FINAL PROJECT IMPACT REPORT

Submitted Pursuant to Article 80 of the Boston Zoning Code

Jackson Square Master Plan Site III, Phase 3



Submitted to:

Boston Redevelopment Authority

One City Hall Square, 9th Floor Boston, MA 02201

Submitted by:

Jackson Square Partners, LLC

c/o Jamaica Plain Neighborhood Development Corporation 31 Germania Street, Jamaica Plain, MA 02130 and

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December 11, 2015

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December 11, 2015

TO: Brian P. Golden Boston Redevelopment Authority One City Hall Square, 9th Floor Boston, MA 02201

Attn: Gary Uter, Project Manager

RE: Final Project Impact Report to Jackson Square Master Plan

Roxbury/Jamaica Plain, Massachusetts

INTRODUCTION

Jackson Square Partners, LLC ("Project Proponent") is pleased to submit this Final Project Impact Report ("FPIR") with respect to the projects referred to in our Draft Project Impact Report ("DPIR") filed with the Boston Redevelopment Authority ("BRA") on May 31, 2007 as the Phase 3 projects to be constructed on Site III (a.k.a Buildings L, M, N and O) in the Jamaica Plain and Roxbury communities of Boston, Massachusetts. This FPIR is being submitted in accordance with Article 80A-6 and 80B-5 of the Boston Zoning Code ("Code").

1.0 PROJECT BACKGROUND

The DPIR described the overall redevelopment of Jackson Square involving 11.2 acres of largely vacant public and privately owned land where the Jamaica Plain and Roxbury communities meet. The full development program proposed to develop the project in four phases (now reduced to three phases) and included construction of 438 units of housing (both home ownership and rental), with 291 units affordable to low and moderate income households, 61,200 square feet (sf) of new ground floor retail space, approximately 66,500 sf of community facilities, 13,500 sf of renovated office space and 13,400 sf for a new youth treatment facility for the Department of Youth Services.

On November 15, 2007, the BRA Board voted to issue a Preliminary Adequacy Determination for Phase 1 of the Jackson Square project, subject to continuing design review by the BRA (the "November 2007 Board Votes"). The BRA director subsequently issued a Preliminary Adequacy Determination for Phase 1 (the "Phase 1 PAD") on January 10, 2008. The November 2007 Board Votes waived the requirement for the filing and review of a FPIR for Phase 1, finding that the DPIR, along with subsequent submissions, was sufficient and adequately

resulted in the identification, analysis and mitigation of expected impacts of Phase 1 of the Proposed Project, subject to satisfaction of certain conditions set forth in the November 2007 Board Votes. The November 2007 Board Votes contemplated that the BRA might request supplemental information for subsequent phases prior to issuing adequacy determinations for such subsequent phases.

This submission responds to the BRA's request for a FPIR on the proposed Site III, Phase 3 projects, and also serves as a notice of project change pursuant to Article 80A-6 to the extent one is required.

As described below, in 2010 the Project Proponent determined that it could not advance the initial building design and program for Site III, Phase 3 due to site conditions and land ownership changes outside of its control. Since that time, the Project Proponent worked with neighborhood residents and other stakeholders, City of Boston staff, and other partners to explore alternative development programs for the site consistent with the vision stated in the original Jackson Square RFP and proposed Jackson Square Redevelopment Initiative Master Plan objectives. The Project Proponent submitted a Supplemental Filing ("Supplemental Filing") pursuant to Article 80A-6 with respect to Site III, Phase 2 (the 75 Amory Avenue project) on May 16, 2013, the BRA board approved the Supplemental Filing on July 16, 2013, and on March 21, 2014 the director issued a "Determination pursuant to Section 80A-6.2 of the Boston Zoning Code, Jackson Square, Site III, Phase 2 Building K, 75 Amory Project, Boston, Massachusetts." The 75 Amory Avenue project is currently under construction. This FPIR, relating to Site III, Phase 3, is the culmination of that revisioning process.

The proposed project changes described in this FPIR will result in only minimal changes to the adverse impacts described in the original DPIR. Because the Site III, Phase 3 projects will be less dense than previously anticipated, any negative environmental impacts as defined by Article 80 and as previously described in the DPIR, as modified over time by the two Notices of Project Change for Phase 1 and the Supplemental Filing for Site III, Phase 2, will either remain the same, be mitigated, or be decreased.

Consistent with the Project Proponent's original mission and the modified Site III, Phase 2 program, the Site III, Phase 3 program will provide a significant benefit to the neighborhood and play a critical role in continuing the revitalization of Jackson Square.

The following pages address the potential impacts of the proposed changes to the Site III, Phase 3 program in detail.

1.1 OVERVIEW OF PHASE 3 PROJECT CHANGES

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¹ The Phase 1 project was subsequently refined through the submission and approval of two Notices of Project Change dated January 29, 2010 and April 11, 2011, respectively.

This FPIR includes modifications to the conceptual design program for 15 Jackson Street and 250 Centre Street (originally called Buildings L, M, N and O in the DPIR) on the Site III portion of the Jackson Square Redevelopment Initiative Master Plan referenced in the November 2007 Board Votes.

The Project Proponent had originally envisioned as part of the master planning work for Jackson Square that Buildings L, M, N and O would rely on an adjacent parcel to satisfy a majority of the parking requirements for the proposed program. The Project Proponent has lost control of that parcel, and has no options for replacing the lost land. For this reason, the Project Proponent has had to reduce the scale of the proposed development -- including a reduction in the number of housing units and retail space. Site restrictions have also led the Project Proponent to combine Buildings N and O into one proposed development. The Project Proponent has also elected, due to market conditions and the types of available funding, to adjust the program from a mix of home ownership and multifamily rental units to all multifamily rental housing. More specifically, the changes to the Site III, Phase 3 program include the following:

- Due to loss of site control, the Project Proponent cannot proceed with Building L, which
 was a proposed mixed use structure including 16 residential units connected to a 223
 space structured parking facility intended to serve the Site III projects as well as provide
 overflow parking for other Jackson Square projects.
- Building M (15 Jackson Street) has been modified to be a 100% affordable, multi-family, green, and transit-oriented project that will include 44 rental apartments to meet the affordable housing needs of various sized households in the neighborhood. The Building M project also includes 22 parking spaces to accommodate the loss of structured parking on the Building L site.
- Building N (250 Centre Street) has been modified to be a mixed-income, mixed-use
 multifamily building that will include approximately 100 affordable and market-rate units
 to provide quality housing options to families of all incomes. Building N will also include
 approximately 2,400 sf of neighborhood focused retail. Approximately eighty (80)
 parking spaces, both structured and at grade, have been added to the Building N
 program to accommodate the loss of parking on the Building L site.
- Like Building L, Building O is no longer being proposed; it has been wrapped into Building N.

1.1.1 Retail

The initial program proposed a total of 20,100 s.f. in retail space among the four buildings, including 4,000 s.f. of retail space in building L, 6,900 s.f. in building N, and 9,200 s.f. in building M. The feasibility of this space was dependent on ample parking to capture customers commuting through Jackson Square. With the loss of the adjacent parcel, the retail scope has been scaled back to approximately 2,400 s.f. of space intended to accommodate transit and pedestrian oriented businesses.

1.1.2 Parking

The DPIR submission had attempted to maximize development on Site III by relying on a structured parking facility attached to Building L, as well as a new roadway (Jackson Street) constructed to connect Site III to the structured parking garage. The proposed Building L parking facility had 223 parking spaces, including 103 parking spaces reserved for the residential construction in Buildings L, M, N and O. With the loss of the proposed structured parking facility, the Project Proponent has added at-grade and structured parking spaces to the remaining portions of Site III. The Supplemental Filing included a modification to the site plan to accommodate adequate parking for the Site III, Phase 2 project, and this FPIR includes a further modification to the site plan to accommodate adequate parking for the proposed Phase 3 projects.

This FPIR does include a significant overall reduction in parking, from 223 parking spaces to 102 due to the scaling back of the retail square footage. The parking ratio for the residential portion of Site III, Phase 3is unchanged from the DPIR.

- The DPIR included 106 parking spaces reserved for the 150 residential units (0.7 spaces per unit).
- This FPIR includes 102 parking spaces for 144 residential units (0.7 spaces per unit).

The current change in the parking plan proposed in this FPIR will minimally reduce the scale of the anticipated "Greenway" described in the DPIR. The modification to the "Greenway" is further described in Section 3.2.

MBTA Right of Reversion

A portion of the parking shown in the revised plans for Site III, Phase 3 is proposed to be located on the MBTA Easement Parcel (defined below) that borders Building N. It is also expected that the easement and use agreement negotiated with the MBTA will include a right of reversion to the MBTA in the event of expansion of the railway or other presently

unanticipated transportation related need. This reversion would result in the loss of up to 19 of Building N's surface parking spaces.

In the unlikely event that this right is exercised, the Project Proponent would work with the MBTA, adjacent property owners, and the developers of other Jackson Square phases to identify parking locations to replace the spaces lost.

1.1.3 Screening and Buffering

The screening and buffering components described below are intended to meet the requirements of Article 55 – 38, which would otherwise be applicable outside of the Article 80 context.

- 1. Along the new driveway, parallel parking spaces, trees in planting pits, and shrub plantings at the base of the building shall demarcate the separations between vehicle and pedestrian paths, and will buffer the building from the driveway. Along the southern property line, a wood fence that is 60% opaque and at least 4'-0" high will screen the abutting parking area from the new driveway lanes. Along the Amory Street Extension, Building M is set back to allow planting buffer at the back of the sidewalk.
- 2. At the sides of the building, trees and/or shrubs (deciduous and/or evergreen) shall buffer the building from adjacent and abutting properties.
- 3. The parking lot shall have a 6" solid curb around its perimeter to separate the parking area from the landscaping.
- 4. Roof mounted mechanical equipment shall be visibly screened from view with opaque walls.
- 5. Landscaping shall be maintained by experienced personnel contracted by the Property Management Agent hired by the Project Proponent.

1.2 Building Program

The Project Proponent is proposing the division of the remaining portion of Site III (remaining after the development of the 75 Amory Avenue project in Phase 2) into multiple parcels to support the development program.

a. A portion of "Parcel 70" (a/k/a B76-1, B76-2 and B76-3) which the Project Proponent expects to acquire in fee simple from the Massachusetts Department of Transportation ("Parcel 70") to be constituted as the Building M parcel (the "Building M Parcel").

- b. The following to be constituted as the Building N parcel: (i) the remaining portion of Parcel 70; (ii) "Parcel 36" ("Parcel 36") which the Project Proponent expects to acquire in fee simple from the MBTA; and (iii) "Parcel 37" ("Parcel 37") which the Project Proponent expects to acquire in fee simple from the MBTA (collectively, the "Building N Parcel").
- c. A portion of Assessing Parcel 11-01197-000, as to which portion the Project Proponent expects to acquire an easement from the MBTA (the "**MBTA Easement Parcel**"), to be used for off-street parking to support Building N and for the linear park.

	DPIR	FPIR	Net Change
Lot Area (Approximate)	141,300 s.f.	Building M Parcel 31,652 s.f. Building N Parcel, 33,656 s.f. MBTA Easement Parcel, 30,790 s.f.	-45,202 s.f.
Building Heights/Stories	Building L, 45 feet Building M, 55 feet Building N, 55 feet Building O, 120 feet	Building L eliminated Building M, 45 feet Building N, 70 feet Buildings O eliminated	-10 feet, Building M and -50 feet, Building N
Total Gross Floor Area (Approximate)	Total 157,800 s.f. (Buildings L,M,N,O)	146,900 s.f. total (Building M, 44,150 Building N, 102,750 Buildings L and O eliminated)	Less 10,900 s.f.
Residential Use	150 units -16 affordable rental units 36 affordable rental units 23 affordable homeownership units 75 market rate homeownership units	144 units -44 affordable rental units (Building M) -75 market rate rental units (Building N) -minimum 25 affordable rental units (Building N)	- 6 overall units -7 affordable units
Retail Use	20,100 s.f.	2,400 s.f.	-17,700 s.f.

Parking	223 spaces located in	102 surface and below	-121 spaces
	Building L garage	grade parking spaces	

1.2.1 Building M (25 Amory Street)

Building M will include 44 rental apartments, with 65% sized for families with two or more bedrooms. The majority of the ground-floor units in Building M will be dedicated to accommodate larger households. Street facing units will have direct entry from the Amory Street Extension. The proposed housing program includes the following income mix:

- A minimum of 10% affordable to extremely low-income households, according to the City of Boston Department of Neighborhood Development homeless set aside requirement, and
- 100% affordable to households earning up to 60% of the Area Median Income.

1.2.2 Building N (250 Centre Street)

Building N will include approximately 100 rental apartments, with 39% sized for families. The proposed housing program includes the following income mix:

- 10% affordable to extremely low-income households,
- At least 15% affordable to households earning up to 60% of the Area Median Income
- 75% of units unrestricted

1.3 Project Schedule

The Site III, Phase 3 project is expected to proceed in four stages, with the infrastructure and site preparation work, followed by the two buildings, and completed with the park and plaza.

Stage 1: Infrastructure: Site preparation work will include re-grading portions of the site and the re-alignment of the Stony Brook sewer line in order to activate the site for development. The sewer relocation is described in more detail in section 4.5. This work is expected to commence in the fall of 2016.

Stage 2: Building M: This work is expected to commence in spring 2017

Stage 3: Building N: This work is expected to commence in fall 2017

Stage 4: Park and Plaza: this work will proceed after the vertical construction is complete, likely in summer/fall of 2018. Parts of the park and plaza may be completed along with Buildings M

and N, but the majority of the site will be needed for staging and storage during the residential construction.

1.4 Community Input

As many as 1,000 residents have participated in more than ten years of community-based planning efforts around the redevelopment of the 11 acres of land in Jackson Square. The vision that emerged from the planning process, and was incorporated into the Boston Redevelopment Authority's Request for Proposals, called for a "vibrant and healthy home and destination where youth and adults of all races and income levels have abundant opportunities for affordable homes, sustainable work, learning, exercise and play."

1.4.1 Community Process

Over the past two years the JPNDC and TCB teams have met with numerous community stakeholders and officials to garner feedback and support for the remaining Site III parcel plan, of which Buildings M and N are a part. Below are highlights of this process:

June 21, 2013 Site III Walking Tour/Community Charrette:

This half day Charrette involved the design teams, planning architect, and approximately forty (40) participants including abutters, members of local merchant associations, local residents and officials. The morning involved an overview of the originally proposed Site III Master Plan, a summary of the impacts to this plan due to the loss of control of Parcel L (the above grade parking garage originally designed to support the development program on the site). The group then split into a handful of small focus groups aimed to study new opportunities, and the trade-offs involved with the loss of land, in an attempt to deliver the maximum development program possible for housing typology, density/massing, open space, retail and parking – all in the face of the infrastructure challenges posed by the site. Each participant was asked to rotate through each focus group. At the end of the morning the participants were asked to discuss their experiences. Finally, the groups returned to a local community room to discuss the day's exercises in greater detail and team captains were asked to report out the priorities defined by the work groups. The JSP team captured this valuable feedback ranging from building design, indoor/outdoor community space, environmental considerations such as sound and air quality, and parking and traffic themes to inform the Site III design.

November 20, 2013 Follow-up Meeting I

Taking the priorities and goals from the Walking Tour, the JSP teams worked again with its planning architect to re-evaluate building locations, massing, and open space while attempting to balance its goals of maximizing the program defined in the original Master Plan. In this meeting, the team presented its first revisions to the program massing including its housing

and retail goals. Once again members of the community were asked to comment in small groups on the conceptual plan. Approximately 30 participants engaged in dynamic discussions around the importance of affordability and place-making in this final phase of Jackson Square and asked the team to re-double its efforts to develop a plan that limited impacts to the open space.

March 3, 2014

Follow-up Meeting II

In response to the November, 2013 meeting, the JPNDC and TCB teams set out to select an architect of record to develop a joint and cohesive design plan for the remaining buildings. The teams also began to study more carefully options to address the key infrastructure obstacles to the design including the location of the existing Stony Brook Sewer and limited circulation and grade issues along the Amory Street Extension. This work led the team to several meetings with state and local departments for infrastructure resources (described below) and allowed the site plan and building programs to be more firmly defined. Once more, members of the community came out in numbers and participated in small groups to review the proposed plans for consideration. Approximately 30 participants engaged in dynamic discussions around the multi-faceted design goals. Again, maximized affordability and vibrant active open space were the core themes of the evening.

November 17, 2015

Follow-up Meeting III

After several months of planning the team finalized its site and open space plans. Based on previous meeting feedback, the team presented a Site III plan which significantly reduced the impact on the proposed open-space (Greenway and Plaza), reduced its original retail goals, and re-oriented the building layouts after settling on the most feasible sewer relocation option available. The resulting housing program, with respect to affordability, was preserved to the greatest extent possible – while parking impacts were reduced. Members of the community were pleased with the progress made by the team and were supportive of the plan being presented for Article 80 approval.

1.4.2 Meetings with Local and State Officials

- In the summer of 2012 the Project Proponent held a series of meetings attended by federal, state and local officials to update them on and galvanize support for the final sequence of Site III projects being put forth in Jackson Square.
- The following summer of 2013 the Project Proponent held a follow-up series of meetings attended by federal, state and local officials to present the revised conceptual plans based on community input to garner support for the infrastructure needs required to enable the projects. The team also submitted a Massworks Application to seek the infrastructure support needed to enable the development program.

- In May 2014, the Project Proponent hosted local officials from the Department of Neighborhood Development and the Boston Redevelopment Authority to discuss infrastructure opportunities at the local level and preview the Site III plan.
- In July 2014, the Project Proponent hosted Governor Deval Patrick and members of his cabinet to showcase the Site III plans in search of ongoing support of its infrastructure requests.
- In March 2015, the Project Proponent hosted a team of state officials from the Executive Office of Housing and Economic Development to introduce the new state administration to the Jackson Square Initiative.
- In July 2015, the Project Proponent met with members of the BRA EDIC, BTD Engineering and Planning Teams, DPW and DND to advance discussions for local and state infrastructure support and coordination in anticipation of a planned Massworks funding application.

1.5 Renderings and Massing





Proposed Aerial View Parcel III -- Jamaica Plain





Proposed Site Plan Parcel III -- Jamaica Plain



FPIR / Jackson Square Master Plan December, 2015



Proposed View of Plaza on Centre Street





Proposed View of 250 Centre Street + Plaza and Greenway





Proposed View of Greenway from the South





Proposed View of Courtyard





Proposed View of Courtyard





Proposed View at the Corner of Amory Street





Proposed View of Building M on Amory Street





FPIR / Jackson Square Master Plan December, 2015

Proposed View at the Corner of Amory and Centre Streets



Proposed View at the corner of Columbus Avenue and Centre Street



Parcel III -- Jamaica Plain

1.7 Project Team

1.7.1 Jamaica Plain Neighborhood Development Corporation- Building M

The mission of the JPNDC is to promote equitable development and equal opportunity in Jamaica Plain and adjacent Boston neighborhoods through affordable housing, organizing, and economic opportunity initiatives that improve the lives of low- and moderate-income people and create a better community for all. In pursuit of this mission, JPNDC over the past 38 years has turned vacant lots and distressed buildings into 600 affordable homes for families and individuals, created 1,500 new jobs and invested \$250 million in Jamaica Plain. The following are among our accomplishments over the past ten years:

- Development of 180 affordable homes at a wide range of affordability levels for diverse populations, including first-time homebuyers, low-income frail and independent seniors, low-income families; and formerly homeless men and women; 70 more are currently in construction.
- Acquisition and redevelopment as affordable homes and community space of one of the largest closed church campuses in the United States, one that was eagerly sought by private developers for luxury housing development.
- Bringing back into productive re-use 100% of "The Brewery," 170,000 square feet of historic industrial space that was abandoned and crumbling when we acquired it in 1983; more than 500 people are employed today by the more than 50 businesses and non-profit organizations located at The Brewery, more than twice our original goal for job creation.
- Facilitation of \$5.3 million in loans to small and primarily immigrant-owned local businesses, creating or preserving more than 400 jobs (\$10.9 million in loans and 820 jobs since our small business technical assistance program was launched in 1996).
- Operating workforce, small business and childcare programs have helped more than a thousand families and placed the JPNDC in the forefront of organizations providing economic development services to Boston's Latino immigrant population.
- Leadership in Jackson Square Partners, designated by the City of Boston to redevelop
 11 acres of vacant land at the crossroads of Boston's Jamaica Plain and Roxbury
 neighborhoods; within the Jackson Square Redevelopment Initiative, JPNDC is the
 lead developer for five acres in Site III (discussed in this FPIR).

1.7.2 The Community Builders- Building N

The Community Builders, Inc. (TCB) is one of the largest and most accomplished non-profit affordable and mixed-income housing developers in the country, with a mission to build and sustain strong communities where people of all incomes can achieve their full potential. We realize this mission by developing, financing and operating high-quality housing and implementing neighborhood self-help initiatives to drive economic opportunity for our residents. Over our 50-year history, TCB has completed or preserved nearly 26,000 units of affordable and mixed-income housing. It has assembled over \$2.5 billion in project financing to complete 330 residential developments in 15 states and Washington, DC. TCB's property management portfolio includes nearly 11,000 units and its staff coordinates resident services programming at more than 20 sites.

1.7.3 ICON Architecture

ICON Architecture, Inc. is a Boston-based firm of 40 staff with award-winning work focused on sustainable urban development—creating new paradigms for city living ranging from infill transit-oriented development to innovative adaptive reuse. ICON's projects mix uses — market housing with workforce/affordable units, artist live/work communities with retail and commercial environments engaging their neighborhood edges. In addition to new construction, ICON believes that reinvigorated buildings offer smart and sustainable value.

ICON's projects have been case studies for nationally distributed books on urban housing, published by the Urban Land Institute, Harvard University Press, and Global Green. ICON's work has won numerous awards, multiple Builders Choice Design Awards, a Governor's Smart Growth Leadership Award, and multiple Preservation Achievement Awards from the Boston Preservation Alliance and the Massachusetts Historical Commission.

Widely recognized for their vision, creativity, and responsiveness to clients, ICON's principals and senior staff offer the skills necessary to conceive and implement complex projects that require coordination of clients, citizens, and agencies. They bring to their clients an ability to listen carefully, to assimilate and synthesize large bodies of information, and to help build consensus among often-conflicting interests.

1.8 Public Benefits

The revised development program for Jackson Square Site III, Phase 3 will continue to provide substantial public benefits as originally described in the DPIR, as modified over time by the two Notices of Project Change for Phase 1 and the Supplemental Filing for Phase 2. The continued redevelopment of Jackson Square will transform the area into a vibrant mixed-use neighborhood that will increase the supply of housing, particularly affordable housing; develop brownfield sites; provide a sustainable transit-oriented development; and provide residents with increased safety, improved aesthetic appearance, access to community programs, greater recreational and social activities, and enhanced commercial opportunities.

Site III, Phase 3 will provide the following benefits originally outlined in the DPIR:

1.8.1 Neighborhood Revitalization

Site III, Phase 3 will redevelop a vacant site and will contribute to the continued revitalization of Jackson Square. The added housing, retail, and open space uses will further energize and enliven the Jackson Square neighborhood as a desirable place to live and shop, as well as improve the quality of life for neighboring residents.

1.8.2 Affordable Housing

Site III, Phase 3 will help advance the city's housing production goals by creating a diverse housing mix, including approximately 144 new housing units at a range of income levels. At least 69 units of housing will be affordable to residents earning under 60% of the area median income, and will be protected by long term affordability restrictions. The new market rate units will target working professionals and young married couples starting families.

1.8.3 Smart Growth/Transit-Oriented Development

The redevelopment of this portion of Site III into an attractive mixed-use development will complement the ongoing development near the Jackson Square MBTA station and the Centre Street retail corridor. Residents will have direct access to mass transit; the Phase 3 projects will generate fewer vehicle trips than the traditional mixed-use development. The proximity to bus, subway, and the Centre Street shopping area will encourage walking as a means of transport and support sustainable design and Transit-Oriented Development/ Smart Growth objectives.

1.8.4 Sustainable Design/Green Building

All developments proposed in the City of Boston must now follow the Boston Green Building Regulations including standards established under Article 37 of the Boston Zoning Code. The Phase 3 projects as currently conceived will meet or exceed the U.S. Green Council's Leadership in Energy and Environmental Design (LEED) system to achieve a Silver standard. LEED checklists for Buildings M and N are attached to this FPIR as Attachment C. The completed Climate Change Preparedness Questionnaires are also attached as Attachment D.

1.8.5 Increased Employment

The Site III, Phase 3 projects will create approximately 88 FTE construction jobs and approximately 15 permanent jobs. The permanent jobs will result from the commercial retail use and management of the multifamily property.

1.8.6 Open Space

The Site III, Phase 3 projects will create an approximately 27,000 s.f. linear park immediately across from the Jackson Square MBTA station, which will include a 3,000 s.f. hardscaped plaza with seating for public use, bicycle and walking paths, and several lawn areas for rest and recreation. Plantings will provide visual interest and shade.

1.8.7 Improved Pedestrian Environment

The Site III, Phase 3 projects will include improved sidewalks adjacent to the properties, providing well lit, safe and comfortable walking routes around the buildings. The linear park will also include a walking path, providing more direct access to Jackson Square Station for residents of the developments, Amory Street neighbors, and the broader neighborhood.

1.8.8 Improved Bicycling Resources to encourage Cycling

The Site III, Phase 3 projects will include a bicycle path through the proposed linear park. This cycling route will provide a safe route to connect riders from Amory Street and the west side of the MBTA orange line to the Southwest Corridor Park and downtown. Both Buildings M and N will include secure bicycle storage, and public bicycle racks will be available in the linear park.

2.0 Transportation

Howard Stein Hudson (HSH) has conducted an evaluation of the transportation impacts of the proposed changes in the Phase 3 projects.

The Site III, Phase 3 plans also include modifications to one block of Amory Street, an existing City of Boston right of way, referred to here as the Amory Street Extension. Based on conversations with staff from the City of Boston Department of Transportation and Public Improvement Commission, the Project Proponent is requesting, as part of the Article 80 process, a review of three options for the modification of Amory Street. These three options are described in detail in section 2.4.1.

2.1 Project Description

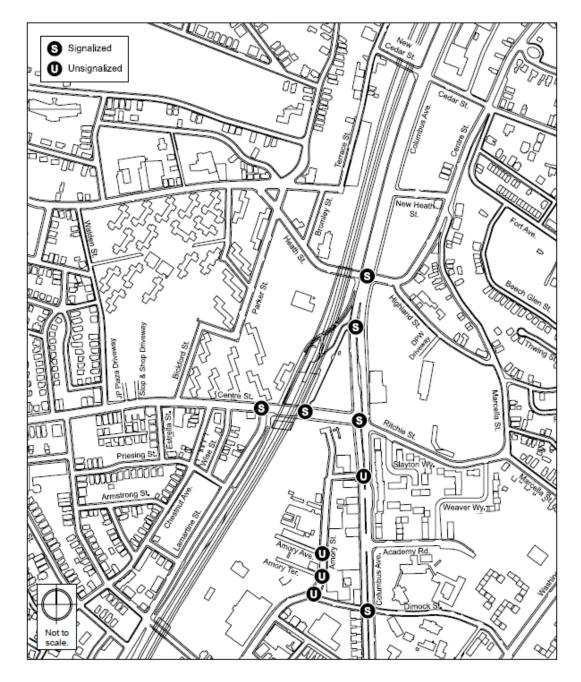
The proposed Site III, Phase 3 projects will consist of the development of Building N (250 Centre Street) and Building M (25 Amory St). The building at 250 Centre Street will consist of approximately 100 apartment units, along with approximately 2,400 square feet (sf) of retail and approximately 80 parking spaces. Building M will consist of approximately 44 apartment units, all affordable, with approximately 22 parking spaces.

2.1.1 Study Area

The DPIR contained a detailed transportation analysis that studied 15 intersections. The new study area consists of the following 12 intersections in the vicinity of Site III, also shown on **Figure 2-1**:

- " Columbus Avenue/Centre Street/Ritchie Street:
- Columbus Avenue/MBTA Busway;
- Columbus Avenue/Centre Street/Heath Street;
- " Columbus Avenue/Amory Street;
- " Columbus Avenue/Dimock Street;
- " Centre Street/MBTA Busway;
- " Centre Street/Lamartine Street;
- " Amory Street/Dimock Street:
- " Amory Street/Amory Terrace;
- " Amory Street/Amory Avenue;
- " Amory Street/New Jackson Street/Amory Street Extension; and
- " Amory Street Extension/Centre Street.

Figure 2-1 Study Area Intersection



Jackson Square Site 3 - 252 Centre Street and Building M



Figure 2-1 Study Area Intersections

2.1.2 Study Methodology

This transportation study adheres to the BTD Transportation Access Plan Guidelines and BRA Article 80 Large Project Review process. This study includes an evaluation of existing transportation conditions, future transportation conditions with and without the Proposed Project, projected parking demand, loading operations, transit services, pedestrian activity, and bicycle accommodation.

The Existing (2015) Condition analysis includes an inventory of the existing transportation conditions such as traffic characteristics, parking, curb usage, transit, pedestrian circulation, bicycle facilities, loading, and site conditions. Existing counts for vehicles, bicycles, and pedestrians were collected at the study area intersections. A traffic data collection effort forms the basis for the transportation analysis conducted as part of this evaluation.

The future transportation conditions analysis evaluates potential transportation impacts associated with the Project. Long-term impacts are evaluated for the year 2020, based on a five-year horizon from the year of the filing of this traffic study.

The No-Build (2020) Condition analysis includes general background traffic growth, traffic growth associated with specific developments (not including this Project), and transportation improvements that are planned in the vicinity of the site.

The Build (2020) Condition analysis includes a net increase in traffic volume due to the addition of Project-generated trip estimates to the traffic volumes developed as part of the No-Build (2020) Condition analysis. Expected roadway, parking, transit, pedestrian, and bicycle accommodations, as well as loading capabilities and deficiencies, are identified.

The final part of the transportation study identifies measures to mitigate Project-related impacts and to address any traffic, pedestrian, bicycle, transit, safety, or construction related issues that are necessary to accommodate the Project.

An evaluation of short-term traffic impacts associated with construction activities is also provided.

2.2 Existing Conditions

This section includes descriptions of the existing study area intersection traffic control, peakhour vehicular and pedestrian volumes, average daily traffic volumes, and public transportation availability.

2.2.1 Existing Traffic Data

Turning Movement Counts (TMCs) were conducted at the 10 study area intersections on August 5, 2015 during the weekday a.m. and the weekday p.m. peak periods (7:00 a.m. – 9:00 a.m. and 4:00 p.m. – 6:00 p.m., respectively).

2.2.2 Existing Vehicular Traffic Volumes

The existing traffic volumes that were collected were used to develop the Existing (2015) Condition traffic volumes. The Existing (2015) weekday a.m. Peak Hour and weekday p.m. Peak Hour traffic volumes are shown in **Figures 2-2** and **Figure 2-3**, respectively.

2.2.3 Existing Bicycle Volumes and Accommodations

The site is conveniently located in close proximity to several bicycle facilities. The Southwest Corridor Bicycle Path runs north-south behind the Site along the west side of the railroad cut and carries a significant volume of bicycle and pedestrian traffic. Bicycle counts were conducted concurrent with the vehicular TMCs, and are presented in **Figure 2-4**.

Bicycle paths along Jamaica Pond, in Olmsted Park, in Franklin Park, and along the Riverway are all within one mile of the Project Site. The City of Boston's "Bike Routes of Boston" indicates Amory Street, Centre Street, and Ritchie Street are all on-street bicycle routes. Bicycle racks are located at Jackson Square Station and in front of 1542 Columbus Avenue.

The site is located in proximity to a bicycle sharing station provided by Hubway. Hubway is the bicycle sharing system in the Boston area, which was launched in 2011 and consists of over 140 stations and 1,300 bicycles. There is one Hubway Station within a quarter mile of the site, located at the Jackson Square MBTA Station. The Jackson Square Hubway Station can accommodate 19 bicycles.

2.2.4 Existing Pedestrian Volumes and Accommodations

The level of pedestrian activity around the Project site is moderate, with a majority of activity originating from or destined to MBTA Jackson Square Station. To the east of Jackson Station, pedestrian activity is lighter on Centre Street and Columbus.

In the vicinity of the site, sidewalks are provided along all roadways and are generally in good condition. Crosswalks, wheelchair ramps, and pedestrian signal equipment are provided and in good condition at the majority of the study area intersections with the exception of the following four intersections:

- " Columbus Avenue/Amory Street;
- " Amory Street/Dimock Street (crosswalk in poor conditions);
- " Amory Street/Amory Terrace;
- " Amory Street/Amory Avenue.

Figure 2-2 Existing (2015) Condition Vehicular Traffic Volumes, a.m. Peak Hour

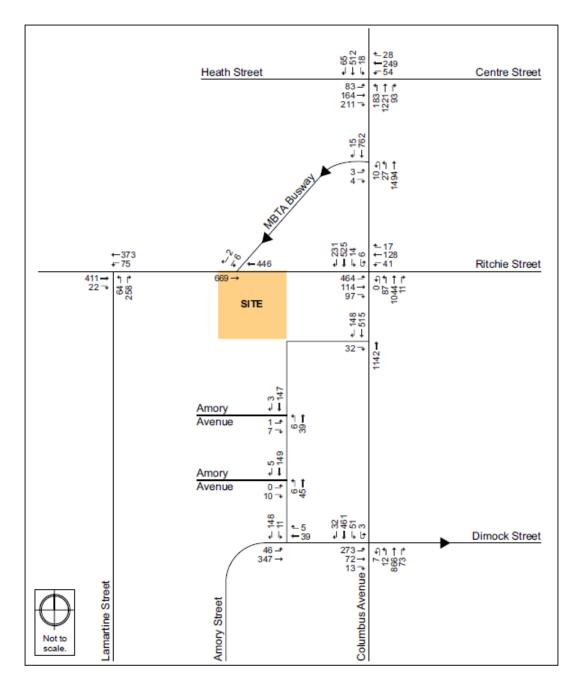




Figure 2-2

Existing (2015) Condition Traffic Volumes, Weekday a.m. Peak Hour

Figure 2-3 Existing (2015) Condition Vehicular Traffic Volumes, p.m. Peak Hour

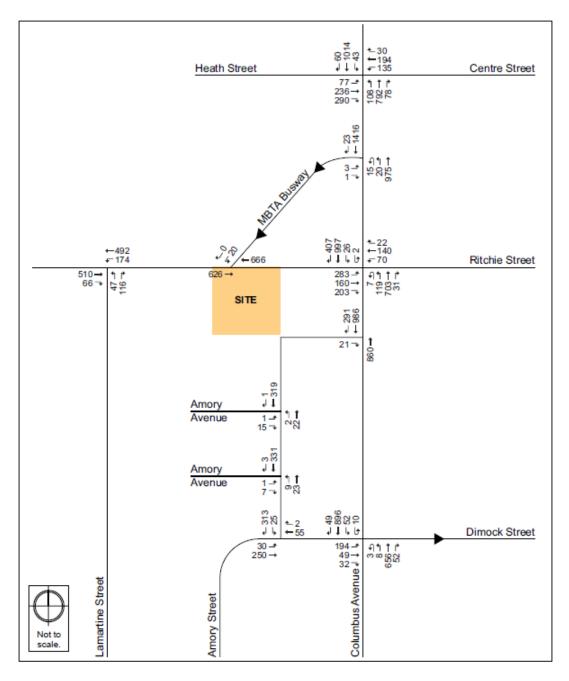




Figure 2-3

Existing (2015) Condition Traffic Volumes, Weekday p.m. Peak Hour

Figure 2-4 Existing (2015) Condition Bicycle Volumes, a.m. and p.m. Peak Hours

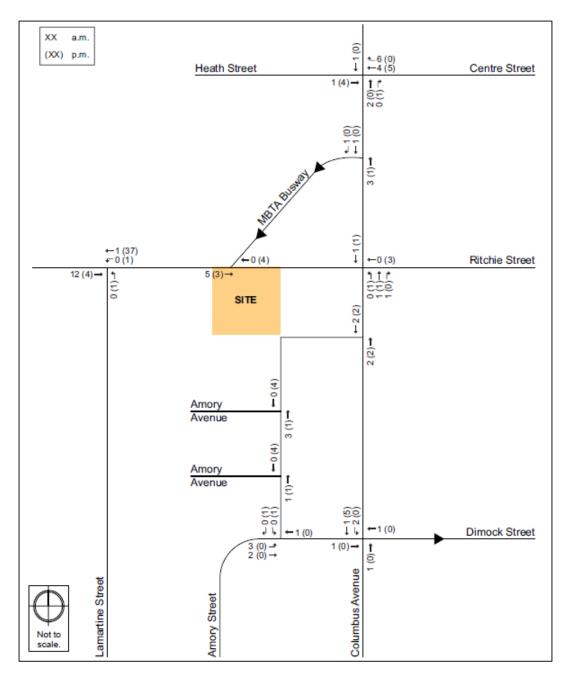




Figure 2-4

Existing (2015) Bicycle Volumes, Weekday a.m. and p.m. Peak Hours

To determine the amount of pedestrian activity within the study area, pedestrian counts were conducted concurrent with the TMCs at the study area intersection and are presented in **Figure 2-5**.

2.2.5 Existing Public Transportation Services

The site is located across from the MBTA Jackson Square Station, which provides Orange Line rapid transit service, MBTA bus services, and private shuttle services. Residents and patrons of the retail uses are more likely to take advantage of the site's close proximity to these and other MBTA services in the area.

The Orange Line subway runs between Oak Grove in Malden and Forest Hills in Jamaica Plain. This service provides direct connection to the commuter rail and the Silver, Red, Blue, and Green lines.

Additionally, the MBTA operates six bus routes, in close proximity to the Project. **Figure 2-6** maps all of the public transportation service located in close proximity of the Site, and **Table 2-1** provides a brief summary of all routes.

Table 2-1	Existing Public	Transportation	Service Summary

Transit Service	Description	Rush-hour Headway (in minutes)
Subway		
Orange Line	Oak Grove Station – Forest Hills Station	6
Bus Rou	tes	
14	Roslindale Square – Heath Street	30 ¹
22	Ashmont Station – Ruggles Station	10 or less
29	Mattapan Station – Jackson Square Station	16 ¹
41	Centre & Eliot Streets – JFK/UMass Station	26 ¹
42	Forest Hills Station – Washington Street	12'
44	Jackson Square Station – Ruggles Station	16 ¹

^{1.} Varies; headway shown is an average during the morning and evening peak periods.

2.2.6 Existing (2015) Condition Traffic Operations Analysis

The criterion for evaluating traffic operations is level of service (LOS), which is determined by assessing average delay experienced by vehicles at intersections and along intersection

approaches. Trafficware's Synchro (version 9) software package was used to calculate average delay and associated LOS at the study area intersections. This software is based on the traffic operational analysis methodology of the Transportation Research Board's 2000 Highway Capacity Manual (HCM).

Figure 2-5 Existing (2015) Condition Pedestrian Volumes, a.m. and p.m. Peak Hours

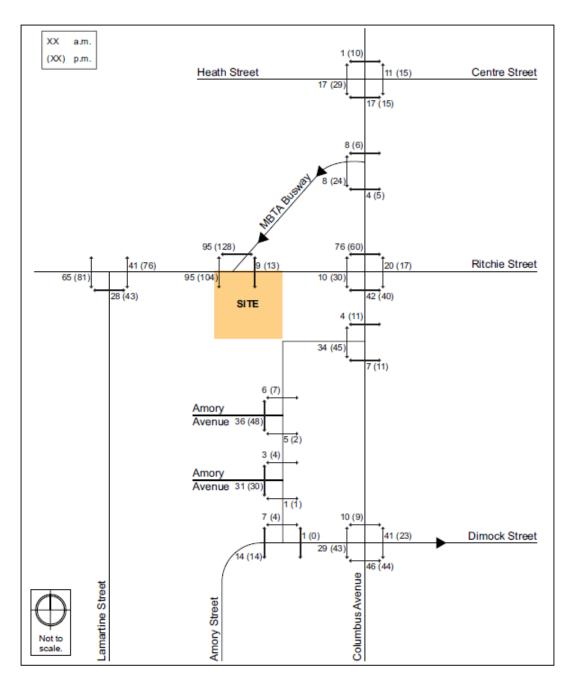
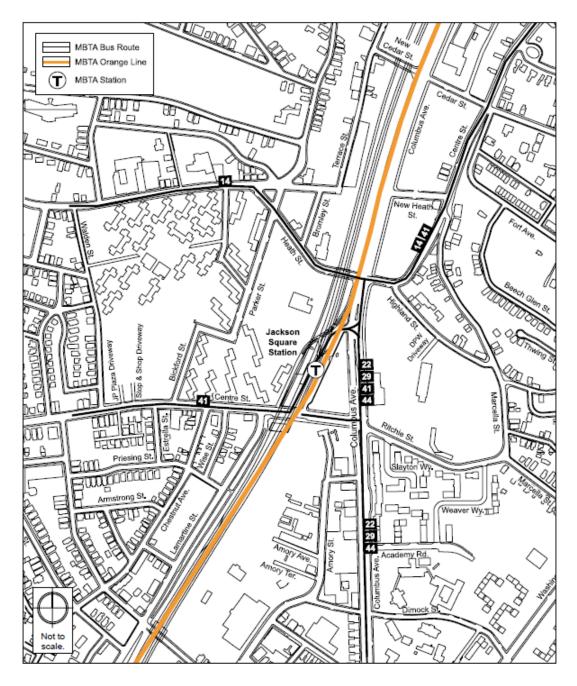




Figure 2.

Existing (2015) Pedestrian Volumes, Weekday a.m. and p.m. Peak Hours

Figure 2-6 Public Transportation



Jackson Square Site 3 - 252 Centre Street and Building M



Figure 2-6
Public Transportation in the Study Area

LOS designations are based on average delay per vehicle for all vehicles entering an intersection. **Table 2-2** displays the intersection LOS criteria. LOS A indicates the most favorable condition, with minimum traffic delay, while LOS F represents the worst condition, with significant traffic delay. LOS D or better is typically considered desirable during the peak hours of traffic in urban and suburban settings.

Table 2-2 Vehicle Level of Service Criteria

Level of	Average Stop	pped Delay (sec/veh)
Service	Signalized Intersections	Unsignalized Intersections
А	<10	<10
В	>10 and <20	>10 and <15
С	>20 and <35	>15 and <25
D	>35 and <55	>25 and <35
Е	>55 and <80	>35 and <50
F	>80	>50

Source: 2000 Highway Capacity Manual, Transportation Research Board.

In addition to delay and LOS, the operational capacity and vehicular queues are calculated and used to further quantify traffic operations at intersections. The following describes these other calculated measures.

The volume-to-capacity (v/c) ratio is a measure of congestion at an intersection approach. A v/c ratio below one indicates that the intersection approach has adequate capacity to process the arriving traffic volumes over the course of an hour. A v/c ratio of one or greater indicates that the traffic volume on the intersection approach exceeds capacity.

The 95th percentile queue, measured in feet, denotes the farthest extent of the vehicle queue (to the last stopped vehicle) upstream from the stop line. This maximum queue occurs five percent, or less, of the time during the peak hour and typically does not develop during off-peak hours. Since volumes fluctuate throughout the hour, the 95th percentile queue represents what can be considered a "worst case" condition. Queues at an intersection are generally below the 95th percentile length throughout most of the peak hour. It is also unlikely that 95th percentile queues for each approach to an intersection occur simultaneously.

Tables 2-3 and 2-4 summarize the Existing (2015) Condition capacity analysis for the study area intersection during the a.m. and p.m. peak hours, respectively.

Table 2-3 Existing (2015) Condition, Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentil e Queue (ft)	95th Percentil e Queue (ft)
Signa	ilized Inte	ersections			
Columbus Avenue/Centre Street/Ritchie Street	Е	58.1			
Centre EB left	F	100.5	1.03	~267	#457
Centre EB left/thru	F	122.3	1.11	~317	#515
Centre EB right	А	6.2	0.25	22	33
Ritchie WB left/thru/right	Е	66.3	0.81	170	212
Columbus NB left left	С	22.2	0.35	33	m63
Columbus NB thru I thru/right	D	46.0	0.96	322	#752
Columbus SB left left	D	44.1	0.17	10	m46
Columbus SB thru thru	E	55.2	0.59	163	306
Columbus SB right	В	11.9	0.35	50	96
Columbus Avenue/MBTA Busway	Α	4.8			
MBTA EB left/right	D	54.6	0.16	15	15
Columbus NB left left	Е	73.4	0.56	27	m27
Columbus NB thru thru thru	А	0.2	0.37	0	m3
Columbus SB thru thru I thru/right	А	8.6	0.31	75	m106
Columbus Avenue/Centre Street/Heath Street	С	27.8			
Heath EB left/thru I thru/right	Е	74.1	0.97	196	#308
Centre WB left	D	39.9	0.36	35	77
Centre WB thru/right	D	46.4	0.69	201	306
Columbus NB left	Α	7.9	0.47	36	37
Columbus NB thru I thru/right	В	12.2	0.79	408	100
Columbus SB left/thru I thru I thru/right	С	21.8	0.45	116	151
Columbus Avenue/Dimock Street	С	28.5			
Dimock EB left/thru/right	E	61.9	0.87	#493	248
Columbus NB left/thru I thru/right	В	19.8	0.63	242	452
Columbus SB left/thru I thru/right	С	21.8	0.48	99	207
Centre Street/MBTA Busway	Α	3.0			

Contro ED the section of		1.0	0.00	00	00
Centre EB thru thru	Α	1.9	0.28	28	28
Centre WB thru thru	Α	2.8	0.19	33	55
MBTA Bus Exit SB left	Е	58.3	0.18	9	16
MBTA Bus Exit SB right	Е	57.0	0.10	3	8
Centre Street/Lamartine Street	В	18.4			
Centre EB thru/right	С	21.2	0.50	258	376
Centre WB left	Α	8.1	0.17	25	60
Centre WB thru	В	10.4	0.36	176	255
Lamartine NB left	Е	62.2	0.50	61	94
Lamartine NB right	В	16.3	0.74	0	42
Unsign	nalized In	tersection	s		
Columbus Avenue/Amory Street					
Amory EB right	Α	9.2	0.04	-	3
Columbus NB thru thru	Α	0.0	0.37	-	0
Columbus SB thru I thru/right	Α	0.0	0.24	-	0
Amory Street/Dimock Street					
Amory EB left/thru	В	12.6	0.53	-	80
Dimock WB thru/right	Α	8.4	0.08	-	7.5
Amory SB left/right	Α	9.6	0.26	-	27.5
Amory Street/Amory Terrace					
Amory Terrace EB left/right	Α	9.8	0.03	-	2
Amory NB thru/left	Α	0.9	0.00	-	0
Amory SB thru/right	Α	0.0	0.11	-	0
Amory Street/Amory Avenue					
Amory Avenue EB left/right	Α	9.9	0.03	-	2
Amory NB thru/left	Α	1.1	0.01	-	0
Amory SB thru/right	Α	0.0	0.10	-	0
	-		•	-	

Grey Shading indicates LOS E or F

m – Volumes for 95th percentile queue is metered by upstream signal

^{~ - 50}th percentile queue exceeds capacity; queue shown is maximum after two cycles

^{# - 95}th percentile queue exceeds capacity; queue shown is maximum after two cycles

Table 2-4 Existing (2015) Condition, Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentil e Queue (ft)	95th Percentil e Queue (ft)		
Signalized Intersections							
Columbus Avenue/Centre Street/Ritchie Street	E	65.8					
Centre EB left	Е	71.1	0.86	153	#278		
Centre EB left/thru	F	210.0	1.34	~335	#504		
Centre EB right	А	7.9	0.46	53	65		
Ritchie WB left/thru/right	Е	66.4	0.82	186	262		
Columbus NB left left	D	49.3	0.73	51	m#194		
Columbus NB thru I thru/right	С	29.0	0.68	311	#428		
Columbus SB left left	С	27.6	0.14	17	m44		
Columbus SB thru thru	F	80.2	1.03	~525	m#645		
Columbus SB right	С	32.3	0.68	300	m253		
Columbus Avenue/MBTA Busway	Α	7.4					
MBTA EB left/right	D	52.8	0.09	9	10		
Columbus NB left left	F	178.3	1.00	~31	m#41		
Columbus NB thru thru thru	А	0.1	0.25	0	m4		
Columbus SB thru thru I thru/right	А	7.9	0.51	117	m127		
Columbus Avenue/Centre Street/Heath Street	E	68.0					
Heath EB left/thru I thru/right	D	50.6	0.89	232	303		
Centre WB left	F	98.0	0.96	117	#217		
Centre WB thru/right	С	33.1	0.52	156	206		
Columbus NB left	С	29.1	0.45	13	#90		
Columbus NB thru I thru/right	А	9.5	0.61	100	45		
Columbus SB left/thru I thru I thru/right	F	127.3	1.19	~438	#505		
Columbus Avenue/Dimock Street	С	27.3					
Dimock EB left/thru/right	Е	69.8	0.88	220	#361		
Columbus NB left/thru I thru/right	В	12.5	0.42	123	287		
Columbus SB left/thru I thru/right	С	26.0	0.65	281	m332		
Centre Street/MBTA Busway	Α	3.7					

Centre EB thru thru Centre WB thru thru MBTA Bus Exit SB left MBTA Bus Exit SB right	A A E	1.2 2.2	0.27 0.26	6 26	8 47	
MBTA Bus Exit SB left		2.2	0.26	26	17	
			1	20	4/	
MBTA Bus Exit SB right		71.3	0.50	30	35	
	Α	0.0	0.00	0	0	
Centre Street/Lamartine Street	В	17.4				
Centre EB thru/right	С	26.2	0.64	367	542	
Centre WB left	Α	6.6	0.37	13	0	
Centre WB thru	Α	6.0	0.41	130	217	
Lamartine NB left	Е	61.8	0.41	43	78	
Lamartine NB right	В	17.4	0.56	0	46	
Unsignalized Intersections						
Columbus Avenue/Amory Street						
Amory EB right	В	10.4	0.03	-	2	
Columbus NB thru thru	В	0.0	0.26	-	0	
Columbus SB thru I thru/right	В	0.0	0.42	-	0	
Amory Street/Dimock Street						
Amory EB left/thru	В	11.5	0.41	-	50	
Dimock WB thru/right	Α	8.9	0.10	-	7.5	
Amory SB left/right	В	11.4	0.49	-	67.5	
Amory Street/Amory Terrace						
Amory Terrace EB left/right	В	11.1	0.03	-	2	
Amory NB thru/left	В	2.4	0.01	-	1	
Amory SB thru/right	В	0.0	0.23	-	0	
Amory Street/Amory Avenue						
Amory Avenue EB left/right	В	11.5	0.04	-	3	
Amory NB thru/left	Α	8.0	0.00	-	0	
Amory SB thru/right	Α	0.0	0.23	-	0	

As shown in **Table 2-3** and **Table 2-4**, under the Existing (2015) Condition:

The intersection of **Columbus Avenue/Centre Street/Ritchie Street** operates at LOS E during both the a.m. and p.m. peak hours. The Centre Street eastbound left-turn approach operates at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour. The Centre Street eastbound left/thru approach operates at LOS F during both the a.m. and p.m. peak

hours. The Ritchie Street westbound left/thru/right approach operates at LOS E during both peak hours. The Columbus Avenue southbound thru/thru approach operates at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour. All other intersection approaches operate at LOS D or better during both peak hours.

The intersection of **Columbus Avenue/MBTA Busway** operates under capacity during both the a.m. and p.m. peak hours. The Columbus Avenue northbound left/left approach operates at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour.

The intersection of **Columbus Avenue/Centre Street/Heath Street** operates at LOS C during the a.m. peak hour and LOS E during the p.m. peak hour. The Heath Street eastbound left/thru | thru/right approach operates at LOS E during the a.m. peak hour. The Centre Street westbound left-turn approach operates at LOS F during the p.m. peak hour. The Columbus southbound left/thru/right approach operates at LOS F during the p.m. peak hour.

The intersection of **Columbus Avenue/Dimock Street** operates under capacity during both the a.m. and p.m. peak hours. The Dimock Street eastbound left/thru/right approach operates at LOS E during both the a.m. and p.m. peak hours.

The intersection of **Centre Street/MBTA Busway** operates under capacity during both the a.m. and p.m. peak hours. The MBTA Bus Exit southbound left-turn approach operates at LOS E during both the a.m. and p.m. peak hours. The MBTA Bus Exit southbound right-turn approach operates at LOS E during the a.m. peak hour. The longest queues occur at Centre Street westbound thru/thru approach during the a.m. peak hour and at MBTA Bus Exit southbound left approach during the p.m. peak hour.

The intersection of **Centre Street/Lamartine Street** operates under capacity during both the a.m. and p.m. peak hours. The Lamartine Street northbound left-turn approach operates at LOS E during both the a.m. and p.m. peak hours. The longest queues occur at Centre Street eastbound thru/right approach during the a.m. and p.m. peak hours.

2.3 No-Build (2020) Condition

The No-Build (2020) Condition reflects a future scenario that incorporates anticipated traffic volume changes associated with background traffic growth, independent of any specific project, traffic associated with other planned specific developments, and planned infrastructure improvements that will affect travel patterns throughout the study area. These infrastructure improvements include roadway, public transportation, pedestrian and bicycle improvements.

2.3.1 Background Traffic Growth

The methodology to account for generic future background traffic growth, independent of this Project, may be affected by changes in demographics, smaller scale development projects, or

projects unforeseen at this time. Based on a review of recent and historic traffic data collected recently and to account for any additional unforeseen traffic growth, a traffic growth rate of 1.0% per year, compounded annually, was used.

2.3.2 Specific Development Traffic Growth

Traffic volumes associated with larger or closer known development projects can affect traffic patterns throughout the study area within the future analysis time horizon. Additional traffic generated by the following projects, which take part of the Jackson Square development (depicted in **Figure 2-7**), was included in the background analysis:

225 Centre Street Retail Development is located on Site 1, Parcel A, consists of 16,700 square feet (sf), however only 10,000 square feet (sf) is currently occupied. For future studies, the remaining 6,700 square feet (sf) was considered for forthcoming traffic volumes.

Youth and Family Center, located on Site 1, Parcel B, consists of 30,500 square feet (sf) recreational center, including a gymnasium.

Indoor Active Recreation Center, located on Site 2, Parcel H, consists of approximately 36,000 square feet (sf), sized for an ice and soccer facility.

75 Amory Avenue, located on Site III, Parcel K, consists of 39 apartment units.

2.3.3 Proposed Infrastructure Improvements

A review of planned improvements to roadway, transit, bicycle, and pedestrian facilities was conducted to determine if there are any nearby improvement projects in the vicinity of the study area. However, no improvements were found in the study area.

2.3.4 No-Build Traffic Volumes

The 1.0 percent per year annual growth rate, compounded annually, was applied to the Existing (2015) Condition traffic volumes, then the traffic volumes associated with the background development project listed above was added to develop the No-Build (2020) Condition traffic volumes. The No-Build (2020) weekday morning and evening peak hour traffic volumes are shown on **Figures 2-8** and **Figure 2-9**, respectively.

Figure 2-7 Specific Background Project Locations

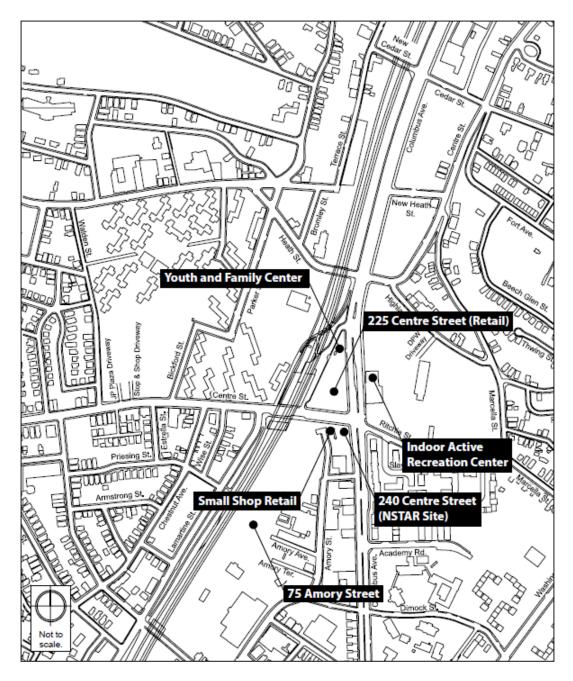




Figure 2-7 Area Projects

Figure 2-8 No-Build (2020) Condition Vehicular Traffic Volumes, a.m. Peak Hour

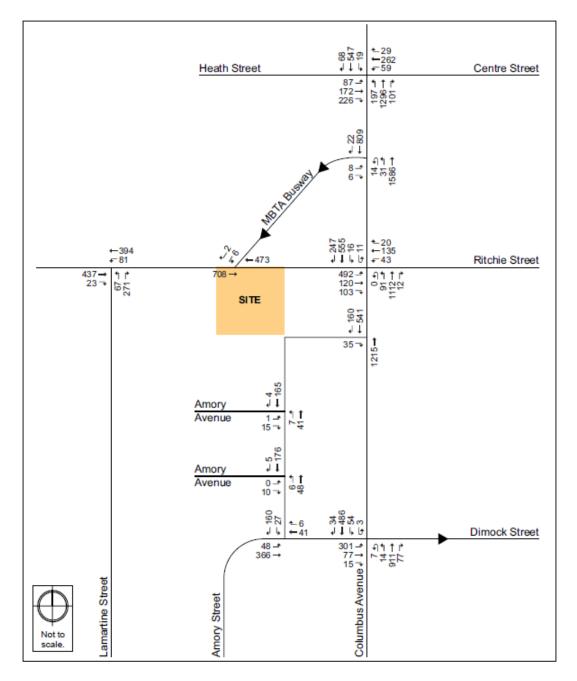




Figure 2-8

No-Build (2020) Condition Traffic Volumes, Weekday a.m. Peak Hour

Figure 2-9 No-Build (2020) Condition Vehicular Traffic Volumes, p.m. Peak Hour

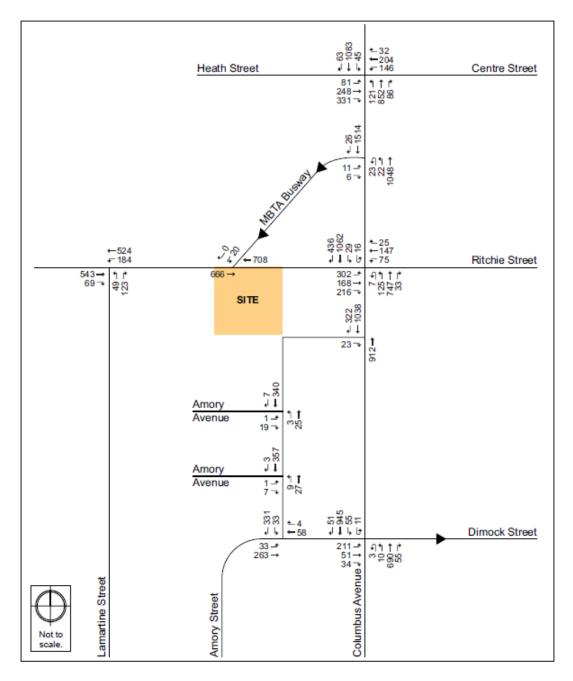




Figure 2-9

No-Build (2020) Condition Traffic Volumes, Weekday p.m. Peak Hour

2.3.5 No-Build (2020) Condition Traffic Operations Analysis

The No-Build (2020) Condition analysis uses the same methodology as the Existing (2015) Condition capacity analysis. **Tables 2-5** and **Table 2-6** present the No-Build (2020) Condition operations analysis for the a.m. and p.m. peak hours, respectively. The shaded cells in the tables indicate a decrease in LOS between the Existing (2015) Condition and the No-Build (2020) Condition to an LOS below LOS D.

Table 2-5 No-Build (2020) Condition, Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentil e Queue (ft)	95th Percentil e Queue (ft)
Signa	lized Inte	ersections			
Columbus Avenue/Centre Street/Ritchie Street	E	79.7			
Centre EB left	F	118.4	1.09	~300	#495
Centre EB left/thru	F	141.9	1.17	~349	#551
Centre EB right	А	6.0	0.27	21	33
Ritchie WB left/thru/right	Е	66.4	0.82	180	223
Columbus NB left left	С	23.1	0.39	34	m60
Columbus NB thru I thru/right	F	89.7	1.11	~617	#833
Columbus SB left left	D	49.1	0.23	22	m56
Columbus SB thru thru	Е	62.4	0.64	260	321
Columbus SB right	В	13.2	0.38	60	108
Columbus Avenue/MBTA Busway	Α	6.3			
MBTA EB left/right	Е	58.4	0.31	30	25
Columbus NB left left	Е	66.9	0.62	29	m31
Columbus NB thru thru thru	А	0.7	0.41	3	m4
Columbus SB thru thru I thru/right	В	10.7	0.36	99	m111
Columbus Avenue/Centre Street/Heath Street	С	30.5			
Heath EB left/thru I thru/right	F	84.0	1.01	~219	#340
Centre WB left	D	42.0	0.40	38	86
Centre WB thru/right	D	46.8	0.71	214	322
Columbus NB left	В	10.5	0.53	7	44

Columbus NB thru I thru/right	В	14.0	0.86	25	181
Columbus SB left/thru I thru I thru/right	С	22.3	0.48	126	163
Columbus Avenue/Dimock Street	С	30.7			
Dimock EB left/thru/right	D	52.9	0.83	296	#562
Columbus NB left/thru I thru/right	С	24.3	0.71	291	494
Columbus SB left/thru I thru/right	С	26.7	0.58	99	231
Centre Street/MBTA Busway	Α	3.1			
Centre EB thru thru	Α	2.0	0.30	30	30
Centre WB thru thru	Α	2.9	0.21	40	58
MBTA Bus Exit SB left	Е	58.3	0.18	9	16
MBTA Bus Exit SB right	E	57.0	0.10	3	8
Centre Street/Lamartine Street	В	18.9			
Centre EB thru/right	С	22.2	0.53	286	409
Centre WB left	Α	8.6	0.19	32	62
Centre WB thru	В	11.0	0.38	207	266
Lamartine NB left	E	62.3	0.52	64	97
Lamartine NB right	В	16.1	0.75	0	42
Unsigr	alized In	tersection	ıs		
Columbus Avenue/Amory Street					
Amory EB right	Α	9.3	0.05	-	4
Columbus NB thru thru	Α	0.0	0.40	-	0
Columbus SB thru I thru/right	Α	0.0	0.25	-	0
Amory Street/Dimock Street					
Amory EB left/thru	В	13.7	0.57	-	92.5
Dimock WB thru/right	Α	8.7	0.09	-	7.5
Amory SB left/right	В	10.3	0.32	-	35
Amory Street/Amory Terrace					
Amory Terrace EB left/right	В	10.0	0.03	-	2
Amory NB thru/left	Α	0.9	0.01	-	0
Amory SB thru/right	Α	0.0	0.13	-	0
Amory Street/Amory Avenue					

Amory Avenue EB left/right	В	10.1	0.06	-	5
Amory NB thru/left	Α	1.2	0.01	-	0
Amory SB thru/right	Α	0.0	0.11	-	0

Table 2-6 No-Build (2020) Condition, Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentil e Queue (ft)	95th Percentil e Queue (ft)		
Signalized Intersections							
Columbus Avenue/Centre Street/Ritchie Street	F	82.8					
Centre EB left	F	80.7	0.92	155	#301		
Centre EB left/thru	F	240.4	1.41	~367	#534		
Centre EB right	А	7.7	0.48	46	71		
Ritchie WB left/thru/right	Е	67.3	0.84	198	280		
Columbus NB left left	D	48.9	0.74	63	m#199		
Columbus NB thru I thru/right	D	37.4	0.78	340	#493		
Columbus SB left left	С	34.7	0.25	35	m56		
Columbus SB thru thru	F	118.8	1.14	~567	m#708		
Columbus SB right	С	32.2	0.72	213	m271		
Columbus Avenue/MBTA Busway	В	13.1					
MBTA EB left/right	Е	60.4	0.39	38	28		
Columbus NB left left	F	220.8	1.21	~42	m#61		
Columbus NB thru thru thru	А	0.3	0.30	4	m4		
Columbus SB thru thru I thru/right	В	14.4	0.65	150	m131		
Columbus Avenue/Centre Street/Heath Street	F	82.1					
Heath EB left/thru I thru/right	D	47.4	0.88	245	#333		
Centre WB left	F	105.3	1.00	129	#246		
Centre WB thru/right	С	31.2	0.51	160	219		
Columbus NB left	D	45.2	0.63	40	#148		
Columbus NB thru I thru/right	В	11.9	0.69	235	64		
Columbus SB left/thru I thru I thru/right	F	163.3	1.27	~490	#556		
Columbus Avenue/Dimock Street	С	29.3					
Dimock EB left/thru/right	Е	67.9	0.88	234	#402		

Columbus NB left/thru I thru/right	В	13.8	0.46	144	310
Columbus SB left/thru I thru/right	С	29.6	0.71	341	m324
Centre Street/MBTA Busway	Α	3.7			
Centre EB thru thru	А	1.4	0.28	7	8
Centre WB thru thru	Α	2.2	0.28	27	50
MBTA Bus Exit SB left	Е	71.3	0.50	30	35
MBTA Bus Exit SB right	Α	0.0	0.00	0	0
Centre Street/Lamartine Street	В	19.0			
Centre EB thru/right	С	28.2	0.69	419	#640
Centre WB left	Α	8.7	0.41	37	0
Centre WB thru	Α	7.7	0.44	170	229
Lamartine NB left	E	62.1	0.43	46	81
Lamartine NB right	В	17.2	0.57	0	47
Unsign	nalized In	tersection	ıs		
Columbus Avenue/Amory Street					
Amory EB right	В	10.3	0.03	-	3
Columbus NB thru thru	В	0.0	0.28	-	0
Columbus SB thru I thru/right	В	0.0	0.44	-	0
Amory Street/Dimock Street					
Amory EB left/thru	В	12.2	0.449	-	57.5
Dimock WB thru/right	Α	9.1	0.112	-	10
Amory SB left/right	В	12.4	0.541	-	82.5
Amory Street/Amory Terrace					
Amory Terrace EB left/right	В	11.4	0.03	-	2
Amory NB thru/left	Α	2.2	0.01	-	1
Amory SB thru/right	А	0.0	0.25	-	0
Amory Street/Amory Avenue					
Amory Avenue EB left/right	В	11.7	0.05	-	4
Amory NB thru/left	Α	1.0	0.00	-	0
Amory SB thru/right	А	0.0	0.25	-	0
	<u> </u>		1		1

Grey Shading indicates that LOS worsens from Existing Condition.

As shown in Table 2-5 and Table 2-6, under the No-Build (2020) Condition:

The intersection of **Columbus Avenue/Centre Street/Ritchie Street** worsens from the Existing (2015) Condition from LOS E to LOS F during the p.m. peak hour. The Centre Street eastbound left approach decrease from LOS E to LOS F during the p.m. peak hour. The Columbus Avenue northbound thru | thru/right approach decrease from LOS D to LOS F during the a.m. peak hour.

The intersection of **Columbus Avenue/Centre Street/Heath Street** worsens from the Existing (2015) Condition from LOS E to LOS F during the p.m. peak hour. The Heath Street eastbound left/thru | thru/right approach decrease from LOS E to LOS F during the a.m. peak hour.

2.4 Build (2020) Condition

Howard Stein Hudson has assessed the transportation impacts associated with the Site III, Phase 3 projects. As previously mentioned, the proposed Site III, Phase 3 project will consist of two buildings. At 250 Centre Street, the project will consist of approximately 100 apartment units and approximately 2,400 square feet (sf) of retail with approximately 80 parking spaces. Building M, will consist of approximately 44 apartment units and approximately 22 parking spaces.

2.4.1 Site Access and Vehicle Circulation

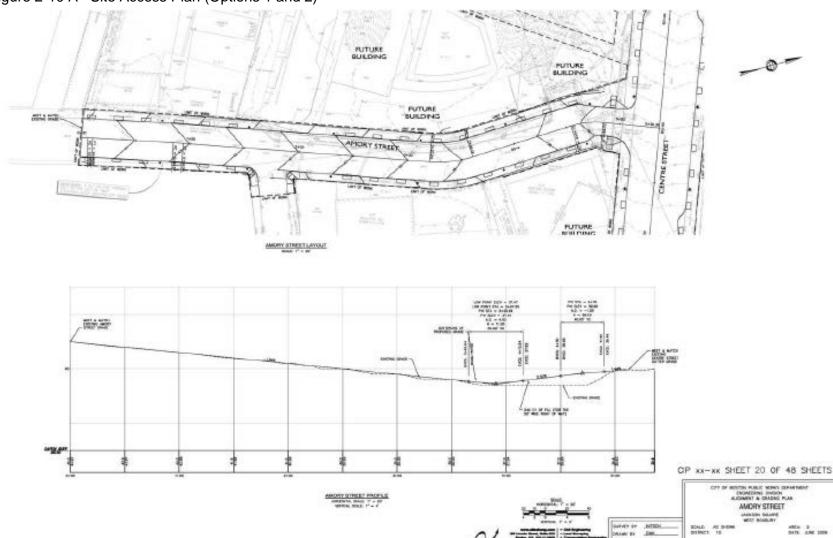
In this FPIR, the roadway connecting Centre Street and Amory Street, being referenced as the Amory Street Extension, will be a primary focus. The Amory street extension is an existing City of Boston right of way that serves as an access point to the adjacent NStar substation, but currently lacks a connection between Amory street and Centre Street. The Amory Street Extension will need to be improved as part of the Site III, Phase 3 projects to provide loading, parking and emergency access to Building M.

The FPIR presents three options for the improvement of this roadway. All three options consist of Amory Street Extension being a two-way (northbound and southbound) roadway. However, at the intersection with Centre Street, the following three options are being proposed:

- Option 1 allows right-turns out only from Amory Street Extension to Centre Street; additionally the section of Dimock Street between Amory Street and Columbus Avenue will be one-way eastbound, matching Dimock Street between Columbus Avenue and Washington Street to the east.
- Option 2 allows only right-turns in from Centre Street to Amory Street Extension.
- Option 3 prevents all non-emergency vehicles and designates the connection of Centre Street and Amory Street Extension as pedestrians only.

The Site Access plan is shown in Figure 2-10

Figure 2-10 A Site Access Plan (Options 1 and 2)





Parcel III -- Amory Street Extension - Alignment & Grading
Parcel III -- Jamaica Plain



2.4.2 Parking

Building N will provide approximately 80 structured and at-grade parking spaces and Building M will provide 22 at-grade parking spaces. The project's parking is intended for use by the residences, community space, and the small retail portion of Building N.

As discussed in Section 1.1.2, the easement and use agreement negotiated with the MBTA will likely include a right of reversion to the MBTA in the event of expansion of the railway or other presently unanticipated transportation related need. This reversion would result in the loss of up to 19 of Building N's surface parking spaces. In that unlikely event, the Project Proponent will seek to negotiate parking arrangements with the MBTA, other Jackson Square development phases, or other adjacent property owners to replace the lost spaces.

2.4.3 Loading and Service Accommodations

Vehicle access for deliveries and trash removal will occur from the same Amory Street curb cut identified in the DPIR. Parking, loading activities, and trash storage/removal will occur via this curb cut.

Residential units primarily generate delivery trips related to small packages and prepared food. Based on the CTPS report, residential uses generate approximately 0.01 light truck trips per 1,000 square feet of gross floor area and 0.001 medium/heavy truck trips per 1,000 square feet of gross floor area.

Based on the CTPS report, office uses generate approximately 0.10 light truck trips per 1,000 square feet of floor area and 0.01 medium/heavy truck trips per 1,000 square feet of gross floor area.

2.4.4 Trip Generation Methodology

Vehicle trip generation estimates will be modified as a result of the project change and clarification of the program set forth in the DPIR. The overall result is a reduction of vehicle trips from those projected in the DPIR. Vehicle trip generation for the FPIR was estimated using the Institute of Transportation Engineers manual "Trip Generation", 7th Edition. Although the 9th Edition of the "Trip Generation" manual has been issued since the original approval of the project, in order to maintain consistency with previous filings, the 7th Edition has been used in the FPIR calculations. It should be noted, based on a comparison of these two editions, the difference between the calculations is negligible and will not affect the outcome of the analysis. To estimate the unadjusted number of vehicular trips for the proposed Site III, Phase 3 projects, the following ITE Land Use Code (LUCs) used for the FPIR are as follows:

Land Use Code 220 – Apartment. This land use code refers to dwelling units located within the same building with at least three other dwelling units. Calculation of the number of trips uses ITE's average rate per dwelling unit.

Land Use Code 820 – Shopping Center. This land use code refers to an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Calculation of the number of trips uses ITE's average rate per 1000 square feet gross leasable area.

2.4.5 Mode Share

The BTD provides vehicle, transit, and walking mode split rates for different areas of Boston. The Project is located in the northeasterly portion of designated Area 6 – Jamaica Plain. The unadjusted vehicular trips were converted to person trips by using vehicle occupancy rates published by the Federal Highway Administration (FHWA)[1]. The person trips were then distributed to different modes according to the mode shares shown in **Table 2-8**.

Table 2-8 Travel Mode Shares

Land Use		Walk/Bicyc le Share	Transi t Share	Auto Share	Vehicle Occupancy Rate
	·	Dai	ly		
Residential	In	14%	25%	61%	1.13
143 units	O ut	14%	25%	61%	1.13
Retail	In	24%	15%	61%	1.13
2,400 sf	O ut	24%	15%	61%	1.13
		a.m. Pea	k Hour	<u>'</u>	
Residential	In	18%	26%	56%	1.13
143 units	O ut	12%	44%	44%	1.13
Retail	In	31%	15%	54%	1.13
2,400 sf	O ut	24%	28%	48%	1.13
p.m. Peak Hour					
Residential	In	12%	44%	44%	1.13
143 units	O ut	18%	26%	56%	1.13

Retail	In	24%	28%	48%	1.13
2,400 sf	O ut	31%	15%	54%	1.13

2.4.6 Project Trip Generation

The mode share percentages shown in **Table 2-8** were applied to the number of person trips to develop walk/bicycle, transit, and vehicle trip generation estimates. The trip generation for the proposed Site III, Phase 3 projects by mode is shown in **Table 2-9**.

Table 2-9 Project Trip Generation

Land Use		Walk/Bicycle	Transit Trips	Vehicle
		Trips		Trips
		Daily		
Residential ¹	In	75	134	290
	Out	75	134	290
Retail ²	In	21	13	30
	Out	21	13	30
Total	In	96	147	320
	Out	96	147	320
	_ .	a.m. Peak Hour		
Residential ¹	In	3	4	8
	Out	7	29	26
Retail ²	In	1	0	1
	Out	0	0	0
Total	In	4	4	9
	Out	7	29	26
p.m. Peak Hour				
Residential ¹	In	7	29	26
	Out	6	9	17
Retail ²	In	2	2	2
	Out	3	1	3
Total	In	9	31	28

|--|

As shown in Table 2-13, there is expected to be 96 pedestrian/bicycle trips, 147 transit trips, and 320 vehicle trips throughout the day. During the a.m. peak hour there is expected to be 11 pedestrian/bicycle trips (4 in and 7 out), 33 transit trips (4 in and 29 out), and 35 vehicle trips (9 in and 26 out). During the p.m. peak hour there is expected to be 18 pedestrian/bicycle trips (9 in and 9 out), 41 transit trips (31 in and 10 out), and 48 vehicle trips (28 in and 20 out).

2.4.7 Trip Generation Comparison

The following sections describe the proposed Site III, Phase 3 projects transportation related impacts in comparison to the previously proposed Site III, Phase 3 projects in the 2007 DPIR. As previously stated, the FPIR's changes are specifically related to what was permitted for Parcel M, Parcel N, and Parcel O from the 2007 DPIR.

Both the DPIR building program and the FPIR building program for Site III, Phase 3 are shown in **Table 2-9.**

Table 2-9	Comparison of Building Program

Land Use	DPIR ¹		Net	
		250 Centre Street	Building M	FPIR Change
Apartments (units)	72	100	44	+71
Condominium s (units)	62	0	0	-62
Retail (square feet)	16,100	2,400	0	-13,800

^{1.} From DPIR submitted May 23, 2007

Table 2-10 compares the trip generation associated with the appropriate parcels from the DPIR and trip generation associated with FPIR projects.

Table 2-10 Unadjusted Vehicle Trip Generation Comparison by Land Use

Direction	DPIR ¹	FPIR	Net Impact
	Da	ily	
In	769	524	-245
Out	769	524	-245
Total	1,538	1,048	-490
a.m. Peak Hour			

In	22	15	-7	
Out	58	59	+1	
Total	80	74	-6	
p.m. Peak Hour				
In	80	62	-18	
Out	58	35	-23	
Total	137	97	-40	

1. From DPIR submitted May 23, 2007

The vehicle trip generation associated with the FPIR results in a reduction of trips compared to the DPIR vehicle trip generation. The FPIR projects are expected to generate approximately 6 fewer vehicle trips during the a.m. peak hour and 40 less trips during the p.m. peak hour.

2.4.7 Trip Distribution

The trip distribution identifies the various travel paths for vehicles associated with the proposed Site III, Phase 3 projects. Trip distribution patterns for the proposed Site III, Phase 3 projects were based on the trip distribution patterns from the 2007 DPIR study. The trip distribution patterns for the proposed Site III, Phase 3 projects are illustrated in **Figure 2-11.**

2.4.8 Build Traffic Volumes

The vehicle trips were distributed through the study area for the three options. The Site III, Phase 3 projects-generated trips for **Option 1** during the a.m. and p.m. peak hours are shown in **Figure 2-12** and **Figure 2-13**, respectively and the Build (2020) Condition a.m. and p.m. peak hour traffic volumes are shown on **Figure 2-14** and **Figure 2-15**, respectively. The Site III, Phase 3 projects-generated trips for **Option 2** during the a.m. and p.m. peak hours are shown in **Figure 2-16** and **Figure 2-17**, respectively and the Build (2020) Condition a.m. and p.m. peak hour traffic volumes are shown on **Figure 2-18** and **Figure 2-19**, respectively. The Site III, Phase 3 projects-generated trips for **Option 3** during the a.m. and p.m. peak hours are shown in **Figure 2-20** and **Figure 2-21**, respectively and the Build (2020) Condition a.m. and p.m. peak hour traffic volumes are shown on **Figure 2-22** and **Figure 2-23**, respectively.

2.4.9 Bicycle Accommodations

BTD has established guidelines requiring projects subject to Transportation Access Plan Agreements to provide secure bicycle parking for residents and short-term bicycle racks for visitors.

Based on BTD guidelines, the Phase 3 projects will supply approximately 143 secure bicycle parking/storage spaces within the site. At Building N, approximately 99 secure bicycle parking spaces will be available and at Building M, approximately 44 secure bicycle parking spaces will be available.

2.4.10 Build Condition Traffic Operations Analysis

The Build (2020) Condition analysis uses the same methodology as the Existing (2015) Condition and No-Build (2020) Condition analysis. **Table 2-11** and **Table 2-12** present the Option 1 Build (2020) Condition capacity analysis for the a.m. and p.m. peak hours, respectively. The shaded cells in the tables indicate a worsening in LOS from the No-Build (2020) Condition.

Ritchie Street Amony Avenue Amory Avenue Columbus Avenue Dimock Street

Figure 2-11 Trip Distribution



Figure 2-11 Vehicular Trip Distribution

Heath Street Centre Street 4 1 2 4 † 4 î Ritchie Street SITE -8 -36 1 1 Amory Avenue Amory Avenue Dimock Street Columbus Avenue Lamartine Street Amory Street Not to scale.

Figure 2-12 Option 1 Vehicle Trip Assignment, a.m. Peak Hour



Figure 2-12

Option 1: Project Generated Trips (2020), a.m. Peak Hour

Heath Street Centre Street 11 P Ritchie Street SITE t-1 +50 -25 -52 1 1 Amory Avenue Amory Avenue Dimock Street Columbus Avenue Lamartine Street Amory Street Not to scale.

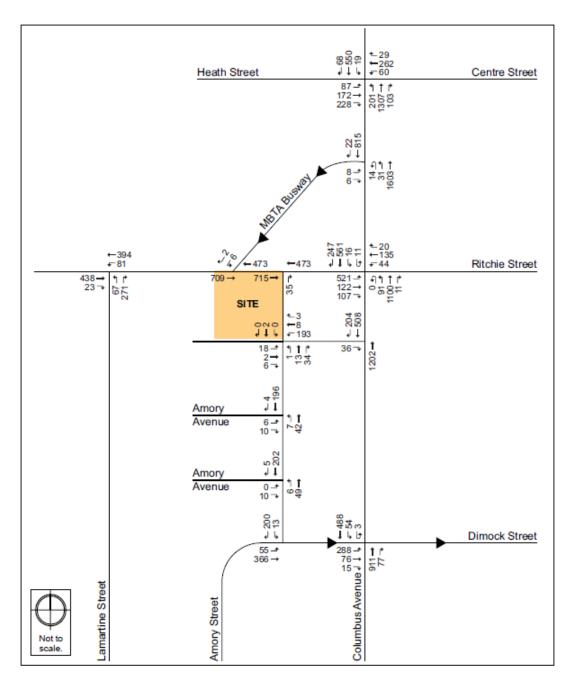
Figure 2-13 Option 1 Vehicle Trip Assignment, p.m. Peak Hour



Figure 2-13

Option 1: Project Generated Trips (2020), p.m. Peak Hour

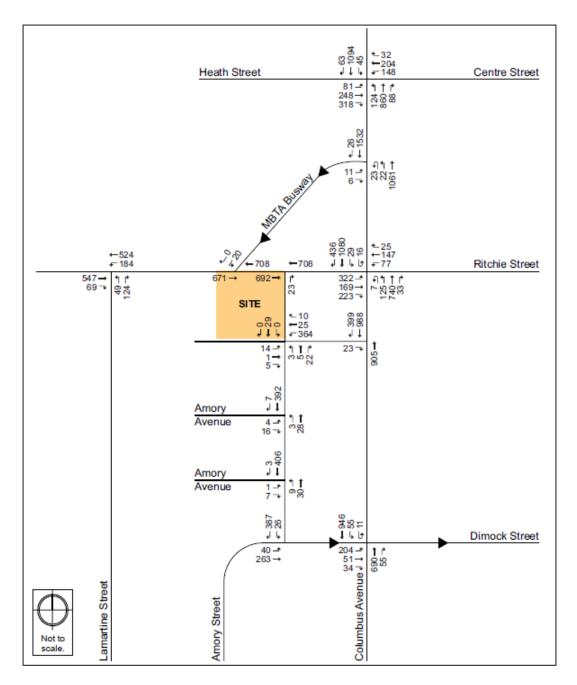
Figure 2-14 Option 1-Build (2020) Condition Vehicular Traffic Volumes, a.m. Peak Hour



HOWARD STEIN HUDSON Engineers + Planners Figure 2-14

Option 1: Build (2020) Condition Traffic Volumes, Weekday a.m. Peak Hour

Figure 2-15 Option 1-Build (2020) Condition Vehicular Traffic Volumes, p.m. Peak Hour



HOWARD STEIN HUDSON Engineers + Planners Figure 2-15

Option 1: Build (2020) Condition Traffic Volumes, Weekday p.m. Peak Hour

Heath Street Centre Street Ritchie Street SITE Amory Avenue 12 Amory Avenue Dimock Street Columbus Avenue Lamartine Street Amory Street Not to scale.

Figure 2-16 Option 2 Vehicle Trip Assignment, a.m. Peak Hour



Figure 2-16

Option 2: Project Generated Trips (2020), a.m. Peak Hour

Heath Street Centre Street 11 P 18 Ritchie Street SITE 1-2 1-20 1-1 1**→** 19→ Amory Avenue Amory Avenue Dimock Street 13*-*1→ Columbus Avenue Lamartine Street Amory Street Not to scale.

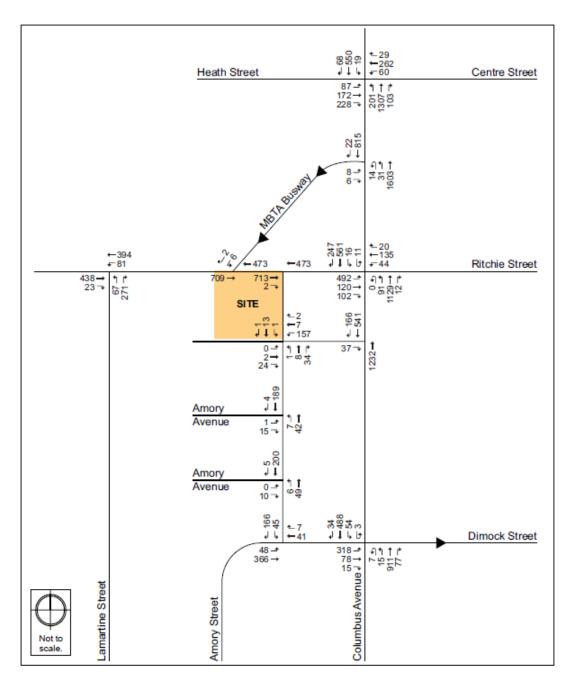
Figure 2-17 Option 2 Vehicle Trip Assignment, p.m. Peak Hour



Figure 2-17

Option 2: Project Generated Trips (2020), p.m. Peak Hour

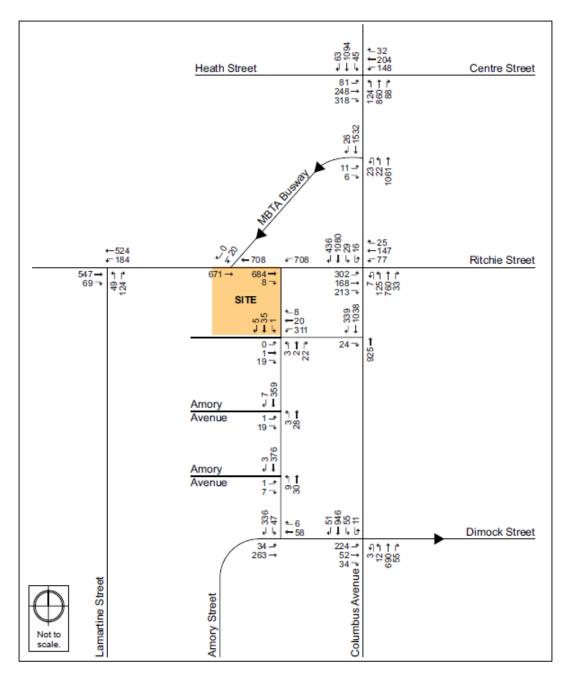
Figure 2-18 Option 2-Build (2020) Condition Vehicular Traffic Volumes, a.m. Peak Hour



HOWARD STEIN HUDSON Engineers + Planners Figure 2-18

Option 2: Build (2020) Condition Traffic Volumes, Weekday a.m. Peak Hour

Figure 2-19 Option 2-Build (2020) Condition Vehicular Traffic Volumes, p.m. Peak Hour



HOWARD STEIN HUDSON Engineers + Planners Figure 2-19

Option 2: Build (2020) Condition Traffic Volumes, Weekday p.m. Peak Hour

Heath Street Centre Street 1 Ritchie Street SITE 2**→** 24 → Amory Avenue ‡ Amory Avenue Dimock Street Columbus Avenue Lamartine Street Amory Street Not to scale.

Figure 2-20 Option 3 Vehicle Trip Assignment, a.m. Peak Hour



Figure 2-20

Option 3: Project Generated Trips (2020), a.m. Peak Hour

Heath Street Centre Street 11 P + 18 Ritchie Street SITE -25 1**→** 19→ Amory Avenue Amory Avenue Dimock Street 13*-*1→ Columbus Avenue Lamartine Street Amory Street Not to scale.

Figure 2-21 Option 3 Vehicle Trip Assignment, p.m. Peak Hour



Figure 2-21

Option 3: Project Generated Trips (2020), p.m. Peak Hour

Figure 2-22 Option 3-Build (2020) Condition Vehicular Traffic Volumes, a.m. Peak Hour

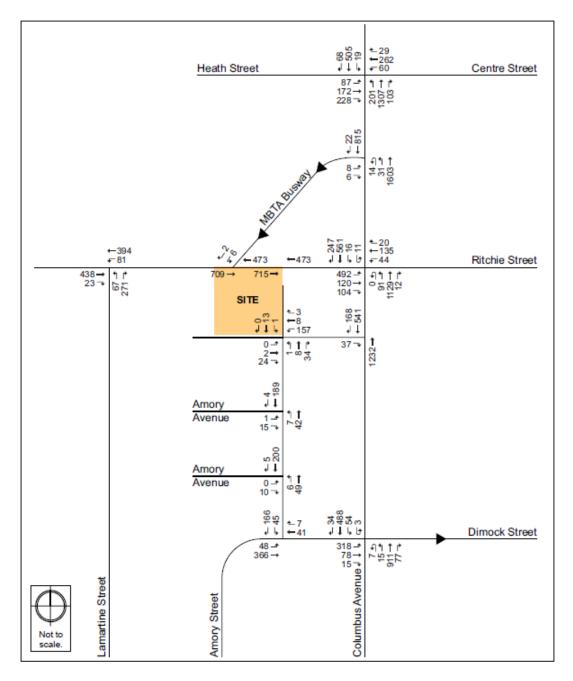
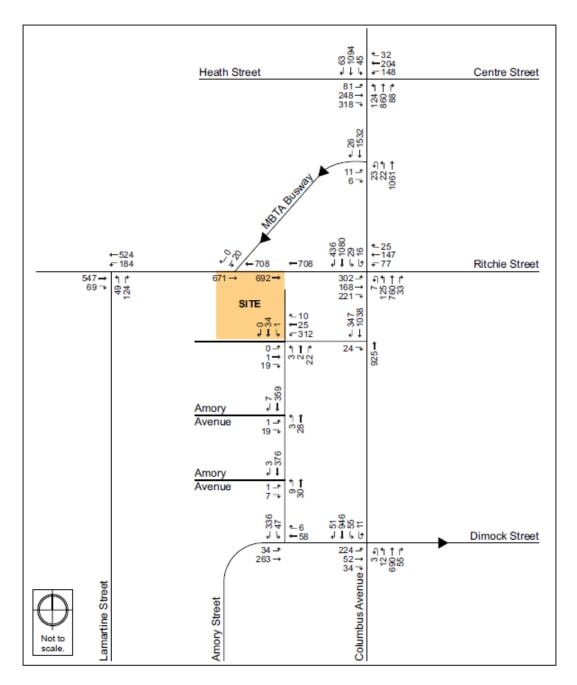




Figure 2-22

Option 3: Build (2020) Condition Traffic Volumes, Weekday a.m. Peak Hour

Figure 2-23 Option 3-Build (2020) Condition Vehicular Traffic Volumes, p.m. Peak Hour



HOWARD STEIN HUDSON Engineers + Planners Figure 2-23

Option 3: Build (2020) Condition Traffic Volumes, Weekday p.m. Peak Hour

Table 2-11 Option 1 Build (2020) Condition, Capacity Analysis Summary, a.m. Peak Hour

Interception/Approach	ntersection/Approach LOS Delay V/C 50th						
Intersection/Approach	LUS	Delay (s)	Ratio	Percentil e Queue (ft)	95th Percentil e Queue (ft)		
Signa	lized Inte	ersections					
Columbus Avenue/Centre Street/Ritchie Street	F	83.5					
Centre EB left	F	139.0	1.16	~330	#531		
Centre EB left/thru	F	163.1	1.22	~377	#583		
Centre EB right	Α	5.9	0.27	21	33		
Ritchie WB left/thru/right	E	66.4	0.82	181	233		
Columbus NB left left	С	23.3	0.39	34	m66		
Columbus NB thru I thru/right	F	86.8	1.10	~606	#820		
Columbus SB left left	D	48.9	0.23	22	m56		
Columbus SB thru thru	Е	62.6	0.64	263	324		
Columbus SB right	В	13.3	0.39	60	108		
Columbus Avenue/MBTA Busway	Α	6.3					
MBTA EB left/right	Е	58.4	0.31	30	25		
Columbus NB left left	Е	67.2	0.62	29	m31		
Columbus NB thru thru thru	А	0.7	0.42	3	m4		
Columbus SB thru thru I thru/right	В	10.8	0.36	100	m112		
Columbus Avenue/Centre Street/Heath Street	С	30.9					
Heath EB left/thru I thru/right	F	84.9	1.02	~222	#341		
Centre WB left	D	42.6	0.41	40	87		
Centre WB thru/right	D	46.8	0.71	214	322		
Columbus NB left	В	11.2	0.55	7	46		
Columbus NB thru I thru/right	В	14.5	0.86	26	174		
Columbus SB left/thru I thru I thru/right	С	22.4	0.48	127	164		
Columbus Avenue/Dimock Street	С	29.4					
Dimock EB left left/thru/right	D	52.1	0.82	298	#582		
Columbus NB thru I thru/right	С	22.9	0.66	273	451		
Columbus SB left/thru I thru	С	25.3	0.56	85	215		
Centre Street/MBTA Busway	Α	3.1					

Α	2.0	0.30	30	30
Α	2.9	0.21	40	57
Е	58.3	0.18	9	16
E	57.0	0.10	3	8
В	18.9			
		0.54	286	410
				62
В	11.0	0.38	206	268
E	62.3	0.52	64	97
В	16.1	0.75	0	42
alized In	tersection	S		
Α	9.3	0.05	-	4
Α	0.0	0.39	-	0
Α	0.0	0.24	-	0
Α	1.3	0.04	-	3
В	10.2	0.28	-	29
В	10.2	0.03	-	3
Α	0.9	0.01	-	0
А	0.0	0.15	-	0
В	11.3	0.08	-	6
А	1.2	0.01	-	0
Α	0.0	0.14	-	0
Α		0.03	-	2
			-	23
Α	0.2	0.00	-	0
Α	0.0	0.00	-	0
	B C A B B A A B A A A A A A A A A A A A	A 2.9 E 58.3 E 57.0 B 18.9 C 22.2 A 8.6 B 11.0 E 62.3 B 16.1 alized Intersection A 9.3 A 0.0 A 0.0 A 1.3 B 10.2 B 10.2 A 0.9 A 0.0 B 11.3 A 0.0 A 0.0 A 0.0 A 0.0 B 11.3 A 0.0 A 0.0 A 0.0 B 11.3 A 0.0 A 0.0	A 2.9 0.21 E 58.3 0.18 E 57.0 0.10 B 18.9 C 22.2 0.54 A 8.6 0.19 B 11.0 0.38 E 62.3 0.52 B 16.1 0.75 A 0.0 0.39 A 0.0 0.24 A 1.3 0.04 B 10.2 0.28 B 10.2 0.28 B 11.3 0.04 B 10.2 0.28 B 11.3 0.04 A 0.0 0.15 B 11.3 0.08 A 0.0 0.15 A 0.0 0.15 A 0.0 0.14 A 8.8 0.03 A 10.0 0.23 A 0.2 0.00	A 2.9 0.21 40 E 58.3 0.18 9 E 57.0 0.10 3 B 18.9 C 22.2 0.54 286 A 8.6 0.19 32 B 11.0 0.38 206 E 62.3 0.52 64 B 16.1 0.75 0 A 9.3 0.05 - A 0.0 0.39 - A 0.0 0.24 - B 10.2 0.03 - A 0.9 0.01 - A 0.0 0.15 - B 11.3 0.08 - A 0.0 0.15 - B 11.3 0.08 - A 0.0 0.14 - B 11.3 0.08 - A 0.0 0.14 - A 8.8 0.03 - A 0.0 0.23 - A 0.0 0.23 - A 0.0 0.23 - A 8.8 0.03 - A 8.8 0.03 - A 10.0 0.23 - A 10.0 0.23 - A 10.0 0.23 - A 0.2 0.00 -

Amory Street Extension/Centre Street					_
Centre EB thru thru thru	Α	0.0	0.15	-	0
Centre WB thru thru	А	0.0	0.15	-	0
Amory NB right	Α	10.1	0.05	-	4

Table 2-12 Option 1 Build (2020) Condition, Capacity Analysis Summary, p.m. Peak Hour

Table 2-12 Option 1 Build (2020) Condition, Capacity Analysis Summary, p.m. Peak i						
Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentil e Queue (ft)	95th Percentil e Queue (ft)	
Signa	lized Inte	ersections				
Columbus Avenue/Centre Street/Ritchie Street	F	87.6				
Centre EB left	F	95.6	0.98	171	#330	
Centre EB left/thru	F	258.0	1.46	~384	#557	
Centre EB right	А	7.6	0.49	46	71	
Ritchie WB left/thru/right	Е	67.6	0.84	200	283	
Columbus NB left left	D	51.0	0.74	54	m#203	
Columbus NB thru I thru/right	С	36.4	0.77	335	#463	
Columbus SB left left	С	35.0	0.25	35	m56	
Columbus SB thru thru	F	127.2	1.16	~587	m#724	
Columbus SB right	С	32.2	0.73	213	m270	
Columbus Avenue/MBTA Busway	В	13.7				
MBTA EB left/right	Е	60.4	0.39	38	28	
Columbus NB left left	F	217.5	1.21	~42	m#61	
Columbus NB thru thru thru	Α	0.3	0.30	4	m4	
Columbus SB thru thru I thru/right	В	15.6	0.66	152	m132	
Columbus Avenue/Centre Street/Heath Street	F	84.0				
Heath EB left/thru I thru/right	D	46.8	0.87	247	#340	
Centre WB left	F	105.6	1.00	132	#248	
Centre WB thru/right	С	30.9	0.50	160	219	
Columbus NB left	D	49.4	0.67	45	#158	
Columbus NB thru I thru/right	В	12.5	0.70	252	66	
Columbus SB left/thru I thru I thru/right	F	168	1.28	~497	#564	

Columbus Avenue/Dimock Street	С	28.7			
Dimock EB left left/thru/right	E	67.5	0.87	237	#425
Columbus NB thru I thru/right	В	13.4	0.42	142	291
Columbus SB left/thru I thru	С	28.8	0.68	317	m292
Centre Street/MBTA Busway	Α	3.7			
Centre EB thru thru	Α	1.4	0.29	7	8
Centre WB thru thru	Α	2.2	0.28	26	50
MBTA Bus Exit SB left	Е	71.3	0.50	30	35
MBTA Bus Exit SB right	Α	0.0	0.00	0	0
	_				
Centre Street/Lamartine Street	В	19.1		100	"0.40
Centre EB thru/right	С	28.4	0.69	423	#648
Centre WB left	Α	8.8	0.41	37	41
Centre WB thru	A	7.7	0.44	169	229
Lamartine NB left	E	62.1	0.43	46	81
Lamartine NB right	В	17.2	0.58	0	47
-	nalized In	tersection	S		
Columbus Avenue/Amory Street	_				
Amory EB right	В	10.3	0.03	-	3
Columbus NB thru thru	В	0.0	0.28	-	0
Columbus SB thru thru/right	В	0.0	0.42	-	0
Amory Street/Dimock Street			0.00		
Amory EB left/thru	A	1.2	0.03	-	2
Dimock WB thru/right	В	12.1	0.50	-	72
Amory Street/Amory Terrace		44.0	0.00		
Amory Terrace EB left/right	В	11.9	0.03	-	2
Amory NB thru/left	Α	2.0	0.01	-	1
Amory SB thru/right	Α	0.0	0.29	-	0
Amory Street/Amory Avenue	_	46 :	0.55		
Amory Avenue EB left/right	В	13.1	0.06	-	5
Amory NB thru/left	A	1.0	0.00	-	0
Amory SB thru/right	Α	0.0	0.28	-	0

Amory Street/New Jackson Street					
New Jackson EB left/thru/right	Α	9.1	0.02	-	2
Amory WB left/thru/right	В	12.3	0.47	-	64
Amory NB left/thru/right	Α	0.7	0.00	•	0
Amory SB left/thru/right	Α	0.0	0.00	-	0
Amory Street Extension/Centre Street					
Centre EB thru thru thru	Α	0.0	0.15	ı	0
Centre WB thru thru	Α	0.0	0.23	-	0
Amory NB right	Α	10.0	0.03	-	3

As shown in Table 2-11 and Table 2-12, under the Option 1 Build (2020) Condition:

The intersection of **Columbus Avenue/Centre Street/Ritchie Street** worsens from the No-Build (2020) Condition from LOS E to LOS F during the a.m. peak hour.

Table 2-13 and **Table 2-14** present the Option 2 Build (2020) Condition capacity analysis for the a.m. and p.m. peak hours, respectively. The shaded cells in the tables indicate a worsening in LOS from the No-Build (2020) Condition.

Table 2-13 Option 2 Build (2020) Condition, Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentil e Queue (ft)	95th Percentil e Queue (ft)			
Signalized Intersections								
Columbus Avenue/Centre Street/Ritchie Street	F	82.4						
Centre EB left	F	118.4	1.09	~300	#495			
Centre EB left/thru	F	141.9	1.17	~348	#551			
Centre EB right	А	6.0	0.26	21	33			
Ritchie WB left/thru/right	Е	66.4	0.82	181	223			
Columbus NB left left	С	23.3	0.39	34	m59			
Columbus NB thru I thru/right	F	96.6	1.13	~621	#848			
Columbus SB left left	D	48.9	0.23	22	m56			
Columbus SB thru thru	Е	62.6	0.64	263	324			

Columbus SB right	В	13.3	0.39	60	108
Columbus Avenue/MBTA Busway	Α	6.3			
MBTA EB left/right	Е	58.4	0.31	30	25
Columbus NB left left	Е	67.2	0.62	29	m31
Columbus NB thru thru thru	Α	0.8	0.42	3	m4
Columbus SB thru thru I thru/right	В	10.8	0.36	100	m112
Columbus Avenue/Centre Street/Heath Street	С	30.7			
Heath EB left/thru I thru/right	F	84.9	1.02	~222	#341
Centre WB left	D	42.6	0.41	40	87
Centre WB thru/right	D	46.8	0.71	214	322
Columbus NB left	В	11.3	0.55	7	47
Columbus NB thru I thru/right	В	14.1	0.86	456	203
Columbus SB left/thru I thru I thru/right	С	22.4	0.48	127	164
Columbus Avenue/Dimock Street	С	32.0			
Dimock EB left/thru/right	D	49.5	0.81	307	#597
Columbus NB left/thru I thru/right	С	26.7	0.75	304	#497 3497
Columbus SB left/thru I thru/right	С	28.6	0.62	107	233
Centre Street/MBTA Busway	Α	3.1			
Centre EB thru thru	А	2.0	0.30	30	30
Centre WB thru thru	Α	2.9	0.21	40	57
MBTA Bus Exit SB left	Е	58.3	0.18	9	16
MBTA Bus Exit SB right	E	57.0	0.10	3	8
Centre Street/Lamartine Street	В	18.9			
Centre EB thru/right	С	22.2	0.54	286	410
Centre WB left	Α	8.6	0.19	32	62
Centre WB thru	В	11.0	0.38	206	268
Lamartine NB left	Е	62.3	0.52	64	97
Lamartine NB right	В	16.1	0.75	0	42
Unsign	alized In	tersection	s		

Columbus Avenue/Amory Street					
Amory EB right	А	9.3	0.05	-	4
Columbus NB thru thru	А	0.0	0.40	-	0
Columbus SB thru thru/right	А	0.0	0.25	-	0
Amory Street/Dimock Street					
Amory EB left/thru	В	14.2	0.585	-	95
Dimock WB thru/right	Α	8.8	0.096	-	7.5
Amory SB left/right	В	11	0.369	-	42.5
Amory Street/Amory Terrace					
Amory Terrace EB left/right	В	10.2	0.03	-	3
Amory NB thru/left	А	0.9	0.01	-	0
Amory SB thru/right	А	0.0	0.15	-	0
Amory Street/Amory Avenue					
Amory Avenue EB left/right	В	10.3	0.07	-	5
Amory NB thru/left	Α	1.2	0.01	-	0
Amory SB thru/right	Α	0.0	0.13	-	0
Amory Street/New Jackson Street					
New Jackson EB left/thru/right	Α	8.6	0.03	-	2
Amory WB left/thru/right	В	10.1	0.20	-	19
Amory NB left/thru/right	А	0.2	0.00	-	0
Amory SB left/thru/right	Α	0.5	0.00	-	0

Table 2-14 Option 2 Build (2020) Condition, Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentil e Queue (ft)	95th Percentil e Queue (ft)
Signa	lized Inte	ersections			
Columbus Avenue/Centre Street/Ritchie Street	F	85.0			
Centre EB left	F	80.7	0.92	154	#304
Centre EB left/thru	F	240.4	1.41	~367	#536
Centre EB right	А	7.6	0.47	45	70
Ritchie WB left/thru/right	Е	67.6	0.84	200	283
Columbus NB left left	D	52.5	0.74	63	m#200
Columbus NB thru I thru/right	С	34.9	0.79	347	#489
Columbus SB left left	D	35.2	0.26	35	m56
Columbus SB thru thru	F	127.2	1.16	~587	m#724
Columbus SB right	С	32.2	0.73	213	m270
Columbus Avenue/MBTA Busway	В	13.7			
MBTA EB left/right	Е	60.4	0.39	38	28
Columbus NB left left	F	219.5	1.21	~42	m#61
Columbus NB thru thru thru	Α	0.3	0.30	4	m4
Columbus SB thru thru I thru/right	В	15.6	0.66	152	m132
Columbus Avenue/Centre Street/Heath Street	F	83.9			
Heath EB left/thru I thru/right	D	46.8	0.87	247	#340
Centre WB left	F	105.6	1.00	132	#248
Centre WB thru/right	С	30.9	0.50	160	219
Columbus NB left	D	49.4	0.67	45	#157
Columbus NB thru I thru/right	В	12.3	0.70	226	64
Columbus SB left/thru I thru I thru/right	F	168.0	1.28	~497	#564
Columbus Avenue/Dimock Street	С	30.0			
Dimock EB left/thru/right	E	65.8	0.87	242	#430
Columbus NB left/thru I thru/right	В	14.5	0.47	153	312
Columbus SB left/thru I thru/right	С	30.6	0.73	346	m317
Centre Street/MBTA Busway	Α	3.7			

Centre EB thru thru	Α	1.4	0.29	7	8
Centre WB thru thru	Α	2.2	0.28	26	50
MBTA Bus Exit SB left	Е	71.3	0.50	30	35
MBTA Bus Exit SB right	Α	0.0	0.00	0	0
0 1 0 1 1 0 1		40.4			
Centre Street/Lamartine Street	В	19.1		400	
Centre EB thru/right	С	28.4	0.69	423	#648
Centre WB left	Α	8.8	0.41	37	41
Centre WB thru	Α	7.7	0.44	169	229
Lamartine NB left	E	62.1	0.43	46	81
Lamartine NB right	В	17.2	0.58	0	47
	nalized In	tersection	ns -	T	1
Columbus Avenue/Amory Street					
Amory EB right	В	10.3	0.04	-	3
Columbus NB thru thru	Α	0.0	0.28	-	0
Columbus SB thru thru/right	Α	0.0	0.44	-	0
Amory Street/Dimock Street					
Amory EB left/thru	В	12.4	0.457	-	57.5
Dimock WB thru/right	Α	9.3	0.116	-	10
Amory SB left/right	В	13.2	0.574	-	92.5
Amory Street/Amory Terrace					
Amory Terrace EB left/right	В	11.6	0.03	-	2
Amory NB thru/left	Α	2.0	0.01	-	1
Amory SB thru/right	А	0.0	0.27	-	0
Amory Street/Amory Avenue					
Amory Avenue EB left/right	В	12.0	0.05	-	4
Amory NB thru/left	Α	0.9	0.00	-	0
Amory SB thru/right	Α	0.0	0.26	-	0
Amory Street/New Jackson Street					
New Jackson EB left/thru/right	А	8.6	0.02	-	2
Amory WB left/thru/right	В	12.0	0.42	-	52
Amory NB left/thru/right	А	0.8	0.00	-	0
Amory SB left/thru/right	Α	0.2	0.00	-	0

As shown in Table 2-13 and Table 2-14, under the Option 2 Build (2020) Condition:

The intersection of **Columbus Avenue/Centre Street/Ritchie Street** worsens from the No-Build (2020) Condition from LOS E to LOS F during the a.m. peak hour. All other approaches continue to operate at the same LOS as the No-Build (2020) Condition during both the a.m. and p.m. peak hour.

Table 2-15 and **Table 2-16** present the Option 3 Build (2020) Condition capacity analysis for the a.m. and p.m. peak hours, respectively. The shaded cells in the tables indicate a worsening in LOS between the No-Build (2020) Condition and the Build (2020) Condition.

Table 2-15 Option 3 Build (2020) Condition, Capacity Analysis Summary, a.m. Peak Hour

Table 2-15 Option 3 Build (2020) Condition, Capacity Analysis Summary, a.m. Peak Hou						
Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentil e Queue (ft)	95th Percentil e Queue (ft)	
Signa	lized Inte	ersections				
Columbus Avenue/Centre	F	82.3				
Street/Ritchie Street						
Centre EB left	F	118.3	1.09	~300	#495	
Centre EB left/thru	F	141.8	1.17	~348	#551	
Centre EB right	Α	6.0	0.27	21	33	
Ritchie WB left/thru/right	Е	66.4	0.82	181	223	
Columbus NB left left	С	23.3	0.39	34	m59	
Columbus NB thru I thru/right	F	96.6	1.13	~621	#848	
Columbus SB left left	D	48.9	0.23	22	m56	
Columbus SB thru thru	Е	62.6	0.64	263	324	
Columbus SB right	В	13.3	0.39	60	108	
Columbus Avenue/MBTA Busway	Α	6.3				
MBTA EB left/right	E	58.4	0.31	30	25	
Columbus NB left left	E	67.2	0.62	29	m31	
Columbus NB thru thru thru	Α	0.8	0.42	3	m4	
Columbus SB thru thru I thru/right	В	10.8	0.36	100	m112	
Columbus Avenue/Centre	С	30.7				
Street/Heath Street						
Heath EB left/thru I thru/right	F	84.9	1.02	~222	#341	
Centre WB left	D	42.6	0.41	40	87	
Centre WB thru/right	D	46.8	0.71	214	322	
Columbus NB left	В	11.3	0.55	7	47	

Columbus NB thru I thru/right	В	14.1	0.86	456	203
Columbus SB left/thru I thru I thru/right	С	22.4	0.48	127	164
Columbus Avenue/Dimock Street	С	32.0			
Dimock EB left/thru/right	D	49.5	0.81	307	#597
Columbus NB left/thru I thru/right	С	26.7	0.75	304	#497
Columbus SB left/thru I thru/right	С	28.6	0.62	106	233
Centre Street/MBTA Busway	Α	3.1			
Centre EB thru thru	Α	2.0	0.30	30	30
Centre WB thru thru	Α	2.9	0.21	40	58
MBTA Bus Exit SB left	Е	58.3	0.18	9	16
MBTA Bus Exit SB right	Е	57.0	0.10	3	8
Centre Street/Lamartine Street	В	18.9			110
Centre EB thru/right	С	22.2	0.54	286	410
Centre WB left	A	8.6	0.19	32	62
Centre WB thru	В	11.0	0.38	206	266
Lamartine NB left	E	62.3	0.52	64	97
Lamartine NB right	В	16.1	0.75	0	42
	nalized In	tersection	าร		1
Columbus Avenue/Amory Street					_
Amory EB right	Α	9.3	0.05	-	4
Columbus NB thru thru	Α	0.0	0.40	-	0
Columbus SB thru thru/right	А	0.0	0.25	-	0
Amory Street/Dimock Street	_				
Amory EB left/thru	В	14.2	0.585	-	95
Dimock WB thru/right	Α	8.8	0.096	-	7.5
Amory SB left/right	В	11	0.369	-	42.5
Amory Street/Amory Terrace					
Amory Terrace EB left/right	В	10.2	0.03	-	3
Amory NB thru/left	Α	0.9	0.01	-	0
Amory SB thru/right	А	0.0	0.15	-	0
Amory Street/Amory Avenue					

Amory Avenue EB left/right	В	10.3	0.07	-	5
Amory NB thru/left	Α	1.2	0.01	-	0
Amory SB thru/right	А	0.0	0.13	-	0
Amory Street/New Jackson Street					
New Jackson EB left/thru/right	А	8.5	0.03	-	2
Amory WB left/thru/right	В	10.1	0.20	-	19
Amory NB left/thru/right	А	0.2	0.00	-	0
Amory SB left/thru/right	А	0.5	0.00	-	0

Table 2-16 Option 3 Build (2020) Condition, Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50th Percentil e Queue (ft)	95th Percentil e Queue (ft)
Signa	lized Inte	ersections			
Columbus Avenue/Centre Street/Ritchie Street	F	84.9			
Centre EB left	F	80.8	0.92	154	#301
Centre EB left/thru	F	240.4	1.41	~368	#536
Centre EB right	А	7.8	0.49	47	73
Ritchie WB left/thru/right	Е	67.6	0.84	200	283
Columbus NB left left	D	52.4	0.74	63	m#200
Columbus NB thru I thru/right	С	35.0	0.79	347	m#488
Columbus SB left left	D	35.2	0.26	35	m56
Columbus SB thru thru	F	127.2	1.16	~587	m#724
Columbus SB right	С	32.2	0.73	213	m270
Columbus Avenue/MBTA Busway	В	13.7			
MBTA EB left/right	Е	60.4	0.39	38	28
Columbus NB left left	F	219.2	1.21	~42	m#61
Columbus NB thru thru thru	Α	0.3	0.30	4	m4
Columbus SB thru thru I thru/right	В	15.6	0.66	152	m132
Columbus Avenue/Centre Street/Heath Street	F	83.9			
Heath EB left/thru I thru/right	D	47.0	0.87	247	#341
Centre WB left	F	105.6	1.00	132	#248
Centre WB thru/right	С	30.9	0.50	160	219
Columbus NB left	D	49.4	0.67	45	#157
Columbus NB thru I thru/right	В	12.3	0.70	229	64
Columbus SB left/thru I thru I thru/right	F	168.0	1.28	~497	#564
Columbus Avenue/Dimock Street	С	30.0			
Dimock EB left/thru/right	Е	66.1	0.87	243	#430
Columbus NB left/thru I thru/right	В	14.5	0.47	153	312
Columbus SB left/thru I thru/right	С	30.4	0.73	346	m317
Centre Street/MBTA Busway	Α	3.7			

Centre EB thru thru	А	1.4	0.29	7	8	
Centre WB thru thru	Α	2.2	0.28	26	50	
MBTA Bus Exit SB left	Е	71.3	0.50	30	35	
MBTA Bus Exit SB right	А	0.0	0.00	0	0	
Centre Street/Lamartine Street	В	19.1				
			0.00	400	#040	
Centre EB thru/right	C	28.4	0.69	423	#648	
Centre WB left Centre WB thru	A	8.8	0.41	37 170	0	
	A	7.8			229	
Lamartine NB left	E	62.1	0.43	46	81 47	
Lamartine NB right B 17.2 0.58 0					47	
Unsignalized Intersections Columbus Avenue/Amory Street						
Amory EB right	В	10.3	0.04		3	
Columbus NB thru thru	В	0.0	0.04		0	
Columbus SB thru thru/right	В	0.0	0.20	-	0	
Amory Street/Dimock Street		0.0	0.44		0	
Amory EB left/thru	В	12.4	0.457	-	57.5	
Dimock WB thru/right	A	9.3	0.116	-	10	
Amory SAB left/right	В	13.2	0.574	_	92.5	
Amory Street/Amory Terrace		10.2	0.07		02.0	
Amory Terrace EB left/right	В	11.6	0.03	-	2	
Amory NB thru/left	A	2.0	0.01	-	1	
Amory SB thru/right	Α	0.0	0.27	-	0	
Amory Street/Amory Avenue						
Amory Avenue EB left/right	В	12.0	0.05	-	4	
Amory NB thru/left	Α	0.9	0.00	-	0	
Amory SB thru/right	Α	0.0	0.26	-	0	
Amory Street/New Jackson Street						
New Jackson EB left/thru/right	Α	8.6	0.02	-	2	
Amory WB left/thru/right	В	12.0	0.43	-	54	
Amory NB left/thru/right	Α	0.8	0.00	-	0	
Amory SB left/thru/right	Α	0.2	0.00	-	0	
	-	-	-			

As shown in Table 2-15 and Table 2-16, under the Option 3 Build (2020) Condition:

The intersection of **Columbus Avenue/Centre Street/Ritchie Street** worsens from the No-Build (2020) Condition from LOS E to LOS F during the a.m. peak hour. All approaches in this intersection continue to operate at the same LOS as the No-Build (2020) Condition.

2.5 Transportation Demand Management

The Project Proponent is committed to implementing Transportation Demand Management (TDM) measures to minimize automobile usage and project-related traffic impacts. TDM will be facilitated by the nature of the Phase 3 projects (which do not generate significant peak hour trips) and their proximity to numerous public transit alternatives.

On-site management will keep a supply of transit information (schedules, maps, and fare information) to be made available to the residents and patrons of the Phase 3 projects. The Project Proponent will work with the City to develop a TDM program appropriate to the Phase 3 projects and consistent with their level of impact.

The Project Proponent is prepared to take advantage of good transit access in marketing the Phase 3 projects to future residents by working with them to implement the following TDM measures to encourage the use of non-vehicular modes of travel.

The TDM measures for the Phase 3 projects may include but are not limited to the following:

Orientation Packets: The Project Proponent will provide orientation packets to new tenants containing information on available transportation choices, including transit routes/schedules and nearby vehicle sharing and bicycle sharing locations. On-site management will work with residents and tenants as they move in to help facilitate transportation for new arrivals;

Provide an annual (or more frequent) newsletter or bulletin summarizing transit, ride-sharing, bicycling, alternative work schedules, and other travel options.

- Transportation Coordinator: The Project Proponent will designate a transportation coordinator to oversee transportation issues, including parking, service and loading, and deliveries, and will work with residents as they move in to raise awareness of public transportation, bicycling, and walking opportunities;
- Provide information on travel alternatives for employees and visitors via the Internet and in the building lobbies;
- Vehicle Sharing Program: The Project Proponent will explore the feasibility of providing spaces in the garage for a car sharing service.

2.6 Transportation Mitigation Measures

While the traffic impacts associated with the new trips are minimal, the Project Proponent will continue to work with the City of Boston to create projects that efficiently serve vehicle trips, improve the pedestrian environment, and encourage transit and bicycle use.

The Project Proponent is responsible for preparation of the Transportation Access Plan Agreement (TAPA), a formal legal agreement between the Project Proponent and the BTD. The TAPA formalizes the findings of the transportation study, mitigation commitments, elements of access and physical design, travel demand management measures, and any other responsibilities that are agreed to by both the Project Proponent and the BTD. Because the TAPA must incorporate the results of the technical analysis, it must be executed after these other processes have been completed. The proposed measures listed above and any additional transportation improvements to be undertaken as part of the Phase 3 projects will be defined and documented in the TAPA.

The Project Proponent will also produce a Construction Management Plan (CMP) for review and approval by BTD. The CMP will detail the schedule, staging, parking, delivery, and other associated impacts of the construction of the Phase 3 projects.

2.7 Evaluation of Short-term Construction Impacts

Most construction activities will be accommodated within the current site boundaries. Details of the overall construction schedule, working hours, number of construction workers, worker transportation and parking, number of construction vehicles, and routes will be addressed in detail in a Construction Management Plan to be filed with BTD in accordance with the City's transportation maintenance plan requirements.

To minimize transportation impacts during the construction period, the following measures will be considered for the Construction Management Plan:

- Limited construction worker parking on-site;
- Encouragement of worker carpooling;
- Consideration of a subsidy for MBTA passes for full-time employees; and
- Providing secure spaces on-site for workers' supplies and tools so they do not have to be brought to the site each day.

The Construction Management Plan to be executed with the City prior to commencement of construction will document all committed measures.

[1] Summary of Travel Trends: 2009 National Household Travel Survey; FHWA; Washington, D.C.; June 2011.

3.0 EVALUATION OF CHANGES – ARTICLE 80 REVIEW

3.1 Urban Design

Jackson Square is transforming. With new mixed-use buildings on all sides, the redevelopment of Site III is going to complete the core of the Jackson Square Redevelopment. This particular site will provide critical linkage between the MBTA station and Amory Street. Additional adjacencies and relationships are described below.

- Transform long-blighted parcels with active, needed, and attractive residential apartments as well as usable open space and parking;
- Create a new public plaza/ open space on Centre Street
- Provide greenway pedestrian and bike path linkage to Amory Street (75 Amory Avenue, Amory Terrace, 125 Amory Street and points south)
- Build new housing that is convenient to mass transportation, bikeways, and greenbelts;
- Build new housing that is energy and water efficient and environmentally sustainable;
 and
- Strengthen public ways by fronting on new streets and sidewalks and enhancing pedestrian routes.

Site III will become a vibrant, mixed-use community, re-creating active edges along Centre Street, along the MBTA Orange Line corridor, and along the new Amory Street extension. Building N (250 Centre Street) will house approximately 100 mixed-income apartments over a half-level of parking, and approximately 2,400 SF of retail space facing Centre Street. Building M will house 44 family-sized affordable apartments. A gracious landscaped plaza will be located on Centre Street and a lushly planted linear park will enliven the space in between 250 Centre Street and the Orange Line.

The project site is bounded by Centre Street to the north, MBTA property and the Stony Brook Low Level Sewer Easement to the west. The southern edge of the site abuts private property, and the southwest "panhandle" of the site abuts the JPNDC redevelopment site currently in construction, 75 Amory Avenue. The southeastern corner of the site touches the bend in Amory Street, and the eastern length of the site bounds along the existing Amory Street dead end. A Verizon building is located across Amory Street. The lot area of the mixed-use buildings and vehicle driveway add up to almost an acre and a half. The total lot area of the Site III, Phase 3 projects comprises 2.2 acres.

The Urban Design strategy for the site is made up of three elements:

1. Improved open space for residents, neighbors and visitors to enjoy:

- Inviting and open plaza for public activities
- The Greenway linear park linking to the Jackson Square MBTA Station
- The courtyard as an oasis for the residents
- 2. New pedestrian and vehicle connections to the neighborhood:
 - A new driveway will connect the bend in Amory Street to the new drive at 75 Amory Avenue. This new linking drive will be built to look like a "street", offering two-way drive lanes, on-street parking, sidewalks, lighting and street trees.
 - Amory Street will be improved, providing a safe and inviting connection to Centre Street from the existing Amory Street. Refer to the Transportation Section for in-depth description of Amory Street improvements.
- 3. Creation of a vibrant new community directly adjacent to Jackson Square:
 - Emulate the transit and industrial history and character of the site.
 - Utilize materials and massing to reinforce streets and open spaces.
 - Encourage active uses at the ground level of the two new buildings and in the open space.
 - Provide a mix of unit sizes, offering housing for young professionals and for families, at varying levels of affordability.

3.1.1 250 Centre Street (Building N)

250 Centre Street will be a six story mixed-use building, providing 100 new apartments. The primary residential entry will be located off the plaza, at the northwestern corner of the site, nearest to Jackson Square MBTA Station. Through the lobby, residents will enjoy a small outdoor patio, looking into the courtyard. Connected to the lobby, a fitness center and event room will be utilized by residents. Entry to the retail space will be at the northeastern corner of the site, adjacent to Amory Street, with the possibility of retail uses spilling out onto the wide sidewalk. Under the building, there will be structured parking for 50 cars, as well as bicycle parking for residents.

Orienting specifically to Centre Street, the new building will also align with the length of the transit line. Facing Centre Street, at 70 foot height, tall storefronts and windows will offer long views back to the city skyline. The roofline will angle, stepping down towards the south, emulating the residential neighborhoods and sloped roofs nearby. Facing the Greenway and the transit corridor, playful angled bays will bounce along the façade, while the regular pattern of windows sets a rhythm as a backdrop. Decks and bays will extend over plantings at the lower living levels, engaging the new linear park. The courtyard façade treatment is more restrained; large living room windows will be demarcated with sunshade devices.

Contemporary materials and accent elements will break up the mass and length of the facades. Building materials will draw inspiration from the adjacent transit use – the body of the building

will be clad in a metal shingle system—with metal panels on bays and surrounding the large windows. Deeply punched openings will provide ample visibility in the glass-storefront retail space. A warm and inviting wood-look material will be employed at inset openings and as an accent material

3.1.2 (25 Amory St) Building M:

Building M will face onto the improved Amory Street. Woven metal railings at stoops for townhouse apartments will line the façade of this new four story (45' foot height) masonry-clad building. Vertical bays will frame each entrance. A tall corner bay will mark this building at the Amory Street bend, and a broad bay denotes the main entrance, connecting the residential lobby from Amory Street through to the courtyard. The management office will be accessed from the lobby, and the community room will connect from the lobby and open into the courtyard. Resident parking will be on site, in the small parking lot, as well as parallel parking on both sides of the new drive. This new residential building will be wood frame construction with masonry and durable cementitious siding and paneling.

3.1.3 Building Courtyard:

Sheltered by the two new buildings, with southern orientation to maximize daylight, the 7,000 square foot central landscaped courtyard will offer a quiet green space for residents. Adjacent to each building, a resident-use patio space will provide a shared outdoor space for quiet enjoyment or small gatherings. The ground level apartments of both buildings will enjoy outdoor decks with direct access from their units. The small parking lot will provide spaces for 13 cars, including loading access and two accessible parking spaces.

3.2 Public Realm- Open Space

3.2.1 Streetscape:

This redevelopment will strengthen the Centre Street corridor between Lamartine Street and Columbus Avenue, improve the path between Centre Street and Amory Street, and create a new pedestrian and vehicular link on the new site driveway. Trees will be located in pits along the sidewalk or alongside the sidewalk, as an additional buffer next to parallel parking. Lining the Amory Street Extension, small front yard gardens and stoop plantings will set a pedestrian and more residential scale further away from Centre Street. High-quality lighting, sidewalk furniture, and landscaping treatments will create an inviting streetscape for residents and for the surrounding community.

3.2.2 Plaza:

The new approximately 3,000 square foot plaza will be located directly across from the Jackson Square MBTA Station, providing the opportunity for public and private gathering space as well as creating a unique sense of place. The plaza will be defined by sculptural light fixtures and patterned paving, will be framed by adaptive seating and enclosed by an overhead tree canopy. Architectural features and planted textures will ensure this vibrant space will be colorful and enjoyed year-round.

3.2.3 Linear Park:

Approximately 27,000 square foot of landscaped linear park will be framed by the long façade of the proposed 250 Centre Street residential building and the MBTA orange line. Envisioned as a destination park for the surrounding neighborhood, the park will be designed with various elements along the pathways, providing small gathering places for quiet contemplation, as well as open lawn space for free play. Providing a designated bike path separated from a pedestrian footpath, the new greenway will offer a safe and enjoyable walk or ride for those travelling through the site to the Jackson Square MBTA Station and beyond.

3.3 Zoning

Both Building M and Building N will require zoning relief from the City of Boston Zoning Board of Appeal.

3.3.1 Zoning Districts

The Phase 3 portion of Site III (i.e., the Building M Parcel, Building N Parcel and MBTA Easement Parcel) is located wholly within a Neighborhood Shopping Subdistrict of the Jamaica Plain Neighborhood District.

The MBTA Easement Parcel is also located within a Greenbelt Protection Overlay District ("GPOD").

3.3.2 Variances for Building M

The Building M project will require the following variances:

- Use of the first story for residential dwelling units
- Insufficient front yard depth
- Insufficient rear yard depth

3.3.3 Variances for Building N:

The Building N project will require the following variances:

- Use of the first story for residential dwelling units
- Excessive building height variance, both absolute height and number of stories
- Insufficient rear yard depth
- Insufficient usable open space
- Excessive floor area ratio (FAR)

3.3.4 Conditional Use Permits

The parking area to be constructed on the MBTA Easement Parcel will require a conditional use permit for ancillary parking, as that parking area will be ancillary to the Building M Parcel and the Building N Parcel. The same kind of relief will be needed for any parking spaces to be constructed on either the Building M Parcel or the Building N Parcel and intended to satisfy the requirements of the other parcel. The MBTA Easement Parcel will also require a conditional use permit for construction of greater than 2,000 sf of impervious surface (i.e., the parking area) within the GPOD.

3.4 Public Agency Review

Table 3.1 below presents a list of state and local agencies from which permits or other actions are expected to be required either for the Phase 3 projects overall or separately for each of the Phase 3 projects:

Table 3.1	
Agency Name	Permit / Approval
STATE	
Department of Environmental Protection,	Sewer Connection and Extension Permit
Division of Water Pollution Control	

Massachusetts Water Resources Authority	Sewer Use Discharge Permit
Massachusetts Historic Commission	State Register Review
Massachusetts Bay Transportation Authority	Access, Easement, and Property Conveyance
MA Department of Transportation	Access, Property Conveyance
LOCAL	
Boston Redevelopment Authority	80B Large Project Review and related documents and agreements; Property Conveyance (in title conduit role)
Boston Civic Design Commission	Approval per Article 28 of Zoning Code
Boston Water and Sewer Commission	Sewer Use Discharge Permit;
	Site Plan Approval;
	Sewer Extension/ Connection Permit;
	Storm water Connection
City of Boston Inspectional Services Department	Building and Occupancy Permits
Boston Public Improvement Commission	Street and Sidewalk Occupation Permits; Street Acceptance
	Specific Repair Plan
Boston Board of Appeals	Variances and Conditional Use Permits
Boston Parks and Recreation Commission	Approval of construction within 100 feet of a park and within a GPOD
Interagency Green Building Committee	Green Building Report Climate Change and Resiliency Checklist
Disabilities Commission	Accessibility Checklist
Boston Department of Transportation	Transportation Access Plan Agreement, Construction Management Plan
Boston Committee on Licenses	Fuel Storage License

4.0 PROJECT IMPACTS

4.1 Wind

The May, 2007 DPIR included a pedestrian level wind analysis that evaluated existing and build conditions at 69 locations throughout the build area. That report concluded that none of these 69 conditions would produce pedestrian level winds that exceeded BRA guidelines. Furthermore, none of the locations was predicted to exceed category 3 (comfortable for walking).

The revision to Site III includes an overall height reduction for both of the proposed buildings M and N. As a result, the project is expected to have minimal impact on wind conditions.

4.2 Shadow

The May, 2007 DPIR included a shadow analysis for Site III and the proposed Phase 3 buildings. That analysis concluded that "while the development of the project will result in increased shadow, the Project will not cause substantial impacts to the surrounding area", and further concluded that "impacts to the project will be primarily to the immediate surrounding public ways and sidewalks with fleeting shadow on some adjacent buildings."

An updated shadow impact analysis was conducted to investigate shadow impacts from the proposed Site III, Phase 3 buildings. The study tracked the sun and resulting shadow during three time periods (9:00 am, 12:00 noon and 3:00 pm) during the vernal equinox (March 21), summer solstice (June 21), autumnal equinox (September 21) and the winter solstice (December 21). In addition, shadow studies were conducted for the 6:00 pm time period during the summer solstice and autumnal equinox Shadows are determined by using the Boston Altitude and Azimuth data, listed in Table 4.1 below.

Table 4.1: Azimuth and Altitude Data				
Date Local Time		Solar Position		
Date	Local Tille		Azimuth	
March 21	9:00 AM EST	33.0	125.7	
	12:00 PM EST	48.0	-176.9	

	3:00 PM EST	30.5	-121.8
June 21	9:00 AM DST	39.9	93.5
	12:00 PM DST	68.8	149.4
	3:00 PM DST	56.5	-113.7
	6:00 PM DST	23.9	-79.3
September			
21	9:00 AM DST	25.9	115.3
	12:00 PM DST	47.4	166.0
	3:00 PM DST	37.4	-132.9
	6:00 PM DST	7.3	-96.0
December			
21	9:00 AM EST	14.2	141.9
	12:00 PM EST	24.1	-175.6
	3:00 PM EST	10.0	-135.1

The shadow analysis presents new shadow from the Site III, Phase 3 buildings, as well as shadows of the existing neighborhood, and illustrates the impact of the Site III, Phase 3 buildings t. The analysis focuses on the public spaces and major pedestrian areas adjacent to and in the vicinity of the site. New shadows from the proposed Project are generally limited to the streets and sidewalks surrounding the Project site. The internal courtyard is oriented to the south, to maximize daylight. No new shadow is anticipated to be cast on existing open spaces in the area.

During March's Vernal Equinox, net new shadow will cross the plaza/ greenway to the northeast and the building's internal courtyard. At noon, the shadows will also cross Centre Street, while the internal courtyard will have minimal shadow impact for much of the afternoon. At 3pm, shadow will fall onto the Amory Street extension. At 6pm, shade will extend across Centre Street and Amory Street to Columbus Avenue to the northeast.

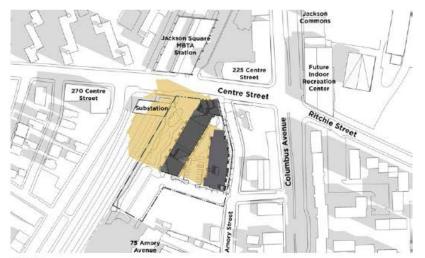
In June, during the Summer Solstice, the building's morning (9am) shadows will fall across the new plaza/ greenway and internal courtyard. At noon, when the sun is at its peak, shadows will fall minimally onto the site. By 3 o'clock in the afternoon, shadows will reach cross Amory Street extension near Centre Street. At 6 pm, the building will cast shadow across the Amory Street extension, as well as into the site's internal courtyard.

In September, during Autumn Equinox, shadow will cross the plaza/ greenway, and reach partially onto Centre Street. At noon, net new shade will fall northerly across Centre Street and partially over the plaza/greenway. By 3 o'clock in the afternoon, shadows will reach across Centre Street and Amory Street extension. At 6pm, building shadows will have elongated across Amory Street extension and reach across Columbus Avenue at Jackson Square.

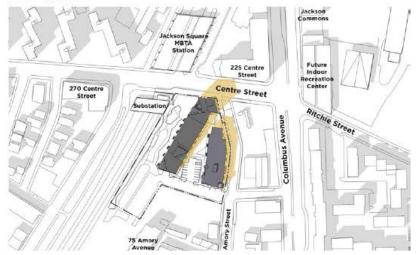
During Winter Solstice, the sun angle is at its lowest and the days are at their shortest. Daylight is least, and shadows are at their longest. At 9am, the building shadows will cross the plaza/

greenway and across Centre Street. At noon, shadows will also reach across Centre Street and shade the front of the MBTA Station. At 3pm on December 21st, building shadows will cross Centre Street and reach almost to Columbus Avenue.

Typically, each morning, the building shadow will fall over the new plaza and greenway. At noon, the shadow falls across Centre Street. As the day progresses, the shadow elongates towards Columbus Avenue.



9:00 a.m.

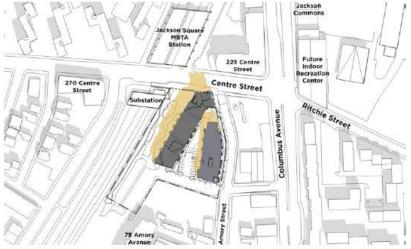


3:00 p.m.

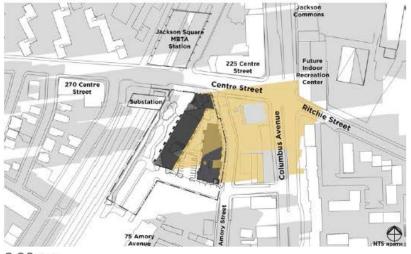






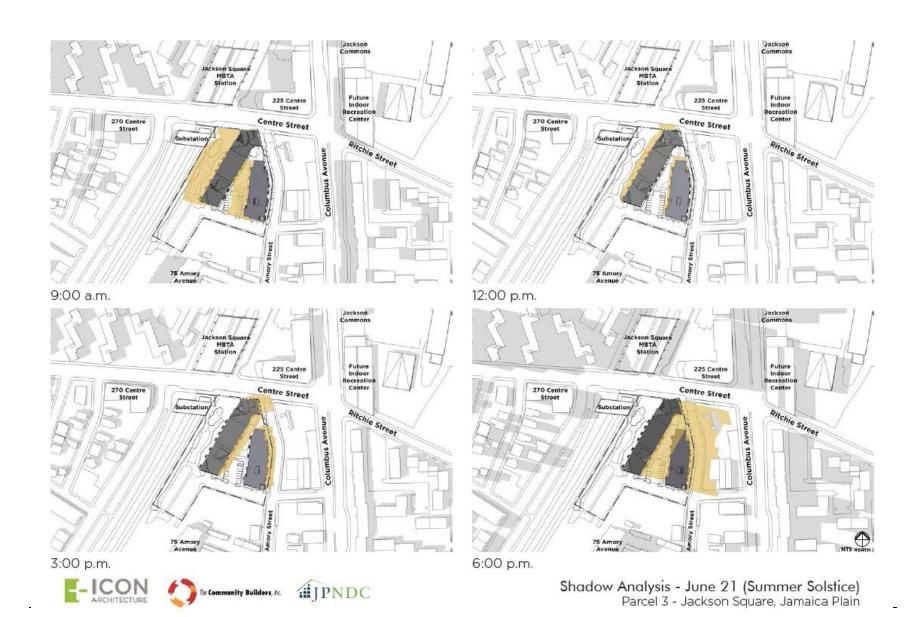


12:00 p.m.

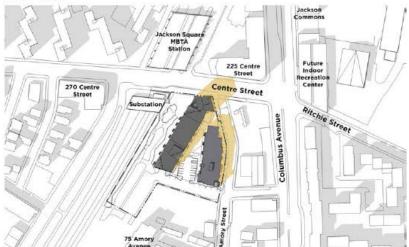


6:00 p.m.

Shadow Analysis - March 20 (Vernal Equinox) Parcel 3 - Jackson Square, Jamaica Plain





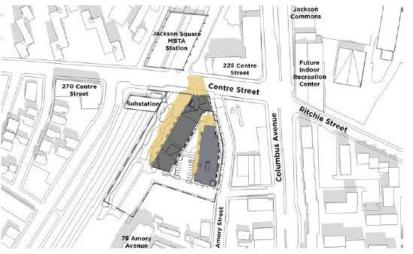


3:00 p.m.

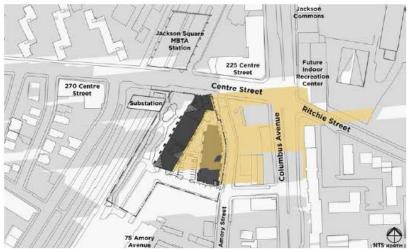






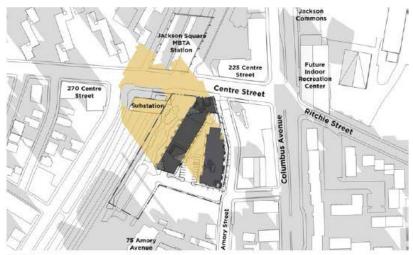


12:00 p.m.

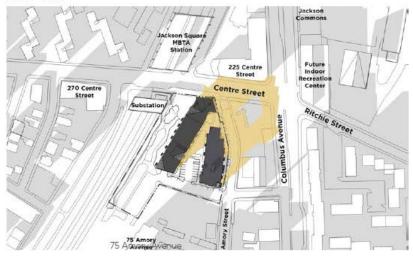


6:00 p.m.

Shadow Analysis - September 23 (Autumnal Equinox) Parcel 3 - Jackson Square, Jamaica Plain



9:00 a.m.

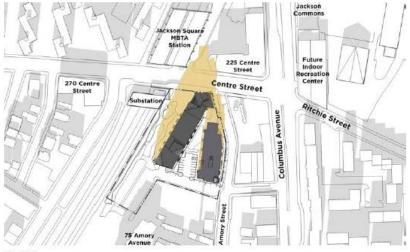












12:00 p.m.



4.3 Daylight

The DPIR included daylight analysis to estimate the effect of the Jackson Square Master Plan on daylight reaching the streets and sidewalks in the immediate vicinity of the project site. The report included eight viewpoints on Site III, with locations on Amory Street, Centre Street, and the linear park.

The report concluded that the Jackson Square Master Plan will "result in increased daylight obstruction at the project site over existing conditions, largely because much of the Project site is vacant." The daylight results for site III were consistent with the conditions expected from as-of-right massing.

With the decrease in project massing and height for Buildings M and N, the effects on daylight for public areas will be smaller than the estimates from the DPIR.

4.4 Historic Resources Component

The DPIR identified, mapped and described the historic and archaeological resources within and adjacent to the Jackson Square project site and the potential effects the Master Plan may have on these resources. Site III is located within the boundaries of the Stony Brook Industrial Area, which is listed in the Inventory of Historic and Archaeological Assets of the Commonwealth. The DPIR also identified one existing structure on the site within the historic district-- a small one story structure built circa 1973. That parcel has since been removed from the development area

The DPIR determined that "the proposed Project will have a positive visual impact on the historic properties located and adjacent to the project site." as well as that "the project will be compatible with the setting, scale, proportions, and materials of the surrounding areas, including the Stony Brook Industrial Area."

For Site III specifically, the report determined that the proposed Site III development's "varied height and massing is consistent with the character of the surrounding Stony Brook Industrial area, materials include masonry, glass, and metal."

The proposed changes to the Site III, Phase 3 projects include similar variations in height and massing, as well as materials consistent with the historic Industrial Area. As a result, the Site III, Phase 3 projects will continue to have a positive impact on the adjacent historical resources.

4.5 Infrastructure Systems Component

4.5.1 Wastewater

Table 2.

The proposed building massing for this phase (250 Centre Street (Building N) and Building M) of the development increase the estimated water demand and wastewater impacts from the original values estimated for these two buildings by approximately 4.9 percent.

The estimated daily sewage generation increased to 24,637 from an estimated 23,480 gpd. This is based on the increase in total Gross Square Foot (GSF) area for the two buildings combined (139,480 sf (2007) to 146,371 sf (2015)). The bedroom count per building or project phase was not defined in the 2007 DPIR filing.

250 Centre Street (Building N) Estimated Daily Sewage Discharges

Housing	Number of Units	Number of Bedrooms	Sewage Generation (gallons per day)
Studio	9	9	990 gpd
One-Bedroom Units	57	57	6,270 gpd
Two-Bedroom Units	24	48	5,380 gpd
Three-Bedroom Units	10	30	3,300 gpd
Housing Total	100	144	15,840 gpd 0.025 cfs
Retail		Square Feet (sf)	
Retail	1	2,400	107 gpd
Retail Total	1	2,400	107 gpd 0.00014 cfs
Grand Total			15,947 gpd .025 cfs

Building M Estimated Daily Sewage Discharges

Housing	Number of Units	Number of Bedrooms	Sewage Generation (gallons per day)
Studio	0	0	0 gpd
One-Bedroom Units	15	15	1,650 gpd
Two-Bedroom Units	23	46	5,060 gpd
Three-Bedroom Units	6	18	1,980 gpd
Housing Total	44	78	8,690 gpd 0.013 cfs

The Site III, Phase 3 projects will have the same or less impacts as described in the DPIR.

Stony Brook Valley Sewer Relocation

The Stony Brook Valley Sewer (48 inch x 60 inch) presently runs through Site III. The Project Proponent is committed to relocating this sewer within the site to allow for the construction of 250 Centre Street (Building N). The proposed sewer relocation as indicated on the plan entitled "Proposed Sewer Relocation Option, Jackson Square Site III, Boston, MA" dated October 2, 2015, by Nitsch Engineering was reviewed and conceptually approved by Stephen Shea, PE and John P Sullivan, PE, Chief Engineer, Boston Water and Sewer Commission in October 2015.

4.5.2 Proposed Water System Impacts

The water consumption for the proposed change is expected to increase by 1,273 gallons per day (gpd), based on the estimated sewer generation from the Phase 3 projects. A factor of 1.1 (which factors in a conservative assumed 10% loss of water) is applied to the average daily wastewater flows to estimate average water use on a daily basis.

Water capacity and pressure is not anticipated to be an issue for the Phase 3 projects based on the projected domestic and fire protection water demands. BWSC record flow data and hydrant flow tests will be used to confirm that there is enough pressure in the existing water systems to support the Phase 3 projects' needs. Both Building M and Building N will connect to an adjacent water main owned and operated by the BWSC. The exact connection points and sizes of services will be coordinated with and approved by the BWSC.

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

4.5.3 Storm Drainage System

Existing Stormwater Drainage System

The streets and easements within and adjacent to portion of Site III on which the Phase 3 projects are proposed contains storm drains owned and maintained by the BWSC, including the Stony Brook conduit (204 inches x186 inches).

Proposed Storm Drainage

The portion of Site III on which the Phase 3 projects are proposed is expected to have an increase in the amount of impervious area in the developed condition compared to the existing condition. As a result, there will be an increase in the peak rate of stormwater discharge from the property in the developed condition compared to the existing condition without stormwater mitigation measures. Therefore, the stormwater design will include stormwater retention structures (i.e., retention basins, or buried retention basins) to mitigate the peak rate of runoff and to treat phosphorous. The Phase 3 projects are not located within the City of Boston's Groundwater Conservation Overlay District and therefore do not require significant groundwater infiltration measures, although the stormwater design will attempt to promote infiltration.

The Site III, Phase 3 projects will have the same or less impacts as described in the DPIR.

Boston Water and Sewer Commission

Proposed connections to the Commission's water, sanitary sewer, and storm drain system will be designed in conformance with the Commission's design standards, Sewer Use and Water

Distribution System Regulations, and Requirements for Site Plans. The Project Proponent will submit a General Service Application and a site plan for review and approval prior to construction. The site plan will indicate the existing and proposed water mains, sanitary sewers, storm sewers, telephone, gas, electric, steam, and cable television. The plan will include the disconnections of the existing services as well as the proposed connections.

The Site III, Phase 3 projects will have the same or less impacts as described in the DPIR.

Conformance with the DEP Stormwater Management Policies

In March 1997, last revised January 2008, the DEP established a Stormwater Management Policy to address non-point source pollution. The Stormwater Management Policy prescribes specific stormwater management standards for development projects, including urban pollutant removal criteria for projects that may impact environmental resource areas. Compliance is achieved through the implementation of Best Management Practices (BMP's) in the stormwater management design. The Stormwater Management Policy is administered locally pursuant to MGL Ch. 131, s. 40.

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

Standard #1: No new untreated stormwater will discharge into, or cause erosion to, wetlands or waters.

Compliance: The proposed design will comply with this Standard. There will be no untreated stormwater discharge. All discharges will be treated prior to connection to the BWSC system.

Standard #2: Post-development peak discharge rates do not exceed pre-development rates on the Site either at the point of discharge or down gradient of the property boundary for the 2- and 10-year 24-hour design storms. The stormwater design of the Phase 3 projects will not increase flooding impacts offsite for the 100-year design storm.

Compliance: The proposed design will increase the impervious area compared to the predevelopment condition. Therefore, there will be detention systems and—where feasible-Green Roofs used to mitigate the peak rate of runoff from the site.

Standard #3: The annual groundwater recharge for the post-development site must approximate the annual recharge from existing site conditions, based on soil type.

Compliance: To the extent possible, the Phase 3 projects will attempt to recharge a portion of the stormwater runoff.

Standard #4: For new development, the proposed stormwater management system must achieve an 80 percent removal rate for the site's average annual load of TSS.

Compliance: To the extent possible, the stormwater management system for the Phase 3 projects will remove 80 percent of the post-development site's average annual TSS load. Water quality inlets, as needed, will be sized to meet this requirement.

Standard #5: If the site contains an area with Higher Potential Pollutant Loads (as prescribed by the Policy), BMPs must be used to prevent the recharge of untreated stormwater.

Compliance: The Phase 3 projects are not associated with Higher Potential Pollutant Loads (per the Policy, Volume I, and page 1-8). The Phase 3 projects comply with this standard.

Standard #6: If the site contains areas of Sensitive Resources (as prescribed by the Policy), such as rare/endangered wildlife habitats, ACECs, etc., a larger volume of runoff from the "first flush" must be treated (1 inch of runoff from impervious area vs. the standard ½ inch).

Compliance: The Phase 3 projects will not discharge untreated stormwater to a sensitive area or any other area.

Standard #7: Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable.

Compliance: The Phase 3 projects will meet or exceed all standards.

Standard #8: Erosion and sediment controls must be designed into the project to minimize adverse environmental effects.

Compliance: The Phase 3 projects will comply with this standard. Sedimentation and erosion controls will be incorporated as part of the design of the Phase 3 projects and employed during site construction.

Standard #9: A long-term BMP operation and maintenance plan is required to ensure proper maintenance and functioning of the SWM system.

Compliance: An Operations and Maintenance Plan including long-term BMP operation requirements will be prepared and will ensure proper maintenance and functioning of the system.

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

Compliance: No illicit discharges, including wastewater, process wastes, toxic pollutants and hazardous substances will be introduced into the stormwater management system. An Illicit Discharge Compliance Statement will be filed with the Boston Conservation Commission prior to receiving a Certificate of Compliance for the Phase 3 projects.

The Site III, Phase 3 projects will have the same or less impacts as described in the DPIR.

4.5.4 Stormwater Impacts During Construction

Maintenance Program During Construction

- 1. Site inspections shall be performed weekly by a Professional Engineer during the construction of the site improvements in order to observe the construction progress, erosion control devices, and the storm water runoff conditions. The Professional Engineer shall recommend corrective measures to the Project Superintendent when warranted. A field report of the Project Engineer's finding will be kept.
- 2. Efforts to control erosion and sediment shall be made by the following: compaction of disturbed earth on slopes, placement and maintenance of hay bales and silt fence as directed by the Engineer and construction documents (including around new and existing drainage structures), and earth stock piling at proper locations and in a manner to minimize erosion.
- 3. The contractor shall make every effort to sequence and complete the construction of drainage facilities to ensure that uncontrolled runoff is kept to a minimum.
- 4. A Professional Engineer shall conduct an inspection of the storm water management system upon completion of its installation.
- 5. Records shall be kept by a Professional Engineer and shall be available for inspection by the Boston Water and Sewer Commission.

Maintenance Program After Construction

- 1. Sweepings shall be disposed offsite and in compliance with all applicable codes.
- 2. The catch basins shall be inspected each May and November. The catch basin shall be cleaned if sediment is within 24 inches of the outlet. All sediment shall be deposited offsite and in compliance with all codes.
- 3. Storm water treatment systems shall be inspected and maintained in compliance with the manufacturers' recommendations.
- 4. A Maintenance Log shall be kept by the Maintenance Superintendent and shall be available for inspection by the Boston Water and Sewer Commission.

4.5.5 Electric & Gas Service

It is anticipated that there will be no significant impacts on the energy requirements with the proposed changes. Electric demands of will be reviewed and coordinated with Eversource. Issues with access to or availability of gas service are not anticipated. The necessary connection points and sizes of services for this project will be coordinated with National Grid.

4.5.6 Telephone & Cable Television Services

Adequate telephone and cable television service is available for the Phase 3 projects along Centre Street and no adverse impact will occur as a result of the project changes.

5.0 SUSTAINABILITY

Site III, Phase 3 redevelopment Project will achieve compliance with the City of Boston's Article 37 Green Building standards and the Governor's Executive Order 484 – Leading by Example – Clean Energy and Efficient Buildings. The proponent anticipates that the two new buildings will achieve LEED certifiable level by demonstrating compliance with all of the prerequisites and credits. The LEED checklists will continue to be revised and developed as the project moves through the design and construction stages.

250 Centre Street will follow *LEED for New Construction*, achieving up to **45 credits** of the LEED 2009 Rating System for New Construction and Major Renovations rating system. Building M will follow the *LEED for Homes v2008 (Mid Rise, update 2010)* building rating system, achieving up to **61 credit points**. Both buildings will achieve Silver certifiable-level in their respective paths. The LEED checklists and summaries are attached as Exhibit B.

The project will strive for the responsible use of resources, including energy, water, and materials, while providing a healthy and comfortable environment for its occupants. Article 37, the Boston Redevelopment Authority's Green Building standards, will also be adhered to. The Article 37 checklist is the same as the LEED checklist, with the exception of the last four points, which are not applicable to the site as there are no electricity distribution load constraints, there is no historic building to preserve, the redevelopment will not have an effect on groundwater, and the residential project size is too small to meet the requirements of transportation demand management.

Major sustainable design elements of the overall project include:

- Redevelopment of a currently under-utilized transit-oriented site.
 - The Project is in an urban area, close to regional and local public transportation.
 - The new residential building will be located near to public transportation on the MBTA's Jackson Square Station and bus lines, encouraging minimal vehicle use.
- The Project will embody urban principles encouraging public transportation and pedestrian activity. The use of cars at this site is expected to be minimal in comparison to the public transportation and pedestrian trips. Other transportation related characteristics include:
 - Less than 0.7 parking spaces per residential unit.

- The development team is investigating the potential to include shared-car facilities on the site.
- Covered bicycle parking will be included for residents. Visitor bike parking will be located adjacent to the building entrances.
- Electric car charging stations for residents, based on demand.

Mechanical Systems:

- No CFCs or HCFCs will be used in cooling equipment.
- The Project will seek to save energy across systems with energy efficient equipment and appropriate insulation.
- High efficiency lighting with occupancy sensors will be incorporated where suitable.

Residential Units:

- Energy Star appliances, lighting and low-flow fixtures will be integrated into residential units.
- Operable and high-quality insulated glass will allow residents to control air movement within the units.

5.1 Building N: LEED NC 2009 Checklist + Description of targeted Credits

The project will achieve compliance with Article 37 of the Boston Zoning Code by meeting "LEED Certifiable" level via the **LEED NC 2009** building rating system. Threshold levels are as follows: Certified/ Certifiable: 40-49 points, Silver: 50 to 59 points, Gold: 60 to 79 points and Platinum 80 to 100 points. The project, as currently envisioned, anticipates earning **43 credit points** and 4 "maybe" points, while not seeking certification through USGBC. The LEED checklist will continue to be revised and developed as the project moves through the design and construction stages. The following sections describe the proposed elements incorporated into the LEED Checklist for 250 Centre Street.

5.1.1 SUSTAINABLE SITES (SS)

20 points expected; 1 "maybe" point

- **SS** Prerequisite 1, Construction Activity Pollution Prevention: An Erosion and Sedimentation Control Plan will be established to control erosion, waterway sedimentation and airborne dust generation during construction.
- **SS 1** Site Selection: The site is not in a flood plain, nor is it within 100 feet of water including wetlands. The site is not a habitat for threatened or endangered species. The land was not

public parkland prior to acquisition. The soils are not prime, unique or of state significance. (1 pt)

- **SS2 Development Density:** The site is within 1/2 mile of at least 10 basic services: Jackson Square is near to the large grocery and shopping district in the area. In addition, nearby Egleston and Hyde Squares also offer numerous Community Resources (3 pts).
- **SS 4.1 Alternative Transportation Public Transportation Access:** The project is located one-tenth of a mile from the MBTA Jackson Square Station Orange Line and Bus Station with regional access (6 pts).
- **SS 4.2 Alternative Transportation Bicycle Storage and Changing Rooms:** The project will provide bicycle storage spaces which will be in excess of the 15% of the building occupants. The proponent will provide one bike parking space for each residential unit, as required by the Bicycle Parking Guidelines- Boston Transportation Department and Complete Streets Guidelines (1 pt).
- **SS 4.3 Alternative Transportation Low-Emitting and Fuel-Efficient Vehicles:** The proponent will provide alternative fueling stations for 5% of the total vehicle parking capacity (4 stations) (3 pts).
- **SS 4.4 Alternative Transportation Parking Capacity:** Parking density has been sized not to exceed the minimum zoning requirements. The project will provide less than .8 parking space per dwelling unit, with 80 parking spaces for 100 residential units. The proponent is looking into the possibility of incorporating a shared car on the site (2 pts).
- **SS6.2 Stormwater Design Quality Control:** The proponent aims to implement a stormwater plan that reduces impervious cover, promotes, infiltration and captures and treats the stormwater runoff from 90% of the average annual rainfall using acceptable best management practices. (1 pt).
- **SS 7.1 Heat Island Effect Nonroof:** At least 50 percent of the parking will be located under cover, under the building. (1 pt).
- **SS 7.2 Heat Island Effect Roof:** Roofing materials will be specified with a solar reflectance index (SRI) equal to or greater than a value of 78 for a minimum of 75% of the roof surface (1 pt).

5.1.2 WATER EFFICIENCY (WE)

4 points expected, 0 "maybe" points

WE Prerequisite Water Use Reduction: The project will employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation).

WE 1 Water Efficient Landscaping: The landscaping will be designed to reduce potable water for irrigation by 50% from a calculated midsummer baseline case (2 pts).

WE 3 Water Use Reduction: An additional reduction to 30% will be achieved with 1.28 gpf toilets, 1.0 gpm lav and 1.75 gpm showers (2 pts).

5.1.3 ENERGY AND ATMOSPHERE (EA)

5 points expected, 1 "maybe" points

EA Prerequisite 1.1 Fundamental Commissioning of Building Energy Systems: The project will not be certified through USGBC, thus, the proponent does not intend to designate a Commissioning Authority to review and oversee commissioning. Similarly, the proponent does not intend to complete Commissioning for HVAC, Lighting and Daylighting, DHW or renewable energy systems. The development will be commission-able, yet will not carry out the commissioning testing.

EA Prerequisite 2 Minimum Energy Performance: Use a computer simulation model to assess the energy performance and identify the most cost- effective energy efficiency measures.

Through Whole Building Energy Simulation, the proponent will demonstrate a 10% improvement in the proposed building performance rating, compared with the baseline building performance rating. The baseline building performance rating will be calculated according to Appendix G of ASHRAE 90.1-2007 using a computer simulation model for the whole building project. For this project, Option One is the eligible path.

The proposed design must meet the following criteria:

- Comply with mandatory provisions (Sections 5.4, 6.4, 7.4, 8.4, 9.4 and 10.4) in Standard 90.1-2007 (with errata but without addenda).
- All energy costs associated with the building project will be included.
- Compare against a baseline building that complies with Appendix G of St. 90.1-2007

While the project is required through LEED to meet minimum 15% energy cost savings compared to ASHRAE 90.1-2007, Appendix G, Massachusetts Stretch Code requires achieving 20% or greater.

EA Prerequisite 3 Fundamental Refrigerant Management: It is the intent of this project to use zero CFC based refrigerants in the new base building heating, ventilating, air conditioning and refrigeration systems.

EA 1 Optimize Energy Performance: The project will strive to optimize energy performance and realize energy cost savings of 21% compared with ASHRAE 90.1 2007 (Note: Massachusetts Stretch Code requires achieving 20% or greater). Documentation will be produced via Whole Building Energy Simulation, which also provides for EA Prerequisite 2 (5 pts).

EA 2 On-Site Renewable Energy Systems: The proponent is investigating the possibility of installing Solar PV on the roof(1 pt).

5.1.4 MATERIALS AND RESOURCES (MR)

2 points expected, 1 "maybe" point

MR Prerequisite 1 Storage and Collection of Recyclables: An easily accessible area will be provided for the collection and storage of materials for recycling for the entire building. Materials will include paper, corrugated cardboard, glass, plastics and metals.

MR 2 Construction Waste Management: The construction team shall institute a Construction Waste Management Plan, including investigation of local options for waste diversion and documentation of diversion rate for construction waste. The team intends to divert 75 percent of waste (2 pts).

MR 7 Certified Wood: It is the intent of this project to install no tropical wood, to install FSC certified wood products and to provide suppliers with a notice of preference for FSC products and to request the country of manufacture for each product (1 pt).

5.1.5 INDOOR ENVIRONMENTAL QUALITY (IEQ)

7 points expected, 1 "maybe" points

IEQ Prerequisite 1 Minimum Indoor air Quality Performance: The project will meet the minimum requirements of Sections 4 through 7 of ASHRAE Standard 62.1-2007, Ventilation for Acceptable Air Quality (with errata but without addenda). Mechanically ventilated spaces must be designed using the ventilation rate procedure of the applicable local code, whichever is more stringent. Naturally ventilated buildings must comply with ASHRAE Standard 62.1-2007, paragraph 5.1 (with errata but without addenda).

IEQ Prerequisite 2 Environmental Tobacco Smoke (ETS) Control: It is the intent of this project to prohibit smoking within living units, in common areas, exterior areas on the property

that are within 25' from entries, air intakes and windows and to communicate these prohibitions through lease agreements, CC&Rs and signage.

- **IEQ 3.1 Construction Indoor Air Quality Management Plan During Construction:** The proponent will develop and implement an IAQ management plan for the construction and preoccupancy phase of the building (1 pt).
- **IEQ 4.1Low- Emitting Materials Adhesives and Sealants:** Low VOC materials are specified in the construction documents. All adhesives and sealants used on the interior of the building will comply with the South Coast Air Quality Management District Rule #1168. All Aerosol Adhesives will comply with Green Seal Standard for Commercial Adhesives GS-36 requirements in effect on October 19, 2000 (1 pt).
- **IEQ 4.2 Low-Emitting Materials Adhesives and Sealants:** Low VOC paints and coatings are specified in the construction documents (1 pt).
- **IEQ 4.3 Low-Emitting Materials Flooring Systems:** All flooring will comply with this requirement (1 pt).
- **IEQ 6.1 Controllability of Systems Lighting:** The project is designed to comply with the standard by providing individual lighting controls for at least 90% of the occupants. All lighting within the dwelling units will be provided with high-efficiency lamps. Permanently installed fixtures are located in kitchen areas, hallways and bathrooms with individual light switch control. All living rooms and bedrooms will be provided with individual switched duplex receptacles for table lamp fixtures. Corridors, stairs, public lobbies and spaces where automatic shut-off would endanger occupant safety will not be provided with local control. All exterior light fixtures will be controlled via an astronomical time clock and photo-cell for dusk to dawn operation (1pt).
- **IEQ 6.2 Controllability of Systems Thermal Comfort:** All dwelling units will be provided with individual heating and cooling equipment that can be controlled by residents. In this way, residents will have control to adjust thermal conditions for a more comfortable environment. Dwelling units will be equipped with operable windows for natural ventilation purposes. All windows are equipped with blinds to accommodate local control of light and solar exposure (1 pt).
- **IEQ 8.1 Daylight and Views Daylight:** The team anticipates that the project may achieve this credit (1 pt).
- **IEQ 8.2 Daylight and Views Views:** The project intends to provide a direct line of sight via glazing between 30 and 90 inches above the floor for building occupants in 90% of all regularly occupied spaces (1 pt).

5.1.6 INNOVATION AND DESIGN (ID)

4 points expected, 0 "maybe" points

- ID 1.1 Innovation and Design Compact Development Density: (1 pt)
- ID 1.2 Innovation and Design Educate Occupants on Green Building: (1 pt)
- **ID 1.3** Innovation and Design TOD: Exemplary Performance: (1 pt)
- **ID 2 LEED Accredited Professional:** A LEED Accredited Professional is part of the team. Nancy Ludwig, FAIA, LEED AP is the principal-in-charge (1pt).

5.1.7 REGIONAL PRIORITY (RP)

1 point expected, 0 "maybe" points

RP 1.1 Regional Priority: SSC7.1 Heat Island Effect- Roof -- An additional point will be achieved for the hi-albedo roof (1 pt).

5.2 Building M: LEED for Homes (Midrise) Checklist + Description of targeted Credits

The project will achieve compliance with Article 37 of the Boston Zoning Code by meeting "LEED Certifiable" level via the **LEED for Homes v2008** (Mid Rise, update 2010) building rating system. The LEED checklist will continue to be revised and developed as the project moves through the design and construction stages. The project, as currently envisioned, anticipates earning **61 credit points** and 6 "maybe" points, and will not seek certification through USGBC. Taking into account the Multi-family Home Size Adjuster Calculator, the pertinent thresholds are: Certified: 35.5, Silver: 50.5, Gold: 65.5 and Platinum: 80.5 credits. The following sections describe the elements incorporated into the LEED Checklist.

5.2.1 INNOVATION AND DESIGN PROCESS (ID)

4 points expected; 3 "maybe" points

ID Prerequisite 1.1 Preliminary Rating: The LEED certification threshold set for this project is Silver certifiable.

ID Prerequisite 1.2 Energy Expertise in MID-RISE: The design team includes expertise in energy for Mid-Rise construction. The team includes:

- Architecture & Sustainable Design ICON Architecture, Inc.
- Mechanical Engineer & Energy Modeler Wozny Barber, Inc.
- Civil Engineer & Landscape Architect Nitsch Engineering and Deb Myers Landscape Architecture

ID 1.3 Professional Credentialed with Respect to LEED for Homes: LEED for Homes Accredited Professionals are part of the project team (1 pt).

ICON architecture: Primary - Kendra Halliwell, AIA, LEED AP Homes.

ICON architecture: Secondary - Lillie Tang, AIA, LEED AP Homes.

ID 1.6 Trades Training for MID-RISE: The design team will conduct a pre-construction training to discuss energy efficiency aspects of the project with the construction team trades for mid-rise construction (1 pt).

ID Prerequisites 2.1 and 2.2 Durability Planning and Durability Management: Durability strategies are being developed, and will be implemented during construction. The builder will have a quality Construction Management Plan (CMP) in place. All applicable indoor moisture mitigation strategies will be incorporated into the design, and exterior products will be selected that meet or exceed the durability standards.

ID 2.3 Third-Party Durability Management Verification: The development team will explore the possibility of third party durability management verification (3 possible pts).

ID 3 Innovative or Regional Design (1pt each):

- Over 250 rides per day within 1.2 mile
- Exemplary Community Resources

5.2.2 LOCATION & LINKAGES (LL)

9 points expected; 0 "maybe" points

- **LL 2 Site Selection:** The site is not currently in a 100 year flood plain. The site is not within 100 feet of water including wetlands. The site is not a habitat for threatened or endangered species. The land was not public parkland prior to acquisition. The soils are not prime, unique or of state significance. (2 pts)
- **LL 3.1 Preferred Locations: Infill Development**: Seventy-five percent of the site perimeter immediately borders previously developed land (2 pts).
- **LL 4 Existing Infrastructure:** Existing water service and sewer lines immediately surround the site. City utilities are located in Amory and Centre Streets (1 pt).
- **LL 5.1 Extensive Community Resources for MID-RISE:** The site is within 1/2 mile of at least fourteen basic community services: Jackson Square is near to the large grocery and shopping district in the area. In addition, nearby Egleston and Hyde Squares also offer numerous Community Resources (3 pts).
- **LL 6 Access to Open Space:** The site is located within ½ mile of the Southwest Corridor Park, which is a linear park for pedestrians and bikers, totaling 52 acres, linking Forest Hills Station to the Back Bay. The park offers significant soft-scaped areas for passive enjoyment or flexible activity, as well as designated active areas for basketball courts and children's play areas (1 pt).

5.2.3 SUSTAINABLE SITES (SS)

10.5 points expected; 0 "maybe" points

SS Prerequisite 1 Site Stewardship: Erosion Controls During Construction: A Stormwater Pollution Prevention Plan (SWPPP) will be established to control storm-water runoff during construction. Erosion control measures in compliance with this prerequisite will be implemented and will also be outlined in the SWPPP.

- **SS 1.2 Minimize Disturbed Area of Site for MID-RISE:** The project will achieve a density greater than 40 units per acre. Lot Area= 30,634 SF; .7 ac, results in 59.5 DU/ac (1 pt).
- **SS Prerequisite 2.1 No Invasive Plants:** Based on the State of Massachusetts' accepted invasive plant species list as determined by the Massachusetts Invasive Plants Advisory Group (MIPAG), no Invasive Plants will be used on the project.
- **SS 2.2 Basic Landscaping Design:** The project will use drought-tolerant turf located away from densely shaded areas, on less than 25% slope, with mulch or soil amendments as appropriate, with compacted construction soil tilled to at 6 inches in depth (1pt).
- **SS 3.2 Reduce Roof Heat Island Effects for MID-RISE:** It is anticipated that 100% of the roofing will be comprised of high albedo materials (1 pt).
- **SS 5 Nontoxic Pest Control:** The project aims to meet four of the non-toxic pest controls described in this section, including maintaining exterior wood 12" above soil, sealing external cracks, etc. with caulk and install pest proof screens, no wood-to-concrete connections, and solid concrete foundation walls. (1/2 point each, maximum 2 pts) (1.5 pts).
- **SS 6.3 Moderate Density for MID-RISE:** The project meets the requirement for Moderate Density for Mid-Rise. Lot Area= 30,634 SF; .7 ac, results in 59.5 DU/ac (2 pt).
- **SS 7.1 Public Transit for MID-RISE:** The project is located across the street from the MBTA Jackson Square Station Orange Line and Bus Station with regional access. These transit services provide more than 60 rides per weekday (2 pts).
- **SS 7.2 Bicycle Storage:** The project will provide 15 bicycle storage spaces which will be in excess of the 15% of the building occupants. (1 pt).
- **SS 7.3 Parking Capacity / Low-Emitting and Fuel-Efficient Vehicles:** Parking density has been sized not to exceed the minimum zoning requirements. The project will provide less than .7 parking spaces per dwelling unit. (1 pt).

5.2.4 WATER EFFICIENCY (WE)

10 points expected, 0 "maybe" points

- **WE 1 Water Reuse for MID-RISE:** The project will investigate Rainwater, Graywater and Recycled water systems for viability. (0 pts).
- WE 2.1 High-Efficiency Irrigation System for MID-RISE: The design team will install a high efficiency irrigation system for the proposed landscaping, meeting four criteria: installing a

central shutoff valve, a sub-meter, a timer or controller for each watering zone, and check valves in sprinkler heads (2 pts).

WE3.2 Very High-Efficiency Fixtures and Fittings: Very high efficiency fixtures and fittings will be specified, including lavatory faucets with average flows less than 1.50 gpm, and showers at less than or equal to 1.75 gpm (2 pts each) (6 pts).

WE 3.3 Water Efficient Appliances for MIDRISE: The project will include water-efficient clothes washers and ENERGY STAR labeled dishwashers that use 6.0 or less gallons per cycle (2 pts).

5.2.5 ENERGY AND ATMOSPHERE (EA)

10 points expected, 2 "maybe" points

EA Prerequisite 1.1 Minimum Energy Performance for MID-RISE: The project's intent is to minimize energy performance for Mid-Rise per the requirements of this section:

- The project will meet mandatory provisions of ASHRAE Std 90.1-2004,
- EPA Multifamily Simulation Guidelines will be incorporated into the modeling methodology,
- The energy model will be submitted and reviewed by USGBC,
- And while the project is required through LEED to meet minimum 15% energy cost savings compared to ASHRAE 90.1-2007, Appendix G, Massachusetts Stretch Code requires achieving 20% or greater.
- **EA Prerequisite 1.2 Testing and Verification for MID-RISE:** The proponent will verify implementation of testing and verification of for Mid-Rise, likely EPA MHFR Testing and Verification Protocols.
- **EA 1.3 Optimize Energy Performance:** The project will strive to optimize energy performance for mid-rise construction and realize energy cost savings of 21% compared with ASHRAE 90.1 2007 (Note: Massachusetts Stretch Code requires achieving 20% or greater) (8 pts).
- **EA 7.1 Efficient Hot Water Distribution:** The team will strive to design and implement an Efficient Hot Water Distribution System (2 pts.)
- **EA 7.2 Pipe Insulation:** The team will include R4 insulation on all domestic hot water piping (1 pt).
- **EA Prerequisite 11 Residential Refrigerant Charge Test:** The project will provide documentation of proper refrigerant charge of the building air conditioning systems.

EA 11.1 Residential Refrigerant Management: It is the intent of this project to use non-HCFC refrigerants throughout the building (1 pt).

5.2.6 MATERIALS AND RESOURCES (MR)

8.5 points expected, 0 "maybe" points

MR Prerequisite 1 Framing Order Waste Factor Limit: It is the intent of this project to limit the overall estimated waste factor to 10% or less.

MR 1.5 Off-Site Fabrication: It is anticipated that panelized construction, requiring off-site fabrication will be utilized for this project (4 pts).

MR Prerequisite 2.1 FSC Certified Tropical Wood: It is the intent of this project to install no tropical wood, to install FSC certified wood products and to provide suppliers with a notice of preference for FSC products and to request the country of manufacture for each product.

MR 2.2 Environmentally Preferable Products: Use of environmentally preferred products including cementitious siding, and cellulose building insulation are a priority. Use of Low emission products including paints, adhesives and sealants are also a priority (2 pts).

MR Prerequisite 3.1 Construction Waste Management Planning: The construction team shall institute a Construction Waste Management Plan, including investigation of local options for waste diversion and documentation of diversion rate for construction waste.

MR 3.2 Construction Waste Reduction: The construction team shall strive to reduce construction waste to a level below the industry norm. The team intends to divert 75 percent of waste (2.5 pts).

5.2.7 INDOOR ENVIRONMENTAL QUALITY (EQ)

7 points expected, 1 "maybe" points

EQ Prerequisite 2 Basic Combustion Venting Measures: The team will implement Basic Combustion Venting Measures for Mid-Rise Construction.

EQ Prerequisite 4.1 Basic Outdoor Air Ventilation for MID-RISE: The project will meet basic outdoor ventilation requirements for Midrise:

- Design and install a whole-unit ventilation system for each individual dwelling unit that complies with the requirements of ASHRAE Standard 62.2-2007.
- Meet the minimum requirements of Sections 4 through 7 of ASHRAE Standard 62.2-2007, Ventilation for Acceptable Indoor Air Quality for all spaces outside the dwelling units.

- **EQ 4.3 Third-Party Performance Testing for MID-RISE:** The development team will explore the possibility of 3rd party performance testing for the flow rate of ventilation to each unit (0 pt.)
- **EQ Prerequisite 5.1 Basic Local Exhaust:** It is the intent of this project to meet all the requirements for Basic Local Exhaust:
 - For each individual dwelling unit, design and install local exhaust systems in all bathrooms (including half baths) and the kitchen to meet the requirements of Section 5 of ASHRAE Standard 62.2-2007.
 - For each individual dwelling unit, design and install the fans and ducts to meet the requirements of Section 7 of ASHRAE Standard 62.2-2007.
 - Exhaust air to the outdoors
 - Use Energy Star labeled bathroom exhaust fans
 - For all spaces outside dwelling units, meet the requirements for local exhaust from ASHRAE Standard 62.1-2007
- **EQ 5.2 Enhanced Local Exhaust:** It is the intent of this project to achieve enhanced local exhaust through the installation of a continuously operating exhaust fan at each bathroom (1 pt).
- **EQ Prerequisite 6.1 Room-by-Room Load Calculations:** Room by room design load calculations (per Manuals J and D) will be performed. System will be installed per calculations.
- **EQ Prerequisite 7.1 Good Filters:** It is the intent of this project to install air filters with a minimum efficiency rating of equal or greater than MERV 8.
- **EQ 8.1 Indoor Contaminant Control During Construction:** The team will seal all permanent ducts and vents to minimize contaminants during construction (1 pt).
- **EQ 8.2 Indoor Contaminant Control:** Permanent walk-off mats have been designed at the primary building entries (1 pt).
- **EQ 8.3 Preoccupancy Flush:** The team will explore the possibility of conducting a preoccupancy flush when all phases of construction are completed, prior to occupancy (0 pt).
- **EQ Prerequisite 9.1 Radon-Resistant Construction in High-Risk Areas**: NA: Suffolk County is a low-risk zone, Zone 3, with average predicted indoor radon levels less than 2 pCi/L. (0 pts)
- **EQ Prerequisite 10.3 No HVAC in Garage:** No Garage (3 pts).
- **EQ 11.1 Environmental Tobacco Smoke Reduction for MID-RISE:** It is the intent of this project to prohibit smoking within living units, in common areas, exterior areas on the property

that are within 25' from entries, air intakes and windows and to communicate these prohibitions through lease agreements, CC&Rs and signage(1 pt).

EQ Prerequisite 12.1 Compartmentalization of Units in MID-RISE Buildings: Exposure of building occupants to indoor air pollutants will be limited and air transfer between units will be minimized. Among various measures, all exterior doors and operable windows will be weather-stripped, all penetrations in demising, common, chase walls will be sealed. Blower door testing will demonstrate acceptable sealing to meet or exceed the allowable maximum leakage of .3 cfm50 per SF of enclosure.

5.2.8 AWARENESS & EDUCATION

3 points expected, 0 "maybe" points

AE Prerequisite 1.1 Basic Operations Training: Basic operations training will take place and will include provision of operations and training manuals to home occupants and a one hour walkthrough of the home with the occupants.

- **AE 1.2 Enhanced Training:** The construction team will provide 2 hours of training for occupants in addition to the training provided in AE prerequisite 1.1 (1 pt.)
- **AE 1.3 Public Awareness:** The team will promote general public awareness about LEED for Homes by carrying out the following activities: Conduct an open house for the public lasting at least 4 hours, publish a website with at least 2 pages of detailed information and display LEED for Homes signage on the exterior of the buildings (1 pt).
- **AE 2 Education of Building Manager:** The construction team will provide the building manager with an operations and training manual. The team may have the construction team provide a one hour walkthrough for the building manager of the building prior to occupancy (1 pt).

6.0 CONCLUSION

We believe that the proposed changes to Jackson Square Phase 3, Site III described in this FPIR will provide new housing opportunities affordable to households with a wide range of incomes, including households who earn incomes significantly below the area median, particularly family-sized households, and contribute to the revitalization of Jackson Square. This project change will result in negligible or no negative impacts from the original DPIR analysis, as subsequently modified by the two Notices of Project Change for Phase 1 and the Supplemental Filing for Site III, Phase 2.

We request that the Boston Redevelopment Authority concur with our analysis and issue an adequacy determination approving this FPIR and stating that no further review is necessary under Article 80 of the Boston Zoning Code.

Sincerely,

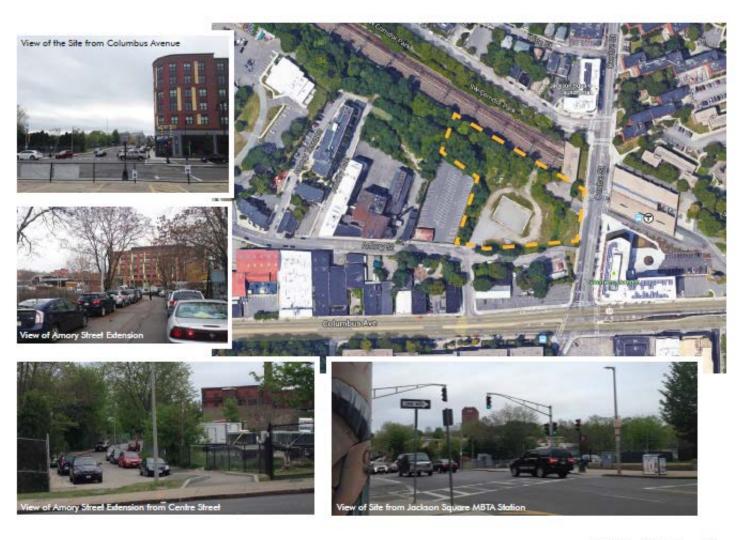
Jackson Square Partners, LLC

Richard Thal, Manager

The Community Builders, Inc.

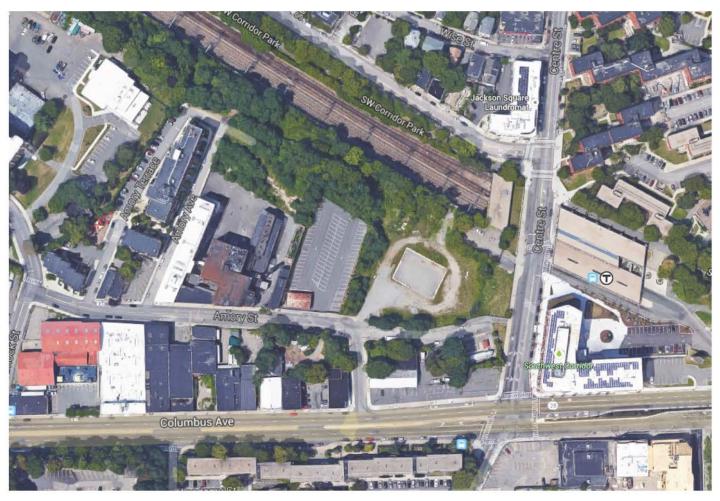
Éliza Datta, Vice President

ATTACHMENT A- SITE INFORMATION





Existing Site Conditions
Parcel III -- Jamaica Plain









Existing Site Conditions Parcel 3 - Jackson Square, Jamaica Plain



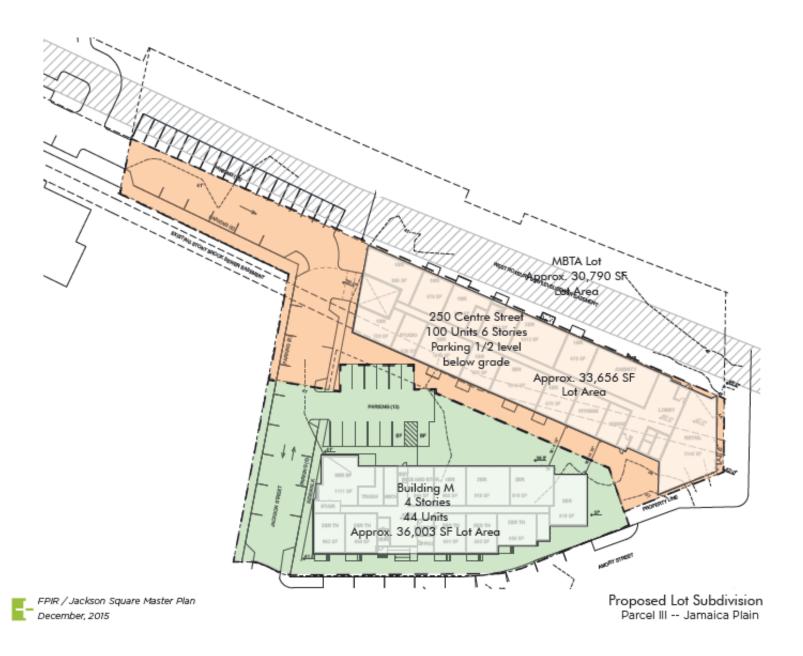


Proposed Aerial View Parcel III -- Jamaica Plain

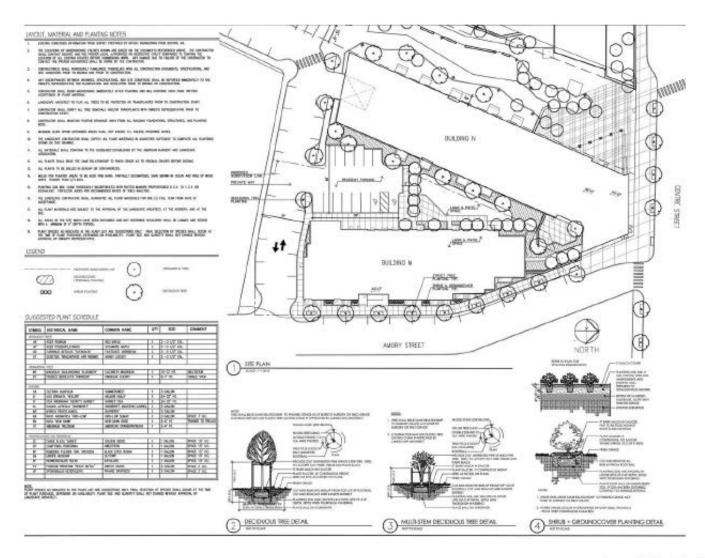




Proposed Site Plan Parcel III -- Jamaica Plain



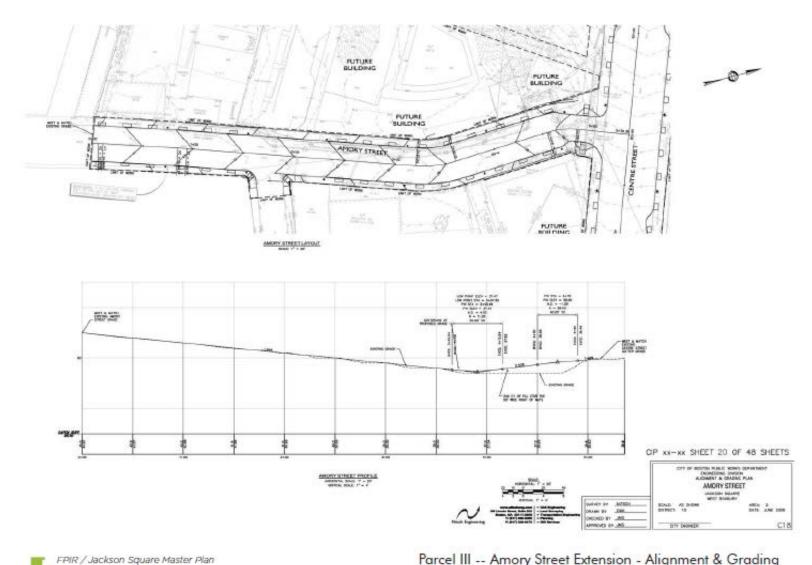
ATTACHMENT B- SCHEMATIC DRAWINGS





Parcel III -- Site Plan Parcel III -- Jamaica Plain

December, 2015



Parcel III -- Amory Street Extension - Alignment & Grading Parcel III -- Jamaica Plain





FPIR / Jackson Square Master Plan December, 2015

Building M -- Floor Plans Parcel III -- Jamaica Plain



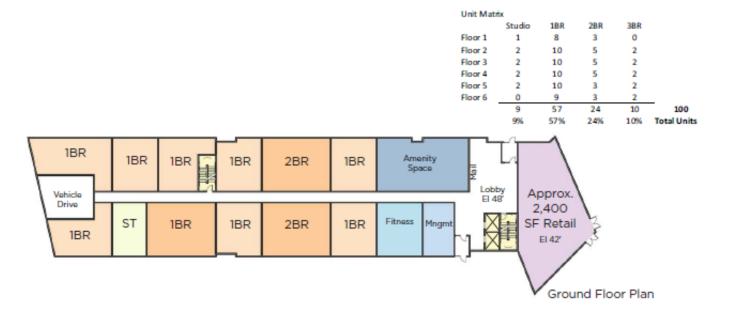


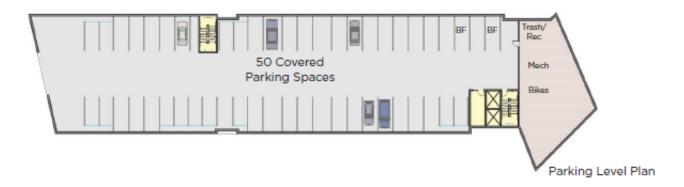






Building M -- Elevations Parcel III -- Jamaica Plain

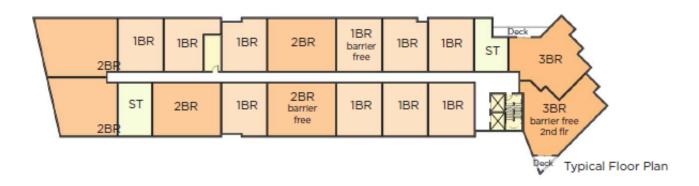






250 Centre Street -- Floor Plans Parcel III -- Jamaica Plain





FPIR / Jackson Square Master Plan December, 2015 250 Centre Street -- Floor Plans Parcel III -- Jamaica Plain



Metal Shingle System
Corrugated Metal System
Cementitous Panel System
Retail Canopy



Metal Panel System at Bays Fiberglass Windows Decks Concrete Base

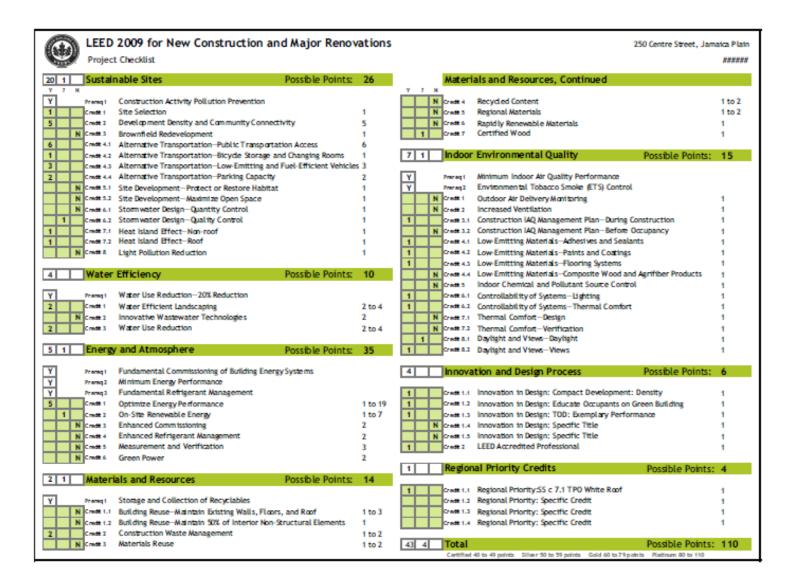




South Elevation

FPIR / Jackson Square Master Plan December, 2015 250 Centre Street -- Elevations Parcel III -- Jamaica Plain

ATTACHMENT C- LEED CHECKLISTS





LEED for Homes Mid-rise Simplified Project Checklist

for Homes Builder Name:

Project Team Leader (If different): Teronda Eilis, Jamaica Plain Neighborhood Development Corporat

Home Address (Street/City/State): Building M, Amory Street, Jamaica Plain, MA

Project Description: Adjusted Certification Thresholds

Building type: Mid-rise multi-family # of stories: 4 Certified: 35.5 Gold: 65.5 # of units: 44 Avg. Home Stze Adjustment: -9.5 Silver: 50.5 Platinum: 80.5

Project Point Total Final Credit Category Total Points
Prelim: 58 + 6 maybe pts Final: 61 ID: 4 SS: 10.5 EA: 10

Certification Level LL: 9 WE: 10 MR: 8.5 AE: 2

Prelim: Silver Final: Silver

	date last updated :				Max	Project I		
last updated by					Pts	Preliminar	_	Final
Innovation and Design I	Proce	255	(ID) (No Minimum Points Required)		Max	Y/Pts Maybe	No	Y/Pts
1. Integrated Project Planning		1.1	Preliminary Rating		Prereq	Y		Y
		1.2	Energy Expertise for MID-RISE		Prereq	Y		Y
		1.3	Professional Credentialed with Respect to LEED for Homes		1	1 0		1
		1.4	Design Charrette		1	0 0	_	0
		1.5	Building Orientation for Solar Design		1	0 0	_	0
			Trades Training for MID-RISE			1 0	_	1
2. Durability Management		2.1	Durability Planning		Prereq	Υ	_	Y
Process		22	Durability Management		Prereq 3	Y	_	Y
		2.3	Third-Party Durability Management Verification			0 3		0
3.Innovative or Regional	29.	3.1	Innovation #1 Over 250 rides per day within 1.2 mile	-	1	1 0		1
Design	28.	3.2	Innovation #2 Exemplary Community Resources	-	1	1 0		1
	29.	3.3	Innovation #3	-	1	0 0	_	0
	34.	3.4	Innovation #4			0 0		0
			Sub-Total for	ID Category:	11	4 3		4
Location and Linkages	(LL)		(No Minimum Points Required)	OR	Max	Y/Pts Maybe	No	Y/Pts
1. LEED ND		1	LEED for Neighborhood Development	LL2-6	10	0 0		0
2. Site Selection	38.	2	Site Selection		2	2 0		2
3. Preferred Locations		3.1	Edge Development		1	0 0		0
		3.2	Infill	LL 3.1	2	2 0		2
		3.3	Brownfield Redevelopment for MID-RISE		1	0 0		0
4. Infrastructure		4	Existing Infrastructure		1	1 0		1
5. Community Resources/		5.1	Basic Community Resources for MID-RISE		1	0 0		0
Transit		5.2	Extensive Community Resources for MID-RISE	LL 5.1, 5.3	2	0 0	_	0
Transit.		5.3	Outstanding Community Resources for MID-RISE	LL 5.1, 5.2	3	3 0		3
6. Access to Open Space		6	Access to Open Space		1	1 0	_	1
a. Access to open opass		0			_			
			Sub-Total for	<u> </u>	10	9 0		9
Sustainable Sites (SS)			(Minimum of 5 SS Points Required)	OR	Max	Y/Pts Maybe	No	Y/Pts
1. Site Stewardship		1.1	Erosion Controls During Construction		Prerequisite	Y		Y
		1.2	Minimize Disturbed Area of Site for MID-RISE		1	1 0		1
2. Landscaping	36.	21	No Invasive Plants		Prerequisite	Υ		Y
1	29.	22	Basic Landscape Design	\$\$ 2.5	1	0 0		1
1	29.	2.3	Limit Conventional Turf for MID-RISE	\$\$ 2.5	2	0 0		0
1	29.	24	Drought Tolerant Plants for MID-RISE	88 2.5	1 3	0 0		0
	36.	2.5	Reduce Overall Irrigation Demand by at Least 20% for MID-R	SE	_	3 0		0
3. Local Heat Island Effects	29.	3.1	Reduce Site Heat Island Effects for MID-RISE		1	0 0		0
	36.	3.2	Reduce Roof Heat Island Effects for MID-RISE		1	1 0		1
4. Surface Water	38.	4.1	Permeable Lot for MID-RISE		2	0 0		0
Management		4.2	Permanent Erosion Controls		1	0 0		0
	29.	4.3	Stormwater Quality Control for MID-RISE		2	2 0		0
5. Nontoxic Pest Control		5	Pest Control Alternatives		2	1.5 0		1.5
6. Compact Development		6.1	Moderate Density for MID-RISE		2	2 0		2
		6.2	High Density for MID-RISE	\$\$ 6.1, 6.3	3	0 0		0
7 Albert day 7-1-1-1		6.3	Very High Density for MID-RISE	\$\$ 6.1, 6.2	4	0 0		0
7. Alternative Transportation		7.1	Public Transit for MID-RISE		2	2 0		2
1		7.2	Bicycle Storage for MID-RISE Parking Capacity/Low-Emitting Vehicles for MID-RISE		1	0 0		1
		1.3					'	1
			Sub-Total for	ss category:	22	12.5 0		10.5

LEED for Homes Mid-rise Pilot Simplified Project Checklist (continued)

				Max	Project P	oints
				Pts	Preliminary	Final
Water Efficiency (WE)			(Minimum of 3 WE Points Required) OR	Max	Y/Pts Maybe	No Y/Pts
I. Water Reuse	39.	1	Water Reuse for MID-RISE	5	0 0	0
. Irrigation System	39.	21	High Efficiency Irrigation System for MID-RISE WE 2.2	2	0 0	2
•	29.	22		2	0 0	0
3. Indoor Water Use		3.1	High-Efficiency Fixtures and Fittings	3	0 0	0
			Very High Efficiency Fixtures and Fittings	6	6 0	6
		3.3	Water Efficient Appliances for MID-RISE	2	0 0	2
			Sub-Total for WE Category	7: 15	6 0	10
F	/EA					
Energy and Atmosphere	(EA		(Minimum of 0 EA Points Required) OR	Max	Y/Pts Maybe	No Y/Pts
I. Optimize Energy Performance		1.1	Minimum Energy Performance for MID-RISE	Prereq	Y	Y
			Testing and Verification for MID-RISE	Prereq	Y	Υ
		1.3	Optimize Energy Performance for MID-RISE	34	12 0	8
7. Water Heating	29.	7.1	Efficient Hot Water Distribution	2	0 2	0
		7.2	Pipe Insulation	1	0 0	1
11. Residential Refrigerant		11.1	Refrigerant Charge Test	Prereq	Υ	Υ
Management		11.2	Appropriate HVAC Refrigerants	1	1 0	1
			Sub-Total for EA Category	/: 38	13 2	10
Materials and Resources	- //	MR)	(Minimum of 2 MR Points Required) OR	Max		No Y/Pts
	, (n		1 /		17 to Mayor	11/18
1. Material-Efficient Framing		1.1		Prereq 1	7	Y
		1.2		1 1	0 0	0
		1.3		3	0 0	0
		1.5		4		_
					2 0	4
2. Environmentally Preferable	29.	21	FSC Certified Tropical Wood	Prereq	Y	Y
Products	36.	22	Environmentally Preferable Products	8	2 0	2
3. Waste Management		3.1	Construction Waste Management Planning	Prereq	Υ	Υ
		3.2	Construction Waste Reduction	3	1.5 0	2.5
			Sub-Total for MR Category	r: 16	5.5 0	8.5
Indoor Environmental Qu	uality	v (E	Q) (Minimum of 6 EQ Points Required) OR	Max	Y/Pts Maybe	No Y/Pts
2. Combustion Venting		2	Basic Combustion Venting Measures	Prereq	V	Y
3. Moisture Control		3	Moisture Load Control	1	0 0	_
					0 0	0
4. Outdoor Air Ventilation	29.		Basic Outdoor Air Ventilation for MID-RISE	Prereq	Y	Y
			Enhanced Outdoor Air Ventilation for MID-RISE	1	0 0	N 0
			Third-Party Performance Testing for MID-RISE		1 0	0
5. Local Exhaust	29.		Basic Local Exhaust	Prerequisite	Υ	Υ
			Enhanced Local Exhaust	1	0 0	1
		5.3	Third-Party Performance Testing	1	1 0	0
S. Distribution of Space	79.	6.1		Prereq	Y	Υ
Heating and Cooling		6.2		1	0 0	0
		6.3	Third-Party Performance Test / Multiple Zones	2	0 0	0
7. Air Filtering		7.1		_	V	Y
			Good Filters	Prereq	T .	
		7.2			0 0	0
			Better Filters EQ 7.3	Prereq	0 0	0
8. Contaminant Control	34	7.2	Better Filters EQ 7.3 Best Filters	Prereq 1		_
8. Contaminant Control	38.	7.2 7.3	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction	Prereq 1	0 0	0
3. Contaminant Control	'a.	7.2 7.3 8.1	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE	Prereq 1 2	0 0	0
	38.	7.2 7.3 8.1 8.2 8.3	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush	Prereq 1 2 1 2	0 0 1 0 0 0	0 1 1
	34.	7.2 7.3 8.1 8.2 8.3	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush	Prereq 1 2 1 2	0 0 1 0 0 0 0 1 Y	0 1 1 0 N/A
3. Radon Protection	38.	7.2 7.3 8.1 8.2 8.3 9.1 9.2	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction In High-Risk Areas Radon-Resistant Construction In Moderate-Risk Areas	Prereq 1 2 1 2 1 Prereq 1	0 0 1 0 0 0 0 1 Y	0 1 1 0 N/A
B. Radon Protection	34.	7.2 7.3 8.1 8.2 8.3 9.1 9.2	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction in High-Risk Areas Radon-Resistant Construction in Moderate-Risk Areas No HVAC in Garage for MID-RISE	Prereq 1 2 1 2 1 Prereq 1 Prereq	0 0 1 0 0 0 0 1 Y	0 1 1 0 N/A 0 Y
3. Radon Protection	34.	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction in High-Risk Areas Radon-Resistant Construction in Moderate-Risk Areas No HVAC in Garage for MID-RISE Minimize Pollutants from Garage for MID-RISE EQ 10.3	Prereq 1 2 1 2 1 Prereq 1 Prereq 2	0 0 1 0 0 0 0 1 Y 1 0 Y 0 0	0 1 1 0 N/A 0 Y
Radon Protection Garage Pollutant Protection	34.	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3	Better Filters EQ 7.3 Best Filters EQ 7.3 Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction In High-Risk Areas Radon-Resistant Construction In Moderate-Risk Areas No HVAC In Garage for MID-RISE EQ 10.3 Detached Garage or No Garage for MID-RISE EQ 10.3	Prereq 1 2 1 2 1 Prereq 1 Prereq	0 0 1 0 0 0 0 1 Y 1 0 Y 0 0 3 0	0 1 1 0 N/A 0 Y 0 3
Radon Protection Garage Pollutant Protection ETS Control	34.	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11	Better Filters EQ 7.3 Best Filters EQ 7.3 Best Filters EQ 7.3 Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction in High-Risk Areas Radon-Resistant Construction in Moderate-Risk Areas No HVAC in Garage for MID-RISE Minimize Pollutants from Garage for MID-RISE EQ 10.3 Detached Garage or No Garage for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE	Prereq 1 2 1 Prereq 1 1 Prereq 2 3 1 1	0 0 1 0 0 0 0 1 Y 1 0 Y 0 0	0 1 1 0 N/A 0 Y 0 3
Radon Protection Garage Pollutant Protection ETS Control Compartmentalization	34.	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction in High-Risk Areas Radon-Resistant Construction in Moderate-Risk Areas No HVAC in Garage for MID-RISE Minimize Pollutants from Garage for MID-RISE Detached Garage or No Garage for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Compartmentalization of Units	Prereq 1 2 1 Prereq 2 3 1 Prereq Prereq 1 1 Prereq 2 3 1 1 Prereq 3 1 1 Prereq 3	0 0 0 1 0 0 1 Y 0 0 0 0 0 0 0 0 0 0 0 0	0 1 1 0 N/A 0 Y 0 3 1
Radon Protection Garage Pollutant Protection ETS Control	34.	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11	Better Filters EQ 7.3 Best Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction In High-Risk Areas Radon-Resistant Construction In Moderate-Risk Areas No HVAC in Garage for MID-RISE Minimize Pollutants from Garage for MID-RISE Detached Garage or No Garage for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Compartmentalization of Units Enhanced Compartmentalization of Units	Prereq 1 2 1 Prereq 2 3 1 Prereq 1 1 Prereq 1 1 Prereq 1 1 Prereq 2 3 1 1 Prereq 1 Pre	0 0 0 1 0 0 0 1 Y 0 0 0 0 1 0 Y 0 0 0 0	0 1 1 0 N/A 0 Y 0 3 1 Y
Radon Protection Garage Pollutant Protection ETS Control Compartmentalization	34.	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction in High-Risk Areas Radon-Resistant Construction in Moderate-Risk Areas No HVAC in Garage for MID-RISE Minimize Pollutants from Garage for MID-RISE Detached Garage or No Garage for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Compartmentalization of Units	Prereq 1 2 1 Prereq 2 3 1 Prereq 1 1 Prereq 1 1 Prereq 1 1 Prereq 2 3 1 1 Prereq 1 Pre	0 0 0 1 0 0 1 Y 0 0 0 0 0 0 0 0 0 0 0 0	0 1 1 0 N/A 0 Y 0 3 1
Radon Protection Garage Pollutant Protection ETS Control Compartmentalization	34 34	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11 12.1 12.2	Better Filters EQ 7.3 Best Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction In High-Risk Areas Radon-Resistant Construction In Moderate-Risk Areas No HVAC in Garage for MID-RISE Minimize Pollutants from Garage for MID-RISE Detached Garage or No Garage for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Compartmentalization of Units Enhanced Compartmentalization of Units	Prereq 1 2 1 Prereq 2 3 1 Prereq 1 1 Prereq 1 1 Prereq 1 1 Prereq 2 3 1 1 Prereq 1 Pre	0 0 0 1 0 0 0 1 Y 0 0 0 0 1 0 Y 0 0 0 0	0 1 1 0 N/A 0 Y 0 3 1 Y
Radon Protection Garage Pollutant Protection ETS Control Compartmentalization of Units Awareness and Education	34 34	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11 12.1 12.2	Better Filters EQ 7.3 Best Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction In High-Risk Areas Radon-Resistant Construction in Moderate-Risk Areas No HVAC in Garage for MID-RISE Minimize Pollutants from Garage for MID-RISE Environmental Tobacco Smoke Reduction for MID-RISE Compartmentalization of Units Enhanced Compartmentalization of Units Sub-Total for EQ Category (Minimum of 0 AE Points Required)	Prereq 1 2 1 Prereq 2 3 1 Prereq 1 1 Prereq 2 3 2 1 Prereq 1 1 Prereq 2 3 1 1 Prereq 1	0 0 0 1 0 0 0 1 Y 0 0 0 0 1 0 Y 0 0 0 0	0 1 1 0 N/A 0 Y 0 3 1 Y
Radon Protection Garage Pollutant Protection ETS Control Compartmentalization of Units Awareness and Education	on (F	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11 12.1 12.2	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction In High-Risk Areas Radon-Resistant Construction In Moderate-Risk Areas No HVAC in Garage for MID-RISE Minimize Pollutants from Garage for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Compartmentalization of Units Enhanced Compartmentalization of Units	Prereq 1 2 1 Prereq 2 3 1 Prereq 1 1 Prereq 2 3 1 Prereq 1 1 Prereq 1 Prere	0 0 0 1 0 0 0 1 Y 0 0 0 0 1 0 Y 0 0 0 0	0 1 1 0 N/A 0 Y 0 3 1 Y 0 7 N/O Y/Y
Radon Protection Garage Pollutant Protection ETS Control Compartmentalization of Units Awareness and Education Education of the	on (A	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11 12.1 12.2 1.1 1.2	Better Filters EQ 7.3 Best Filters EQ 7.3 Best Filters EQ 7.3 Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction in High-Risk Areas Radon-Resistant Construction in Moderate-Risk Areas No HVAC in Garage for MID-RISE EQ 10.3 Detached Garage or No Garage for MID-RISE Equitable Equitable Environnmental Tobacco Smoke Reduction for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Compartmentalization of Units Sub-Total for EQ Category (Minimum of 0 AE Points Required) Basic Operations Training Enhanced Training	Prereq 1 2 1 2 1 Prereq 1 Prereq 2 3 1 Prereq 2 3 1 Prereq 1 Prereq 1 7: 21	0 0 0 1 0 0 0 1 Y 1 0 0 0 0 3 0 1 0 Y 0 0 0 8 1 Y 1 Y 1 Y 1 0 0 0 8 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1	0 1 1 0 N/A 0 Y 0 3 1 1 Y 0 7 NO Y/Pls
Awareness and Education 1. Education of the Homeowner or Tenant	on (A	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11 12.1 12.2	Better Filters EQ 7.3 Best Filters EQ 7.3 Best Filters EQ 7.3 Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction in High-Risk Areas Radon-Resistant Construction in Moderate-Risk Areas No HVAC in Garage for MID-RISE EQ 10.3 Detached Garage or No Garage for MID-RISE Equitable Equitable Environnmental Tobacco Smoke Reduction for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Compartmentalization of Units Sub-Total for EQ Category (Minimum of 0 AE Points Required) Basic Operations Training Enhanced Training	Prereq 1 2 1 Prereq 2 3 1 Prereq 1 1 Prereq 2 3 1 Prereq 1 1 Prereq 1 Prere	0 0 0 1 0 0 0 1 Y 1 0 0 0 0 3 0 1 0 Y 0 0 0 8 1 Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	0 1 1 0 N/A 0 Y 0 3 1 1 Y 0
3. Radon Protection 10. Garage Pollutant Protection 11. ETS Control 12. Compartmentalization of Units Awareness and Education 1. Education of the Homeowner or Tenant 2. Education of Building	on (A	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11 12.1 12.2 1.1 1.2 1.3	Better Filters EQ 7.3 Best Filters Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction In High-Risk Areas Radon-Resistant Construction In Moderate-Risk Areas No HVAC in Garage for MID-RISE Minimize Pollutants from Garage for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Compartmentalization of Units Enhanced Compartmentalization of Units Sub-Total for EQ Category (Minimum of 0 AE Points Required) Basic Operations Training Enhanced Training Public Awareness	Prereq 1 2 1 2 1 Prereq 1 Prereq 2 3 1 Prereq 2 3 1 Prereq 1 Prereq 1 7: 21	0 0 0 1 0 0 0 1 Y 1 0 0 0 0 3 0 1 0 Y 0 0 0 8 1 Y 1 Y 1 Y 1 0 0 0 8 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1	0 1 1 0 N/A 0 Y 0 3 1 1 Y 0 7 NO Y/Pls
P. Radon Protection O. Garage Pollutant Protection I. ETS Control C. Compartmentalization of Units Awareness and Education Education of the Homeowner or Tenant	on (#	7.2 7.3 8.1 8.2 8.3 9.1 9.2 10.1 10.2 10.3 11 12.1 12.2 1.1 1.2 1.3	Better Filters EQ 7.3 Best Filters EQ 7.3 Best Filters EQ 7.3 Indoor Contaminant Control during Construction Indoor Contaminant Control for MID-RISE Preoccupancy Flush Radon-Resistant Construction in High-Risk Areas Radon-Resistant Construction in Moderate-Risk Areas No HVAC in Garage for MID-RISE EQ 10.3 Detached Garage or No Garage for MID-RISE Equitable Equitable Environnmental Tobacco Smoke Reduction for MID-RISE Environnmental Tobacco Smoke Reduction for MID-RISE Compartmentalization of Units Sub-Total for EQ Category (Minimum of 0 AE Points Required) Basic Operations Training Enhanced Training	Prereq 1 2 1 Prereq 1 Prereq 1 Prereq 2 3 1 Prereq 1 Prereq 1 1 Prereq 1 1 1	0 0 0 1 0 0 0 1 Y 0 0 0 0 0 0 0 0 0 0 0	0 1 1 0 0 N/A 0 Y 0 3 1 1 Y 0 0 7 7 NO 0 7

U.S. Green Building Council Page 2 of 2 January 1, 2011

ATTACHMENT D- CLIMATE CHANGE PREPAREDNESS CHECKLISTS

D1- Building N, 250 Centre Street

A.1 - Project Information

Project Name: Parcel III - 250 Centre Street

Project Address Primary: Jackson Square

Project Address Additional: Jamaica Plain, MA, 02130

Project Contact (name / Title / Noah Sawyer/ Project Manager - TCB

Company / email / phone): nsawyer@tcbinc.org 857-221-8668

A.2 - Team Description

Owner / Developer: Jackson Square Partners - TCB + JPNDC

Architect: ICON Architecture Inc

Engineer (building systems): Wozny Barber Engineering

Sustainability / LEED: TBD

Permitting: NA

Construction Management: TBD

Climate Change Expert: TBD

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	BRA Final Design Approved	Under Construction	Construction just completed:
Area			

A.4 - Building Classification and Description

List the principal Building Uses: Residential, Mixed-Use

List the First Floor Uses: Retail, Residential Lobby, Residential Units, Amenity Space

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

	Wood Frame	Masonry	Steel Frame	Concrete
Describe the building?				
Site Area:	33,656 SF	Building Area:		102,750 SF
Building Height:	70 Ft.	Number of Stor	ies:	6 stories
First Floor Elevation (reference Boston City Base):	42' Elev.BCB	Are there below spaces/levels,	w grade if yes how many:	½ Level of parking

A.5 - Green Building

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

3 3 ()	,	, , ,	•	3 , ,
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:	(kW)	Heating:	(MMBtu/hr)
What is the planned building Energy Use Intensity:	(kbut/SF or kWh/SF)	Cooling:	(Tons/hr)

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

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

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

Electrical Generation:	(kW)	Fuel Source:		
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.

75 Years

B.1 - Analysis

What is the full expected life of the project?

Select most appropriate:

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?

25 Years

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

10 Years

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

Deg. Days Events / yr.

50 Years

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

Days 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?

Inches / yr. Inches per hour 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?

Peak Wind Hours 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:

Estimate 21 %

How is performance determined:

Energy modeling: Train Trace 700 in acc with ASHRAE 90.1-Appendix G

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

Select all appropriate:

:	High performance building envelope	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:

R =

/U = .3

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

R = 50Walls / Curtain R = 19.6Roof: Wall Assembly: Foundation: R = 5Basement / Slab: Parking on slab

Windows: U = .3 max.Doors:

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

> On-site clean Building-wide Thermal energy Ground source energy / CHP power dimming storage systems heat pump system(s) On-site Solar PV On-site Solar Wind power None Thermal

Describe any added measures:

High eff HVAC equip for all units (15 SEER for AC units) 90+ percent AFUE combined HW and heat appliances (Navien systems)

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

Select all appropriate:

Connected to Building will be Connected to Distributed local distributed Smart Grid ready distributed thermal energy electrical steam, hot, ready chilled water

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? No

If Yes, describe strategies:

Select all appropriate:

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

:	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	Waste water storage capacity	High Performance Building Envelope

Describe any added measures:

What measures will the project employ to reduce urban heat-island effect?

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

What measures will the project employ to accommodate rain events and more rain fall?

vegetated water Select all appropriate: On-site retention Infiltration Vegetated roofs systems & ponds galleries & areas capture systems

Describe other strategies:					
What measures will the project employ to accommodate extreme storm events and high winds?					
Select all appropriate:	Hardened building structure & elements	Buried utilities & hardened infrastructure	Hazard removal & protective landscapes	Soft & permeable surfaces (water infiltration)	
Describe other strategies:	Flood gates /doors at all openings at or below el 16.5 Sheet piles all around garage level Foundation walls waterproofed Underslab drainage system				

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? Flat, slopes to water.

Site Elevation - Low/High

Building Proximity to Water:

Points:

Low:EI. -37' High: EI 48' 25 Ft.

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

Coastal Zone:

Flood Zone:

Yes / No

Velocity Zone:

Area Prone to Flooding:

Yes / No 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?

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 se	ea levels and more fr	equent and extreme	e storm events analy	zed:	
Sea Level Rise:	Ft.	Frequency of storms: pe			
C.3 - Building Flood Proofing					
Describe any strategies to limit storn of disruption.	n and flood damage a	and to maintain fund	ctionality during an e	extended periods	
What will be the Building Flood F	Proof Elevation and F	irst Floor Elevation:			
Flood Proof Elevation:		Fi	rst Floor Elevation:		
Will the project employ tempora	emporary measures to prevent building flooding (e.g. barricades, flood gates):				
	Yes / No	If Yes	, to what elevation		
If Yes, describe:					
What measures will be taken to e event:	ensure the integrity (of critical building s	ystems during a floo	d or severe storm	
Were the differing effects of fres	sh water and salt wa	ter flooding conside	red:		
	Yes / No				
Will the project site / building(s) transportation:	be accessible during	g periods of inundat	ion or limited access	s to	
	Yes / No	If yes, to wha	nt height above 100 Year Floodplain:	Boston City Base Elev. (Ft.)	
Will the project employ hard and impacts?	I / or soft landscape	elements as velocit	y barriers to reduce	wind or wave	
	Yes / No				
If Yes, describe:					
Will the building remain occupial	ole without utility po	ower during an exter	nded period of inunc	lation:	
	Yes / No	lf	Yes, for how long:	days	
Describe any additional strategie	s to addressing sea I	evel rise and or seve	ere 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 reas	onably modified to i	ncrease Building Flo	od 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 ar	nd designed to accor	nmodate future resil	liency enhancement	s?
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:				

D2- Building M, 25 Amory St

A.1 - Project Information

Project Name: Parcel III - 25 Amory Street

Project Address Primary: Jackson Square

Project Address Additional: Jamaica Plain, MA, 02130

Project Contact (name / Title / Terc

Company / email / phone):

Teronda Ellis/ Project Manager - JPNDC

tellis@jpndc.org 617-522-2424

A.2 - Team Description

Owner / Developer: Jackson Square Partners - TCB + JPNDC

Architect: ICON Architecture Inc

Engineer (building systems): Wozny Barber Engineering

Sustainability / LEED: TBD

Permitting: NA

Construction Management: TBD

Climate Change Expert: TBD

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: Residential, Mixed-Use

List the First Floor Uses: Retail, Residential Lobby, Residential Units, Community Room, Common

Laundry

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

Wood Frame	Masonry	Steel Frame	Concrete

Describe the building?

Site Area: 31,562 SF Building Area: 44,150 SF
Building Height: 45 Ft. Number of Stories: 4 stories

First Floor Elevation (reference

Boston City Base):

Number of Stories:

Are there below grade spaces/levels, if yes how many:

42' Elev.BCB

A.5 - Green Building

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

3 - 3 - 1	3 - 3 - 3 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -						
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:	(kW)	Heating:	(MMBtu/hr)
What is the planned building Energy Use Intensity:	*	Cooling:	(Tons/hr)

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

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

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

Electrical Generation:	(kW)	Fuel Source:		
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 operati	onal life of key build	dina systems (e.a. he	eating, cooling, vent	ilation)?

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?

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

Deg. Days Events / yr.

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

Days 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?

Inches / yr. Inches per hour 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?

Peak Wind Hours 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:

Estimate 21 %

How is performance determined:

Energy modeling: Train Trace 700 in acc with ASHRAE 90.1-Appendix G

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

Select all appropriate:

High performance building envelope	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:

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

Roof: R = 50 Walls / Curtain R = 19.6 Wall Assembly:

Foundation: R = 5 Basement / Slab:

Windows: U = .3 max. Doors: R = /U = .3

Parking on slab

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		
. [High eff HVAC equip for all units (15 SEER for AC units)					

Describe any added measures:

High eff HVAC equip for all units (15 SEER for AC units) 90+ percent AFUE combined HW and heat appliances (Navien systems)

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,	Distributed thermal energy ready
			chilled water	

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?	No		
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	Waste water storage capacity	High Performance Building Envelope

Describe any added measures:

What measures will the project employ to reduce urban heat-island effect?

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?

Select all appropriate:	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?

· · · · · ·	· · ·			
Select all appropriate:	Hardened building	Buried utilities & hardened	Hazard removal & protective	Soft & permeable
	bullulig	Harueneu	& protective	permeable
		infrastructure	landscapes	

				1	
	structure & elements			surfaces (water infiltration)	
Describe other strategies:	Flood gates /doors at all openings at or below el 16.5 Sheet piles all around garage level Foundation walls waterproofed Underslab drainage system				
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 Cla	ssification:				
Do you believe the building to susce	eptible to flooding n	low or during the ful	I expected life of t	he building?	
	Yes / No				
Describe site conditions? Flat, slope	es to water.				
Site Elevation - Low/High Points:	Low:El37' High: El 48'				
Building Proximity to Water:	25 Ft.				
Is the site or building located in an	y of the following?		_		
Coastal Zone:	Yes / No		Velocity Zone:	Yes / No	
Flood Zone:	Yes / No	Area Pi	rone to Flooding:	Yes / No	
Will the 2013 Preliminary FEMA Floo Climate Change result in a change of				dates due to	
2013 FEMA Prelim. FIRMs:	Yes / No	Future flood	plain delineation updates:	Yes / No	
What is the project or building pro	ximity to nearest Co	astal, Velocity or Flo	ood Zone or Area P	rone to Flooding?	
If you answered YES to any of the complete the following questions.		Description and C have completed t			
C - Sea-Level Rise and Storms This section explores how a project responds to Sea Level Disc and / or increase in storm frequency or severity.					
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 free	quent and extreme s	storm events analyz	zed:	
Sea Level Rise:	Ft.	Freq	uency 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 P	roof Elevation and F	irst Floor Elevation:			
Flood Proof Elevation:		Fir			
Will the project employ temporal	ry measures to preve	ent building flooding	(e.g. barricades, flo	ood gates):	
	Yes / No	If Yes,	to what elevation		
If Yes, describe:					
What measures will be taken to e event:	ensure the integrity o	y of critical building systems during a flood or severe storm			
Were the differing effects of fres	h water and salt wat	ter flooding consider	red:		
	Yes / No				
Will the project site / building(s) transportation:	be accessible during	g periods of inundati	ion or limited access	to	
	Yes / No	If yes, to wha	t height above 100 Year Floodplain:	Boston City Base Elev. (Ft.)	
Will the project employ hard and impacts?	/ or soft landscape	elements as velocity	y barriers to reduce	wind or wave	
·	Yes / No				
If Yes, describe:					
Will the building remain occupiat	ole without utility po	wer during an exter	nded period of inund	ation:	
	Yes / No	If	Yes, for how long:	days	
Describe any additional strategie:			• 1	days	
bescribe any additional strategie.	s to addressing sea in	ever rise and or seve	ere storm impacts.		
C.4 - Building Resilience and Ada					
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 withs	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 an	d designed to accon	nmodate future resil	iency enhancements	5?
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:				

ATTACHMENT E- ACCESSIBILITY CHECKLIST

Project Information

Project Name: Jackson Square Phase 3, Site III

Project Address Primary: 250 Centre Street and Building M

Project Address Attn.: Jackson Square Partners, 27 Germania St, Boston, MA

Additional: 02130

Project Contact (name / Noah Sawyer, Project Manager, TCB, 857-221-8668
Title / Company / email Teronda Ellis, Project Manager, JPNDC, 617-522-2424

/ phone):

Team Description

Owner / Developer: Jackson Square Partners - TCB + JPNDC

Architect: ICON Architecture, Inc

Engineer (building Wozny Barber Engineering

TBD

TBD

systems):

Sustainability / LEED:

Permitting: TBD

Construction

Management:

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:

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	
Retail, Residential Lobby, Residential Units, Amenity Space				

First Floor Uses (List)

What is the Construction Type - select most appropriate type?

	Wood Frame	Masonry	Steel Frame	Concrete
Describe the building?				
Building N: Site Area:	33,656 SF	Building Are	a:	102,750 SF
Building Height:	70 Ft.	Number of S	tories:	6 FIrs.
First Floor Elevation:	42' Elev.	Are there be spaces:	elow grade	½ level of parking
Building M: Site Area:	31,562 SF	Building Are	a:	44,150 SF
Building Height:	45 Ft.	Number of S	tories:	4 FIrs.
First Floor Elevation:	42′ Elev.	Are there be spaces:	elow grade	none

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.

development neighborhood and identifying characteristics.	Orange Line Station. This is an urban area, with extensive open space, multifamily homes and mixed - use neighborhood fabric.
List the surrounding ADA compliant MBTA transit lines and the proximity to the development site: Commuter rail, subway,	The site is across the street (one- tenth of a mile) from the Jackson Square Orange Line and Bus Lines. The MBTA station offers an elevator and escalator access to the train platforms. The Buses also provide access.

List the surrounding institutions: hospitals,

bus, etc.

Several schools are within $\frac{1}{2}$ mile of the site. Dimock Center is $\frac{2}{10}$ of a mile from the site. The Heath Street BHA property is

public housing and elderly and disabled housing developments, educational facilities, etc.

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

located 1/10 of a mile from the site. Anna Cole Community Center is 3/10 of a mile from the site. 125 Amory Street is a BHA senior residential building, located south of the site.

Parcel III is adjacent to and backs up to Amory Street, which, as part of this project, will be improved to allow safe and accessible pedestrian access from Centre Street to Amory Street and points south. The Kelly Ice Skating Rink is located south of this development site.

Surrounding Site Conditions - Existing:

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

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

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

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.

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

The site is bounded by a sidewalk on Centre Street to the north. Along the alignment of the Amory Street Extension, to the east, a bituminous path connects Centre Street to the Corner of Amory Street. There is no pedestrian access on the east or southern sides of the site.

These sidewalks do not currently meet accessibility code. The FPIR includes improving the pedestrian way along Amory Street Extension, creating an accessible public path in cooperation with the City of Boston. The sidewalk on Centre Street will be improved as much as possible while maintaining the street slope.

Public sidewalks will be rebuilt as part of the project. They are not currently compliant.

Yes, Site III is located within the boundaries of the Stony Brook Industrial Area, which is listed in the Inventory of Historic and Archaeological Assets of the Commonwealth.

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.bostoncompletestreet s.org

Proposed public sidewalks aim to meet Complete Street Guidelines. The private driveway will provide an accessible walkway, with tree plantings where possible.

If yes above, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, Boulevard. Public Streets aim to be designed as a Neighborhood Residential Street Type. Existing grades pose a challenge on Centre and on Amory Street Extension. The private driveway will provide an accessible route, as well as a greenspace/ furnishing zone where possible.

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

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? Sidewalks will be rebuilt of either concrete or bituminous paving, with curbs. Specific locations of sidewalk on Amory Street Extension, TBD.

If the pedestrian right-ofway is on private property, will the proponent seek a pedestrian easement with the City of Boston Public Improvement Commission? Along the east side of the parcel, the proponent will improve the MBTA easement area, providing pedestrian and bicycle path, linking north to south. The proponent intends for seek a pedestrian easement with the City of Boston PIC.

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

No.

If yes above, what are the proposed dimensions of the sidewalk café or furnishings

NA

and what will the right-ofway 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?

What is the total number of accessible spaces provided at the development site?

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?

Where is accessible visitor parking located?

Has a drop-off area been identified? If yes, will it be accessible?

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.

102 parking spaces

Two accessible parking spaces will be provided in the parking lot in the courtyard, and three accessible spaces will be provided in the parking level of the 250 Centre Street building. There will be a total of five accessible parking spaces on site.

No. All accessible parking will be provided in the parking level under cover or in the parking lot.

No visitor parking provided.

No drop-off area.

See attached Accessibility Diagrams

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 Accessibility Diagram
Describe accessibility at each entryway: Flush Condition, Stairs, Ramp Elevator.	See attached Accessibility Diagram
Are the accessible entrance and the standard entrance integrated?	Yes. See attached Accessibility Diagram
If no above, what is the reason?	NA
Will there be a roof deck or outdoor courtyard space? If yes, include diagram of the accessible route.	See attached Accessibility Diagram
Has an accessible routes way-finding and signage package been developed? If yes, please describe.	NA

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?	Up to 144 residential apartments are proposed on the site.		
How many units are for	All apartments in both buildings are for rent.		
sale; how many are for		Market	Affordable
rent? What is the market	1BR	\$1,700	\$554-\$1,035
value vs. affordable	2BR	\$2,100	\$665-\$1,108
breakdown?	3BR	\$2,850	\$769-\$1,536

How many accessible units are being proposed?

Three accessible units in Building M, and five accessible units in 250 Centre Street, for a total of eight accessible units, or 5% of the total units.

Please provide plan and diagram of the accessible units.

Please refer to Accessibility Diagrams

How many accessible units will also be affordable? If none, please describe reason.

Building M: All units in Building M are affordable: 3 affordable and accessible units.

Total affordable and accessible units: 3 affordable and accessible units.

All units in both elevator buildings will be flats designed to meet

Building N (250 Centre Street): 5 accessible units

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.

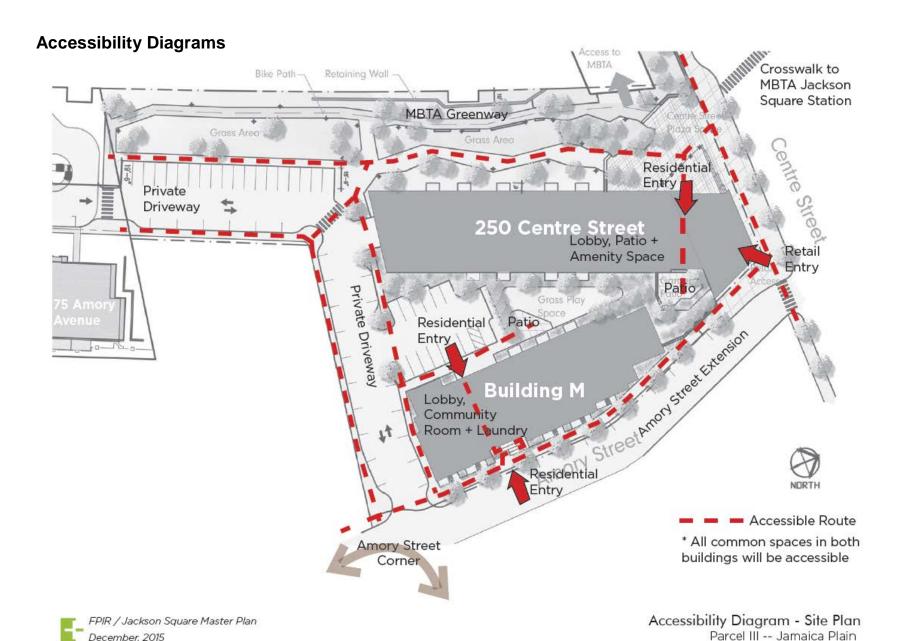
All units in both elevator buildings will be flats designed to meet MAAB/ADA Group 1 accessibility, except for five three-bedroom duplex units that face Amory Street in Building M. These units will meet all accessibility requirements inside the building, and in addition, will have a front stoop at the back of the sidewalk.

Has the proponent reviewed or presented the proposed plan to the City of Boston Mayor's Commission for Persons with Disabilities Advisory Board? Not yet.

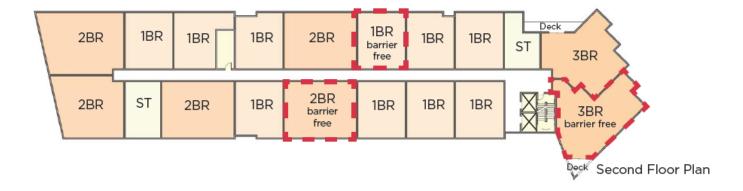
Did the Advisory Board vote to support this project? If no, what recommendations did the Advisory Board give to make this project more accessible?

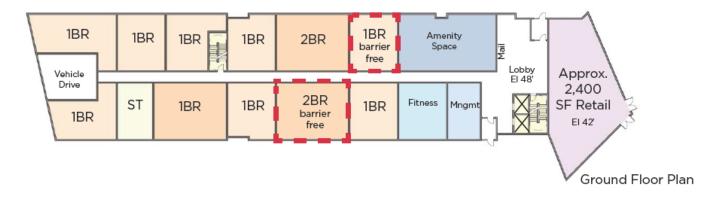
Thank you for completing the Accessibility Checklist!

For questions or comments about this checklist or accessibility practices, please contact: kathryn.quigley@boston.gov | Mayors Commission for Persons with Disabilities









Accessible Unit

* All common spaces will be accessible