community Services** – YouthCare Community Services, a program of MGH-Charlestown, is another example of MGH's commitment to the community. YouthCare is a family of therapeutic programs that serve school-aged children with mental health and developmental disabilities such as autism spectrum disorders, non-verbal learning disabilities, attention deficit disorder, and other related disabilities.

- **The Boston Health Care for the Homeless Program** – The Boston Health Care for the Homeless Program (BHCHP) delivers care to homeless individuals and families in Boston. Services include primary care, mental health services and direct care services at over 70 shelter and outreach sites. These include adult and family shelters, soup kitchens, day centers, shelters for victims of domestic violence, jails and detoxification centers, and recovery and transitional programs. As part of the BHCHP program, the MGH Homeless Clinic was created in 1985 and is operated through the MGH Medical Walk-In Unit. The early goal of the clinic was to focus and coordinate the care of homeless persons already utilizing the hospital services, especially the Emergency Department. Five days per week, the caregivers see adult patients who have been or currently are homeless. The Clinic's Homeless Team proactively reaches out to improve the continuity and consistency of quality health

care to homeless persons by engaging individuals directly on the streets and in shelters, and following them in primary care and specialty clinics as well as providing care in the Emergency Department and during inpatient hospitalizations.

- MGH Community Health Associates – MGH has also established MGH Community Health Associates (CHA), which provides programmatic support, advocacy, clinical supervision, grant management and technical assistance to MGH community health centers. The mission of the CHA and the healthcare centers is the delivery of comprehensive, high quality, primary and preventative health services to low income, uninsured and underserved people who live and work in these communities. MGH fully licenses health care centers in Charlestown, the North End and Back Bay, as well as Chelsea, Everett, and Revere.

- The Community Hepatitis C Virus (HCV) Program began at the MGH Revere HealthCare Center in 2001 when primary care staff identified a growing number of patients infected with HCV. In 2005, the HCV Project launched a HCV treatment clinic at the MGH Charlestown HealthCare Center. James Morrill, MD continues to lead the HCV Project and has created the first community-based program within the MGH system for treatment of patients with Hepatitis C. In 2007, the project was awarded a three-year DPH Chronic Disease Management Grant to allow hiring a full-time Community Health Worker to advocate and educate HCV patients with co-morbid conditions and to pursue outreach to high-risk residents in Charlestown, Revere and Chelsea. In January 2010, a second clinic was opened at the MGH Chelsea HealthCare Center with services provided by a board certified Infectious Disease Specialist, Dr. Richard Colvin. In February 2013, a third clinic was opened at the MGH Revere HealthCare Center, with services provided by a board certified Infectious Disease Specialist, Dr. Dahlene Fusco. The program evaluates approximately 250 patients each year and provides local access to treatment in each community, reducing barriers to treatment.

Community/School Partnerships

A major challenge facing MGH and other teaching hospitals is recruiting candidates with the necessary skills to meet the hospital's high standards in patient care and research. One long-term strategy to address this issue is collaboration with Boston Public Schools to enhance science and health curricula while fostering students' career exploration and skill development. Through partnerships with the James P. Timilty Middle School in Roxbury and East Boston High School – both designated effective practice schools by the Boston's school superintendent as centers for innovation in public education – the Community Benefit Program is bringing a new perspective to the hospital's teaching mission. An intended outcome of these partnerships with Boston Public Schools is to create a pipeline of candidates with the transferable skills to meet the ever-changing demands of the health care industry.

1.3.2 Job Training and Education

MGH's workforce is its most valuable asset and a critical component in its success. MGH is committed to fostering the highest quality work opportunities for all employees, including fair and safe work environments, and to nurturing career-long growth in knowledge and skills. MGH is also committed to communicating the information and providing the tools employees need to accomplish their jobs. In addition, diversity plays a crucial role in shaping MGH as an employer, health care provider, and member of the community. MGH is committed to recruiting, hiring, and promoting people from different backgrounds. A diverse workforce is critical to improving access to quality health care, indispensable for quality education, and can accelerate advances in both medical and health services research.

MGH's Training and Workforce Development Office facilitates and promotes employee education, training, and career development opportunities. Employee education programs administered through the office include classes in English for Speakers of Other Languages, General Equivalency Diploma, Medical Terminology, and Spanish for Healthcare.

1.3.3 Youth Training and Employment

As the city's largest health care employer, the MGH recognizes a responsibility to provide meaningful employment opportunities to Boston's youth. Each year, through employment programs and ProTech (a program in which a group of students is offered intensive career guidance and employment for almost two years), the MGH provides young people with employment in supportive work environments with supervisors and colleagues who introduce students to the world of work and help them to develop positive work habits.

1.3.4 Employment

MGH has a direct workforce of approximately 25,000 employees. Of this total, a significant 23 percent are Boston residents.

1.3.5 Property Taxes/PILOT

Partners HealthCare is the highest contributor to the City of Boston's Payment in Lieu of Taxes (PILOT) program with $8.2 million in payments in fiscal year 2014; MGH accounts for $5.2 million of this amount. MGH expects it will be continuing to contribute to the PILOT program for this building and Project.

1.3.6 Estimated Development Impact Payments

Under Section 80B-7 of the Boston Zoning Code, projects that require zoning relief and that will devote more than 100,000 sf of space to "development impact uses," must make contributions to the City of Boston's Neighborhood Housing Trust and Neighborhood Jobs

Trust. The Project's office use is a development impact use triggering these linkage obligations.

1.3.7 Transportation Programs

MGH offers several transportation-related programs to area residents. In addition, MGH implements an extensive transportation demand management program that benefits employees, patients, and visitors. Specific transportation programs benefiting area residents include:

- Zipcars – Residents have access to the four Zipcars located in the Fruit Street Garage and four Zipcars located in the Charles River Plaza garage.

- Parking for Community Residents - MGH offers reduced rate evening and overnight parking to residents of Beacon Hill and the West End in the Parkman, Fruit Street and Charles River Park garages. There are currently approximately 275 residents parking overnight in these garages. These parkers can enter the garages after 3:30 p.m. and must exit the Charles River Park garage by 8:30 a.m. and the Parkman and Fruit Street garages by 9:30 a.m. on the following day. MGH will continue to make garage spaces on its campus available to residents of the Beacon Hill and West End neighborhoods for overnight parking at reduced rates, and will expand the number of available spaces as appropriate.

- Area Signage – Working closely with the community and the BTD, MGH planned and implemented improved directional signage in the vicinity of the hospital to direct patients and visitors to the main entrance, Emergency Department, and parking garages.

1.3.8 Economic Benefits

MGH is a significant contributor to the local economy. MGH is the largest non-governmental employer in Boston, and the hospital's annual Boston payroll is approximately $343 million. In addition, MGH expends more than $676 million annually on goods and services from firms within the City of Boston.

1.4 Project Team

Proposed Project:	125 Nashua Street Renovation
Address/Location:	125 Nashua Street
Proponent:	Massachusetts General Hospital 55 Fruit Street Boston, MA 02114 (617) 726-2000 Dr. Jean Elrick
Development Consultant:	Leggat McCall Properties 10 Post Office Square Boston, MA 02109 (617) 422-7000 Charles Favazzo
Architect:	Linea 5, Inc. 195 State Street, 2nd Floor Boston, MA 02109 (617) 723-8808 Michael Slezak
Permitting Consultants:	Epsilon Associates, Inc. 3 Clock Tower Place, Suite 250 Maynard, MA 01754 (978) 897-7100 Cindy Schlessinger Geoff Starsiak
Legal Counsel:	Goulston & Storrs 400 Atlantic Avenue Boston, MA 02110 (617) 482-1776 Douglas Husid Christian Regnier
Transportation Consultants/ Civil Engineers:	Vanasse Hangen Brustlin, Inc. 99 High Street, 10th floor Boston, MA 02110 (617) 728-7777 Howard Moshier Ellen Donohoe
MEP:	Thompson Consultants, Inc. 525 Mill Street Marion, MA 02738 (508) 748-2620 Sean Brice

Chapter 2.0
IMP Project Description

2.0 IMP PROJECT DESCRIPTION

2.1 Program Need

MGH evaluates its leases and owned properties on a continual basis to ensure that the hospital is working efficiently and costs are contained. The combination of assuming responsibility for the 125 Nashua Street site in July 2013 and expiring leases in the surrounding area, as well as a desire to consolidate certain departments into one building has resulted in the decision to renovate the existing building at the Project site to accommodate administrative and support uses. It is important that these uses are near the main campus, but they do not need to be on or adjacent to the campus. The creation of this administration space will consolidate many non-clinical MGH Department Groups within one building leading to operational efficiencies.

2.2 Project Site

The Project site is an approximately 2.075-acre site in the West End neighborhood of Boston bounded by the North Station train tracks, a parking lot, Nashua Street and the Suffolk County Jail across the street and the Charles River. The Project site is also located within walking distance to the MBTA's North Station as well as several MBTA bus lines which operate along Causeway Street. The site includes surface parking, landscaping, and an approximately 199,628 square foot (sf) 10-story, approximately 105 foot building previously occupied by Spaulding Rehabilitation Hospital. MGH assumed responsibility for the site in July 2013. A site survey is included in Appendix A.

2.3 Proposed IMP Project

The Project includes the interior renovation of the building located at 125 Nashua Street for use by MGH for a variety of administrative uses serving its medical and clinical operations. The renovation will result in a small decrease in the building's gross floor area to approximately 198,080 sf. These uses may include medical record storage facilities, physician and staff offices, accounting and financial offices, other administrative and support space and related accessory uses including but not limited to conference spaces, kitchens and eating areas, parking and loading. When occupied, the building will be open during normal business hours. The Project includes providing facilities for the staff such as bike racks and a shower to encourage biking to work. The Project site also includes certain existing public open space uses and a publicly accessible dock that will remain unchanged after completion of the Project. Other than cleaning and repointing the exterior of the building, replacing signage and some upgraded mechanical equipment on the roof, no exterior changes to the building are proposed and the site will remain substantially as it exists today. The estimated total construction cost for the Project is approximately $44 million.

Figures 2-1 and 2-2 show views of the Project with upgraded mechanical equipment. Figure 2-3 provides a typical floor plan.

2.3.1 Schedule

The Project is anticipated to start occupancy in April 2015.

2.4 Zoning

2.4.1 Existing Zoning

The Project site is located within the General Area of the North Station Economic Development Area governed by Article 39 of the Boston Zoning Code (the "Code") and the Restricted Parking Overlay District, governed by Section 3-1A(c) of the Code.

Allowed uses within the General Area of the North Station Economic Development Area include business or professional offices; office buildings; and professional offices accessory to a hospital whether or not on the same lot. A garage or parking space for occupants, employees and visitors not accessory to a residential use is a conditional use both in the General Area and the Restricted Parking Overlay District.

The General Area has a maximum allowed building height of up to 155 feet and a maximum floor area ratio (FAR) of up to 10 if a Proposed Project has completed Large Project Review. There are also specific design requirements regarding street walls and sky plane setbacks in the North Station Economic Development Area. Finally, no structure is to be erected, altered or extended within 35 feet of the existing mean high water mark of the Charles River.

No off-street parking facilities are required in the North Station Economic Development Area. The provision and design of off-street loading facilities shall be determined through Large Project Review.

2.4.2 Proposed Zoning

The Project has an existing building height of approximately 105 feet, measured in accordance with the Code, plus rooftop mechanicals reaching approximately 125 feet, which is within the allowed building height. The Project contains approximately 198,080 square feet of gross floor area. If the Project's gross floor area is divided by the area of the Project site, it would result in a FAR of approximately 2.19, which is well within the allowed FAR of up to 10. However, the IMP calculates FAR on a campus-wide basis and provides an existing campus wide FAR of approximately 5.42. When the gross floor area of the Project is added to the gross floor area of the main campus, as described in the IMP, and the Project site area is added to the IMP Area, the campus wide FAR decreases to approximately 5.06.

125 Nashua Street Boston, Massachusetts

LINEA 5, inc.
Boston, MA

Figure 2-1

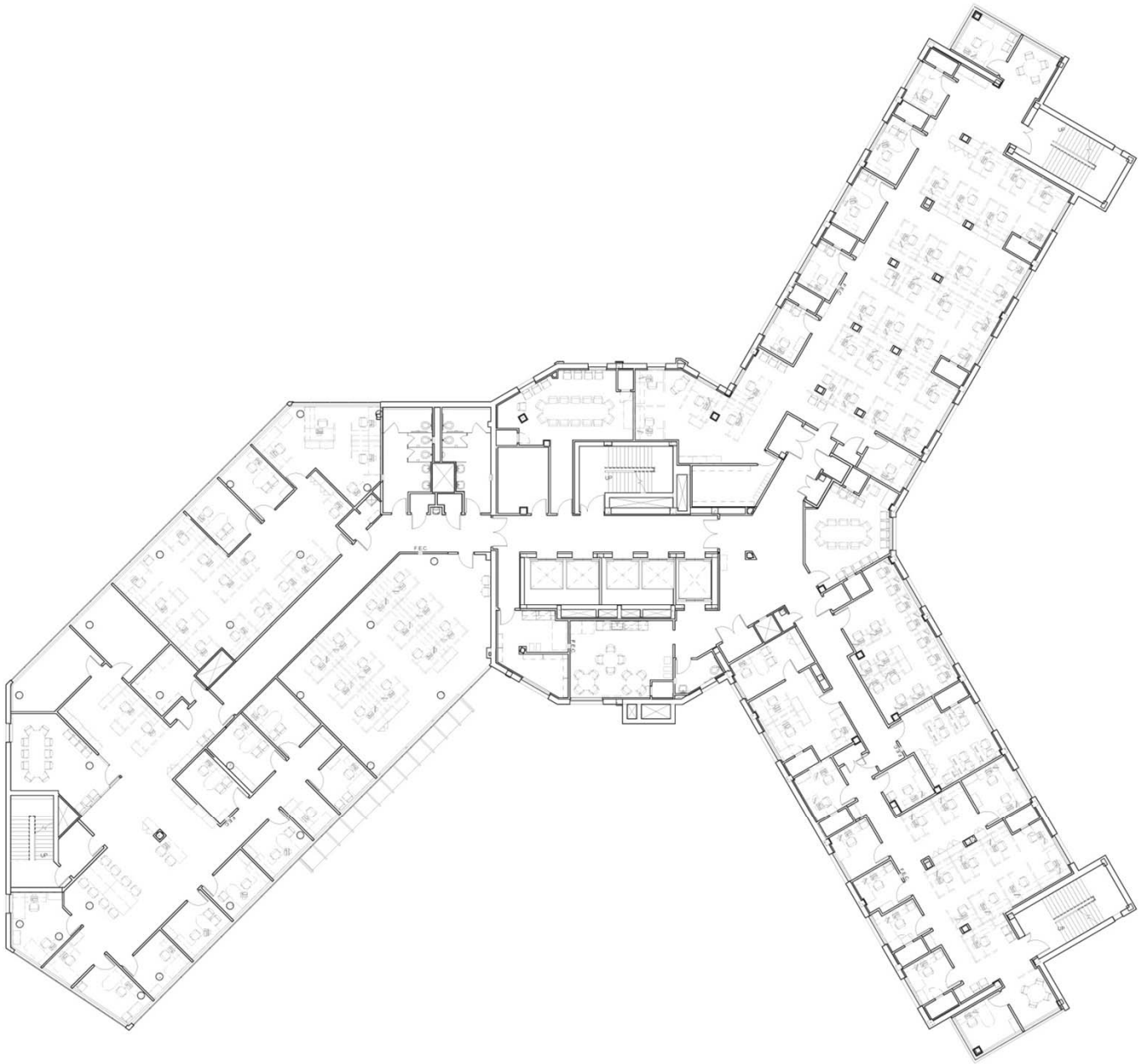
Street View Looking North at the Project (After Installation of New Mechanical Equipment)

125 Nashua Street Boston, Massachusetts

LINEA 5, inc.
Boston, MA

Figure 2-2

Street View Looking East at the Project (After Installation of New Mechanical Equipment)



125 Nashua Street Boston, Massachusetts

Figure 2-3
Typical Floor Plan

The Project includes approximately 98 existing accessory parking spaces. The Project includes existing loading bays which are not being altered in connection with the Project.

The Project will include new and updated building and exterior signage. To the extent relief is needed from Article 11 of the Code, it will be obtained via Comprehensive Sign Design from the BRA or will be addressed in the IMP.

Upon approval of the MGH IMP amendment, MGH will be submitting plans and specifications to be reviewed by the BRA pursuant to Section 80D-10 of the Code in order to obtain a Certification of Consistency.

MGH plans to submit a new IMP prior to the expiration of their existing IMP which expires in December 2016.

2.5 Anticipated Permits and Approvals

Table 2-1 presents a preliminary list of federal, state and local permits and approvals that may be required for the Project, based on currently available information. It is possible that only some of these permits or approvals will be required, or that additional permits or approvals will be required.

Table 2-1 Preliminary List of Anticipated Permits and Approvals

AGENCY	APPROVAL
Local	
Boston Redevelopment Authority	Article 80 Large Project Review; Execution of Agreements under Article 80B Large Project Review; IMP Adequacy Determination and Certification of Consistency
Office of Jobs and Community Service	Permanent Employment Agreement (as required)
Boston Employment Commission	Boston Residents Construction Employment Plan (as required)
Boston Civic Design Commission	Design Review (as required)
Boston Zoning Commission	IMP and Zoning Map Approval
Boston Transportation Department	Construction Management Plan (as required); Transportation Access Plan Agreement
Public Safety Commission Committee on Licenses	Flammable Storage License (as required)

Table 2-1 Preliminary List of Anticipated Permits and Approvals (Continued)

AGENCY	APPROVAL
Boston Inspectional Services Department	Demolition Permit; Building Permit; Certificate of Occupancy
State	
Department of Environmental Protection	Chapter 91 Minor Project Modification (received); Fossil Fuel Utilization Permit (as required); Notice of Demolition/Construction

2.6 Legal Information

2.6.1 Legal Judgments Adverse to the Proposed Project

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

2.6.2 History of Tax Arrears on Property

Neither the Proponent, nor its affiliate, The General Hospital Corporation own any real estate in Boston in which real estate tax payments are in arrears.

2.6.3 Site Control / Public Easements

The Project site is owned by the Proponent's affiliate, The General Hospital Corporation, pursuant to a deed from its other affiliated entity, The Spaulding Rehabilitation Hospital Corporation. There are certain public easements under and on the Project site; however, these public easements will not affect or be affected by the Project. In addition, there will be no change to existing public rights to use the Property.

2.7 Public Participation

MGH looks forward to working with the MGH Task Force, City agencies and community during the review of this Project.

Chapter 3.0
Assessment of Development Review Components

3.0 ASSESSMENT OF DEVELOPMENT REVIEW COMPONENTS

3.1 Transportation

This transportation analysis reviews the impact of the Project. The Project involves renovation of the former Spaulding Rehabilitation Hospital. The renovation will convert the approximately 198,080 zoning gross square foot hospital building into administrative office space. The Project results in fewer vehicle trips than when the Spaulding Rehabilitation Hospital was in operation at the site.

This section presents an overview of the existing transportation infrastructure serving the Project site and a summary of impacts from a transportation perspective. The following sections describe existing conditions and expected Project impacts:

- Traffic
- Parking
- Transit Services
- Bicycle and Pedestrian Accommodations
- Loading Operations
- Project Trip Generation
- Transportation Demand Management

3.1.1 Existing Transportation

3.1.1.1 Roadways

The Project is located at 125 Nashua Street, which is approximately one half-mile north of the MGH's main campus. The Project site currently provides two driveways on Nashua Street. With the Project, the northernmost driveway will be closed by a gate during normal daily operations to improve the pedestrian realm and reduce the number of driveway crossings associated with the Project site. With the change in use associated with the Project, it is expected that the loading and service demands associated with the northern driveway will be reduced.

The site is easily accessible from the regional roadway network, including I-93, Route 1, Monsignor O'Brien Highway, and Storrow Drive. The site is less than a quarter-mile from Leverett Circle which provides access to the following roadways:

- Nashua Street is a four-lane roadway providing access to the Project site. Nashua Street connects to the Leverett Circle just west of the Project site and Lomasney Way southeast of the site. Two lanes are provided in each direction with sidewalks.

- **I-93** is the major north-south interstate traveling through downtown Boston. I-93 North and South is easily accessible from Leverett Circle at the end of Nashua Street near the Project site.

- **Route 1** connects Boston to the coast north of Boston. Route 1 North is accessible via Leverett Circle.

- **Monsignor O'Brien Highway** is an arterial connecting Somerville and Cambridge to downtown Boston. The highway connects to McGrath Highway/Route 28 to the north heading into East Somerville.

- **Storrow Drive** is an east-west regional parkway serving the area. It is a six-lane, limited access parkway near Leverett Circle and provides access to the I-90 Turnpike Extension in Allston-Brighton to the west.

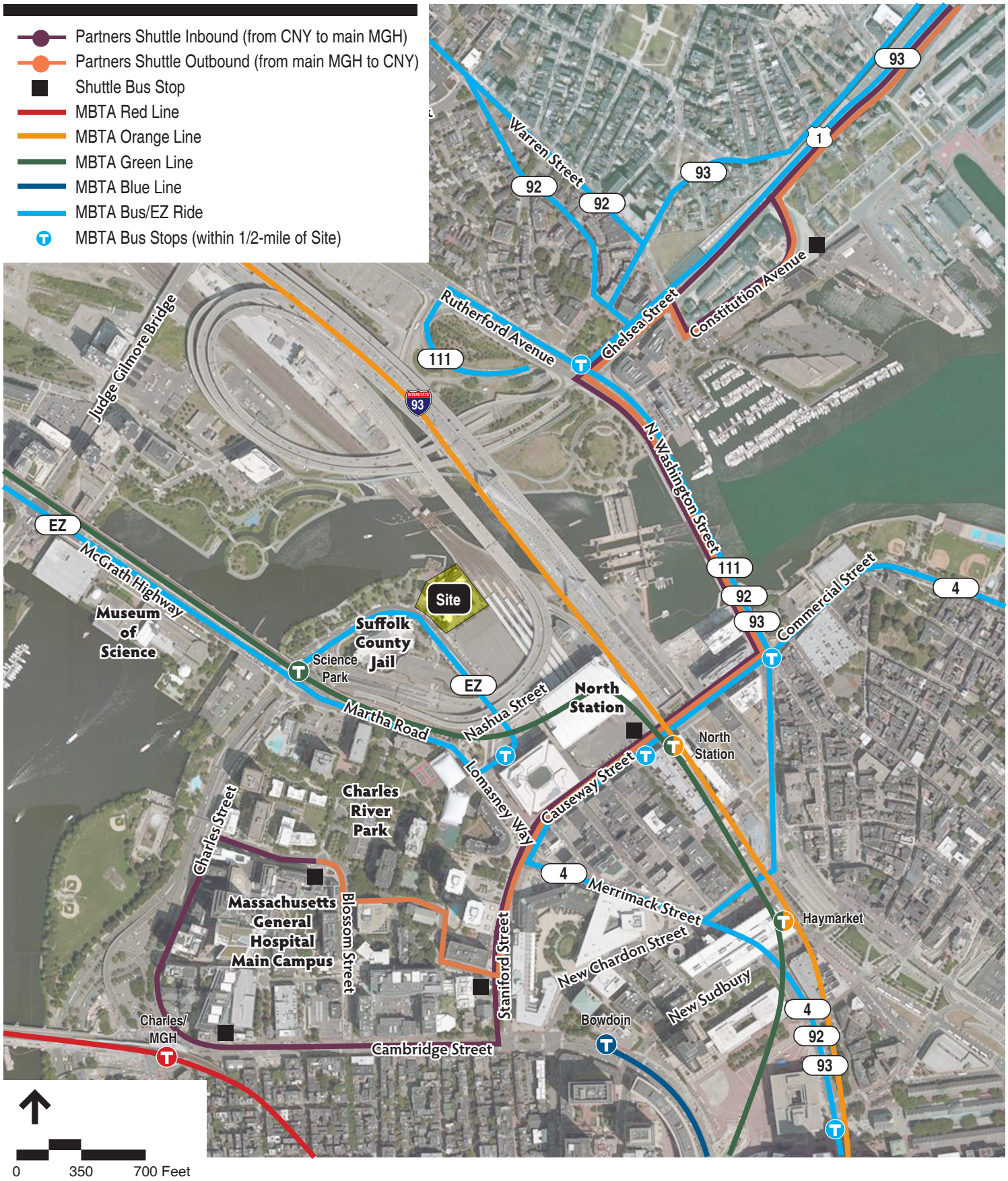
3.1.1.2 Public Transit and Shuttle Services

The Project site is well served by the Massachusetts Bay Transportation Authority (MBTA) public transportation services as shown in Figure 3-1. MBTA's Science Park Station is less than a block from the site providing access to the Green Line. North Station abuts the Project site and provides Commuter Rail, Green Line, Orange Line, and bus services.

- **Commuter Rail Services** at North Station include services to Fitchburg, Haverhill, Lowell and Newburyport/Rockport. The Fitchburg/South Acton line provides service between 5:15 a.m. to 1:14 a.m. daily with 20-30 minute headways during the peak hours. The Haverhill line operates under 20-30 minute headways during the peak hours between 5:05 a.m. and 1:15 a.m. daily. The Lowell line provides daily service between 5:35 a.m. and 12:55 a.m. with 30-50 minute headway during the peak hours. The Newburyport/Rockport line operates daily between 5:05 a.m. and 1:20 a.m. with 15-30 minute headways during the peak hours.

- **Green Line E Branch** at North Station provides services between Lechmere Station and Heath Street with connections to the Commuter Rail and Orange line at North Station and the Red line at Park Street. Connections to other Green Line Branches are provided at Park Street, Boylston Street and Arlington Stations. The Green line E branch operates daily from 5:00 a.m. to 12:45 a.m. with Friday late night service until 2:10 a.m. The line operates under 6 minute headways during peak hours and 8-14 minute headways non-peak hours.

- **Green Line C Branch** at North Station provides services between North Station and Cleveland Circle, providing connections to the Commuter Rail and Orange Line at North Station and the Red Line at Park Street. Transfers between Green Line branches can occur at Park Street, Boylston Street and Arlington Stations. The C Branch operates between 5:00 a.m. and 12:50 a.m. daily with 6 minute headways during peak hours and 10-14 minute headways during non-peak hours.



125 Nashua Street Boston, MA

VHB Vanasse Hangen Brustlin, Inc.

Figure 3-1
Transit Services

- **Orange Line** provides service to Oak Grove to the north and Forest Hills to the south, with connections to the Green Line at North Station, the Blue Line at State Street, the Red Line at Downtown Crossing and Commuter Rail services south of Boston at Back Bay. The Orange Line operates daily from 5:15 a.m. to 12:35 a.m. with Friday late-night service until 2:15 a.m. During peak hours the line operates under 6 minute headways, and 8-10 minute headways during non-peak hours.

- **Bus Route 4** provides service between North Station and the World Trade Center with stops at the Federal Courthouse and South Station. The route operates during the morning peak hours between 6:25 a.m. and 9:25 a.m. with buses running every 10-20 minutes. During the evening peak hours, the route operates every 10-20 minutes from 3:30 p.m. to 6:50 p.m.

- **Bus Route 92** provides service between Assembly Square Mall and Downtown Boston along Main Street, with stops at Sullivan Square Station and Haymarket Station. The route operates between 5:00 a.m. and 10:15 p.m. daily with 10-15 minute headways during the peak hours. The closest stop to the Project site is North Washington Street and Medford Street approximately one half-mile from the site.

- **Bus Route 93** provides service between Sullivan Square Station and Downtown Boston along Broadway and Bunker Hill Street. The route operates daily between 4:30 a.m. and 1:35 a.m. with 7-15 minute headways during the peak hours. The closest stop to the Project site is North Washington Street and Medford Street approximately one half-mile from the site.

- **Bus Route 111** provides service between Broadway and Park Avenue and Haymarket Station via Washington Avenue and the Tobin Bridge. The route operates daily from 4:50 a.m. to 12:55 a.m. with 10-20 minute headways during the peak hours. The closest stop to the Project site is North Washington Street and Medford Street approximately one half-mile from the site.

In addition, the MBTA's EZRide service provides service from Cambridge to North Station traveling outbound on Nashua Street adjacent the Project site.

Partners HealthCare provides free shuttle service to employees, patients and visitors at MGH. Partners Shuttle Route 1 connects the Charlestown Navy Yard (CNY) with North Station and the MGH main campus. A one-way trip from MGH to the CNY takes approximately 15-20 minutes. The shuttle operates seven days a week, typically on 15-30 minute headways off-peak and 7-8 minute headways during peak times.

3.1.2 Project Impacts

3.1.2.1 Trip Generation

Trip generation estimates were developed using the Institute of Transportation Engineer's (ITE) Trip Generation manual (9th Edition) rates for Office Building (LUC 710). The Project includes approximately 198,080 sf of gross floor area of office space. Consistent with ITE trip procedure, a total of approximately 211,000 gross square feet for the building (the non-zoning gross floor area) was used for trip generation purposes. The raw unadjusted vehicle trips for the building renovation are presented in Table 3-1. Trips are summarized for total daily, a.m. and p.m. peak hours. These results are not adjusted for local mode splits.

Table 3-1 ITE Unadjusted Vehicle Trips

	Daily	AM Peak Hour	PM Peak Hour
In	1,164	293	47
Out	1,164	36	267
Total	**2,328**	**329**	**314**

The unadjusted vehicle trips were then converted into person trips by applying the National Average Vehicle Occupancy (AVO) of 1.13 based on the 2009 National Household Travel Survey.

Mode splits, shown in Table 3-2, from the Boston Transportation Department (BTD) were used to develop vehicle, transit, and other (walk, bike, etc.) Project trips by transportation mode.

Table 3-2 Mode Splits

Type	Daily	AM Peak Hour	PM Peak Hour
Vehicle	43%	38%	38%
Transit	30%	33%	29%
Walk/Bike/Other	27%	29%	33%

Source: BTD Area 1

The national AVO was used to convert vehicle-person trips back into Project generated vehicle trips. The resulting Project generated trips are presented in Table 3-3 for daily, a.m. peak, and p.m. peak trips.

Table 3-3 Project Generated Trips

Mode		Daily	AM Peak Hour	PM Peak Hour
Vehicle	In	500	111	18
	Out	500	14	102
	Total	1,000	125	120
Transit	In	395	109	15
	Out	395	13	88
	Total	790	122	103
Walk/Bike/Other	In	355	96	18
	Out	355	12	100
	Total	710	108	118

As shown in Table 3-3, the Project is expected to generate approximately 125 vehicle trips (111 in, 14 out) during the weekday a.m. peak hour, and 120 vehicle trips (18 in, 102 out) during the weekday p.m. peak hour.

Trip Generation Comparison

The Project's estimated trip generation was compared to the previous, more intensive uses by Spaulding Rehabilitation Hospital. Using data provided in the *Spaulding Rehabilitation Hospital's Draft Environmental Impact Report/Draft Project Impact Report* dated March 27, 2009, historical trips to the site were estimated as shown in Table 3-5 and compared against the Project's trip estimates to show a net reduction in trip generation.

Table 3-5 Vehicle Trip Generation Comparison

Mode		Spaulding Rehabilitation Hospital	Proposed MGH Office	Net New Trips
Daily Peak	In	-	500	-
	Out	-	500	-
	Total	1,915	1,000	-915
AM Peak Hour	In	93	111	18
	Out	38	14	-24
	Total	131	125	-6
PM Peak Hour	In	42	18	-24
	Out	95	102	7
	Total	137	120	-17

The Project will generate 915 fewer vehicle trips over the course of the day compared to the previous, higher trip generating use by the Spaulding Rehabilitation Hospital. During the peak hours the Project site will experience a net decrease of (-6) vehicle trips during the a.m. peak hour and (-17) vehicle trips during the p.m. peak hour.

3.1.2.2 Pedestrian and Bicycle Accommodations

The Project site provides ample pedestrian accommodations with wide sidewalks along Nashua Street from Leverett Circle to North Station and towards Downtown Boston. Crosswalks are provided at all surrounding intersections including Leverett Circle and Nashua Street at Lomasney Way.

Across Nashua Street northwest of the Project site, Nashua Street Park provides connections to multi-use pathways along the Charles River. These multi-use paths connect the Project site to Leverett Circle and a shared bike lane along O'Brien Highway heading northwest.

There is currently no bicycle parking available on site. The Project will provide approximately 22 bike parking spaces and a shower facility for employees.

3.1.2.3 Parking

MGH currently controls a total approximately 680 parking spaces in close proximity of the Project site: on-site (98 spaces), across Nashua Street at the "Registry" lot (102 spaces) and at the Nashua Street "Orange" lot (480 spaces), as shown in Figure 3-2. Two public parking garages are also near the Project site, as shown on Figure 3-2.

The site will continue to have a total of approximately 98 parking spaces as outlined in Table 3-6.

Table 3-6 Project Parking Supply

Description	Spaces
Standard Spaces	92
Compact Spaces	2
Accessible Spaces	3
Van Accessible Spaces	1
Total Spaces	**98**

Source: VHB

125 Nashua Street Boston, MA

VHB Vanasse Hangen Brustlin, Inc.

Figure 3-2

Parking Locations within Close Proximity

3.1.2.4 Loading

All deliveries and service vehicles will be accommodated on-site. There are two existing loading dock spaces on-site located on the backside of the building which will remain unchanged with the Project. These dock spaces will typically accommodate single unit trucks. Vehicles up to size WB-40 tractor trailers can be accommodated on-site. Access to the loading docks will be provided by the main driveway on Nashua Street.

3.1.3 Transportation Demand Management

MGH provides a comprehensive transportation demand management (TDM) program that will apply to the staff located at the Project. Key features of the MGH TDM program include:

- Subsidized Transit Passes
- Participation in the MBTA Corporate T-Pass Program
- Free Partners Shuttle Service
- MGH membership in A Better City Transportation Management Association (ABC TMA)
- Ridematching Services
- On-site Bicycle Storage
- On-site Lockers and Showers
- Carpool/Vanpool Incentives
- On-campus Employee Parking Freeze
- Promotion of Alternative Modes of Travel
- Transportation Coordinator

3.2 Wind / Shadow / Daylight / Solar Glare

The Project involves an interior renovation. There will be no expansion or alteration of the building other than the addition of upgraded rooftop mechanical equipment. The equipment is located towards the center of the building. Because no changes are proposed to the building's height and massing and the upgraded rooftop equipment is located towards the center of the building, the Project is not anticipated to result in wind, shadow, daylight obstruction or solar glare impacts.

3.3 Air Quality

A microscale analysis is typically performed to evaluate the potential air quality impacts of carbon monoxide (CO) due to traffic flow around the Project area. In addition, for stationary sources (i.e. combustion source stacks, and garage vents), United States Environmental Protection Agency (EPA) approved air dispersion models are often used to estimate project-generated ambient concentrations of nitrogen oxides (NOx), particulate matter (PM-10 and PM-2.5), and sulfur dioxide (SO_2), in addition to CO.

Microscale Analysis

A microscale analysis is used to determine the effect on air quality of the increase in traffic generated by the Project. As discussed in Section 3.1, the Project generates 915 fewer trips per day than the previous uses on the site. Therefore, air quality impacts related to site-related traffic are not anticipated and the Proponent believes a microscale analysis is not warranted.

Stationary Sources

The Project includes the replacement of some older mechanical equipment with newer equipment. It is anticipated that this newer, more efficient equipment will decrease the building's air quality impacts.

3.4 Noise

New noise associated with development projects are most commonly due to mechanical equipment required for the operation of the building. Minimal noise impacts are anticipated as the extent and general location of new and replacement mechanical equipment will be similar to the existing mechanical equipment for the building. MGH will ensure that the new equipment meets the City of Boston Zoning District Noise Standards.

3.5 Stormwater/Water Quality

Please see Section 3.17.3.

3.6 Solid and Hazardous Waste

3.6.1 Existing Hazardous Waste Conditions

During demolition, hazardous wastes within the building were removed and disposed in accordance with state and federal regulations.

3.6.2 Operational Solid and Hazardous Wastes

The Project will generate solid waste typical of other office projects. Solid waste will include wastepaper, cardboard, glass, and bottles. A portion of the waste will be recycled. The remainder of the waste will be compacted and removed by waste haulers contracted by MGH.

3.7 Geotechnical and Groundwater Impacts

The Project does not include excavation and is not anticipated to impact soil conditions or groundwater.

3.8 Flood Zones and Wetlands

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the site located in the City of Boston - Community Panel Number 25025C0077G indicates the FEMA Flood Zone Designations for the Project site. The map shows that the Project is located outside of the 500-year flood plain. The building remains outside of the 500-year flood zone area in the Preliminary FEMA Flood Hazard Map issued in November 2013.

The Project site is developed and does not contain wetlands.

3.9 Construction Impacts

Construction-related impacts are anticipated to be minimal due to the location of the Project site and the type of construction work being conducted. Minimal impacts from construction trucks and noise are anticipated.

3.9.1 Construction Methodology

Secure fencing and barricades are used to isolate construction and staging areas from pedestrian traffic adjacent to the site. Construction procedures are designed to meet all Occupational Safety and Health Administration (OSHA) safety standards for specific site construction activities.

Construction management and scheduling—including plans for construction worker commuting and parking, routing plans and scheduling for trucking and deliveries, protection of existing utilities, maintenance of fire access, and control of noise and dust—will minimize impacts on the surrounding environment.

Truck routes are defined to minimize the impact of trucks on local streets.

3.9.2 Construction Schedule

Typical construction hours are from 7:00 a.m. to 6:00 p.m., Monday through Friday. Certain finish work done inside the building may be conducted on Saturdays. No substantial sound-generating activity occurs before 7:00 a.m.

3.9.3 Construction Employment and Worker Transportation

The number of workers required during the construction period will vary. It is anticipated that the Project will result in approximately 370 construction jobs.

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

3.9.4 Construction Air Quality

Short-term air quality impacts from fugitive dust were minimized during demolition. Fugitive dust is controlled during construction and demolition as a result of mechanical street sweeping and careful removal of debris by covered trucks. The construction contract provides for a number of strictly enforced measures to be used by contractors to reduce potential emissions and minimize impacts. These measures included:

- Using covered trucks;
- Minimizing spoils on the construction site;
- Minimizing storage of debris on the site; and
- Periodic street and sidewalk cleaning with water to minimize dust accumulations.

3.9.5 Construction Noise

MGH is committed to mitigate noise impacts from the construction of the Project. Increased community sound levels, however, are an inherent consequence of construction activities. The general contractor is required to take every reasonable effort to minimize the noise impact of construction activities. However, construction noise for the Project is minimal as it is an interior renovation.

Mitigation measures include:

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

- Using appropriate mufflers on all equipment and ongoing maintenance of intake and exhaust mufflers;
- Muffling enclosures on continuously running equipment, such as air compressors and welding generators;
- Replacing specific construction operations and techniques by less noisy ones where feasible;
- Selecting the quietest of alternative items of equipment where feasible;
- Scheduling equipment operations to keep average noise levels low, to synchronize the noisiest operations with times of highest ambient levels, and to maintain relatively uniform noise levels;
- Turning off idling equipment; and
- Locating noisy equipment at locations that protect sensitive locations by shielding or distance.

3.9.6 Construction Waste Management

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

3.10 Rodent Control

As part of the rodent control program, rodent inspection monitoring and treatment are required before and during, and at the completion of all construction work for the Project, in compliance with the City's requirements. Regular service visits during the construction process are also required.

3.11 Wildlife Habitat

The Project site is within a fully developed urban area and, as such, the Project will not impact wildlife habitats.

3.12 Tidelands

The 125 Nashua Street site and building are located within former tidelands, now filled. As such, activities on and uses of the property are subject to Chapter 91, the Massachusetts Public Waterfront Act, and its associated regulations at 310 CMR 9.00.

The use of the site and building were authorized under Chapter 91 License No. 2107 dated November 30, 1989. The use of the building and grounds were identified at that time to include "patient care; hospital administrative support; public access to the waterfront open space for passive recreational purposes; public access to navigable waters for recreational boating and fishing purposes."

In June 2013, the MassDEP Waterways Regulation Program confirmed the proposed improvements to the building facility are consistent with the existing Chapter 91 license, and the surrounding grounds will continue to provide the public benefits and amenities described in the license. MassDEP notes that "the proposed modification represents an insignificant deviation from the original specifications of all approvals and legislative authorizations, and will continue to provide demonstrable public benefits described and required by prior authorizations," and concluded with the statement "Accordingly, this change of use does not require the submission of a M.G.L. c. 91 license application."

As described herein, the public open space benefits will remain in effect and unchanged. Meanwhile, the improvements to the structure will similarly continue to provide those benefits identified in the original Chapter 91 license for the building.

3.13 Sustainability

The Project team will prioritize the following credits from the LEED 2009 Rating System for Commercial Interiors in order to achieve a level of LEED Certifiable for this Project. Each credit will be evaluated by the Project team on an on-going basis through all of the construction phases of the Project. A LEED Checklist is included at the end of this section.

Sustainable Sites

SS Credit 1: Site Selection

The building will replace the existing roofing with a high solar reflective white membrane roof that will qualify for one credit under Path 5 for Heat Island Effect – Roof.

SS Credit 2: Development Density and Community Connectivity

The building selected for the Project is located in an established, walkable community with a minimum density of 60,000 square feet for acre net and qualifies for this credit under Option 1 – Development Density.

SS Credit 3.1: Alternative Transportation—Public Transportation Access

The Project is located in a building within ½ mile walk of an existing commuter rail station as required by Option 1 – Rail Station Proximity.

Water Efficiency

WE Prerequisite 1: Water Use Reduction – 20% Reduction

The Project will employ a strategy through the use of toilets, urinals, and lavatory faucets to use 20% less water than the water use baseline for commercial projects.

Energy and Atmosphere

EA Prerequisite 1: Fundamental Commissioning of Building Energy Systems

The Project intends to follow the requirements for fundamental commissioning as described by this prerequisite.

EA Prerequisite 2: Minimum Energy Performance

Portions of the building, as required, will comply with ANSI/ASHRAE/IESNA Standard 90.1-2007 and complete the requirements for energy performance, reduction in lighting power density, and use of Energy Star equipment as required by this credit.

EA Prerequisite 3: Fundamental Refrigerant Management

It is the intent of the Project to use zero CFC-based refrigerants in the Project's HVAC&R systems.

EA Credit 1.1: Optimize Energy Performance – Lighting Power

It is the intent of the Project to exceed the requirements of this credit to reduce the connected lighting power density below that allowed by ASI/ASHRAE/IESNA Standard 90.1-2007. This Project intends to achieve approximately 40% reduction, and attaining the maximum 5 points allowable under this credit.

EA Credit 3: Measurement and Verification

The Proponent will be paying for the energy costs as required in Case 1.

EA Credit 4: Green Power

The Proponent will engage in a renewable energy contract to purchase at least 8 kw hours per square foot per year from renewable electricity sources as required for this credit, Option 2.

Materials & Resources

MR Prerequisite 1: Storage and Collection of Recyclables

The Project intends to provide an easily accessible area that serves the entire building and is dedicated to the collection and storage of non-hazardous materials for recycling, including paper, corrugated cardboard, glass, plastics and metals at a minimum.

MR Credit 1.1: Tenant Space – Long-Term Commitment

The Proponent has committed to occupy the location for a minimum of ten years as required by this credit.

Indoor Environmental Quality

IE Q Prerequisite 1: Minimum Indoor Air Quality Performance

The Project intends to meet the minimum requirements of ASHRAE 62.1-2007 and Case 1 Mechanically Ventilated Spaces as required for this prerequisite.

IEQ Prerequisite 2: Environmental Tobacco Smoke (ETS) Control

The Project intends to minimize exposure to Environmental Tobacco Smoke through Option 1, to prohibit smoking in the building and locate any exterior designated smoking areas at least 25 feet from entries, air intakes, and operable windows.

IEQ Credit 3.1: Construction Indoor Air Quality Management Plan—During Construction

The Project is utilizing an IAQ management plan during construction and preoccupancy phases as required by this credit.

IEQ Credit 4.2: Low-Emitting Materials—Paints and Coatings

It is the intent of the Project that all interior paints and coatings will meet the VOC limits indicated by the reference standards listed under this credit.

IEQ Credit 4.3: Low-Emitting Materials—Flooring Systems

It is the intent of the Project that all flooring systems will be selected to meet the requirements of the credit and the required reference standards listed under this credit.

IEQ Credit 6.1: Controllability of Systems—Lighting

The Project will provide the level of lighting controls required by this credit for individual lighting control and for shared multi-occupant spaces as required by this credit.

IEQ Credit 7.1: Thermal Comfort - Design

The Project has designed the HVAC systems to meet the requirements of ASHRAE 55-2004 as required by this credit.

IEQ Credit 7.2: Thermal Comfort - Verification

The Project will include a permanent monitoring system and process for corrective action to ensure that building performance meets the desired comfort criteria and conduct a thermal comfort survey within 6 to 18 months after occupancy. The Project will also develop a plan with corrective actions if more than 20% of occupants are dissatisfied with thermal comfort.

Innovation in Design

ID Credit 1.1: Innovation in Design – Transportation Demand Management

MGH has a comprehensive TDM program that will be extended to employees that will be located at the Project site.

ID Credit 2: LEED Accredited Professional

A LEED Accredited Professional is part of the Project team.

Regional Priority Credits

Based on the Project's location, the Project qualifies for one Regional Priority credit by satisfying the Optimize Energy Performance – Lighting Power requirements.

3.14 Climate Change Preparedness

Projects subject to Article 80, Large Project Review are required to complete the Climate Change Preparedness Checklist. Climate change conditions considered include sea level rise, higher maximum and mean temperatures, more frequent and longer extreme heat events, more frequent and longer droughts, more severe freezing rain and heavy rainfall events, and increased wind gusts.

The expected life of the Project's mechanical equipment is anticipated to be approximately 25 years. Therefore, the Proponent planned for climate change conditions projected at an approximately 25 year time span. A copy of the completed checklist is included in Appendix B.

LEED 2009 for Commercial Interiors

Project Checklist

MGH Nashua Street

Updated: 11/6/14

Y	?	N			
13	4	4	**Sustainable Sites**	Possible Points:	21
1	4		Credit 1	Site Selection	1 to 5
6			Credit 2	Development Density and Community Connectivity	6
6			Credit 3.1	Alternative Transportation—Public Transportation Access	6
		2	Credit 3.2	Alternative Transportation—Bicycle Storage and Changing Rooms	2
		2	Credit 3.3	Alternative Transportation—Parking Availability	2
		11	**Water Efficiency**	Possible Points:	11
Y			Prereq 1	Water Use Reduction—20% Reduction	
		11	Credit 1	Water Use Reduction	6 to 11
19	4	14	**Energy and Atmosphere**	Possible Points:	37
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
5			Credit 1.1	Optimize Energy Performance—Lighting Power	1 to 5
1		2	Credit 1.2	Optimize Energy Performance—Lighting Controls	1 to 3
		10	Credit 1.3	Optimize Energy Performance—HVAC	5 to 10
	4		Credit 1.4	Optimize Energy Performance—Equipment and Appliances	1 to 4
5			Credit 2	Enhanced Commissioning	5
3		2	Credit 3	Measurement and Verification	2 to 5
5			Credit 4	Green Power	5
1	1	12	**Materials and Resources**	Possible Points:	14
Y			Prereq 1	Storage and Collection of Recyclables	
1			Credit 1.1	Tenant Space—Long-Term Commitment	1
		2	Credit 1.2	Building Reuse	1 to 2
		2	Credit 2	Construction Waste Management	1 to 2
		2	Credit 3.1	Materials Reuse	1 to 2
		1	Credit 3.2	Materials Reuse—Furniture and Furnishings	1
	1	1	Credit 4	Recycled Content	1 to 2
		2	Credit 5	Regional Materials	1 to 2
		1	Credit 6	Rapidly Renewable Materials	1
		1	Credit 7	Certified Wood	1

Y	?	N			
7	3	7	**Indoor Environmental Quality**	Possible Points:	17
Y			Prereq 1	Minimum IAQ Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
		1	Credit 1	Outdoor Air Delivery Monitoring	1
		1	Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
	1		Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
	1		Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
		1	Credit 4.5	Low-Emitting Materials—Systems Furniture and Seating	1
		1	Credit 5	Indoor Chemical & Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
		1	Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
	1	1	Credit 8.1	Daylight and Views—Daylight	1 to 2
		1	Credit 8.2	Daylight and Views—Views for Seated Spaces	1
2		4	**Innovation and Design Process**	Possible Points:	6
1			Credit 1.1	Innovation in Design: Transportation Demand Management	1
		1	Credit 1.2	Innovation in Design: Specific Title	1
		1	Credit 1.3	Innovation in Design: Specific Title	1
		1	Credit 1.4	Innovation in Design: Specific Title	1
		1	Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1
1		3	**Regional Priority Credits**	Possible Points:	4
1			Credit 1.1	Regional Priority: Optimize Energy Performance - Lighting Power	1
		1	Credit 1.2	Regional Priority: Specific Credit	1
		1	Credit 1.3	Regional Priority: Specific Credit	1
		1	Credit 1.4	Regional Priority: Specific Credit	1
43	12	55	**Total**	Possible Points:	110

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

Extreme Weather Events

Since the building will be used for office space, in the event of extreme weather conditions that cut electricity, heating and cooling to the site for an extended period of time, the building will be closed to users. Due to the elevation and slope of the site, extreme rain events are not anticipated to significantly impact the site and its users. In addition, the renovation includes the installation of water conservation fixtures that will minimize water use, minimizing the impact of severe droughts on the building.

Sea Level Rise

The building is located at an elevation of approximately 18.65 feet Boston City Base, which is above the anticipated impacts of sea level rise and storm surge within the next 25 years. The building is also located above the 500-year flood plain identified in the preliminary FEMA maps released in November 2013.

3.15 Urban Design

As described in Section 2.3, the Project involves the interior renovation of the existing ten-story building previously occupied by the Spaulding Rehabilitation Hospital. No exterior changes are proposed to the building other than some upgrades to rooftop mechanical equipment. The site is approximately two acres abutting the Charles River to the north, the North Station train tracks to the east, a parking lot to the south, and Nashua Street and the Suffolk County jail to the west.

The Project includes cleaning the building façade, repointing brick and caulk concrete panels, as necessary, and generally cleaning up the landscaped areas. No exterior alterations or additions to the building are proposed other than new signage and the addition of minor rooftop equipment. The site has a landscaped area abutting Nashua Street and the open space located to the northwest. An existing brick surfaced patio extends from inside the site boundaries to a continued patio area projecting over the Charles River. There is also public access to ramp systems leading down to a wood dock. Post-renovation, the public will continue have the ability to use the portions of the site that it does currently. The Accessibility Checklist is included in Appendix C.

3.16 Historic and Archaeological Resources

3.16.1 Historic Resources in the Project Site

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

3.16.2 Historic Resources in the Project Vicinity

Several historic resources listed in the State and National Registers of Historic Places and included in the Inventory are located within the vicinity of the Project site. The Project site includes an existing approximately 199,628 square feet, 10-story hospital building constructed in 1968 and a surface parking lot. The building initially functioned as a nursing home and was converted to hospital use in 1970 for the Spaulding Rehabilitation Hospital, who occupied it until 2013. The building is not listed in the State or National Registers of Historic Places nor is it included in the Inventory of Historic and Archaeological Assets of the Commonwealth (Inventory).

Table 3-7 lists State and National Register-listed properties and historic districts located within a quarter mile radius of the Project site. Figure 3-3 depicts the locations of these properties and historic districts.

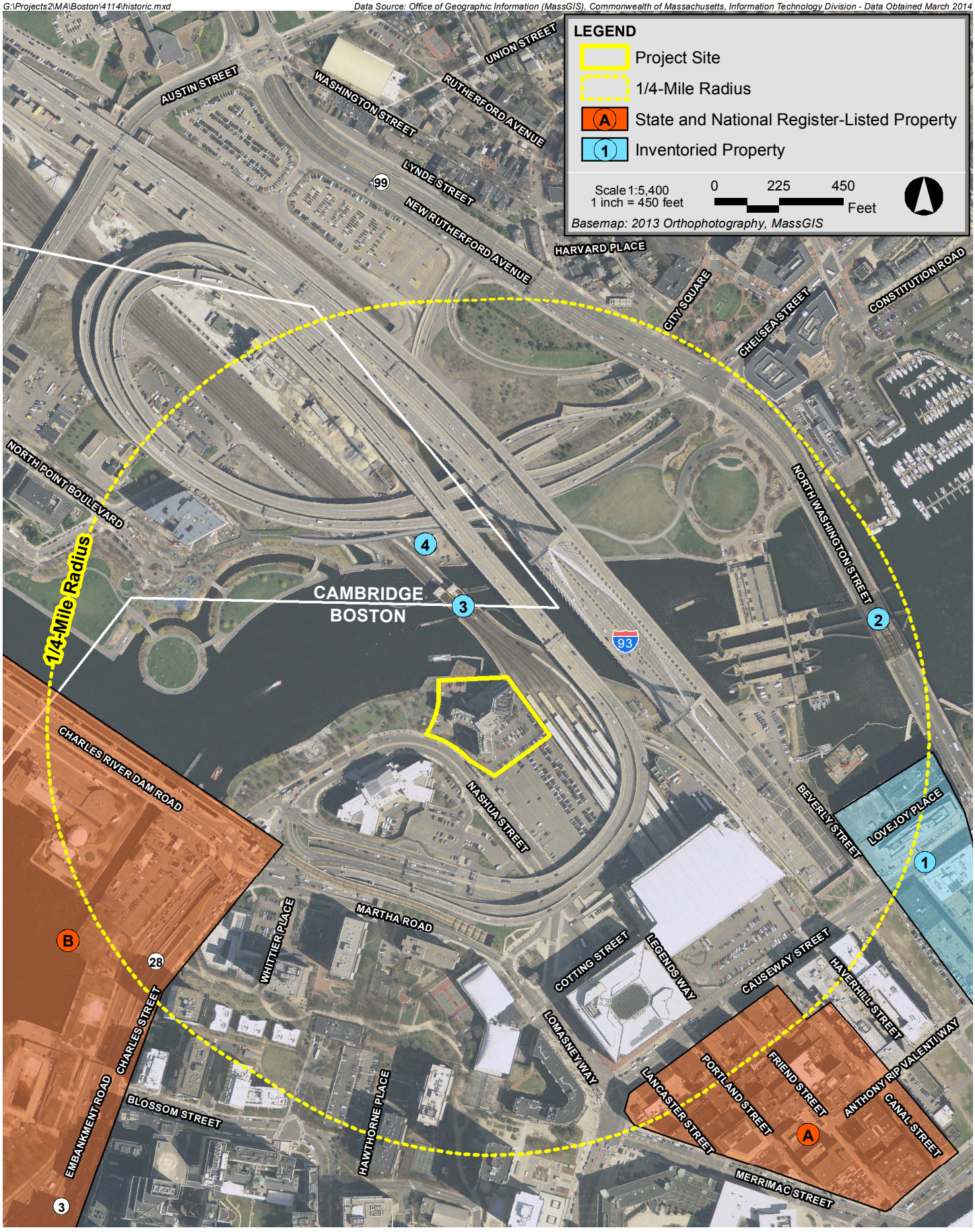
Table 3-7 State and National Register-Listed Properties and Historic Districts

Map Key to Figure	Historic Resource	Address
State and National Register-listed Properties		
A	Bulfinch Triangle Historic District	Canal, Causeway, Friend, Lancaster, Lowell Square, Merrimack, Portland and Traverse Streets, (Boston)
B	Charles River Basin Historic District	Monsignor O'Brien Highway (Boston/Cambridge), Storrow Drive (Boston), and Memorial Drive (Cambridge)
Properties included in the *Inventory of Historic and Archaeological Assets of the Commonwealth*		
1	Causeway/North Washington Street Area	Causeway and North Washington Streets, (Boston)
2	Charlestown Bridge	North Washington to Rutherford Avenue over Charles River, (Boston)
3	Charles River Railroad Draw Bridge #1	Railroad Tracks at Charles River, (Boston/Cambridge)
4	Boston & Maine Railroad Signal Tower A	Railroad Tracks at Charles River, (Cambridge)

3.16.3 Archaeological Resources Within the Project Site

A review of the Inventory indicates there are no known archaeological resources within the Project site. The Project site is located on previously disturbed land. Due to the prior disturbance and the scope of work, which consists of interior renovations, no impacts to archaeological resources are anticipated.

Data Source: Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, Information Technology Division - Data Obtained March 2014



125 Nashua Street Boston, Massachusetts

Epsilon Associates Inc.

Figure 3-3
Historic Resources Map

3.16.4 Potential Impacts to Historic Resources

3.16.4.1 Renovation of Existing Building

The existing 10-story building was constructed in 1968, designed by the architecture firm of Valtz and Kimberly. Valtz and Kimberly were also the designers of five school buildings in Melrose, as well as responsible for the renovation of the St. Stevens Episcopal Church in Lynn and the 1970 conversion of 125 Nashua Street from Nashua Nursing Home to the Spaulding Rehabilitation Hospital. During the course of the hospital's history, the building has had numerous interior renovations, alterations and additions. The Project consists of interior renovations to the former Spaulding Rehabilitation Hospital to facilitate conversion to administrative use. Due to the scope of the Project, involving interior renovations, the Project is not anticipated to impact historic resources.

3.16.4.2 Visual Impacts

The Project consists of interior renovations and the addition of minor rooftop equipment and building identification signage; therefore no visual impacts to historic properties in the vicinity of the Project site are anticipated.

3.16.4.3 Shadow Impacts

The Project consists of interior renovations and the addition of minor rooftop equipment; therefore no new shadow impacts to nearby historic resources are anticipated.

3.16.5 Consistency with Historic Reviews

3.16.5.1 Massachusetts Historical Commission

At this time, no state and/or federal action initiating State Register Review (950 CMR 71) or Section 106 of the National Historic Preservation Act (36 CFR 800) is anticipated.

3.17 Infrastructure

This section describes the utility infrastructure systems that support the Project site, including sanitary sewer, domestic and fire protection water, storm drainage and energy systems. Except for the steam condensate upgrade described herein, the Project will be using existing utility connections and utility demands are expected to be reduced.

3.17.1 Sanitary Sewer

The Project site is served by a 10-inch BWSC sanitary sewer in Nashua Street. Under pre-Project conditions, the facility contained a mix of office, inpatient, and outpatient uses. Using an assumed sewage generation rate of 150 gallons per day (gpd) per 1,000 square feet (sf), the approximately 199,628 sf former facility would have generated approximately 29,945 gpd under pre-Project conditions.

The Project proposes to contain approximately 198,080 sf of office use. Using the Massachusetts Department of Environmental Protection Title 5 wastewater generation rate for office use of 75 gpd per 1,000 sf, the Project is expected to discharge approximately 14,856 gpd. This results in an expected 50% reduction in sanitary sewage.

No changes to the sanitary sewer system are proposed as part of the Project.

3.17.2 Domestic and Fire Protection Water

The Project site is served by a 12-inch BWSC water main in Nashua Street. Two 6-inch service connections provide water to the building. Under pre-Project conditions, the expected water demand was approximately 32,940 gpd. This estimate is based on the expected sewage generation plus 10% for system losses.

Under the Project, water demand is expected to drop by slightly over 50% to approximately 16,340 gpd.

No changes to the external water and fire protection systems are proposed as part of the Project.

3.17.3 Storm Drainage

The site contains an existing surface drainage system consisting of catch basins and a closed pipe network. Record information shows the drainage system discharging to the Charles River. No changes to the site's stormwater system are proposed. The Project is not expected to result in any changes to the rates and patterns of stormwater runoff. BWSC has a 24-inch drain in Nashua Street.

3.17.4 Energy Systems

The Project site is fed NSTAR electricity, National Grid natural gas, and Veolia steam from Nashua Street. As part of a measure to improve the steam system, the Proponent recently upgraded the steam condensate system to take advantage of the enhanced steam system in Nashua Street recently upgraded by Veolia. Due to the change in use from medical/rehabilitation use to office, energy demands are expected to be reduced and no additional services are required.

Chapter 4.0
Coordination With Other Government Agencies

4.0 COORDINATION WITH OTHER GOVERNMENT AGENCIES

4.1 Architectural Access Board Requirements

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

4.2 Massachusetts Environmental Policy Act (MEPA)

Massachusetts Environmental Policy Act review is not expected to be required. There is no state funding involved and no MEPA review thresholds are exceeded.

4.3 Massachusetts Historical Commission

No state permits or funding are anticipated, and therefore Massachusetts Historical Commission review is not anticipated.

Chapter 5.0
Project Certification

5.0 PROJECT CERTIFICATION

This form has been submitted to the Boston Redevelopment Authority as required by the Boston Zoning Code, Article 80.

Signature of Proponent's Representative

Douglas M. Husid, Attorney
for Massachusetts General Hospital
on behalf of
Dr. Jean Elrick

Massachusetts General Hospital
55 Fruit Street
Boston, MA 02114

11-10-14
Date

Signature of Preparer

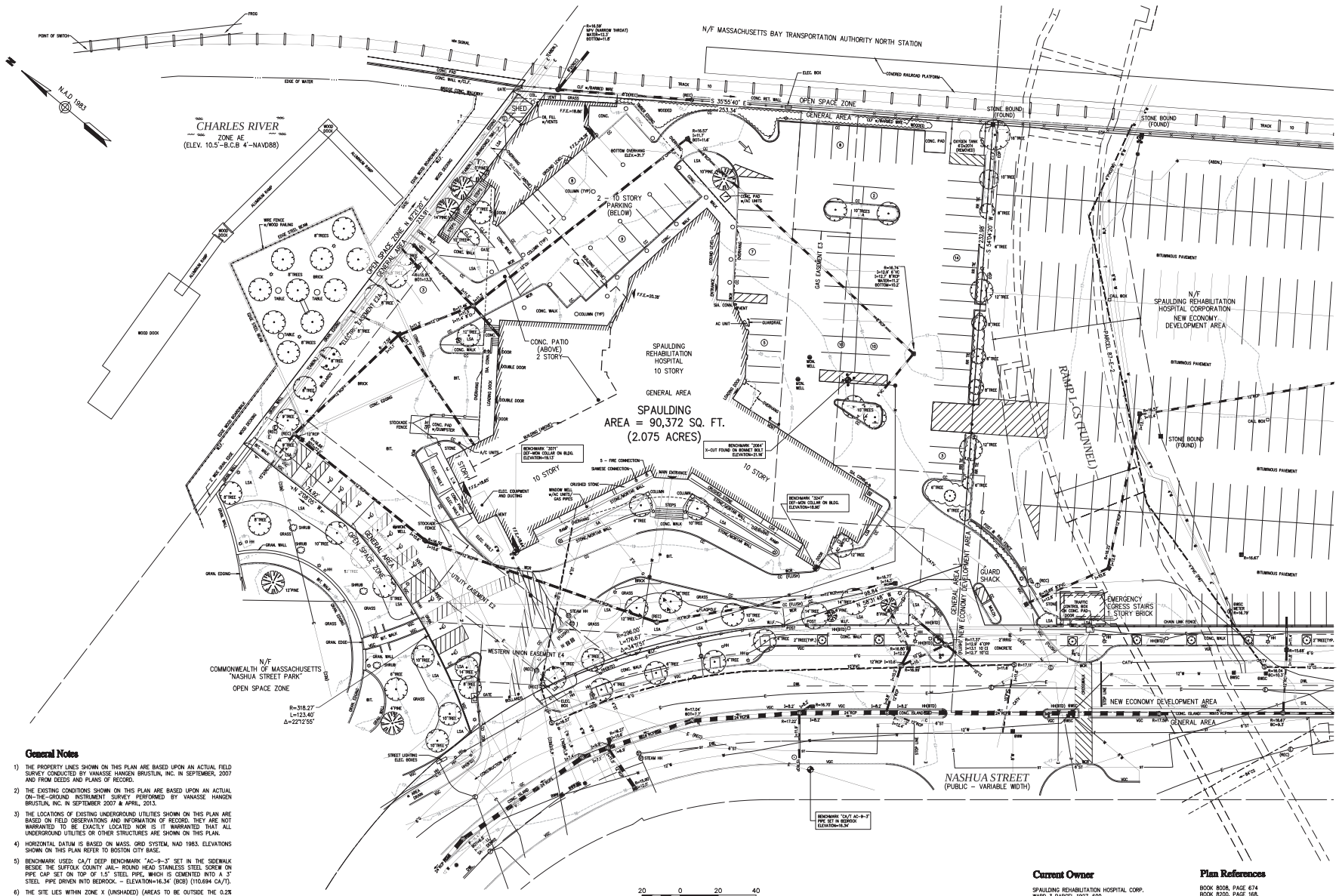
Geoff Starsiak

Epsilon Associates, Inc.
3 Clock Tower Place, Suite 250
Maynard, MA 01754

11-10-14
Date

Appendix A

Survey



General Notes

1) THE PROPERTY LINES SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY VANASSE HANGEN BRUSTLIN, INC. IN SEPTEMBER, 2007 AND FROM DEEDS AND PLANS OF RECORD.

2) THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL ON–THE–GROUND INSTRUMENT SURVEY PERFORMED BY VANASSE HANGEN BRUSTLIN, INC. IN SEPTEMBER 2007 & APRIL, 2013.

3) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD OBSERVATIONS AND INFORMATION OF RECORD. THEY ARE NOT WARRANTED TO BE EXACTLY LOCATED NOR IS IT WARRANTED THAT ALL UNDERGROUND UTILITIES OR OTHER STRUCTURES ARE SHOWN ON THIS PLAN.

4) HORIZONTAL DATUM IS BASED ON MASS. GRID SYSTEM, NAD 1983. ELEVATIONS SHOWN ON THIS PLAN REFER TO BOSTON CITY BASE.

5) BENCHMARK USED: CA/T DEEP BENCHMARK "AC–9–3" SET IN THE SIDEWALK BESIDE THE SUFFOLK COUNTY JAIL – ROUND HEAD STAINLESS STEEL SCREW ON PIPE CAP SET ON TOP OF 1.5" STEEL PIPE, WHICH IS CEMENTED INTO A 3" STEEL PIPE DRIVEN INTO BEDROCK. – ELEVATION=16.34' (BOB) (110.694 CA/T).

6) THE SITE LIES WITHIN ZONE X (UNSHADED) (AREAS TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR CITY OF BOSTON, SUFFOLK COUNTY, MASSACHUSETTS, MAP NUMBER 25025C0077G, EFFECTIVE DATE SEPTEMBER 25, 2009.

7) THE SITE LIES ENTIRELY WITHIN THE GENERAL AREA OF THE "NORTH STATION ECONOMIC DEVELOPMENT AREA" AS SHOWN ON THE CITY OF BOSTON ZONING ON MAP 1B/1J/1K/1L NORTH STATION EDA, BULFINCH TRIANGLE, CAMBRIDGE STREET NORTH & NORTH END NEIGHBORHOOD DISTRICTS. DIMENSIONAL REQUIREMENTS OF THE SITE AT THE TIME OF THIS SURVEY ARE:

GENERAL AREA

FLOOR AREA RATIO (FAR).....8–10

MAXIMUM BUILDING HEIGHT.....125'/155' FEET*

* SEE SECTION 39–5

8) THE TREE SYMBOL OUTLINE SHOWN ON THIS PLAN DOES NOT REPRESENT THE ACTUAL TREE CANOPY.

9) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND MAY BE SUBJECT TO ADDITIONAL INFORMATION DISCLOSED IN SUCH.

Current Owner

SPAULDING REHABILITATION HOSPITAL CORP.
WARD 3 PARCEL 1927–600
DEED BOOK 10713, PAGE 216

Plan References

BOOK 8008, PAGE 674
BOOK 8200, PAGE 168.
BOOK 12873, PAGE 305
BOOK 12873, PAGE 302–308
BOOK 13006, PAGE 233
BOOK 14612, PAGE 149
BOOK 15345, PAGE 323
BOOK 18154, PAGE 224
BOOK 21071 PAGE 47
BOOK 21768 PAGE 288
BOOK 23081 PAGE 79
BOOK 36305 PAGE 231

CITY OF BOSTON PLAN NO. L–6024
CITY OF BOSTON PLAN NO. L–6025
CITY OF BOSTON PLAN NO. L–6672
CITY OF BOSTON PLAN NO. L–10757
CITY OF BOSTON PLAN NO. L–11496
CITY OF BOSTON PLAN NO. L–11497

MDOT LAYOUT NO. 6780
MDOT LAYOUT NO. 6880
MDOT LAYOUT NO. 7243

Legend

- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- MANHOLE
- HANDHOLE
- WATER GATE
- BWSC WATER GATE
- FIRE HYDRANT
- GAS GATE
- STREET SIGN
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- GUY POLE
- FFE=33.18' FIRST FLOOR ELEVATION
- MONITORING WELL
- EDGE OF PAVEMENT
- CONCRETE CURB
- VERTICAL GRANITE CURB
- SLOPED GRANITE EDGE
- BITUMINOUS BERM
- GUARD RAIL
- CHAIN LINK FENCE
- DRAINAGE LINE
- SEWER LINE
- OVERHEAD WIRE
- UNDERGROUND ELECTRIC
- TELEPHONE LINE
- GAS LINE
- WATER LINE
- STONEWALL
- TREELINE
- 100'–FT BUFFER ZONE
- 100'–FT RIVERFRONT AREA
- 200'–FT RIVERFRONT AREA
- LIMIT MEAN ANNUAL HIGH WATER
- LIMIT OF BANK
- VEGETATED WETLAND BOUNDARY

Vanasse Hangen Brustlin, Inc.

Transportation
Land Development
Environmental Services

101 Walnut Street, P.O. Box 9151
Watertown, Massachusetts 02471-9151
617 924 1770 • FAX 617 924 2286

No.	Revision	Date	Appvd.

Designed by | Drawn by | Checked by
CAD checked by | Approved by
Scale 1"=20' | Date May 29, 2013

Project Title
Spaulding Rehabilitation Hospital
125 Nashua Street
Boston, Massachusetts

Issued for

Drawing Title
Existing Conditions Plan of Land

Drawing Number
Sv-1

Sheet 1 of 1

Project Number
12364.00

\\vhb\pro\Boston\12364.00\cad\sr\planset\12364.00–EXIST.dwg

Appendix B
Climate Change Checklist

Climate Change Preparedness and Resiliency Checklist for New Construction

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

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

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

Climate Change Analysis and Information Sources:

1. Northeast Climate Impacts Assessment (www.climatechoices.org/ne/)
2. USGCRP 2009 (http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/)
3. Army Corps of Engineers guidance on sea level rise (http://planning.usace.army.mil/toolbox/library/ECs/EC11652212Nov2011.pdf)
4. Proceeding of the National Academy of Science, "Global sea level rise linked to global temperature", Vermeer and Rahmstorf, 2009 (http://www.pnas.org/content/early/2009/12/04/0907765106.full.pdf)
5. "Hotspot of accelerated sea-level rise on the Atlantic coast of North America", Asbury H. Sallenger Jr*, Kara S. Doran and Peter A. Howd, 2012 (http://www.bostonredevelopmentauthority.org/planning/Hotspot of Accelerated Sea-level Rise 2012.pdf)
6. "Building Resilience in Boston": Best Practices for Climate Change Adaptation and Resilience for Existing Buildings, Linnean Solutions, The Built Environment Coalition, The Resilient Design Institute, 2103 (http://www.greenribboncommission.org/downloads/Building_Resilience_in_Boston_SML.pdf)

Checklist

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

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

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

A.1 - Project Information

Project Name:	125 Nashua Street
Project Address Primary:	125 Nashua Street
Project Address Additional:	
Project Contact (name / Title / Company / email / phone):	Nick Haney, Project Manager, MGH Planning and Construction, nhaney@partners.org, (857) 238-5218

A.2 - Team Description

Owner / Developer:	Massachusetts General Hospital
Architect:	Linea 5
Engineer (building systems):	Thompson Consulting
Sustainability / LEED:	Linea 5
Permitting:	Epsilon Associates
Construction Management:	Walsh Brothers
Climate Change Expert:	Epsilon Associates

A.3 - Project Permitting and Phase

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

☑ PNF / Expanded PNF Submission	☐ Draft / Final Project Impact Report Submission	☐ BRA Board Approved	☐ Notice of Project Change
☐ Planned Development Area	☐ BRA Final Design Approved	☐ Under Construction	☐ Construction just completed:

A.4 - Building Classification and Description

List the principal Building Uses:	Office
List the First Floor Uses:	*Office*

What is the principal Construction Type – select most appropriate type?

☐ Wood Frame	☐ Masonry	☑ Steel Frame	☑ Concrete

Describe the building?

Site Area:	*90,372 SF*	Building Area:	*198,080 SF*
Building Height:	*105 Ft.*	Number of Stories:	*10 Flrs.*
First Floor Elevation (reference Boston City Base):	*18.65 Elev.*	Are there below grade spaces/levels, if yes how many:	*Yes, 1 level*

A.5 - Green Building

Which LEED Rating System(s) and version has or will your project use (by area for multiple rating systems)?

Select by Primary Use:	☐ New Construction	☐ Core & Shell	☐ Healthcare	☐ Schools
	☐ Retail	☐ Homes Midrise	☐ Homes	☑ Other
Select LEED Outcome:	☑ Certified	☐ Silver	☐ Gold	☐ Platinum

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

Registered:	*Yes / No*	Certified:	*Yes / No*

A.6 - Building Energy-

What are the base and peak operating energy loads for the building?

Electric:	*1650 (kW)*	Heating:	*6.9 (MMBtu/hr)*
What is the planned building Energy Use Intensity:	*0.007 (kWh/SF)*	Cooling:	*575 (Tons/hr)*

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

Electric:	*150 (kW)*	Heating:	*0 (MMBtu/hr)*
		Cooling:	*0 (Tons/hr)*

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

Electrical Generation:	*250 (kW)*		Fuel Source:	*Diesel*
System Type and Number of Units:	☑ Combustion Engine	☐ Gas Turbine	☐ Combine Heat and Power	*(Units)*

B - Extreme Weather and Heat Events

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

B.1 - Analysis

What is the full expected life of the project?

Select most appropriate:	☑ 10 Years	☐ 25 Years	☐ 50 Years	☐ 75 Years

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

Select most appropriate:	☐ 10 Years	☑ 25 Years	☐ 50 Years	☐ 75 Years

What time span of future Climate Conditions was considered?

Select most appropriate:	☐ 10 Years	☑ 25 Years	☐ 50 Years	☐ 75 Years

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

8/91 Deg.	Based on ASHRAE Fundamentals 2013 99.6% heating; 0.4% cooling

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

95 Deg.	*5 Days*	*4 Events / yr.*

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

30-90 Days	*0.2 Events / yr.*

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

45 Inches / yr.	*4 Inches*	*0.3 Events / yr.*

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

105 Peak Wind	*10 Hours*	*0.25 Events / yr.*

B.2 - Mitigation Strategies

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

Building energy use below code:	20%
How is performance determined:	

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

Select all appropriate:	☐ High performance building envelop	☐ High performance lighting & controls	☐ Building day lighting	☐ EnergyStar equip. / appliances
	☐ High performance HVAC equipment	☐ Energy recovery ventilation	☐ No active cooling	☐ No active heating
Describe any added measures:	Increased insulation and new mechanical equipment.			

What are the insulation (R) values for building envelop elements?

Roof:	*U = 0.039*	Walls / Curtain Wall Assembly:	*U = 0.05*
Foundation:	*R =*	Basement / Slab:	*U = 0.629*
Windows:	*R = / U = 0.49*	Doors:	*R = / U =*

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

	☐ On-site clean energy / CHP system(s)	☐ Building-wide power dimming	☐ Thermal energy storage systems	☐ Ground source heat pump
	☐ On-site Solar PV	☐ On-site Solar Thermal	☐ Wind power	☑ None
Describe any added measures:				

Will the project employ Distributed Energy / Smart Grid Infrastructure and /or Systems?

Select all appropriate:	☐ Connected to local distributed electrical	☐ Building will be Smart Grid ready	☑ Connected to distributed steam, hot, chilled water	☐ Distributed thermal energy ready

Will the building remain operable without utility power for an extended period?

Yes / No	If yes, for how long:	*Days*
If Yes, is building "Islandable?		
If Yes, describe strategies:		

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

Select all appropriate:	☐ Solar oriented – longer south walls	☐ Prevailing winds oriented	☐ External shading devices	☐ Tuned glazing
	☐ Building cool zones	☐ Operable windows	☐ Natural ventilation	☐ Building shading
	☐ Potable water for drinking / food preparation	☐ Potable water for sinks / sanitary systems	☐ Wastewater storage capacity	☐ High Performance Building Envelop
Describe any added measures:				

What measures will the project employ to reduce urban heat-island effect? **No proposed changes to exterior of building or site landscaping.**

Select all appropriate:	☐ High reflective paving materials	☐ Shade trees & shrubs	☑ High reflective roof materials	☐ Vegetated roofs
Describe other strategies:				

What measures will the project employ to accommodate rain events and more rain fall? **No proposed changes to exterior of building or site landscaping.**

Select all appropriate:	☐ On-site retention systems & ponds	☐ Infiltration galleries & areas	☐ Vegetated water capture systems	☐ Vegetated roofs
Describe other strategies:				

What measures will the project employ to accommodate extreme storm events and high winds? **No proposed changes to exterior of building or site landscaping.**

Select all appropriate:	☐ Hardened building structure & elements	☐ Buried utilities & hardened infrastructure	☐ Hazard removal & protective landscapes	☐ Soft & permeable surfaces (water infiltration)
Describe other strategies:				

C - Sea-Level Rise and Storms

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

C.1 - Location Description and Classification:

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

	Yes / **No**

Describe site conditions?

Site Elevation – Low/High Points:	*16ft/23ft Boston City Base Elev.(Ft.)*
Building Proximity to Water:	*60 Ft.*

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

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

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

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

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

10 Ft.

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

C - Sea-Level Rise and Storms

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

C.2 - Analysis

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

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

C.3 - Building Flood Proofing

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

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

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

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

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

What measures will be taken to ensure the integrity of critical building systems during a flood or severe storm event:

☐ Systems located above 1st Floor.	☐ Water tight utility conduits	☐ Waste water back flow prevention	☐ Storm water back flow prevention

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

Yes / No

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

Yes / No	If yes, to what height above 100 Year Floodplain:	*Boston City Base Elev. (Ft.)*

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

Yes / No	
If Yes, describe:	

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

Yes / No	If Yes, for how long:	*days*

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

C.4 - Building Resilience and Adaptability

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

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

Select appropriate:	*Yes / No*	☐ Hardened / Resilient Ground Floor Construction	☐ Temporary shutters and or barricades	☐ Resilient site design, materials and construction

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

Select appropriate:	*Yes / No*	☐ Surrounding site elevation can be raised	☐ Building ground floor can be raised	☐ Construction been engineered
Describe additional strategies:				

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

Select appropriate:	*Yes / No*	☐ Solar PV	☐ Solar Thermal	☐ Clean Energy / CHP System(s)
		☐ Potable water storage	☐ Wastewater storage	☐ Back up energy systems & fuel
Describe any specific or additional strategies:				

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

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

Appendix C
Accessibility Checklist

Accessibility Checklist

(to be added to the BRA Development Review Guidelines)

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

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

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

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

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

Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design
    a. http://www.ada.gov/2010ADAstandards_index.htm
2. Massachusetts Architectural Access Board 521 CMR
    a. http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations-pdf.html
3. Boston Complete Street Guidelines
    a. http://bostoncompletestreets.org/
4. City of Boston Mayors Commission for Persons with Disabilities Advisory Board
    a. http://www.cityofboston.gov/Disability
5. City of Boston – Public Works Sidewalk Reconstruction Policy
    a. http://www.cityofboston.gov/images_documents/sidewalk%20policy%200114_tcm3-41668.pdf
6. Massachusetts Office On Disability Accessible Parking Requirements
    a. www.mass.gov/anf/docs/mod/hp-parking-regulations-mod.doc
7. MBTA Fixed Route Accessible Transit Stations
    a. http://www.mbta.com/about_the_mbta/accessibility/

Article 80 | ACCESSIBILTY CHECKLIST

Project Information

Project Name:	125 Nashua Street
Project Address Primary:	125 Nashua Street
Project Address Additional:	
Project Contact (name / Title / Company / email / phone):	Nick Haney, Project Manager, MGH Planning and Construction, nhaney@partners.org, (857) 238-5218

Team Description

Owner / Developer:	Massachusetts General Hospital
Architect:	Linea 5
Engineer (building systems):	Thompson Consulting
Sustainability / LEED:	Linea 5
Permitting:	Epsilon Associates
Construction Management:	Walsh Brothers

Project Permitting and Phase

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

PNF / Expanded PNF Submitted	Draft / Final Project Impact Report Submitted	BRA Board Approved
BRA Design Approved	Under Construction	Construction just completed:

Article 80 | ACCESSIBILTY CHECKLIST

Building Classification and Description

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

	Residential – One to Three Unit	Residential - Multi-unit, Four +	Institutional	Education
	Commercial	Office	Retail	Assembly
	Laboratory / Medical	Manufacturing / Industrial	Mercantile	Storage, Utility and Other
First Floor Uses (List)	*Office/Lobby*			

What is the Construction Type – select most appropriate type? **N/A**

Wood Frame	Masonry	Steel Frame	Concrete

Describe the building?

Site Area:	*90,372 SF*	Building Area:	*198,080 SF*
Building Height:	*105 Ft.*	Number of Stories:	*10 Flrs.*
First Floor Elevation:	*18.65 Elev.*	Are there below grade spaces:	*Yes*

Assessment of Existing Infrastructure for Accessibility:

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

Provide a description of the development neighborhood and identifying characteristics.	The site is located in an area with surface parking lots, transportation infrastructure, and large commercial and government buildings, including the Suffolk County Jail, TD Garden, North Station, and Thomas P. O'Neill, Jr. Federal Building.
List the surrounding ADA compliant MBTA transit lines and the proximity to the development site: Commuter rail, subway, bus, etc.	North Station, 0.25 mile; Science Park Station, 0.25 mile

List the surrounding institutions: hospitals, public housing and elderly and disabled housing developments, educational facilities, etc.	Museum of Science, West End Museum
Is the proposed development on a priority accessible route to a key public use facility? List the surrounding: government buildings, libraries, community centers and recreational facilities and other related facilities.	No. Thomas P. O'Neill, Jr. Federal Building, Basketball City, Suffolk County Sherriff's Department, West End Community Center

Surrounding Site Conditions – Existing:

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

Are there sidewalks and pedestrian ramps existing at the development site?	Yes. Two exterior ramps at the front entrance, one interior ramp at the back entrance. Existing sidewalks wrap 2/3 around the building perimeter and stretch along Nashua Street (See Site Plan Exhibit).
If yes above, list the existing sidewalk and pedestrian ramp materials and physical condition at the development site.	The ramps and the sidewalks are all concrete. They are in good condition.
Are the sidewalks and pedestrian ramps existing-to-remain? If yes, have the sidewalks and pedestrian ramps been verified as compliant? If yes, please provide surveyors report.	Yes, existing sidewalks and ramps are to remain. A survey has been conducted at the ramps, please see the attached graphic report. There are two ramps at the front entry. They are both compliant with the exception of one stretch of the left ramp at the front entry that is slightly steeper than code requirements (9% vs 8.3% slope).
Is the development site within a historic district? If yes, please identify.	No

Surrounding Site Conditions – Proposed

This section identifies the proposed condition of the walkways and pedestrian ramps in and around the development site. The width of the sidewalk contributes to the degree of comfort and enjoyment of walking along a street. Narrow sidewalks do not support lively pedestrian activity, and may create dangerous conditions that force people to walk in the street. Typically, a five foot wide Pedestrian Zone supports two people walking

side by side or two wheelchairs passing each other. An eight foot wide Pedestrian Zone allows two pairs of people to comfortable pass each other, and a ten foot or wider Pedestrian Zone can support high volumes of pedestrians.

Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? See: www.bostoncompletestreets.org	No new sidewalks proposed.
If yes above, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, Boulevard.	
What is the total width of the proposed sidewalk? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone.	
List the proposed materials for each Zone. Will the proposed materials be on private property or will the proposed materials be on the City of Boston pedestrian right-of-way?	
If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the City of Boston Public Improvement Commission?	
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way?	
If yes above, what are the proposed dimensions of the sidewalk café or furnishings and what will the right-of-way clearance be?	

Proposed Accessible Parking:

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

What is the total number of parking spaces provided at the development site parking lot or garage?	98
What is the total number of accessible spaces provided at the development site?	4 including 1 van space
Will any on street accessible parking spaces be required? If yes, has the proponent contacted the Commission for Persons with Disabilities and City of Boston Transportation Department regarding this need?	No
Where is accessible visitor parking located?	They are the spaces closest to the front entrance ramp. Accessible parking spaces are for both staff and visitors.
Has a drop-off area been identified? If yes, will it be accessible?	There is no designated drop-off area. However, drop-off can be done at both the front entrance and back entrance where accessible doors, ramps, and overhead covers exist.
Include a diagram of the accessible routes to and from the accessible parking lot/garage and drop-off areas to the development entry locations. Please include route distances.	See attached diagram “From Accessible Parking Lot to Building Entry”.

Circulation and Accessible Routes:

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

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

Provide a diagram of the accessible route connections through the site.	See attached diagram "Accessible Route through Site".
Describe accessibility at each entryway: Flush Condition, Stairs, Ramp Elevator.	See attached diagram "Accessible Route through Site". One stair and three ramps at two entries.
Are the accessible entrance and the standard entrance integrated?	Yes
If no above, what is the reason?	
Will there be a roof deck or outdoor courtyard space? If yes, include diagram of the accessible route.	Yes, the second floor has an outdoor terrace that can be accessed from the Café. See attached diagram "Accessible Route to Second Floor Terrace".
Has an accessible routes way-finding and signage package been developed? If yes, please describe.	Yes, signage for accessible parking space, entries, and toilets are included in the package.

Accessible Units: (If applicable)

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

What is the total number of proposed units for the development?	
How many units are for sale; how many are for rent? What is the market value vs. affordable breakdown?	
How many accessible units are being proposed?	

Article 80 | ACCESSIBILTY CHECKLIST

Please provide plan and diagram of the accessible units.	
How many accessible units will also be affordable? If none, please describe reason.	
Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs at entry or step to balcony. **If yes,** please provide reason.	
Has the proponent reviewed or presented the proposed plan to the City of Boston Mayor's Commission for Persons with Disabilities Advisory Board?	
Did the Advisory Board vote to support this project? **If no,** what recommendations did the Advisory Board give to make this project more accessible?	

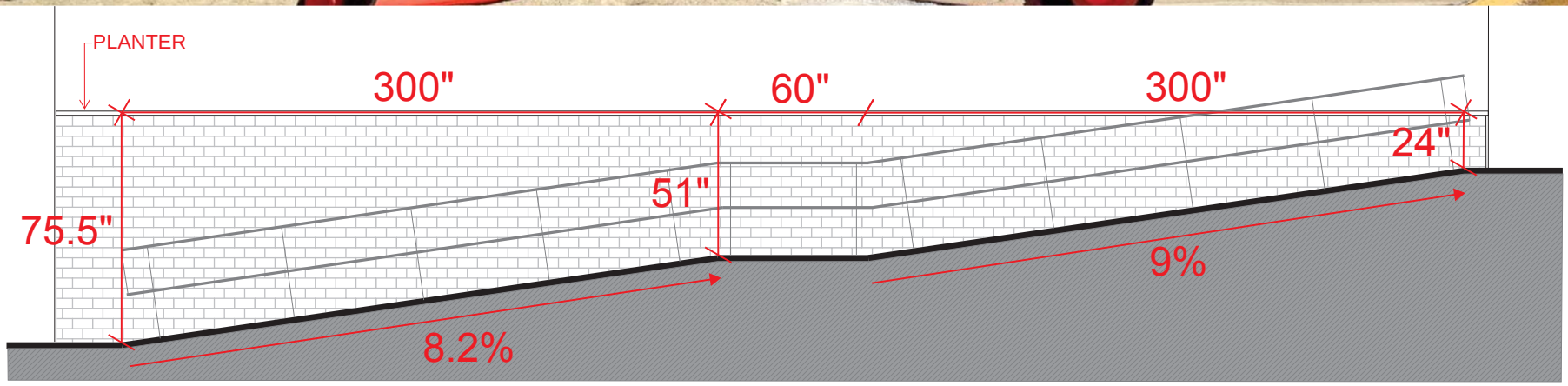
Thank you for completing the Accessibility Checklist!

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

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

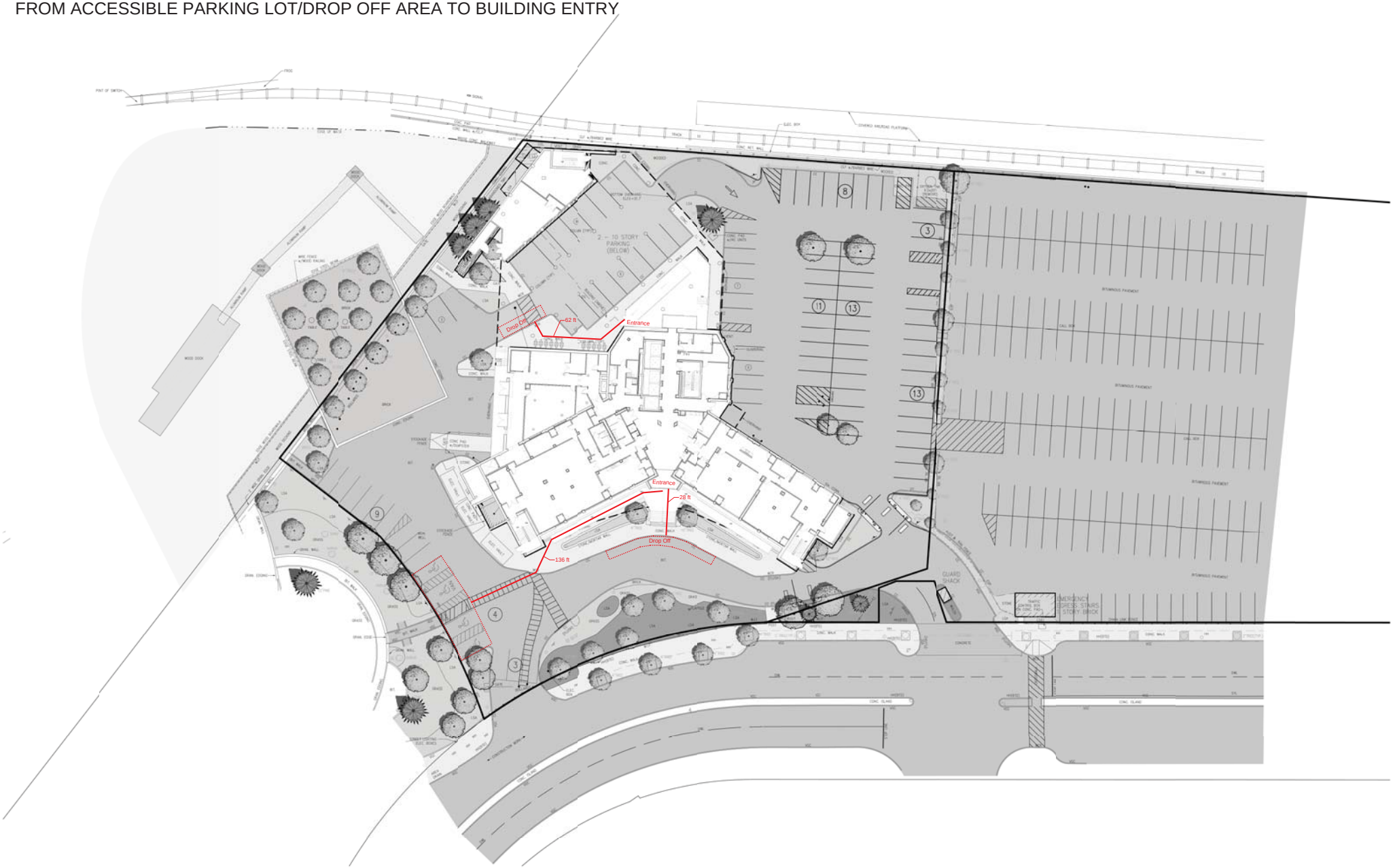
BACK ENTRY RAMP SURVEY

FRONT ENTRY LEFT RAMP SURVEY

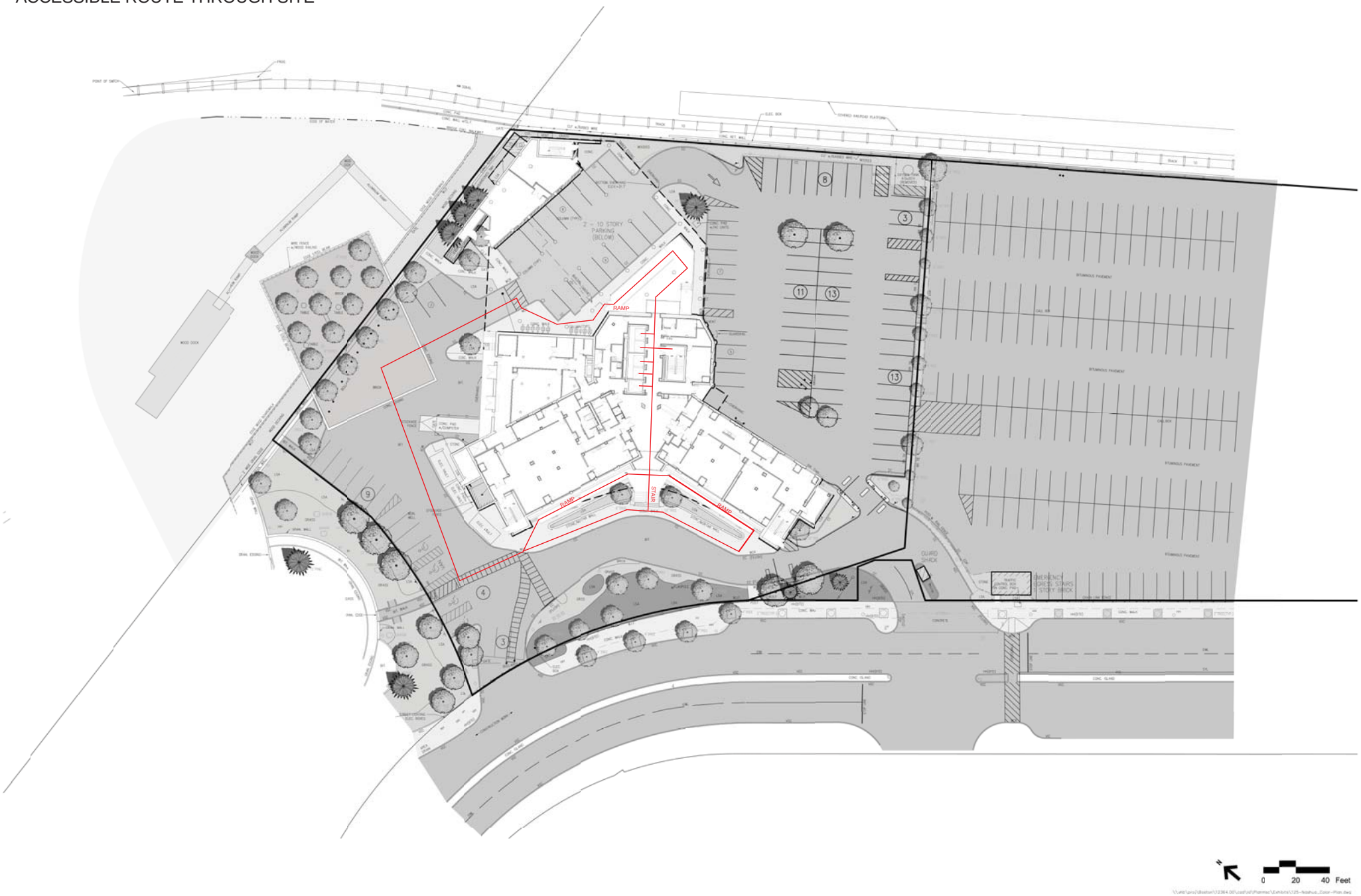


FRONT ENTRY RIGHT RAMP SURVEY

FROM ACCESSIBLE PARKING LOT/DROP OFF AREA TO BUILDING ENTRY



ACCESSIBLE ROUTE THROUGH SITE



ACCESSIBLE ROUTE TO SECOND FLOOR TERRACE