MIT Kendall Square Initiative
SoMa Project

Volume I: Final Development Plan and Responses to Request for Additional Information

Final Development Plan Submission

Cambridge Planning Board #303

November 5, 2015

Submitted by:

Massachusetts Institute of Technology (MIT)

Owner/ Project Proponent

Massachusetts Institute of Technology (MIT)

Legal Counsel

Goulston & Storrs

Gallucio & Watson, LLP

Project Management

Redgate

Northstar (Building 6)

Building Design Architects

Elkus Manfredi Architects (Building 2)

Perkins + Will Architects (Building 3)

NADAAA/Perkins & Will (Building 4)

Weiss/Manfredi Architects (Building 5)

nARCHITECTS (Building 6)

Landscape Architects

Hargreaves Associates

Retail and Placemaking

Graffito SP

Civil Engineering

Nitsch Engineering

Transportation Engineering

VHB

Parking Consultant

Desman Design Management

M/E/P Engineering

AHA Consulting Engineers

Bard Rao + Athanas Consulting Engineers

WSP

ARUP

Structural Engineering

MacNamara · Salvia Robert Silman Associates Odeh Engineers

GeoTechnical/GeoEnvironmental

McPhail Associates, LLC

Acoustical Engineering

Acentech

Sustainability Consultant

Atelier Ten The Green Engineer

District Energy Consultant

JB&B

Wind Consultant

RWDI Consulting Engineers

Surveyor

Feldman

PreConstruction Services

Turner Construction Elaine Construction

Communications

Solomon McCown & Company

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SECTION A: Introductory Letter

Massachusetts Institute of Technology

Office of Executive Vice President and Treasurer

77 Massachusetts Avenue
Cambridge, Massachusetts
Building 4-204
02139–4307
Phone 617–253-3928

November 5, 2015

VIA HAND DELIVERY

City of Cambridge
Office of the Planning Board
City Hall Annex
344 Broadway
Cambridge, Massachusetts 02139

RE: Kendall Square Initiative/South of Main – Final Development Plan
Planning Board Case No. 303

Ladies and Gentlemen:

The Massachusetts Institute of Technology ("**MIT**") is pleased to submit the enclosed Final Development Plan for the South of Main portion of its Kendall Square Initiative, to the Planning Board for its review and consideration. As you are aware, this Final Development Plan is the culmination of several years of hard work and collaboration by MIT, the City and the Cambridge community. This Final Development Plan is a continuation and refinement of the Development Proposal that MIT filed with the Planning Board on July 27, 2015, and responds to the comments and questions raised, and additional information requested, by the Planning Board in its Preliminary Determination dated September 8, 2015, in connection with MIT's Development Proposal, a copy of which is included as Appendix A to the Final Development Plan.

The Final Development Plan contains a refreshed graphic package that supersedes the graphics contained in the Development Proposal. It should be noted that the Final Development Plan supplements the materials submitted by MIT in connection with its pending application for an Article 19 Project Review Special Permit, and should be considered together with that prior submission, as a single, comprehensive application for a PUD Special Permit as well as a Project Review Special Permit.

MIT appreciates the time and consideration that the Planning Board, the Community Development Department, the City and the Cambridge community have given to this important project. MIT looks forward to the opportunity to present this exciting Final Development Plan to you and the general public in the near future.

Should you have any questions concerning the above or the enclosed, please contact me.

Thank you.

Sincerely,

Israel Ruiz
Executive Vice President & Treasurer
Massachusetts Institute of Technology

Enclosures

SECTION B: Forms

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

SPECIAL PERMIT APPLICATION • COVER SHEET

In accordance with the requirements of the City of Cambridge Zoning Ordinance, the undersigned hereby petitions the Planning Board for one or more Special Permits for the premises indicated below.

Location of Premises: Various Addresses (See attached addendum)

Zoning District: Residence C-3B, Mixed Use Residential Overlay (MXR), PUD-5

Applicant Name: Massachusetts Institute of Technology

Applicant Address: 238 Main Street, Cambridge, MA 02142

Contact Information: 617-258-5634 mowu@mit.edu

Telephone # Email Address Fax #

List all requested special permit(s) (with reference to zoning section numbers) below. *Note that the Applicant is responsible for seeking all necessary special permits for the project. A special permit cannot be granted if it is not specifically requested in the Application.*

Planned Unit Development Special Permit (Article 12.000 and Section 13.82)
Project Review Special Permit (Section 19.20)

List all submitted materials (include document titles and volume numbers where applicable) below.

Planned Unit Development Special Permit Application
MIT Kendall Square Initiative – SoMa (South of Main) Project
Project Review Special Permit Application
MIT Kendall Square Initiative – SoMa (South of Main) Project
MIT Kendall Square Initiative – SoMa (South of Main) Graphics Package

Signature of Applicant:

For the Planning Board, this application has been received by the Community Development Department (CDD) on the date specified below:

Date Signature of CDD Staff

MIT – SoMa Special Permits Application Filing

Addendum to Application Cover Sheet

Location of Premises:

Development Parcel B

84 Wadsworth Street and 36 Memorial Drive.

Development Parcel C

226-254 Main Street, 65 Wadsworth Street, 16 Hayward Street, Hayward Street, 264 Main Street, 292 Main Street, 1 Hayward Street, 8, 26, 28, 34, 42 and 46 Carleton Street, Carleton Street, 310, 322 and 336 Main Street, 65 Carleton Street, 5 and 21 Deacon Street, and 40 Ames Street.

OWNERSHIP CERTIFICATE

Project Address: Multiple Parcels (see attached) **Application Date:** July 27, 2015

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: Massachusetts Institute of Technology

at the following address: 77 Mass. Ave, Cambridge MA 02139

to apply for a special permit for: A mixed-use multi-building project

on premises located at: Several properties (see attached addendum)

for which the record title stands in the name of: Massachusetts Institute of Technology

whose address is: 77 Mass. Ave, Cambridge MA 02139

by a deed duly recorded in the:

Registry of Deeds of County: See attached Book: Page:

OR Registry District of the Land Court, Certificate No.: Book: Page:

Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

To be completed by Notary Public:

Commonwealth of Massachusetts, County of middlesex

The above named Seth Alexander personally appeared before me,

on the month, day and year 7/23/15 and made oath that the above statement is true.

Notary: Christine A. Martignetti

My Commission expires:

CHRISTINE A. MARTIGNETTI
Notary Public
Massachusetts
Commission Expires Mar 5, 2021

MIT – SoMa Special Permits Application Filing

Addendum to Ownership Certificate

Property Addresses:

Development Parcel B

84 Wadsworth Street and 36 Memorial Drive.

Development Parcel C

226-254 Main Street, 65 Wadsworth Street, 16 Hayward Street, Hayward Street, 264 Main Street, 292 Main Street, 1 Hayward Street, 8, 26, 28, 34, 42 and 46 Carleton Street, Carleton Street, 310, 322 and 336 Main Street, 65 Carleton Street, 5 and 21 Deacon Street, and 40 Ames Street.

Vesting Deed References:

Development Parcel B

Deed dated October 31, 1952 and recorded with Middlesex South Registry of Deeds in Book 7986, Page 523 and filed with Middlesex South Registry District of the Land Court as Document No. 264993 (creating Certificate of Title 76987),

Deed dated September 25, 1956 and recorded with Middlesex South Registry of Deeds in Book 8823, Page 106,

Deed dated November 15, 1963 and filed with Middlesex South Registry District of the Land Court as Document No. 399602 (creating Certificate of Title 112995),

Deed dated December 28, 1950 and filed with Middlesex South Registry District of the Land Court as Document No. 246868 (creating Certificate of Title 71877), and

Deed dated February 28, 1964 and filed with Middlesex South Registry District of the Land Court as Document No. 402652 (creating Certificate of Title 113752) and recorded in Book 10473, Page 318.

Development Parcel C

Portion containing and abutting Building Parcel 3

Deed dated April 9, 1968 and recorded with Middlesex South County Registry of Deeds in Book 11490, Page 32; Deed dated March 6, 1962 and recorded in Book 9995, Page 432; and Deed dated September 15, 1961 and filed as Document 370630 creating Certificate of Title 105748.

Portion containing Hayward Street

Grant of Easement from the City of Cambridge to the Massachusetts Institute of Technology, dated June 28, 1993, and recorded in Book 23326, at Page 15.

Portion containing and abutting Building Parcel 4

Deed dated July 2, 1969 and recorded with Middlesex South County Registry of Deeds in Book 11703, Page 181; Deed dated July 23, 1968 and recorded in Book 11563, Page 512; Deed dated November 7, 1988 and recorded in Book 19459, Page 156; Deed dated April 30, 1982 and recorded in Book 14596, Page 508; Deed dated December 13, 1967 and recorded in Book 11443, Page 194 and filed as Document 450990 (Certificate of Title 125701); Deed dated January 16, 1974 and filed as Document 519189 (Certificate of Title 142984); and Deed dated December 13, 1967 and recorded in Book 11443, Page 199.

Portion containing Carleton Street

Easement from the City of Cambridge to the Massachusetts Institute of Technology, dated June 28, 1993, and recorded in Book 23326, at Page 21.

Portion containing and abutting Building Parcel 5

Deed dated December 4, 1986 and recorded with Middlesex South County Registry of Deeds in Book 17637, Page 455; Deed dated December 13, 1967 and recorded in Book 11443, Page 194; Deed dated December 22, 1986 and filed as Document 730908 (Certificate of Title 178776); Deed dated November 7, 1988 and filed as Document 787433 (Certificate of Title 184147) and also recorded in Book 19459, Page 151; and Release Deed recorded in Book 65786, at Page 60.

Portion containing and abutting Building Parcel 6 (and portion running between westerly side of Carleton Street and Building Parcel 6)

Deed dated December 27, 1960 and recorded with Middlesex South Registry of Deeds in Book 9737, Page 321, and filed with Middlesex South Registry District of the Land Court as Document No. 32160 (creating Certificate of Title 103584), by virtue of a Deed dated March 13, 1970 and recorded with Middlesex South Registry of Deeds in Book 11811, Page 117, and filed at Middlesex South Registry District of the Land Court as Document No. 474308 (creating Certificate of Title No. 131990); by virtue of deed dated September 30, 1971 and recorded in Book 12083 Page 668 and filed as Document 490396 (creating Certificate of Title No. 136077); and by virtue of a deed dated May 18, 1973, and recorded with the Middlesex South District Registry of the Land Court as Document No. 511001 (creating Certificate of Title No.140922).

Project Address: Multiple Parcels (see attached) **Application Date:** July 27, 2015

The Applicant must provide the full fee (by check or money order) with the Special Permit Application. Depending on the nature of the proposed project and the types of Special Permit being sought, the required fee is the larger of the following amounts:

- If the proposed project includes the creation of new or substantially rehabilitated floor area, or a change of use subject to Section 19.20, the fee is ten cents ($0.10) per square foot of total proposed Gross Floor Area.
- If a Flood Plain Special Permit is being sought as part of the Application, the fee is one thousand dollars ($1,000.00), unless the amount determined above is greater.
- In any case, the minimum fee is one hundred fifty dollars ($150.00).

Fee Calculation

New or Substantially Rehabilitated Gross Floor Area (SF): 1,130,500	× $0.10 =	$113,050
Flood Plain Special Permit	Enter $1,000.00 if applicable:	
Other Special Permit	Enter $150.00 if no other fee is applicable:	$150
TOTAL SPECIAL PERMIT FEE	**Enter Larger of the Above Amounts:**	$113,200

SECTION C: Copy of Planning Board Preliminary Determination

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

NOTICE OF PRELIMINARY DETERMINATION
PLANNED UNIT DEVELOPMENT PROPOSAL

Case Number:	303
Location of Premises:	84 Wadsworth Street; 36 Memorial Drive; 226-254 Main Street; 65 Wadsworth Street; 16 Hayward Street; Hayward Street; 264 Main Street; 292 Main Street; 1 Hayward Street; 8, 26, 28, 34, 42 and 46 Carleton Street; Carleton Street; 310, 322 and 336 Main Street; 65 Carleton Street; 5 and 21 Deacon Street; 40 Ames Street.
Zoning:	Residence C-3B, PUD-5 Overlay District, Mixed Use Residential (MXR) Overlay District.
Applicant:	Massachusetts Institute of Technology 238 Main Street, Cambridge, MA, 02142
Owner:	Massachusetts Institute of Technology
Application Date:	July 28, 2015
Date of Public Hearing:	September 8, 2015
Date of Determination:	September 8, 2015
Summary of Proposal:	Development Proposal for Planned Unit Development (PUD) on five building sites. Includes demolition of one existing building and construction of approximately 1,376,000 square feet of Gross Floor Area for a combination of commercial office/laboratory, retail, dormitory and academic uses, including a below-grade accessory parking facility for existing and new development, new publicly accessible open space, and associated public improvements. This application for South of Main ("SoMa") development is made in conjunction with an application for North of Main ("NoMa") development, case PB #302.
Determination:	**APPROVED, with conditions and requests for modification.**

Copies of this Preliminary Determination and plans, if applicable, are on file with the Community Development Department and the City Clerk.

Authorized Representative of the Planning Board: Jeffrey C. Roberts

For further information concerning this Preliminary Determination, please contact Liza Paden at 617-349-4647, or lpaden@cambridgema.gov.

DOCUMENTS SUBMITTED

Application Documents and Supporting Material

1. Special Permit Application dated July 27, 2015 (received by the City on July 28, 2015) containing the following volumes: Planned Unit Development Special Permit Application (Development Proposal); Article 19 Project Review Special Permit Application; Graphics Package.

2. Slides from Presentation to Planning Board on September 8, 2015.

Other Documents

3. Letter to the Planning Board from East Cambridge Planning Team, dated June 16, 2015.

4. Memo to the Planning Board from Katherine F. Watkins, City Engineer, dated September 1, 2015.

5. Memo to the Planning Board from Community Development Department Staff, dated September 2, 2015.

6. Memo to the Planning Board from Joseph E. Barr, Director of Traffic, Parking and Transportation, dated September 2, 2015.

7. Memo to the Planning Board from Charles Sullivan, Executive Director, Cambridge Historical Commission, dated September 3, 2015.

8. Letter to the Planning Board from Nicholas Fandetti, dated September 7, 2015.

APPLICATION SUMMARY

The "SoMa" PUD application proposes redevelopment of five sites on the southern side of Main Street in Kendall Square. The sites are identified as "2" through "6" from east to west. Site "1" is included in a separate "NoMa" PUD application that has been assigned case PB #302.

- Site "2" proposes demolition of the existing Eastgate graduate student residential dormitory and construction of a new 200-foot tall building containing approximately 300,000 square feet of office uses and approximately 18,000 square feet of ground floor retail and active uses.

- Site "3" proposes construction of a 200-foot tall building on existing surface parking lots behind and attached to the existing Kendall ("Clocktower") Building at 238 Main Street containing approximately 280,000 square feet of research, laboratory and technical office space (R&D) use and approximately 27,000 square feet of new and repositioned retail and

active uses. Approximately 69,219 square feet of office space currently located in the Kendall Building will be retained.

- Site "4" proposes construction of a 300-foot tall building on existing surface parking lots behind and adjacent to the existing buildings at 264-292 Main Street, involving the demolition of some existing smaller-scale buildings on Carleton Street. The new building will contain approximately 330,000 square feet of graduate student dormitory housing (replacing and enlarging the Eastgate tower to be demolished) and a 9,000 square-foot child care facility as well as 28,000 square feet of new retail or repositioned retail and active uses in adjacent existing buildings. The adjacent existing buildings to be retained also include approximately 96,640 square feet of academic uses.

- Site "5" proposes construction of a 250-foot tall building on existing surface parking lots at 310-336 Main Street, involving the demolition of some smaller-scale buildings. The new building will contain approximately 360,000 square feet of office space, approximately 20,000 square feet of retail on the ground floor, and approximately 65,000 square feet of institutional space devoted to the MIT Museum.

- Site "6" proposes construction of a 43-foot tall, approximately 6,600 square-foot office building on an existing paved area in front of existing loading bays for MIT academic facilities.

Each new building would contain ground-floor retail and active uses on the Main Street building frontages in accordance with the PUD-5 requirements. Main building entrances are also located on Main Street. Some active ground-floor frontages and building entrances are also proposed on the southern sides of each building.

New publicly accessible open space of over two acres is proposed to be added to the existing eight acres of publicly accessible open space in the PUD-5 district. The majority of the new open space will be within a single contiguous space on the southern side of building sites 3 and 4, connected by a pedestrian path that also connects behind site 2 to Main Street.

Parking for all new development (809 net new spaces) and replacement parking for the surface lots being redeveloped (685 replacement spaces), along with loading facilities, are proposed to be provided in a combination of below-grade garages, one located beneath site 2 and another connected facility located beneath sites 3, 4 and 5.

The proposal also includes reconstruction of the MBTA Red Line headhouse on the south side of Main Street, aligned with Carlton Street.

FINDINGS

Based on a review of submitted Application materials and testimony given at the public hearing, the Board makes the following findings with reference to the criteria for preliminary approval of a Planned Unit Development Proposal as set forth in Article 12.000 of the Zoning Ordinance.

(1) The Development Proposal conforms with the General Development Controls set forth in Section 12.50, and the development controls set forth in the specific PUD district in which the project is located.

The Board finds that the Development Proposal is in conformance with the General Development Controls set forth in Section 12.50 and the development controls of the PUD-5 zoning district contained in Section 13.80 of the Zoning Ordinance. The Application Documents demonstrate compliance with the particular requirements set forth in the PUD-5 zoning adopted in 2013.

(2) The Development Proposal conforms with adopted policy plans or development guidelines for the portion of the city in which the PUD district is located.

The zoning for the PUD-5 district was developed in response to the recommendations of the Kendall Square Study, which establishes goals and objectives for future redevelopment as well as a set of Kendall Square Design Guidelines to inform the review of new projects. The Board finds that the Development Proposal builds upon the work that occurred through the planning and rezoning process taking place from 2010 to 2013. The Board also finds that the proposal is generally consistent with the development guidelines established for the area, with the understanding that details will be fleshed out as the review process continues.

(3) The Development Proposal provides benefits to the city that outweigh its adverse effects.

The Board finds that, on the whole, the proposed PUD will benefit the City by enabling redevelopment of underutilized parcels in the heart of a major economic, academic and creative center for Cambridge and the region, while also providing specific benefits to the City as outlined in the Kendall Square Study and incorporated into the PUD-5 zoning.

In making this determination the Planning Board shall consider the following:

(a) The quality of the site design, including integration of a variety of land uses, building types, and densities; preservation of natural features; compatibility with adjacent land uses; provision and type of open space; provision of other amenities designed to benefit the general public

The Development Proposal includes a positive arrangement of uses on the site, with a commercial zone and academic zone tied together with publicly accessible open space as the basic design and structuring element, as well as retail and cultural space to activate the ground floors, and parking and loading located below grade.

(b) Traffic flow and safety

The Development Proposal includes a thorough transportation analysis that looks comprehensively at all forms of transportation. The project is subject to requirements that will limit or mitigate traffic impacts and the project is designed to provide safe access, egress and circulation meeting City standards. However, the Board acknowledges that the impact of new development on public transportation, the MBTA Red Line in particular, are a major concern that will need to be discussed further when reviewing transportation impacts pursuant to Article 19.000.

(c) Adequacy of utilities and other public works

The Application Documents, testimony at the public hearing and memorandum from the City Engineer indicate that City requirements related to infrastructure are understood and will be met in the proposed new development.

(d) Impact on existing public facilities within the city

The Development Proposal is not expected to result in any negative impact on existing public facilities. The proposal includes reconstruction of the MBTA headhouse and improvements along Main Street, the details of which will be investigated in further detail through the review process.

(e) Potential fiscal impacts

The Development Proposal is expected to result in positive fiscal impacts for the City, including increased tax revenue and contributions to public improvements and mitigation as required in the zoning for the district.

DETERMINATION

Section 12.35.2 of the Zoning Ordinance requires that the Planning Board make a preliminary determination on a Development Proposal prior to holding a hearing to consider granting a special permit for a PUD Final Development Plan. The Planning Board may make a preliminary approval, potentially with conditions and subject to additional review and final approval of a special permit at a subsequent public hearing, or deny the application.

It is the Planning Board's Determination to **APPROVE** the Development Proposal and to authorize the Applicant to prepare a Final Development Plan to be submitted to the Board and reviewed at a future public hearing for possible granting of a special permit.

The Final Development Plan must respond to the specific comments set forth in memoranda provided to the Planning Board by the Community Development Department, Traffic, Parking and Transportation Department, Department of Public Works and Historical Commission, attached to this Preliminary Determination. The Board offers its comments on the following topics in addition to the comments set forth by City staff.

The comments provided in this Preliminary Determination are shared with those in the Board's Preliminary Determination regarding the "NoMa" PUD Proposal (PB #302).

Site Planning and Design

- Develop a more coordinated pedestrian and bicycle circulation plan between "SoMa" and "NoMa" and with the broader Kendall Square neighborhood. Consider a more direct connection from "SoMa" to "NoMa" area.
- Provide clearer differentiation between public and private streets, and how each street will function, to understand effectiveness of proposed open space connectivity.
- Explore opportunities to extend or connect the public realm and open space to existing open space areas such as Memorial Drive (including the median and river side), Point Park, and the open space around the Sloan School.
- Consider connections between Point Park and Wadsworth Street (recommended in Connect Kendall Square plan).
- Provide detail on the design of Wadsworth Street, which is an important pedestrian/bicycle connection, but also provides double-sided loading/service access in the development proposal.
- Provide detail on the separation between Building Site 2 and E53, which seems to create a "pinch point."
- Provide additional details on underground garage layout and connections between buildings, with a particular focus on how the single loading ramp will service "SoMa" buildings 3, 4, and 5. Discuss in context of other nearby MIT facilities, including "NoMa" proposal.
- Discuss how pedestrian circulation will occur from parking and bicycle parking facilities into building entrances. Consider how flows of people could animate the open space.
- Provide a long view of open space at back of buildings.

Building Concept Design

- The proposal's architectural character, building massing, and relationship to the public realm was a concern to several Board members. Consider how the proposed urban design approach responds to the urban context and creates a high-quality urban environment, and contributes to the character and vitality of Kendall Square.
- Cantilevered spaces are a concern. Spaces with building overhangs are often unpleasant, and it would be helpful to provide examples of successful spaces.
- Discuss ways in which the buildings are trying to look different and ways in which they are similar.
- Consider the scale and design of new buildings in the context of existing buildings, including the historic buildings being preserved and the former fire station (Kendall Hotel).
- Consider use of color in building designs.
- Provide a view of buildings from the Longfellow Bridge.
- Provide additional cross-sectional views of buildings along Main Street to provide a sense of scale.
- Provide a rendering showing skyline changes from Boston.
- Show tops of buildings (including mechanical systems and screening) in images and renderings. Consider strategies to minimize exposure of mechanical systems.

Transportation

- Red Line issues are a concern for several Board members. Discuss further in the Final Development Plan and Project Review phase.
- Provide additional details for the proposed T head-house relocation with a realistic depiction of what improvements are proposed.
- Consider improvements to other T head-houses and access on Main St.

Sustainability

- Review how the proposal will respond to Net Zero efforts that will soon be implemented by the city.
- Discuss how energy performance goals will be met with such a large use of glass in building facades.

Open Space and Retail Programming

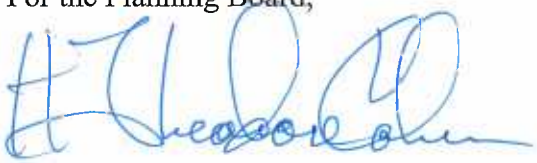
- Provide an operations and programming plan to ensure that open space and retail programs will cater to diverse age groups and visitors.

Housing

- Discuss affordability of the proposed residential units and consider including middle income residential units to serve a diverse population and workforce needs.
- Consider including three-bedroom units.

Voting in the affirmative to approve the Development Proposal were Planning Board Members Louis Bacci, Jr., H Theodore Cohen, Steven Cohen, Mary Flynn, Hugh Russell, and Associate Members Ahmed Nur and Thacher Tiffany, constituting at least two thirds of the members of the Board.

For the Planning Board,



H Theodore Cohen, Chair.

A copy of this Preliminary Determination PB #303 shall be filed with the Office of the City Clerk.

SECTION D: Responses to Requests for Additional Information

Each request for modifications or additional information contained in the Planning Board's Notice of Preliminary Determination and staff memo is addressed below. Please refer to *MIT Kendall Square Initiative, Volume II Technical Studies and Information (SoMa Project and NoMa Project), (November 5, 2015)* for referenced Technical Studies and *MIT Kendall Square Initiative, SoMa Project, Volume III Graphic Materials* (November 5, 2015) for referenced Figures.

I. Site Planning and Design

Preliminary Determination Comments

1. ***Develop a more coordinated pedestrian and bicycle circulation plan between "SoMa" and "NoMa" and with the broader Kendall Square neighborhood. Consider a more direct connection from "SoMa" to "NoMa" area.***

   Integrating the project into the existing and planned Cambridge bike network and facilitating pedestrian and bicycle connections between NoMa and SoMa and from the project to the broader neighborhood has been a priority for the project team.

   North-South connections across Main Street: The project is aligned with the new pedestrian crossing of Main Street between the Sloan School and the Red Cross Building. The project design enhances the value of the crossing on both sides of the street. On the north side, the crossing will integrate into a new 20-foot wide pedestrian walkway between the new Building 1 and the Red Cross Building that provides new connection from Main Street (and points south of it) to the Broad Canal waterfront, the restaurants and amenities along Broad Canal Way and the East Cambridge neighborhood beyond. To the south, the landscape at the Sloan School/Building 2 site is being redesigned to connect seamlessly and rationally from the new crosswalk around the exhaust vents from the Sloan garage, to connect points on the north side of Main Street to the Sloan School, the Wadsworth Street corridor to the River, the new open space at MIT's East Campus and Institute buildings beyond. Please see ***Figure B9 Sloan Pedestrian Connections Detail Plan*** for detail.

   The proposed project also includes logical connections from Point Park to Wadsworth Street. The proponent has participated in the Connect Kendall initiative and will continue to work with the City and the owners of the land – the Cambridge Redevelopment Authority and Boston Properties – to ensure that the project is consistent with plans for Point Park that arise out of that initiative.

   As part of the Kendall Square Initiative, MIT is investing in roadway improvements within the PUD that will facilitate pedestrian access between Main Street and the significant open space proposed. These include alternative paving on Carleton Street, Hayward Street and a section of Wadsworth Street that favor pedestrians and cyclists. The character of each of these streets as proposed is described below.

   Wadsworth Street: Wadsworth Street is owned by the City of Cambridge. MIT will reconstruct Wadsworth Street to favor pedestrians and create an improved link to the Charles River. The sidewalks on the west side of Wadsworth Street will be reconstructed to increase from 6.5 feet in width to 8 feet in width to accommodate tree plantings and appropriate width for comfortable walking along 238 Main Street and Building 3. On the east side, Building 2 is

set back to allow for an 8 foot sidewalk plus over 18 feet of spill out space which combine to accommodate a double row of trees and outdoor seating spilling out of the retail that wraps the corner. In conjunction with the renovation of Building E52, MIT recently repaved the segment of Wadsworth Street south of Amherst Street. In this section, the profile of the street will be retained with a 6.5 foot sidewalk on the east side and 13 foot sidewalk on the west side. Alternative paving on a crosswalk just north of Amherst Street will serve to protect pedestrians and bicyclists as they cross from the East Campus open space to the Sloan building. MIT is testing the feasibility of raising this crosswalk for improved pedestrian safety. As discussed throughout the zoning process, Wadsworth Street has a high value as a pedestrian connection between East Cambridge and the Charles River and the street profile has been designed to provide wider sidewalks where possible. We anticipate that this will be a low volume road and have included sharrows (shared lane bicycle markings) in the street design. Please see ***Figure B38 Wadsworth Street 1 Site Section H***, ***Figure B39 Wadsworth Street 2 Site Section I***, and ***Figure B40 Wadsworth Street Improvements Detail Plan***.

Hayward Street: Hayward Street is owned by the City of Cambridge but is characterized as a "discontinued way." MIT intends to completely reconstruct this street. As shown on ***Figure B4 Shared Streets and Crossings***, the first segment off of Main Street includes the access to the below grade loading docks for the project and will be accessible to trucks. This segment will include pavers at the entrance to Hayward to signal the transition to the project area. South of the loading dock entry the pavement will be changed to pavers and no vehicular through access will be allowed through the open space (except for emergency vehicles). At the south end of Hayward Street two way loading access to the existing E40 building will also be retained. Please see ***Figure B35 Hayward Street 1 Site Section F, Figure B36 Hayward Street 2 Site Section G, and Figure B37 Hayward Street Improvements Detail Plan***.

Carleton Street: Carleton Street is owned by the City of Cambridge but is characterized as a "discontinued way." MIT will reconstruct Carleton Street as a shared street. Vehicles (except emergency vehicles) will be prohibited from the northern segment at Main Street to provide a complete auto-free zone around the MBTA headhouse. Limited vehicular access will be maintained from Deacon Street to Amherst Street to accommodate activities related to MIT uses and the Kendall Hotel. Carleton Street will be treated with pavers to signal preference to pedestrians and slow vehicle movements. Please see ***Figure B34 Carleton Street/ Gateway Site Section E.*** Views of the paving treatments on Carleton Street are included in ***Open Space-Proposed Renderings A and B (Figures B42 and B44).***

Ames Street: MIT has an interest in the functionality of Ames Street between Main Street and Memorial Drive as it is traversed by a heavily used pedestrian connection from Main Campus to the existing East Campus Buildings (Media Lab, Medical, MBTA station) and the proposed PUD-5 buildings beyond. This segment of Ames Street also includes approximately 65 heavily utilized on-street parking spaces serving residents and visitors to MIT and other nearby companies, several loading zones and a bus stop, as well as a significant number of mature trees located fairly close to the right of way on its west side. The City has recognized Ames Street as an important bicycle connection between Main Street and Memorial Drive and MIT will continue to work with the City on the best way to accommodate bicycles while balancing pedestrian movements, on-street parking, street trees, and public realm needs.

The SoMa Project will further accommodate bicyclists by adding 154 short term bicycle parking spaces distributed throughout the new public realm and 504 long term bicycle parking space in the parking garages.

The specifics of how the proposed pedestrian improvements will integrate with the existing pedestrian paths and crossings is shown on ***Figures B6 – B9***. The specifics of how the on street bicycle improvements work with the existing and planned network are shown on ***Figure B10 District Bicycle Facilities and Connections***. The functionality of each street is shown on ***Figure B4 Shared Streets & Crossings***.

2. *Provide clearer differentiation between public and private streets, and how each street will function, to understand effectiveness of proposed open space connectivity.*

Figure B3 Street Ownership depicts the ownership of each of the streets directly abutting the SoMa district. ***Figure B4 Shared Streets and Crossings*** depicts the proposed functionality of the SoMa streets.

3. *Explore opportunities to extend or connect the public realm and open space to existing open space areas such as Memorial Drive (including the median and river side), Point Park, and the open space around the Sloan School.*

The proposed open space crosses Wadsworth Street to the Sloan School/Building 2 at a crosswalk making a direct, pedestrian-focused East-West Connection all of the way from E52 to Building 2 across Main to Building 1 and to East Cambridge beyond. A detailed plan showing the connections to the Sloan/Building 2 area from both Building 1 and Building 3 is shown on ***Figure B9 Sloan Pedestrian Connections***.

The project is making improvements to Wadsworth Street to provide wider sidewalks and accommodate more bicycles in order to strengthen the connection between Main Street and Memorial Drive. There is a signal coordinated crosswalk at Memorial Drive at Wadsworth that provides safe access to the median and to the Charles River.

The existing and new pedestrian open space connections are shown on ***Figure B5 Proposed Open Space Connections***.

Please see below for a discussion of connections with Point Park.

4. *Consider connections between Point Park and Wadsworth Street (recommended in Connect Kendall Square plan).*

MIT's Development Plan achieves many of the connectivity goals of the Connect Kendall plan including strengthening connections to the Charles River by activating both sides of Broad Canal Way and incorporating a bio-retention feature at Site 1 and strengthening the pedestrian experience along Wadsworth Street. In addition the MIT plan connects the north and south sides of Main/Broadway by meeting the new crosswalk between Sloan and Red Cross with a robust pedestrian network on either side.

MIT's proposed streetscape design is attentive to how the proposed Wadsworth Street sidewalks meet the existing crosswalks to Point Park. Nothing proposed in this Development Plan precludes implementation of improved connections between Point Park and Wadsworth Street through Connect Kendall or other initiatives and MIT looks forward to the continued community process associated with Point Park.

5. *Provide detail on the design of Wadsworth Street, which is an important pedestrian/bicycle connection, but also provides double-sided loading/service access in the development proposal.*

As described above, Wadsworth Street has been viewed in planning as an important pedestrian connection between Main Street and the Charles River. The team was challenged to find an ideal location for service access for Building 2 given that all four sides of the building are meant to be active. Further, the drive between Wadsworth Street and Main Street will be an important pedestrian connector and, while it will be treated as a shared street to accommodate the existing Sloan service, adding cars to that drive is not preferred. Therefore, great care has been taken to develop a plan for Wadsworth Street that provides the optimal pedestrian experience. MIT will reconstruct the existing sidewalks at the west side to make them a more generous width of 8-feet. On the east side, Building 2 has been located to ensure an 8-foot sidewalk plus an 18-foot active edge on that corner that can be planted with a double row of trees and accommodate pedestrians as well as spill out activity from Building 2.

Please see *Figure B38 Wadsworth Street 1 Site Section H*, *Figure B39 Wadsworth Street 2 Site Section I*, *Figure B40 Wadsworth Street Improvements Detail Plan* and *Figure B9 Sloan Pedestrian Connections.*

6. *Provide detail on the separation between Building Site 2 and E53, which seems to create a "pinch point."*

The distance at the narrowest point of separation between Building 2 and E53 is approximately 46 feet. The southeast corner of Building 2 will be an active edge with pedestrian entries at both the east and south façades. The reconstructed shared driveway providing limited vehicle access between Wadsworth and Main will be approximately 21-feet wide. The drive has been located toward E53 as that building has a blank façade on the first floor in favor of providing a more generous pedestrian zone along Building 2 of approximately 25 feet. As the design of this building progresses, MIT will continue to explore opportunities to open up this area.

Please see *Figure B9 Sloan Pedestrian Connections*

7. *Provide additional details on underground garage layout and connections between buildings, with a particular focus on how the single loading dock will service all "SoMa" buildings. Discuss in context of other nearby MIT facilities, including "NoMa" proposal.*

Based on a very conservative estimate that does not take into account shared daily truck trips, the transportation consultant estimated that Building 1 will generate 97 truck trips, Building 2 will generate 39 truck trips, Buildings 3-5 (with the shared access ramp) will generate 202 truck trips, and Building 6 will generate 5 truck trips. It is expected that some service and delivery trips will accommodate multiple buildings and therefore reduce the number of total site generated truck trips. Existing trips to the site and surrounding MIT buildings could also combine services and deliveries with the Project, also reducing individual truck trips to the site.

Trucks will enter the loading area at Building 4 off of Hayward Street. Parking garage functionality with respect to loading, including separation of loading, parking and pedestrian activities, is shown on ***Figure E87 SoMa Garage Level P1 – Parking and Loading***.

8. ***Discuss how pedestrian circulation will occur from parking and bicycle parking facilities into building entrances. Consider how flows of people could animate the open space.***

The location of the parking garage access and egress for pedestrians and bicyclists will contribute to the animation of the open space. The below grade parking under the open space includes pedestrian and bike egress points at Building 3 and Building 4 as well as into the open space near the proposed surface parking lot. The majority of the spaces are located near the elevators leading to Building 4 (which is graduate student housing) and the open space and the academic parkers and workers in Buildings 5 and 6 will necessarily have to traverse the open space to get to their destinations.

Figure B7 Proposed Pedestrian and Garage Flows illustrates the location of the garage access/egress and illustrates potential pedestrian flows.

9. ***Provide a long view of open space at back of buildings.***

In addition to the single view of the open space shown at the September 8, 2015 Planning Board presentation, the Final Development Plan includes a number of images, including long views, that illustrate the open space at the south side of the buildings from a number of different angles. These are ***Figures B41 – B48***.

<u>Additional Comments from City of Cambridge Departments</u>

a. ***More could be done to enable the shared street design to intersect with Main Street, so that the pedestrian connections are not perceived to be primarily loading or parking access roads. Proposed street and sidewalk improvements should also be coordinated with the redesign process that the City will be undertaking for Point Park.***

The intent of the north-south street redesign is to have it be truly shared and to intersect with the pedestrian flow on Main Street. The team continues to evaluate the opportunity to extend pavers to include the stretch of Hayward Street that is open to loading. However, there is concern about the durability of pavers in that section given the expectation of truck

utilization. Additional pavers on Wadsworth Street are not considered appropriate due to its function as a through City street.

MIT's proposed streetscape design is attentive to how the proposed Wadsworth Street sidewalks meet the existing crosswalks to Point Park. Nothing proposed in this Development Plan precludes implementation of improved connections between Point Park and Wadsworth Street through Connect Kendall or other initiatives and MIT looks forward to the continued community process associated with Point Park.

Please see ***Figure B37 Hayward Street Improvements Detail Plan*** and ***Figure B40 Wadsworth Street Improvements Detail Plan***.

b. Graphic materials show new paving material on Wadsworth Street, between Amherst Street and Main Street. Additional information should be provided to explain what is proposed.

Wadsworth Street between Main Street and Memorial Drive will continue to accommodate two-way traffic on asphalt paving. However MIT is proposing to construct a raised crosswalk to facilitate pedestrian connection between Sites 2 and 3. In addition, similar to Hayward Street, MIT is also proposing to construct a raised crosswalk at the intersection of Wadsworth Street and Main Street. Please see ***Figure B40 Wadsworth Street Improvements Detail Plan*** a description of materials.

c. Consider design options for Hayward Street, such as a shared street, for all users including trucks, pedestrians, and cyclists.

Hayward Street is intended to be a shared street for all users at the north and south ends; the middle section will be restricted to emergency vehicles only. The intent of the north-south street redesign is to have them be truly shared and to intersect with the pedestrian flow on Main Street.

The team continues to evaluate the opportunity to extend pavers to include the stretch of Hayward Street that is open to loading. However, there is concern about the durability of pavers in that section given the expectation of truck utilization.

Please see ***Figure B35 Hayward Street 1 Site Section F***, ***Figure B36 Hayward Street 2 Site Section G***, and ***Figure B37 Hayward Street Improvements Detail Plan***.

d. Access to the below grade parking off of Amherst Street could be better integrated into the design of open space, and better screened or buffered where appropriate.

MIT's intends to minimize the visibility of access to the below grade parking from Hayward Street and from the open space. ***Figure B8 Amherst Street Surface Parking (Site R)*** shows the detailed plan of landscape buffering. MIT and its landscape designers will continue to focus on this area as design progresses to ensure that the entry is screened appropriately.

e. Special attention should be paid to the location of parking entrances, exits and vents in relation to surface uses and activities, and the depth above the central parking structure that is needed to accommodate trees and plantings.

Garage intake and exhaust systems have been carefully located in each building to minimize impact to pedestrians and adjacent uses. Locations are shown on ***Figure E35 Garage Intake and Exhaust***.

The garage exhaust will be in shafts from the lowest garage level to a minimum of 9 feet above the adjacent sidewalk. Louvers will be integrated into the architectural materials maintaining the same finish and rhythm as the adjacent architecture. The garage exhaust will have sound attenuation in order to meet the sound requirements.

The garage intake will either be located in ground level areaways covered by grating (high heel friendly) or in louvers at the buildings. The intakes are not attached to fans and will not require sound attenuation.

The team has also carefully considered the integration of the below grade garage and landscape design. The site will be regraded and, as shown in ***Figure B22 Carleton Street*** and ***Figure B23 Hayward Street***, there will be a minimum of 3 feet depth of planting soil to accommodate the variety of trees shown in the Final Development Plan.

f. Further detailed review of the locations for short-term bicycle parking will be needed.

MIT is providing over 1,034 bicycle parking spaces as part of the proposed Kendall Square Initiative, including 208 spaces designed for short-term use. These spaces have been carefully located to balance the need for easy access for cyclists and adequate pathways for pedestrians. MIT looks forward to working with staff as they continue to review the detailed short term bicycle parking locations presented in ***Bike Parking Figures B11 – B12***.

g. Hubway Station planning should be occurring at this stage so that it is well integrated with the site planning and access. Hubway has become an important piece of the public realm especially in Kendall Square. TIS found that all Hubway bikes were used at 6:00 pm at Binney/Sixth and Kendall Street. A minimum of one new Hubway Station at the Broad Canal and another large station or two in other areas are needed.

Hubway stations are very well utilized in Kendall Square. There are currently 4 Hubway stations within the PUD-5 boundary or in close proximity. The project will add two additional MIT-sponsored Hubway stations, one on Broad Canal Way, as requested by the City, and the other adjacent to Building 2. Please see ***Figure B11 SoMa Bike Parking***.

II. Building Concept Design

Preliminary Determination Comments

1. *The proposal's architectural character, building massing, and relationship to the public realm was a concern to several Board members. Consider how the proposed urban design approach responds to the urban context and creates a high-quality urban environment, and contributes to the character and vitality of Kendall Square.*

The urban design intent is to create a family of buildings that work harmoniously together while allowing for individual character and definition. This is achieved through the use of simple volumes for each building with chamfered bases where needed to create oblique visual connections but without compromising the legibility of the volumes. The staggered massing that is produced out of cantilevered volumes on top in each block and paired alignments between both lower and upper volumes across blocks produces a tapering effect from Building 2 to Building 5 while respecting the autonomy of each block. The cantilevers create enticing covered outdoor areas.

In plan, the upper volumes of buildings 4 and 5 are more closely aligned on Main Street, while Buildings 2 and 3 are stepped back to define a wider space around Kendall Square, and to frame and celebrate the historic clock tower in the Kendall Building.

The orientation of Building 4 and the rotated upper section of Building 3 allow more light and air to Main Street and also minimize shadows.

In elevation, the alignment of the historical buildings as a base is respected and extended into Buildings 2 and 5. All buildings have a base that is similar in height to the key historic buildings on Main Street and distinguished volumetrically from the top volume.

In elevation as well, the tops of the towers are aligned in groups in order to lock them to the skyline of both the campus and Kendall Square. The residential towers rise above the others with similar volumes and north-south orientations. The upper volumes of Buildings 2 and 3 work together with One Broadway to create a lower trio within the bookends of Buildings 1 and 4, framing the important Main Street, Broadway, and Third Street intersection.

The existing street hierarchy is respected with a special emphasis on the connections to the river. By wrapping retail and active uses around the secondary street, the designs encourage pedestrian activity into the publicly-accessible open spaces within the development and to the Broad Canal and Charles River.

Up close, the individual character of each building becomes apparent. Although the façades of several of the buildings are glass and curtain wall, each building is quite unique in its use of color, texture, fins, type of glass (e.g., clear, fritted, or spandrel), and type of metal panel.

See ***Figures D36 – D80*** showing each building's consistency with the K2C2 Design Guidelines. See ***D23 – D31*** for details on the façade materials for each building.

2. *Cantilevered spaces are a concern. Spaces with building overhangs are often unpleasant, and it would be helpful to provide examples of successful spaces.*

   The buildings with cantilevers have been carefully designed to ensure that the spaces below them are active, vibrant zones that introduce a new and exciting element to the City's urban fabric. The dimension from the cantilevered volumes to grade ranges from 78 feet to 92 feet in Buildings 2 and 3 (***Figures D13 and D19***), more than enough to allow ample light and air to the spaces below. The spaces below present an alternative outdoor experience when protection from the sun or rain is desired.

   The spaces will work in tandem with retail and adjacent public realm to form gathering spaces and activity zones. As the design of the buildings progress, MIT will ensure that the underside of the cantilevers are designed to enhance the public realm experience through the careful use of materials and the potential introduction of art. We are excited to engage our various teams to coordinate to activate these exciting outdoor spaces.

   See ***Figures D11-D22*** for examples of very successful cantilevered designs around the world.

3. *Discuss ways in which the buildings are trying to look different and ways in which they are similar.*

   See discussion in #1 above.

4. *Consider the scale and design of new buildings in the context of existing buildings, including the historic buildings being preserved and the former fire station (Kendall Hotel).*

   Each building has been carefully designed to work within the context of adjacent buildings, with a particular focus on the historic buildings on or near every site.

5. *Consider use of color in building designs.*

   Each building incorporates color in key locations in the design. For example, in Building 1, the design includes wood façade elements to add a warmer finish at the base and help define the retail/public realm. In Building 4, the precast concrete panels will include a tint to complement the connected historic buildings, while the anodized bronze fins and metal panels add a warmer tone to the base on the south side of the building. In Building 5 the proposed material for the podium is a pleated metal panel with a bronze anodized chroma and brushed finish that reflect and diffuse the adjacent built context.

   See ***Figures D23 – D31*** and ***Figures E1 – E80*** for details on how color is being applied.

6. *Provide a view of buildings from the Longfellow Bridge.*

   The Final Development Plan includes an additional view from the Longfellow Bridge (***Figures D7 – D8***).

7. *Provide additional cross-sectional views of buildings along Main Street to provide a sense of scale.*

   The Final Development Plan includes a number of cross sectional views along Main Street to provide a sense of scale. These include ***Figures B32, B33 and D35***.

8. *Provide a rendering showing skyline changes from Boston.*

   The Final Development Plan includes a number of long views showing skyline changes from Boston. These include ***Figures D3 - D4*** from Main Street near Lafayette Square, ***Figures D5 – D6*** from Third Street, ***Figures D7 – D8*** from the Longfellow Bridge, and ***Figures D9 – D10*** from the Esplanade/Storrow Lagoon.

9. *Show tops of buildings (including mechanical systems and screening) in images and renderings. Consider strategies to minimize exposure of mechanical systems.*

   All building materials in the Final Development Plan show the tops of buildings. Only Building 3, which is designed as a research and development building, has mechanical systems that are visible from a distance. This equipment is required by code to be above the roof line. Like many buildings in Cambridge, the presence of these stacks signal and celebrate the use within the building. The stacks are carefully placed on the roof to minimize visibility. The Final Development Plan includes views of Building 2 with the stacks visible.

<u>Additional Comments from City of Cambridge Departments</u>

a. *Provide a long streetscape elevation, which shows the entire collection of SoMa buildings in context, as well as a longitudinal site section, to gain a better understanding of the relationship between buildings.*

   The Final Development Plan includes long streetscape elevations of all of the SoMa buildings from their north sides and their south sides. These are ***Figures D1 and D2***.

b. *Provide study of shadow and wind impacts – especially on public realm (streets, sidewalks, open space, plazas, parks) – shadow study should extend beyond the hours previously shown (e.g. hourly 9-6) – and graphics should highlight key existing and proposed public space.*

   The SoMa buildings are sited to activate existing parking lots and are consistent with the shadow impacts associated with a two sided urban street. The net new shadow impact is

mitigated by the fact that Buildings 3 and 4 are set behind the existing Kendall Building, Hammett Building and Suffolk Engraving Building, the shadow cast by existing buildings in Kendall Square, and the thoughtful massing and orientation of the proposed buildings. The impacts on new shadows are further mitigated by the addition of publicly-accessible open space on the south sides of the buildings.

MIT has conducted shadow studies to evaluate the shadow impacts of the proposed buildings on the public realm including the sidewalks on the north and south sides of Main Street, the sidewalks in front of One Broadway, Point Park, the new open space to be created by the proposed project and the sidewalks of Wadsworth Street, Hayward Street and Carleton Street. The complete shadow study is included in ***Volume II, Section B***.

MIT conducted an initial pedestrian wind study to assess wind comfort conditions on and around the development and recommend mitigation measures if necessary. The complete report was included in Appendix B of the Preliminary Development Plan.

MIT has subsequently conducted additional wind studies with a detailed physical model of the overall development area to further inform the designs of each building. Using this initial information, design teams have worked to address areas at grade that are projected to experience less desirable wind conditions at various times during the year. Working together with the landscape architect, each design team has made adjustments to the project design to help improve wind conditions. Examples include the introduction of wind screens and canopies at key locations, the adjustment of building overhangs, and the placement of trees.

The final wind analysis, included in ***Volume II, Section C***, shows a significant improvement in overall wind conditions in all challenging locations throughout the project.

c. ***Along Main Street, there should be more of an emphasis on creating a strong pedestrian-scaled street wall, which limits the sense of height at street level. To this end, at the Final Development Plan stage it would be worthwhile to review.***

Creating a strong pedestrian scaled street wall throughout the PUD and particularly on Main Street is important to achieving the level of public realm activity desired. The ground floors of each of the buildings are distinct in use as more than 75% of the primary façades contain active uses. In the new buildings architecture reflects this use through the design of unique and transparent storefronts in the first story height zone. Much of the Main Street frontage contains existing historic buildings. In these buildings the ground floors will be lowered to accommodate active uses that will signal a change from the upper story architecture. As design develops the ground floors will be further animated with signage and projections to support the uses.

Ground floor elevations for Main Street are included in the Final Development Plan as ***Figures C13 – C17***.

d. Types of retail activities shown in the application materials are small-scale, have small frontages, and very unique storefront designs. Provide more information on how retail uses will be accommodated and given an individual identity within the strong architecture of each of the buildings.

MIT is hiring an in-house retail expert to ensure that the retail spaces are designed to meet the needs of the range of retailers we hope to attract. To ensure that retailers have clear individual identities, the façades of the retail spaces are being designed with flexible storefront systems that will accommodate a range of needs, including operable windows and doors and adequate provisions for customized signage for improved individual identity. In the interior, careful consideration is being given to the depth and configuration of the retail spaces to ensure that they work well for retail uses, and the design teams are taking appropriate measures to ensure that kitchen exhaust and waste handling are accommodated. During the public zoning process the community, Planning Board and City officials weighed in heavily on the importance of smaller, diverse, local and independent retail. The zoning includes many requirements that ensure that this is a priority and that continued input is required.

e. The folded façades of Buildings 1 and 5 help mitigate bulk, but perhaps could be further exaggerated to help break up the long façades. Consider further fragmenting the massing, enhancing the nature of angled planes, and more strongly expressing the different functions of buildings through detailed design.

Buildings are being designed to reduce perceived mass. In Building 1, the gradual tapering of the upper portions of the building help break up the façade, and the sculpted massing along the north/south axis will generate a fractured perception of the articulated glass envelope. As the design of the building develops, the team will continue to explore additional ways to enhance the angled planes and more strongly express the different functions of the building. In Building 5, the design team has added bronzed anodized fins of varied length, which, together with the reflective low E and acid etch glass, accentuate the chroma at oblique views, provide sustainable shading devices, and break down the massing.

See ***Figures E56 – E72*** for detail on Building 5. See separate NoMa submission (PB#302) for detail on Building 1.

f. Provide more detailed elevations with all external materials annotated, with special attention to the ground floor façades, the proposed retail experience, and the street presence of the museum.

The façades of all the buildings on the ground floor are being designed to be as open and transparent as possible. Each building maximizes clear glass fenestration on the retail edges, clearly distinguishes this public realm zone from the podiums and towers above. See ***Figures D23 – D31*** for detailed elevations showing the proposed materials for each building.

g. The interface between the academic housing and outdoor space (Building 4) and the plaza requires further review regarding the type of screening/enclosure proposed along this important edge.

The base of the building is conceived as a civic trellis. The mesh at the level 2 child care play area is an infrastructure for vegetation, while also providing a monumental window looking out from the play area and E38 onto the open space below (See ***Figure E51***).

III. Transportation

Preliminary Determination Comments

1. Red Line issues are a concern for several Board members. Discuss further in the Final Development Plan and Project Review phase.

MIT is pleased to have advanced the collective understanding of the Red Line operations through a detailed transit study as part of the Kendall Square TIS. It is clear that the Red Line is in need of a thorough analysis and MIT has worked with the Kendall Square Association in advocating for improvements. The detailed analysis showed that observed overcapacity on specific trains was caused by fewer trains operating during the PM peak hour due to system issues. Based on ridership observations, existing and new PM Project riders would be accommodated if the MBTA operated the scheduled number of peak hour trains on a regular schedule. As described the PUD-5 zoning requires cash contributions to the City. In addition, MIT is prepared to consider in-kind contributions and financial support to advance studies related to Red Line improvements. MIT is also interested in studying Kendall Square commuters who may be better served by improved shuttle connections to the nearby Green and Orange lines.

2. Provide additional details for the proposed T head-house relocation with a realistic depiction of what improvements are proposed.

MIT's Kendall Square Initiative design team has conducted extensive technical feasibility and design analysis associated with the opportunity for a new headhouse for the inbound Red Line at Carleton Street. MIT has evaluated structural engineering, constructability, operations and building code issues. The images shown on ***Figures E81 – E86*** of the Final Development Plan accurately show the potential location of a new headhouse and how it would interface with the existing platforms and tunnels below grade. MIT favors a translucent and modern design similar to what is shown in because it will act as a design feature in the plaza. However, final design would occur in collaboration with the City and State. Ultimately the MBTA must approve the concept of a new station, including its location and design, and MIT has begun discussions with the agency.

Replacing the headhouse in its current location would require the closure of the inbound service during the entire construction period due to the high volume of riders and the limited capacity of the east exit. The location for the new headhouse was initially chosen in order to maintain functionality of the MBTA station during construction. However, MIT also believes

that setting the headhouse back to the location proposed provides an opportunity for a gathering plaza right along Main Street with sufficient space to accommodate the larger number of subway users exiting the station as shown in ***Figure C6 – C7***. The angled design of Building 5 combined with appropriate signage would provide appropriate visibility and wayfinding for the station.

Consider improvements to other T head-houses and access on Main St.

MIT will discuss the need for cosmetic upgrades to the other inbound headhouse with the MBTA.

Additional Comments from City of Cambridge Departments

a. *If the MBTA Headhouse is reconstructed, a public bicycle station should be included in the design. Another potential location for a public bicycle station can be at Building 6.*

As shown on ***Figures C6 and C7***, the public realm area around the MBTA station at Carleton Street must accommodate a number of activation activities in a relatively constrained space. Activities include unimpeded pedestrian flow for MBTA users and spill out space from the restaurants and other active uses along Carleton. To achieve the goal of activating a "missing tooth" along Main Street, Building 6 is designed to fill out as much of the loading dock area as possible while continuing to accommodate MIT's necessary loading needs. Bike station components such as showers are accommodated throughout the proposed buildings for the building users. Publicly accessible fix-it stations will be located in ground floor active use space. MIT will continue to discuss the possibility of further bike station elements with the City and assess strategies for integrating these amenities into the development.

The SoMa and NoMa projects will add 208 short term bicycle parking spaces consistent with the Cambridge Bicycle Ordinance and is proposing two Hubway facilities in conjunction with the proposed project. In addition, the projects will add 826 long term bicycle parking spaces in the parking garages. MIT will continue to review the quantity and location of short term parking spaces with staff in an attempt to balance open space, bike parking and pedestrian flow goals throughout the public realm.

Hubway stations are also very well utilized in Kendall Square. There are currently 4 Hubway stations within or near the PUD-5 district and the project will add two additional MIT-sponsored Hubway stations, one at Building 1 as requested and another at Building 2 as shown on ***Figure B11***.

IV. Sustainability

A. Preliminary Determination Comments

1. ***Review how the proposal will respond to Net Zero efforts that will soon be implemented by the city. Discuss whether the buildings will meet the Net Zero Action Plan objective that new buildings target a 22 percent energy performance improvement over ASHRAE 90.1-2010.***

The City's Net Zero target for energy performance for new construction references a 22% improvement on the current baseline (i.e. LEED v3). The Kendall Square development is pursuing a more stringent version of LEED, LEED v4, and will achieve an equivalent 25-35% improvement on the current baseline.

Sustainability is discussed in detail in ***Section VIII, Sustainability Narrative*** of the Final Development Plan.

2. ***Discuss how energy performance goals will be met with such a large use of glass in building façades.***

Reductions in energy consumption can be achieved in different ways, depending on building program and loads and respective major drivers of energy consumption.

Sustainable buildings must weigh factors such as daylight availability, reduced electric lighting consumption, and preservation of views and connection to the outdoors for occupant health with building solar gains or heat losses through the façade. Likewise, not all buildings are driven primarily by façade performance. All buildings in the Kendall Square development will be specifying high performance glazing, including but not limited to low-e coatings, frit coverage, and well insulated double or triple pane glazing, in conjunction with shading devices, operable windows for natural ventilation, and opaque wall areas. All buildings will utilize numerous cutting-edge sustainable practices and technology in building design and operation.

In addition, buildings will achieve the most significant energy reductions through efficient HVAC equipment and conditioning systems utilizing heat recovery and heat exchange, installed equipment power density reductions (such as office and lab equipment reductions and/or efficient residential appliances), advanced lighting and controls, and possible district energy connections. High performance design for energy efficiency in Kendall Square takes a holistic look at each building's specific needs to determine the most effective energy efficiency measures while meeting other programmatic or sustainability goals.

B. Additional Comments from City of Cambridge Departments

a) ***Include more discussion of opportunities for on-site and district energy, such as steam connections (as described in Section 13.89.4 of the PUD-5 zoning).***

After a comprehensive study and numerous discussions with Veolia, the current plan optimizes district energy solutions including the creation of mini/local district connections.

There are currently no available steam connections within the SoMa and NoMa project boundaries.

The current plan includes a hybrid district energy strategy:

- Three buildings Site 4, E38 and E39 will connect to the MIT Central Plant for chilled water, steam, and electricity.
- Site 3 and 238 Main Street will develop a local district energy plant for cooling and heating, powered by gas and electricity sourced from the local utility.
- Sites 1, 2, 5 and 6 will develop building level energy plants for cooling and heating, powered by gas and electricity sourced from the local utility. These plants will be optimized in response to the building load profile and might include local co-generation if it matches the load profile and improves efficiency. Building-level energy efficiency measures can provide significant energy and emissions savings.
- We continue to explore opportunities at Site 1 for local/Veolia steam connections to provide heat.
- To the extent Veolia service is extended across Main Street, the commercial buildings (Sites 2, 3, 5, 6) will further investigate opportunities for steam connections.

b) Discuss how climate change resiliency is being addressed in each building.

The topic of resiliency covers a broad range of issues and concerns for response and preparation for climactic or disastrous events. Likewise, different building types will need to provide unique support during such potential occurrences. Office and lab buildings, while not likely a shelter-in-place location, have been designed so that mission critical systems are elevated significantly above the ground floor to ensure building power and conditioning system continuity during significant events. Backup systems will provide critical continuity for tenants during outage situations.

More critically, the residential buildings are being designed to allow for more passive façade design to resist temperature changes and provide user controllability during significant regional outages. Similarly, water, electricity, and building systems have been elevated and designed to maintain connectivity and continuity during major events.

Most importantly, the Kendall Square development intends to help create a sense of community through site, landscape, and urban design that can foster relationships and connectivity among residents, employees, students and faculty, visitors and community members, that when in times of crisis, can share resources and come together to strengthen support for one another.

V. Open Space and Retail Programming/ Active Uses & Innovation Space Programming

A. Preliminary Determination Comments

1. Provide an operations and programming plan to ensure that open space and retail programs will cater to diverse age groups and visitors.

MIT plans to hire a new Director of Open Space Programming whose primary responsibilities will be 1) to develop and implement a plan for the publicly-accessible open space and 2) to ensure that the space is actively programmed to meet the diverse needs of the MIT and Cambridge communities.

Recognizing the importance of the retail programs in achieving truly vibrant neighborhood, MIT also plans to hire a new Associate Director of Retail Development to focus on the development and execution of all retail-related activities in the district.

Both jobs have been posted and MIT is actively accepting applications for these important positions.

Planning for programming will also be guided by the recommendations of the retail consultant that MIT engaged for the Kendall Square project during the rezoning process and who has continually advised the team through project planning. The consultant's recommendations are included as ***Volume II, Section D*** of the Final Development Plan. Active use ground floor plans and other information related to activation of the public realm are included as ***Figures C1 - C17***.

B. Additional Comments from City of Cambridge Departments

a. Provide more detailed landscape plans, including lighting, creative and sustainable management of storm water, species selection to maximize urban heat island mitigation and softscapes, and opportunities for public art and wayfinding.

The details of lighting, stormwater management, species selection and public art are important factors in the success of the open space and public realm design. These details have informed the design of the open space and public realm since the development of initial concepts. Detailed landscaped plans illustrating these details are included in the Final Development Plan as ***Figures B13 – B23***.

b. Discuss the inclusion of public art, wayfinding, and lighting as integral components of the open space network that might aid legibility and movement.

MIT has carefully considered public art, wayfinding and lighting through the design of the open space. MIT has one of the most robust outdoor art collections in the world and expects to extend that attribute to the PUD-5 district. Potential locations for permanent and temporary public art are shown on ***Figure C11*** of the Final Development Plan. Lighting is shown on ***Figures B25 – B28***.

Improving wayfinding in Kendall Square and MIT has been a goal of the project from its initial stages of planning. ***Figure B24*** in the Final Development identifies possible locations for enhanced campus and non-campus wayfinding within the bounds of PUD-5. MIT has been working with the Kendall Square Association and other Kendall Square landowners on this topic in recent years and will continue to coordinate efforts as the Kendall Square Initiative project develops.

c. *Discuss the extent of tree canopy, and the proportion of hardscape and softscape, to ensure the extent of paving is minimized and the environment is softened.*

The design intent is to find the optimal balance between hardscape and softscape. Hardscape areas are limited to the zones where there will be heavy pedestrian traffic and occasional vehicular traffic (including emergency vehicles), and locations where we anticipate programmed activities could take place. New trees are proposed throughout the district wherever possible. Within the major publicly-accessible open space in the SoMa development, the proposed trees will provide an extensive canopy, creating shade and helping mitigate the urban heat island effect, while still providing opportunities for direct sunlight to penetrate. See ***Figures B13 – B23*** for details on the proportion of hardscape and softscape and for further information on the extent of the proposed tree canopy in the SoMa development.

d. *Provide more explanation of the future retail strategy and to provide the Planning Board with the consultant's recommendations, as indicated in Section 13.810.1 of the zoning. Some of the issues that might be considered include strategies to recruit and cultivate smaller retail tenants and independent operators, which can be a challenge in new buildings. Other considerations include the non-retail active uses such as public event spaces and recreational uses. The inclusion of the MIT Museum is an example that could perhaps anchor and catalyze a wider range of activities to serve the community.*

As previously noted, MIT is hiring a new Associate Director of Retail Development to develop and implement the retail strategy consistent with the Institute's and the City's objectives and the recommendations presented in the consultant's report included as Volume II, Section D of the Final Development Plan.

e. *Describe the activities of the CIC in more detail and explain how it meets the requirements and the overall goals of the district, and provide assurances that if the operational model of the CIC changes over time (or if a different entity takes over the space) then it would continue to meet those requirements.*

The Cambridge Innovation Center (CIC) provides co-working space to innovation and service companies typically ranging in size from 1-30 employees. There are no leases and spaces are typically smaller than what could be rented in a standard office format. CIC provides shared infrastructure including conference rooms, Internet, printing & copying, phones, high-end furniture, operational & technical support and concierge.

MIT is very proud of its long-standing relationship with the Cambridge Innovation Center. MIT has supported CIC's growth from 18,000 square feet to its current 150,000 square foot

presence at One Broadway. Over the years, CIC has been home to hundreds of start-up companies that have positively impacted the Cambridge innovation culture.

No less than 60,000 sf of CIC space meets the specific requirements as described in Section 13.89 of the PUD-5 zoning. The lease agreement between MIT and the CIC requires that CIC maintain the space to ensure that MIT can safeguard the existence of the space for years to come. However, if CIC cannot fulfill the terms of its lease, MIT would ensure that the function is continued in the building by hiring an alternative operator or bringing the management function in-house within the Institute.

f. Discuss programming of the open space. For instance, describe what "spillage activity" is envisioned to occur from the buildings to outdoor areas, and whether the audience for that activity is meant to be primarily the MIT community or the broader public.

MIT is in the process of hiring a Director of Open Space Programming whose primary responsibility will be to cultivate a vibrant community around MIT's open spaces being created as part of the Kendall Square Initiative. The Director will envision, produce, and evaluate unique and memorable public events, activities, and multi-faceted initiatives. Programming is intended to engage diverse members of the Cambridge community – residents and individuals working in the area – as well as faculty, staff and students across MIT to build connections and energize open public spaces in creative and enduring ways.

Each of the buildings that front on open space have active uses on the ground floors offering opportunities for indoor activities to spill out into the open space. These spaces, such as the MIT Museum in Building 5 or the forum in Building 4, are being designed to accommodate activities that would attract members of both the MIT and broader Cambridge communities.

VI. Housing

Preliminary Determination Comments

1. Discuss affordability of the proposed residential units and consider including middle income residential units to serve a diverse population and workforce needs.

The project includes a commitment that 18% of the units in Building 1 will be classified as affordable per Section 11.200 of the Cambridge Zoning Ordinance, the highest percentage requirement in the City. This is equivalent to 53 units that will be available households with incomes up to $45,000 for a single person household and $65,000 for a household of four persons, based on current income limits. The goal of the City's affordable housing requirement is to provide housing for residents with working incomes who do not qualify for public housing but struggle to afford market rents. The zoning requirement – along with the diversity of unit sizes planned for Building 1 -- will bring significant income diversity to the building.

Similar to other new housing developed in Kendall Square over the last decade, it is anticipated that the 290 units in Building 1 will be attractive to employees of the companies

located in Kendall Square. The spectrum of rents anticipated in Building 1 are aligned with the array of employment incomes in the area. In addition, the building's proximity to this robust employment center, public transit and a mature bike and pedestrian network will appeal to the demographic of employees that prefer alternative means of getting to work and/or choose not to invest in automobiles.

The zoning allows for Building 1 to go to 300 feet which would require some "moderate" income housing as well as the 18 percent "affordable" required throughout the building. The current proposal balances design considerations, cost and feasibility. We are confident we can deliver the proposed building that will provide economic and household diversity throughout the building.

2. *Consider including three-bedroom units.*

Building 1 includes 13 three-bedroom units, which is equivalent to 5% of the building.

Additional Comments from City of Cambridge Departments

a) *The Final Development Plan should include some discussion of the anticipated mix of unit types in the proposed residential building.*

Building 1 will contain approximately 290 units, 70% of which will be studios and one-bedroom units and 30% of which will be two bedroom and three bedroom units. Consistent with the Commitment Letter, approximately 8% of the GFA of the residential component will be devoted to units measuring 300 – 550 square feet in size. These units will be designed to include features that enhance affordability and communication among residents.

Building 4 will be an MIT residential dormitory and will skew toward smaller units. Building 4 will include approximately 450 units of which 55% will be efficiencies, 40% will be one-bedroom units, and 5% will be two-bedroom units.

VII. Phasing and Design Review Process

Additional Comments from City of Cambridge Departments

a. *Discuss phasing of buildings and how individual buildings will proceed through final design review, coordinating among the Planning Board, CDD and Historical Commission (for each building except 5 and 6).*

Given the strength of the current commercial real estate market, MIT intends to initiate construction as soon as possible and therefore desires to complete final design review on Buildings 4 and 5 as quickly as possible following receipt of special permits. MIT has worked closely with the Cambridge Historical Commission (CHC), CDD and the Planning Board on this project for the past five years and will continue to do so through final design of these buildings. In particular, the Building 4 teams have been meeting with the CHC regarding design advancement of Building 4. MIT anticipates that following the completion of design

review on Buildings 4 and 5, MIT will advance into design review for Building 3, and then Building 2. Building 6 is a 6,000 sf infill retail building that will serve to contribute towards continuous streetwall and retail uses on the south side of Main Street. This building does not have interdependencies with the other SoMa buildings, and, therefore, could be built at any time.

The exact construction sequence will be determined based on MIT needs and market conditions. MIT may choose to pursue more than one building simultaneously or in a sequential fashion.

The below-grade garage situated with SoMa Development Parcel C (the "Parcel C Garage") will be constructed sufficiently in advance to support the initial commercial building(s) as well as to replace the displaced surface parking caused by the initial construction. However, MIT may choose to construct Parcel C Garage at one time in order to take advantage of construction efficiencies and below grade loading requirements.

Building 2 will not be developed until Building 4 is completed and occupied with new graduate housing available to replace the existing graduate housing at Eastgate, thereby not causing any loss in available graduate housing. The below-grade parking at SoMa Development Parcel B will be constructed simultaneously with Building 2.

Open space and public realm improvements immediately adjacent to buildings will be constructed in conjunction with the construction of the buildings. The open space above the Parcel C Garage will be constructed immediately following the completion of the Garage. Pedestrian connections will be implemented to connect new open spaces as the spaces come on-line.

Temporary parking or surface loading to service a new building may also be needed during the interim phases of construction.

MIT hopes to take advantage of the strong residential market and move forward with the planning for the activation of Third Street and Broad Canal Way.

MIT expects that the buildings in the SoMa and NoMa Projects will take 7-10 years to construct.

VIII. Additional Comments from Traffic, Parking and Transportation Department

Transportation Impacts

1. *The project will need a very robust PTDM and TDM program in order to achieve the mode shares assumed in the TIS (i.e. 33% office employee SOV rate). Although the TIS provided examples of TDM measures, the PUD and Special Permit Application provided no specific commitments. What is the status of the Project's required Parking and Transportation Demand Management Plan (PTDM Plan)?*

MIT has submitted a draft PTDM plan to the City for review. The draft includes robust PTDM and TDM measures designed to significantly reduce automobile trips generated by the project. These measures include the following:

a. Language in all office and lab leases that will require employers to provide various options for transit subsidies, parking fees, cash-out options, and Hubway memberships.
b. A requirement that all office and lab tenants join the Charles River Transportation Management Association and participate in the EZ-Ride Shuttle service.
c. The designation of an Employee Transportation Coordinator to manage the implementation of the PTDM programs and monitoring.

In addition, MIT will provide extensive marketing and promotion about non-SOV commuter options, and bicycle programs and services, including extensive bike parking facilities, Hubway stations, showers in buildings, and bike repair equipment.

2. *TIS indicated insufficient bicycle parking in Kendall Square (250 bike spaces and as many as 321 bikes counted). Although the Project will provide bicycle parking to meet zoning, TP+T does not consider meeting zoning a transportation mitigation unless commitments are above and beyond what zoning requires. The Planning Board may want to consider asking MIT to demonstrate why the proposed bicycle parking plan will be sufficient to meet the growing need for bicycle parking in Kendall Square.*

The City of Cambridge recently updated the bicycle parking requirements in the Zoning Ordinances, significantly increasing the required number of both short and long term bicycle parking spaces. The NoMa and SoMa projects will add 208 short-term bicycle parking spaces consistent with the Cambridge Bicycle Ordinance and is proposing two MIT-sponsored Hubway facilities in conjunction with the proposed project. In addition the project will add 826 long term bicycle parking spaces in the parking garages. With more than double the number of spaces that would have been required just a few years ago, MIT believes that the proposed number of 1,034 spaces is adequate. Nevertheless, MIT will continue to monitor demand as the project develops and will review the quantity and location of bicycle parking spaces in an attempt to balance open space, bike parking and pedestrian flow goals throughout the public realm.

3. *Provide additional information on the expected new truck trips.*

Based on a very conservative estimate that does not take into account shared truck trips, the transportation consultant estimated that Building 1 will generate 97 truck trips, Building 2 will generate 39 truck trips, Buildings 3-5 (with the shared access ramp) will generate 202 truck trips, and Building 6 will generate 5 truck trips. It is expected that some service and delivery trips will accommodate multiple buildings and therefore reduce the number of total site generated truck trips. Existing trips to the site and surrounding MIT buildings could also combine services and deliveries with the Project, also reducing individual truck trips to the site.

Parking

4. *Are the proposed number of parking spaces the right amount?*

   MIT believes that the spaces proposed for the project are the correct amount due to factors described below including very low parking ratios for new project uses, the elimination of 114 existing parking spaces supporting commercial uses as part of the project, and the need to relocate academic parking spaces to compensate for MIT parking structures that are reaching the end of their useful lives.

5. *Why does 100% of the existing 485 existing surface parking spaces (369 academic and 116 nonacademic spaces) need to be replaced given that according to the TIS, only 75% are occupied at one time today?*

   MIT is eliminating 114 surface parking spaces serving existing uses in the NoMa development area, reducing supply of parking spaces serving the very high density office uses in One Broadway by 27%. Existing academic parking spaces in the SoMa development area are part of MIT's overall parking pool, and are operating at capacity.

6. *Why relocate 200 parking spaces to Kendall Square from elsewhere on campus, given that transit, bicycling and walking is preferred in Kendall Square?*

   Given the loss of parking in the east campus area due to the Kendall Square Initiative redevelopment, the proposed construction of an upgraded cogeneration plant on an Albany Street surface parking lot, and the loss of additional parking last year in the Main Lot due to MIT.nano construction, the new garage in Kendall is strategically located to serve the members of the MIT community within a reasonable distance of their work sites. In an effort to respond to construction and recent development, MIT has leased parking near campus as part of a short-term solution. The Institute has also allocated parking as far west on the campus as possible but the density of the MIT population remains in the east and main campuses. This density will be enhanced by the relocation of the MIT Museum, the expanded graduate student presence, the Innovation and Entrepreneurship Center, and other academic uses that are planned for the new Kendall Square site 4 and site 5 buildings.

7. *How will TPT be able to monitor the proposed 1,156 parking spaces in the SoMa garage with regards to the final approved parking ratios and PTDM plan, commercial parking regulations, and MIT's academic parking space inventory (i.e. max 0.8 space/1,000 sf of R&D use, max 0.9 space/1,000 sf for office use, max 0.5 space/1,000 sf of retail and MIT's parking inventory cap of 4,359 spaces).*

   MIT is working closely with our garage design consultants and garage operators to develop a plan that is operationally feasible and meets the City's needs.

8. *The TIS stated that the SoMa garage will be managed with state-of-the-art card access technology, including a fixed number of permits for academic and commercial users. Why would a fixed number of permits be the best method to manage the parking? Separate parking facilities for academic and commercial spaces may be simpler way to manage and monitor spaces.*

   During the early design phases, MIT considered separate parking facilities for academic and commercial spaces. However, such a design would have a less efficient layout and would have required additional access ramps, negatively impacting the pedestrian experience at grade.

9. *A more detailed parking management plan is needed, including parking best practices and how the TPT Department will monitor the use of the parking spaces. In developing this parking management plan, MIT should also consider how the parking can be used in the most flexible possible way, so that commuters can make decisions on a daily basis as to how they commute, rather than being locked into traveling by car because they have prepaid for a parking pass/permit.*

   MIT is working closely with our transportation experts and garage operators to develop a parking management plan that is feasible within the landlord-tenant framework.

10. *Parking programs such as universal transportation passes, peak parking demand pricing and other innovative parking management measures that allow people to drive on days when they need to drive but also provide incentives to use transit, bicycling or other non-SOV modes on other days should be implemented.*

    MIT has a very comprehensive program of commuter choices, including incentives to encourage alternative modes of transportation. In addition, the Institute is actively testing the feasibility of implementing more innovative measures to encourage transit, bicycle and other non-SOV modes. MIT will encourage tenants to adopt aggressive measures to reduce SOV trips to the site.

Transit Improvements

11. *Indicate what financial commitments MIT will provide to support the Kendall Mobility Task Force recommendations. Some potential commitments could be transit contributions based on a dollar amount per square foot of new development, daily or yearly parking surcharges that are allocated to transit improvements, or financial or in-kind contributions to advance a feasibility study of communication-based-train-control (CBTC) for the Red Line, which could significantly improve Red Line Capacity by allowing trains to run closer together (i.e. shorter headways.)*

    MIT is pleased to have advanced the collective understanding of the Red Line operations through a thorough transit study as part of the Kendall Square TIS. It is clear that the Red Line is in need of a detailed analysis and MIT has worked with the Kendall Square

Association in advocating for improvements. MIT is prepared to consider in-kind contributions and financial support to advance studies related to Red Line improvements.

12. According to the TIS, the MBTA Bus routes #CT2 and #85 will be over capacity because of new riders generated by the MIT project. There is currently no weekend bus service by EZ Ride and CT2 buses, how will these issues be mitigated (i.e. new buses and operating costs.)

Table 10.e.1, page 177 of the TIS shows Bus #85 inbound entering at 102% capacity which translates to 2 people over the course of the AM peak hour not finding a seat and needing to stand on the bus. Similarly, 104% capacity of bus route CT2 outbound entering translates to 7 people over the course of the PM peak hour not finding a seat and needing to stand on the bus. The analysis used MBTA policy capacity levels for utilization calculations, which are based on seating capacity only – i.e. 1.0 v/c means that all seats are taken and any additional persons standing on the bus are considered "over" capacity. In this case the "over" capacity 2 people and 7 people are still accommodated on the bus, just not accommodated with a seat. This is a minimal impact on the existing bus capacity.

MIT is a founding member, active partner, and the largest financial supporter of the Charles River TMA. As the project develops, the Institute will continue to work closely with the TMA to evaluate the appropriate opportunities for funding the expansion of EZ-Ride shuttle service in order to distribute non-redline users to the nearby green and orange line stations.

Infrastructure Improvements (to be considered)

13. Design and reconstruct Ames Street, from Main Street to Memorial Drive to the Paul Dudley White Multiuse Path. This work should include extending the existing two-way cycle track on Ames Street to the River as part of the bicycle network.

MIT has an interest in the functionality of Ames Street between Main Street and Memorial Drive as it is traversed by a heavily used pedestrian connection from Main Campus to the existing East Campus Buildings (Media Lab, Medical, MBTA station) and the proposed PUD-5 buildings beyond. This segment of Ames Street also includes approximately 65 heavily utilized on-street parking spaces serving residents and visitors to MIT and other nearby companies, several loading zones and a bus stop, as well as a significant number of mature trees located fairly close to the right of way on its west side. The City has recognized Ames Street as an important bicycle connection between Main Street and Memorial Drive and MIT will continue to work with the City on the best way to accommodate bicycles while balancing pedestrian movements, on-street parking, street trees, and public realm needs.

14. Design and construct improvements to Vassar Street/Massachusetts Avenue and Vassar Street/Main Street intersections, with particular attention to bike accommodations and cycle track transitions.

MIT will continue to discuss improvements to these intersections but believes that adjustments to these areas are best implemented in conjunction with future development projects that are closer to these locations.

15. *Update outdated traffic signal equipment (controllers, conduit, mast arms, signal heads) at Ames Street/Main Street, Broadway/Ames Street, and Vassar/Main/Galileo Galilei Way.*

    MIT is committed to mitigating the impacts of traffic generated by the Project and is prepared to evaluate appropriate improvements to the Ames Street/Main Street signal equipment.

16. *Possibly design and reconstruct Galileo Galilei Way, from Broadway to Main (unless undertaken by Cambridge Redevelopment Authority).*

    As part of its proposed amendment of the Kendall Square Urban Renewal Plan, the Cambridge Redevelopment Authority is proposing to evaluate Galileo Way and its intersections with Broadway and Main Street/Vassar Street.

17. *Evaluate the option of raising the cycle track on Main Street, between Longfellow Bridge and Third Street.*

    The City has recently completed the construction of Broadway from Ames Street to Third Street with on-street bike lanes, and MIT understands that the Commonwealth has designed and is preparing to reconstruct the Longfellow Bridge and the section of Main Street from the bridge to Third Street with bike lanes at the street level. MIT supports this design which provides a uniform and continuous bike facility throughout the corridor.

18. *More information about the Memorial Drive Phase II improvements should be provided and any commitments by MIT.*

    MIT is interested in working with the City to improve pedestrian and bicycle connections across Memorial Drive, particularly at Ames and Wadsworth Streets. MIT will continue discussions with the City to understand the role of Memorial Drive Phase II Improvements in achieving this goal.

Bicycle Improvements

19. *TIS indicated insufficient short-term bicycle parking. MIT to demonstrate why proposed number of racks is sufficient or to add more spaces*.

    See response VIII.2 above.

20. *Install Hubway at Broad Canal and two more in other areas.*

    Hubway stations are very well utilized in Kendall Square. There are currently 4 Hubway stations within and in close proximity to the PUD-5 district and the project will add two additional MIT-sponsored Hubway stations, one on Broad Canal Way, as requested by the City, and the other adjacent to Building 2 (*See Figure B11*).

21. Provide a public bike station at Building 6 or at reconstructed headhouse.

As shown on Figure C6, the public realm area around the MBTA station at Carleton Street must accommodate a number of activation activities in a relatively constrained space. Activities include unimpeded pedestrian flow from the heavily used MBTA station and spill out space from the restaurants and other active uses along Carleton Street. To achieve the goal of activating a "missing tooth" along Main Street, Building 6 is designed to fill out as much of the loading dock area as possible while continuing to accommodate MIT's necessary loading needs (see Figure E76). Bike station components such as showers are accommodated throughout the proposed buildings for the building users. Publicly accessible fix-it stations will be located in key locations. MIT will continue to discuss the possibility of further bike station elements with the City and to assess strategies for integrating these amenities into the development.

SECTION E: Final Development Plan

MIT Kendall Square Initiative
SoMa Project

SoMa Final Development Plan

Final Development Plan Submission

Cambridge Planning Board #303

November 5, 2015

Submitted by:

Massachusetts Institute of Technology (MIT)

Owner/ Project Proponent

Massachusetts Institute of Technology (MIT)

Legal Counsel

Goulston & Storrs

Gallucio & Watson, LLP

Project Management

Redgate

Northstar (Building 6)

Building Design Architects

Elkus Manfredi Architects (Building 2)

Perkins + Will Architects (Building 3)

NADAAA/Perkins & Will (Building 4)

Weiss/Manfredi Architects (Building 5)

nARCHITECTS (Building 6)

Landscape Architects

Hargreaves Associates

Retail and Placemaking

Graffito SP

Civil Engineering

Nitsch Engineering

Transportation Engineering

VHB

Parking Consultant

Desman Design Management

M/E/P Engineering

AHA Consulting Engineers

Bard Rao + Athanas Consulting Engineers

WSP

ARUP

Structural Engineering

MacNamara · Salvia Robert Silman Associates Odeh Engineers

GeoTechnical/GeoEnvironmental

McPhail Associates, LLC

Acoustical Engineering

Acentech

Sustainability Consultant

Atelier Ten The Green Engineer

District Energy Consultant

JB&B

Wind Consultant

RWDI Consulting Engineers

Surveyor

Feldman

PreConstruction Services

Turner Construction Elaine Construction

Communications

Solomon McCown & Company

SUBMITTED MATERIALS

MIT is requesting a Planned Unit Development Special Permit pursuant to Article 12 of the Zoning Ordinance. Special Permit Application Forms including Cover Sheet, Dimensional Form (as modified for this project), Ownership Certificate and Fee Schedule are included in this Planned Unit Development Special Permit Application immediately following this page. Certifications of Receipt of Plans are included in the Appendix of this Application.

This Application includes the submission requirements specified in Section 12.34.3. This application also addresses the requirements of Section 13.80 Planned Unit Development 5 District as appropriate.

A separate SoMa Project Graphics Materials package has been submitted under separate cover to accompany this Application. The graphics package includes Existing Conditions and Site Context Maps and Photographs as well as Proposed Site Plans, Floor Plans, Landscape Plans, Elevations and Perspectives.

MIT is also requesting a Project Review Special Permit pursuant to Article 19 of the Zoning Ordinance. As required by Section 19.24 of the Zoning Ordinance this Application includes an Urban Design Objectives Narrative, a Sewer Service Infrastructure Narrative, a Water Service Narrative and a Noise Mitigation Narrative. A Wind Study, Shadow Study and Acoustical Study are included as Appendices to this Application.

The proponent submitted a Traffic Impact Study for this project on June 22, 2015 and City of Cambridge Traffic, Parking and Transportation Department (TPT) certified the study on July 21, 2015. Due to the size of the study it is not included as an Appendix to this document but is available upon request of the proponent or the TPT.

The proponent has met with the City Arborist and has submitted a preliminary Tree Study demonstrating how the project can meet the requirements of the Tree Protection Ordinance, Chapter 8.66 of the Cambridge Municipal Code. A final Tree Study will be provided in the Final Development Plan following review of the landscape plans by the Planning Board.

As required by Article 22 of the Ordinance, MIT has included in this application LEED Project Checklists for the Site and for each of the 5 buildings proposed as well as a Sustainability Narrative describing how the project will be designed to meet the applicable requirements.

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SECTION I: Introduction

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MIT's Kendall Square Initiative South of Main ("SoMa") Project (the "SoMa Project") is an opportunity to transform five parking lots owned by MIT on its East Campus into a new, fully urban, mixed-use district in the heart of Kendall Square that will:

- Enhance the ground floor public realm and provide the foundation for continuous streetwall and related ground floor retail from Ames Street to the Longfellow Bridge on the south side of Main Street
- Increase the amount of publicly beneficial open space with a focus on community interaction and programming
- Increase the amount of MIT graduate student housing and locate it in the center of Kendall Square
- Create new office and R&D jobs and reinforce Kendall Square, MIT, and Cambridge's preeminent position as a leader in innovation
- Provide critical space to accelerate MIT's innovation and impact, strengthen the innovation ecosystem, and enable stronger interactions between the MIT campus community and the Kendall Square community
- Provide a new location for the MIT Museum and an opportunity to increase its exposure and role as a regional resource

The SoMa Project area consists of 293,808 sf (6.75 acres) divided into two development parcels. Parcel B, the site of proposed Building 2, is the site of the existing MIT Eastgate graduate housing building and its associated surface parking and measures 69,711 sf (1.6 acres). Parcel C, the site of Buildings 3-6, is the site of 485 surface parking spaces, several underutilized campus and commercial buildings and MIT loading facilities and measures 224,097 sf (5.14 acres). Existing conditions are shown on Figures A1 - A8 of ***Volume II: MIT Kendall Square Initiative – SoMa Project Graphics Materials dated November 5, 2015 ("Graphics Set")***.

The proposed SoMa Project includes five buildings: three will house office and/or R&D uses, one will provide graduate student housing, and one is proposed as a small retail building. All will include retail and/or actives uses on the ground floor. MIT has selected accomplished architectural teams to design each of these five buildings. Each building has its own expression and concept that is reflective of its uses while ensuring that the buildings work together to create a complementary urban context. The

modern design respects the City of Cambridge (the "City") urban design guidelines and highlights the interaction with the public realm with multiple openings.

The SoMa Project will retain and incorporate the three historic buildings along Main Street: The Kendall Building (238 Main Street, E48); The J.L. Hammett Building (264 Main Street, E39) and The Suffolk Building (292 Main Street; E38). The ground floor retail in these buildings will be repositioned and the buildings will be modified through techniques including lowering the ground floor to meet grade, which will increase accessibility and porosity of retail and other active uses (retail entries are currently approximately 3 feet above grade). The ground floors of existing buildings along Wadsworth Street, Hayward Street and Carleton Street will also be modified to include active uses as they integrate into the active ground floors of the proposed buildings. MIT believes that celebrating the three historic buildings and integrating their design with the proposed modern buildings serves as a physical expression of the evolution of Kendall Square from its early industrial roots to a center of innovation.

The SoMa Project – in conjunction with MIT's NoMa (North of Main) Project – includes over 100,000 square feet of new or repositioned ground floor retail and active uses for much-needed neighborhood amenities such as a potential drugstore and an urban grocer in Kendall Square and continue the growth of restaurants, and other establishments to serve the workforce, neighborhood and region.

The SoMa Project transforms existing parking lots and streets into more than two acres of new publicly accessible and porous open space that will be added to the eight acres currently existing within PUD-5. The landscape is designed to be a cohesive and pedestrian-oriented open space, connected by upgraded streetscapes to adjacent properties and neighborhoods. Hayward Street will be closed to through vehicular traffic, the north and south sections serving only as access for building-specific service and loading, and a key section of Carleton Street will be converted into a shared street, and raised crossings will prioritize the pedestrian experience on Wadsworth Street. Each of Carleton and Wadsworth Streets leads into the open space and extends access to an area that will promote greater public use. The open space is the connective tissue of the Kendall Square Initiative, connecting the MIT east and main campuses and connecting the campus and the community.

The public realm is designed to offer a diversity of destinations and program opportunities for a broad range of anticipated users: residents, neighbors, workers, visitors and students. It will serve as a gathering space for the community and include programming influenced by the open space and retail advisory committee. Key elements include an 'urban forest' of canopy trees above a richly textured unit paver ground plane, interspersed with discrete lawns, and densely planted gardens of native and

adaptive planting. This landscape may include an interactive fountain or interactive technology-focused art installation, either permanent or temporary.

The SoMa Project is designed to be a leader in sustainability. All of the buildings will be designed to achieve USGBC LEED Gold V.4 ratings and will include comprehensive sustainability strategies such as district stormwater capture and reuse, high performance envelopes that integrate a mix of insulating materials, advanced glazing materials, external shading, efficient building mechanical systems to reduce energy consumption and an open space that fosters healthful interaction with the surroundings.

The SoMa Project includes 1,494 (809 net new) parking spaces primarily located in two below grade garages. A below grade garage on Parcel B will include 278 spaces to serve Building 2 above. Parking will be provided on Parcel C to serve the new demand generated from buildings 3, 4, 5 and 6 (531 spaces), replace the surfaces spaces displaced by the proposed project in Parcels B and C (485 spaces) and relocate spaces from elsewhere on the MIT campus (200 spaces). Of these 1216 spaces on Parcel C, 1,156 will be located in the below grade "SoMa Garage" and approximately 60 will be located at a new, well-landscaped surface parking area that will continue to serve visitors to the MIT Medical Department, the Media Lab and other academic groups. The garages will include long-term secured bike parking and space for carpools/vanpools, carsharing and alternative energy vehicles. Short-term bike parking will be provided at grade. Parking and bikes storage is shown on Figures E87 - E95.

SECTION II: Existing Conditions

SECTION II: Existing Conditions

The SoMa Project site is located in East Cambridge adjacent to the MBTA Red Line Kendall Square Station, and bounded by Main Street to the north, MIT Building E19 to the west, Amherst Street to the south and the MIT Sloan School of Management (MIT Building E62) to the east. The proposed SoMa Project is comprised of two Development Parcels referred to as "SoMa Development Parcel B" (including Building Parcel 2) and "SoMa Development Parcel C" (including Building Parcels 3-6). Concurrent with this filing, MIT has filed a separate Final Development Plan for NoMa Development Parcel A for a property in the PUD-5 district that is located north of Main Street in the Third Street Transition Subdistrict (the "NoMa PUD Filing"). The parcel organization is shown on Figure A1 and A2 and described below:

SoMa Development Parcel B is located south of Main Street, northwest of the Sloan School of Management and east of Wadsworth Street. Development Parcel B site is currently occupied by MIT's Eastgate Building (E55) which provides 201 graduate housing units as well as a childcare facility to support the MIT community. These existing graduate housing and childcare uses will be transferred from this site to Building Parcel 4 as part of the proposed development. The 49 surface parking spaces adjacent to Eastgate will be relocated to the parking facilities at Development Parcel C as part of the proposed development. Access to the existing parking lot is provided from Wadsworth Street as well as from Main Street.

SoMa Development Parcel C is located south of Main Street, west of Wadsworth Street, north of the Muckley building (E40) and Amherst Street, and is bounded at its westerly end by MIT Buildings E23, E25, E18 and E19 and includes Hayward Street and a portion of Carleton Street. Three historic buildings along Main Street will be retained and incorporated as part of the proposed project.

- The Kendall Building (E48; 238 Main Street) is a five-story brick building containing 65,119 GFA of office space that will be retained in the proposed project in addition to 12,781 SF of retail that will be repositioned.

- The Hammett Building (E39; 264 Main Street) is a three-story brick building containing 29,854 GFA of office space that will be retained in the proposed project and 10,806 SF of retail that will be repositioned.

- The Suffolk Building (E38; 292 Main Street) contains 61,324 GFA of academic space that will be retained in the proposed project and 1,800 SF of retail that will be repositioned.

A total of four buildings located in Development Parcel C will be removed. These include:

- E33 and E34 are academic buildings totaling 33,547 GFA

- E28/Cambridge Trust is a one-story brick building on the northwest corner of the site that contains the 2,777 GFA Cambridge Trust Company and 4,027 GFA of office space.

- 8 Carleton Street is a three-story brick building totaling 12,943 GFA of office/lab space.

Development Parcel C includes surface parking lots for 414 spaces that will be replaced on Parcel C as part of the SoMa Project:

- 49 academic surface parking spaces as well as 70 commercial spaces between Wadsworth Street and Hayward Street that support the buildings along Main Street. Access to the academic lot is located on Hayward Street while the curb cut to the commercial parking lot is provided on Wadsworth Street.

- 189 surface parking spaces for MIT academic uses, 19 parking spaces for commercial,retail and office tenants along Main Street and 13 commercial parking spaces serving 8 Carleton in lots between Hayward Street and Carleton Street. Parking is accessed from Hayward Street and from Carleton Street.

- 60 surface parking spaces for MIT academic uses and 14 surface commercial parking spaces for Cambridge Trust. Access to the MIT parking spaces is provided by a curb-cut on Deacon Street while a separate curb-cut is used to access the Cambridge Trust parking lot on Dock Street adjacent to the Kendall Hotel.

Development Parcel C also includes the area for the future Building 6 located on the south side of Main Street between the MIT Ford building (E19) and the Kendall Hotel on the E19 loading dock facility

and MIT fleet vehicle parking lot. There is one approximately 60 foot wide curb-cut serving MIT fleet vehicles and trucks accessing the loading docks. There are 22 parking spaces provided for MIT fleet vehicles to use throughout the day. Five loading docks as well as two trash compactors serve the loading needs for the academic buildings on MIT's East campus. The loading and service activity for the MIT campus will continue after Building 6 is completed. This new building will help create continuous active storefronts all the way from E19 to MIT's Sloan School.

The entirety of both SoMa Development Parcel B and SoMa Development Parcel C is currently owned and controlled by MIT with the exception of Carleton and Hayward Streets which are owned by the City of Cambridge but over which MIT has perpetual easements to maintain, control and construct improvements in such streets. Existing conditions are shown in the Figures A1 – A8.

The existing site uses that will be replaced with proposed development are presented in Table A.: Existing Buildings to be Removed.

Table A Existing Buildings to be Removed (in Gross Floor Area "GFA')

Building Site	Academic	Office	Retail	Residential	Academic Housing	Total
Parcel B						
E55 (Eastgate)	0	0	0	0	163,733	163,733
Parcel C						
E33	7,581	0		0	0	7,581
E34	25,966			0	0	25,966
8 Carleton		12,943				12,943
E28/Cambridge Trust		4,027	2,777			6,804
Total Parcel C	33,547	16,970	2,777	0	0	53,294
TOTAL SoMa	33,547	16,970	2,777	0	163,733	217,027

SECTION III: Statement of Development Concept/Project Overview

SECTION III: Statement of Development Concept/Project Description

A. Project Description

i. Site Planning and Open Space

The Development Proposal transforms existing parking lots and streets into more than two acres of new publicly accessible and porous open space that will be added to the eight acres currently existing within PUD-5. The landscape is designed to be a cohesive and pedestrian-oriented open space, connected by upgraded streetscapes to adjacent properties and neighborhoods. Hayward Street, a private way controlled by the Applicant pursuant to easement rights, will be closed to through vehicular traffic with the north and south sections serving only as access for building-specific service and loading. In addition, a key section of Carleton Street, a private way controlled by the Applicant pursuant to easement rights, will be converted into a shared street. MIT is also evaluating the feasibility of installing raised crossings in Wadsworth Street to prioritize the pedestrian experience on this street. Each street leads into the open space and extends access to an area that will promote greater public use. The open space is the connective tissue of the Kendall Square Initiative, connecting the MIT east and main campuses and connecting the campus and the community.

The public realm is designed to offer a diversity of destinations and program opportunities for a broad range of anticipated users: residents, neighbors, workers, visitors, faculty and students. It will serve as a gathering space for the community and include programming influenced by the open space and retail advisory committee. Key elements include an 'urban forest' of canopy trees above a richly textured unit paver ground plane, interspersed with discrete lawns, and densely planted gardens of native and adaptive planting. This landscape may include an interactive fountain or interactive technology-focused art installation, either permanent or temporary.

Site furnishings may include moveable tables and chairs in addition to a variety of fixed seating opportunities and materials. The public realm is above all else intended to be an adaptable landscape accommodating to passive sitting and socializing. These elements can accommodate both active events such as festivals, lectures, and outdoor symposia, as well as more passive daily activities such as eating lunch on a bench or relaxing on the lawn under the shade of a tree. The balance of hardscape paving and softscape vegetation throughout the core open space maximizes the flexible use of the space and could promote activities such as outdoor classes, chessboards, farmers markets and

innovation demonstrations.

In order to achieve this dynamic and active open space, intrinsically adaptable to future change, the proposed plan integrates with existing urban networks. Enhanced connections are provided both to and from the core open space. Essential connections through the space are emphasized, with particular attention paid to the interfaces with Main Street's upgraded streetscape, MIT's internal campus spine 'Infinite Corridor', and neighborhood connections along Third Street to the river along Wadsworth Street as follows:

North-South connections across Main Street: The project is aligned with the new pedestrian crossing of Main Street between the Sloan School and the Red Cross Building. The project design enhances the value of the crossing on both sides of the street. On the north side, the crossing will integrate into a new 20 foot wide pedestrian walkway between the new Building 1 and the Red Cross Building that provides new connections from Main Street (and points south of it) to the Broad Canal waterfront, the restaurants and amenities along Broad Canal Way and the East Cambridge neighborhood beyond. To the south, the landscape at the Sloan School/Building 2 site is being redesigned to connect seamlessly and rationally from the new crosswalk around the exhaust vents from the Sloan garage, to connect points on the north side of Main Street to the Sloan School, the Wadsworth Street corridor to the River, the new open space at MIT's East Campus and Institute buildings beyond. Please see Figure B9 Sloan Pedestrian Connections Detail Plan for detail.

The proposed project also includes logical connections from Point Park to Wadsworth Street. The proponent has participated in the Connect Kendall initiative and will continue to work with the City and the owners of the land – the Cambridge Redevelopment Authority and Boston Properties – to ensure that the project is consistent with plans for Point Park that arise out of that initiative.

As part of the Kendall Square Initiative, MIT is investing in roadway improvements within the PUD that will facilitate pedestrian access between Main Street and the significant open space proposed. These include alternative paving on Carleton Street, Hayward Street and a section of Wadsworth Street that favors pedestrians and cyclists. The character of each of these streets as proposed is described below. Figure B3 Street Ownership depicts the ownership of each of the streets in a directly abutting the SoMa district. Figure B4 Shared Streets and Raised Crossings depicts the proposed functionality of the SoMa streets.

- **Wadsworth Street**: Wadsworth Street is owned by the City of Cambridge. MIT will reconstruct Wadsworth Street to favor pedestrians and create an improved link to the Charles River. The sidewalks on the west side of Wadsworth Street will be reconstructed to increase from 6.5 feet in width to 8 feet in width to accommodate tree plantings and appropriate width for comfortable walking along 238 Main Street and Building 3. On the east side, Building 2 is set back to allow for an 8 foot sidewalk plus over 18 feet of spill out space which combine to accommodate a double row of trees and outdoor seating spilling out of the retail that wraps the corner. In conjunction with the renovation of Building E52, MIT recently repaved the segment of Wadsworth Street south of Amherst Street. In this section, the profile of the street will be retained with a 6.5 foot sidewalk on the east side and 13 foot sidewalk on the west side. Alternative paving on a crosswalk just north of Amherst Street will serve to protect pedestrians and protect bicyclists as they cross from the East Campus open space to the Sloan building. MIT is testing the feasibility of raising this crosswalk for improved pedestrian safety. As discussed throughout the zoning process, Wadsworth Street has a high value as a pedestrian connection between East Cambridge and the Charles River and the street profile has been designed to provide wider sidewalks where possible. We anticipate that this will be a low volume road and have included sharrows in the street design. Please see Figure B38 Wadsworth Street 1 Site Section H, Figure B39 Wadsworth Street 2 Site Section I, and Figure B40 Wadsworth Street Improvements Detail Plan.

- **Hayward Street**: Hayward Street is owned by the City of Cambridge but is characterized as a "discontinued way." MIT intends to completely reconstruct this street. As shown on Figure X, the first segment off of Main Street includes the access to the below grade loading docks for the project and will be accessible to trucks. This segment will include pavers at the entrance to Hayward to signal the transition to the project area. South of the loading dock entry the pavement will be changed to pavers and no vehicular through access will be allowed through the open space (except for emergency vehicles). At the south end of Hayward Street two way loading access to the existing E40 building will also be retained. Please see Figure B35 Hayward Street 1 Site Section F, Figure B36 Hayward Street 2 Site Section G, and Figure B37 Hayward Street Improvements Detail Plan.

- **Carleton Street**: Carleton Street is owned by the City of Cambridge but is characterized as a "discontinued way." MIT will reconstruct Carleton Street as a shared street. Vehicles (except emergency vehicles) will be prohibited from the northern segment at Main Street to provide

a complete auto-free zone around the MBTA headhouse. Limited vehicular access will be maintained from Deacon Street to Amherst Street to accommodate activities related to MIT uses and the Kendall Hotel. Carleton Street will be treated with pavers to signal preference to pedestrians and slow vehicle movements. Please see Figure B34 Carleton Street/Gateway Site Section E. Views of the paving treatments on Carleton Street are included in Open Space Proposed Renderings A and B (B42 and B44).

- Ames Street: MIT has an interest in the functionality of Ames Street between Main Street and Memorial Drive as it is traversed by a heavily used pedestrian connection from Main Campus to the existing East Campus Buildings (Media Lab, Medical, MBTA station) and the proposed PUD-5 buildings beyond. This segment of Ames Street also includes 65 heavily utilized on-street parking spaces serving residents and visitors to MIT and other nearby companies and a significant number of mature trees located fairly close to the right of way on its west side. The City has recognized Ames Street as an important bicycle connection between Main Street and Memorial Drive and MIT will continue to work with the City on the best way to accommodate bicycles while balancing pedestrian movements, on-street parking, street trees, and public realm needs.

The project will further accommodate bicyclists by adding 154 short term bicycle parking spaces distributed throughout the new public realm and 504 long term bicycle parking space in the parking garages. The specifics of how the proposed pedestrian improvements will integrate with the existing pedestrian paths and crossings is shown on Figure B6 – B9 Proposed Pedestrian Network. The specifics of how the on street bicycle improvements work with the existing and planned network are shown on Figure B10. The functionality of each street is shown on Figure B4 Shared Streets & Crossings.

MIT's Development Plan achieves many of the connectivity goals of the Connect Kendall plan including strengthening connections to the Charles River by activating both sides of Broad Canal Way and incorporating a bio-retention feature at Site 1 and strengthening the pedestrian experience along Wadsworth Street. In addition the MIT plan connects the north and south sides of Main/Broadway by meeting the new crosswalk between Sloan and Red Cross with a robust pedestrian network on either side.

MIT's proposed streetscape design is attentive to how the proposed Wadsworth Street sidewalks

meet the existing crosswalks to Point Park. Nothing proposed in this Development Plan precludes implementation of improved connections between Point Park and Wadsworth Street through Connect Kendall or other initiatives and MIT looks forward to the continued community process associated with Point Park.

The location of the parking garage access and egress for pedestrians and bicyclists will contribute to the animation of the open space. The below grade parking under the open space includes pedestrian and bike egress points at Building 3 and Building 4 as well as into the open space near the proposed surface parking lot. The majority of the spaces are located near the elevators leading to Building 4 (which is graduate student housing) and the open space and the academic parkers and workers in Buildings 5 and 6 will necessarily have to traverse the open space to get to their destinations. Figure B7 Proposed Pedestrian and Garage Flows illustrates the location of the garage access/egress and illustrates potential pedestrian flows.

ii. Ground Floor Activation and Programming

Section 13.810.1 of the PUD-5 Zoning requires that development plans enhance the public pedestrian usage of the sidewalks and create a sense of neighborhood continuity by providing an interesting, lively and active presence at street level. To ensure this, the PUD-5 Zoning further calls for active uses to comprise 75% of the first floors (to a depth of 20 feet from the principal front wall plane of the building) abutting Main Street, Broadway and Broad Canal Way. The SoMa Project takes this concept further by providing active uses on ground floors along the secondary streets of Wadsworth, Hayward and Carleton and along the south side of the adjoining newly constructed buildings as they face the planned open space.

The SoMa Project includes approximately 99,000 square feet of ground floor space available for retail and other active uses. MIT has engaged the services of a retail consultant who has expertise in Kendall Square and Cambridge and in placing local and independent retailers. MIT is committed to ensuring the presence of small and local retailers in Kendall Square and has a track record of implementing strategies to enable these retailers to thrive in Kendall Square and Central Square. As set forth in the Commitment Letter, MIT has committed that 50% of the retailers will be local and independent so we will use similar techniques in the PUD-5 District to satisfy this commitment.

MIT is hiring an in-house retail expert to ensure that the retail spaces are designed to meet the needs of the range of retailers we hope to attract. To ensure that retailers have clear individual identities, the facades of the retail spaces are being designed with flexible storefront systems that will accommodate a range of needs, including operable windows and doors and adequate provisions for customized signage for improved individual identity. On the interior, careful consideration is being given to the depth and configuration of the retail spaces to ensure they work well for retail uses, and the design teams are taking appropriate measures to ensure that kitchen exhaust and waste handling are accommodated. During the public zoning process the community, Planning Board and City officials weighed in heavily on the importance of smaller, diverse, local and independent retail. The zoning includes many requirements that ensure that this is a priority and that continued input is required.

Consistent with MIT's April 9, 2013 Commitment Letter, adopted as part of the PUD-5 zoning amendment, MIT will establish an advisory committee that will meet annually to ensure that the community is involved in the programming of activities for the open space and the retail. This committee will include representatives from the Community Development Department, adjacent neighborhoods and MIT.

Included in the experience is proven and public placemaking with creative and flexible spaces provided for all. MIT has worked with this retail consultant to develop an initial retail vision for the ground floor spaces in the PUD-5 District. The consultant recommendations are included as Volume II Section D of the Final Development Plan. Planning for programming will also be guided by the recommendations of the retail consultant that MIT engaged for the Kendall Square project during the rezoning process and who has continually advised the team through project planning.

Although this submission is primarily focused on the SoMa Project, the retail strategy is best understood through discussions of the PUD-5 District in its entirety, including the Broad Canal Way area of the NoMa Project.

As shown on Figures C1 – C17, the retail strategy for PUD-5 District consists of four zones that complement existing uses in proximate buildings in order to establish a seamlessly integrated pattern of robust retail and active uses. The design of the ground floor spaces and the open space will work together to encourage spill out of ground floor building activity into the landscape, providing flexible zones along the building faces. Multiple doors and windows at the ground floor will

emphasize the connection to the public realm and create a feeling of transparency between inside and outside. Temporary events or activities can spill out from the buildings into the open space. The overarching objective is to blur the distinction between inside and outside by maximizing clear glass and operable glazing and taking advantage of opportunities to occupy both the ground floor and immediate exterior space as part of a diverse range of active uses.

"Main Street" Retail Zone: Retail on the south side of Main Street is currently interrupted by a loading dock at Building Parcel 6 and the parking lot at Building Parcel 2. The retail environment for the existing retailers that are present is suboptimal due to the fact that the first floors of the Hammett and Suffolk Engraving Buildings are situated approximately 3 feet above grade. The proposed SoMa Project provides the opportunity to program retail and active uses from Ames Street to the Sloan School on the south side of Main Street. The retail at the ground floors of the existing buildings along Main Street will be repositioned as part of the strategy. The ground floors will be dropped to the street level so as to make the retail more accessible and interactive with the public realm, while preserving the historic ensemble and bringing new life to these buildings. Retail on both sides of Main Street will create a critical mass along this corridor and also provide a new context for the retail at the existing One Broadway building situated in the NoMa Development Parcel.

The strategy for retailers along the Main Street zone is to meet the needs of various communities through the types of neighborhood retail that supports students, faculty, residents and workers. In Kendall Square, this will include the practical and accessible retailers the community has called for such as a pharmacy, a grocer, grab and go food service, and soft goods retailers including the MIT Press Bookstore and sit-down restaurants. Care will be taken to tenant key corners to facilitate interaction with the streetscape, sidewalk, pedestrians and landscaping at those edges.

"Gathering" Zone: The area around the MBTA station where Main Street and Carleton Street connect is the crossroads of Kendall Square – the nexus where business, academic, community and visitors connect. As shown in Figure C6 – C7, the plaza area is anchored by an architecturally enhanced MBTA station and the new MIT Museum in Building 5. It is also a prime connector between the MIT campus, the new public open space, links to the river, and Main Street. As with the Main Street side, the ground floor of E38 on the west side will be dropped to grade to foster accessibility and permeability and to bring new life and activity into the historic structure.

Ground floor active uses that occur here will foster interaction between all users of the adjacent spaces, be complementary to the MIT Museum and be conducive to activities that spill out onto the open space during the majority of the year in order to foster life beyond the work day. This is the prime location to create an extended hours environment in Kendall Square throughout the week and weekends.

Neighborhood and Campus Services Zone: The ground floors of Buildings 2, 3 and 4 have been designed to provide active ground floor uses on their south side as they open onto the open space. By activating both sides of the new buildings, we are creating a porous and unique environment that allows students, faculty, workers and neighborhood residents to enjoy the retail from both the hustle and bustle of Main Street as well as the relaxing open space on the south side of the buildings. Ground floor active uses could incorporate and integrate with activities in the open space allowing residents, students, visitors and workers to experience the practical retail and MIT-focused uses along with the restaurants and extended-hours retail.

Broad Canal Zone: While this document focuses on SoMa, the retail and public realm strategy covers the entire district and thus it is important to understand how the activation of Broad Canal Way at the northerly edge of the NoMa Project has been imagined and is integrated. The infill building at the south side of Broad Canal Way presents an opportunity to complement the successful uses along the north side and create a two-sided retail corridor. The existing uses on the north side are primarily neighborhood restaurants and an upscale wine/beverage store. Complementary uses on the south side could add additional neighborhood restaurants as well as a market with prepared foods. The NoMa Project is located at a critical juncture in the Charles River pedestrian and recreation system. The Broad Canal accommodates put-in for kayaks while runners and bicyclists travel in multiple directions throughout Kendall Square, creating opportunities for more active retail such as a bike shop, a yoga studio or an outdoor supply store. The new pathway connecting Main Street to Broad Canal Way is an ideal location for a retailer or other family-friendly activities that complement the active lifestyle of Kendall Square's residents, workers and visitors. The planned 20' wide pedestrian corridor will enhance the experience both during the day and at night with a safe, convenient, and active pathway to and from the Canal.

Kendall Square is home to some of the most groundbreaking technological advancements in the world. Incorporating that spirit into ground floor spaces – whether the MIT Museum, maker space or similar programming -- will recognize and celebrate the creative genius that is Kendall Square.

The ground floors will be subdivided into small spaces except where a larger format use such as a grocer, pharmacy or entertainment space is contemplated. Although zoning includes incentive for retail spaces under 5,000 square feet, MIT envisions that most of the retailers will be significantly smaller than that, fostering more doors on the street, and increased and varied offerings.

iii. Building Concept Design

The urban design intent is to create a family of buildings that work harmoniously together while allowing for individual character and definition. This is achieved through the use of simple volumes for each building with chamfered bases where needed to create oblique visual connections but without compromising the legibility of the volumes. The staggered massing that is produced out of a cantilevered volumes on top in each block and paired alignments between both lower and upper volumes across blocks produces a tapering effect from Building 2 to Building 5 while respecting the autonomy of each block. The cantilevers create engaging covered outdoor areas. They will work in tandem with adjacent retail and adjacent public realm to form gathering spaces and activity zones.

In plan, the upper volumes of buildings 4 and 5 are more closely aligned on Main Street, while Buildings 2 and 3 are stepped back to define a wider space around Kendall Square, and to frame and celebrate the historic clock tower in the Kendall Building.

The orientation of Building 4 and the rotated upper of Building 3 allow more light and air to Main Street and also minimize shadows.

In elevation, the alignment of the historical buildings as a base is respected and extended into Buildings 2 and 5. All buildings have a base that is similar in height to the key historic buildings on Main Street and distinguished volumetrically from the top volume.

In elevation as well, the tops of the towers are aligned in groups in order to lock them to the skyline of both the campus and Kendall Square. The residential towers rise above the others with similar volumes and north-south orientations. The upper volumes of Buildings 2 and 3 work together with One Broadway to create a lower three-some within the bookends of Buildings 1 and 4, framing the important Main Street, Broadway, and Third Street intersection.

The existing street hierarchy is respected with a special emphasis on the connections to the river. By wrapping retail and active uses around the secondary street, the designs encourage pedestrian activity into the publicly-accessible open spaces within the development and to the Broad Canal and Charles River.

Up close, the individual character of each building becomes apparent. Although the facades of several of the buildings are glass and curtain wall, each building is quite unique in its use of color, texture, fins, type of glass (e.g., clear, fritted, or spandrel), and type of metal panel. See Figures D23 – D31 for details on the façade materials for each building.

Each building incorporates color in key locations in the design. For example, in Building 1, the design includes wood façade elements to add a warmer finish at the base and help define the retail/public realm. In Building 4, the precast concrete panels will include a tint to complement the connected historic buildings, while the anodized bronze fins and metal panels add a warmer tone to the base on the south side of the building. In Building 5 the proposed material for the podium is a pleated metal panel with a bronze anodized chroma and brushed finish that reflect and diffuse the adjacent built context.

Creating a strong pedestrian scaled street wall throughout the PUD and particularly on Main Street is important to achieving the level of public realm activity desired. The ground floors of each of the building are distinct in use as more than 75% of the primary facades contain active uses. In the new buildings architecture reflects this use through the design of unique and transparent storefronts in the first story height zone. Much of the Main Street frontage contains existing historic buildings. In these buildings the ground floors will be lowered to accommodate active uses which will signal a change from the upper story architecture. As design develops the ground floors will be further animated with signage and projections to support the uses.

iv. Development Program

The SoMa project will transform 5 parking lots into an active mixed use environment. The SoMa Project development program is summarized in Table B, and is described below. In addition to the building program, the project will facilitate a continuous retail environment along Main Street that will include a significant number of local and independent retailers as well as more than two acres of new open space which will be programmed to enhance interaction among all members of the MIT and greater Kendall communities.

SoMa Development Parcel B

Building 2 will contain approximately 298,000 SF of office uses and approximately 18,000 SF of ground floor retail and active uses. The building will be positioned on the Development Parcel to activate the corner of Main Street and Wadsworth Street, facilitating pedestrian and bike travel to the river and extending Main Street retail all the way to the Sloan School. The building will be set back so that travelers crossing the Longfellow Bridge from Boston to Cambridge will have the iconic clock tower on the Kendall Building in full view.

SoMa Development Parcel C

Building 3 will be an addition to the rear of the Kendall Building totaling approximately 270,000 SF of research, laboratory and technical office space (R&D) use and approximately 27,000 SF of new and repositioned retail and active uses. Approximately 69,219 GSF of office space currently located in the Kendall Building will be retained. The top of Building 3 will be designed and positioned to provide a frame for the clock tower while still providing an opportunity for larger retail such as an urban grocer or a pharmacy at the base of the building.

Building 4 will include approximately 330,000 SF of Academic Graduate Housing and a 9,000 SF childcare facility as well as 28,000 SF of new retail or repositioned retail and active uses in E38, E39 and the new building. The Academic Graduate Housing and childcare facility are being moved from Building Parcel 2 (E55) to Building 4. The Graduate Housing will increase in size from 201 units to approximately 450 units, depend on final unit configurations. The upper floors of E38 will continue to contain 61,324 SF of academic space but will be the home of MIT's Innovation and Entrepreneurship (I&E) programs, bringing these activities at the center of the Kendall Square innovation cluster. The upper floors of E39 will continue to contain 29,854 SF of academic office space.

Building 5 will contain approximately 305,000 SF of office and approximately 20,000 SF of retail and MIT Museum space on the ground floor. The MIT Museum which will occupy approximately 65,000 SF primarily on the second and third floors of the building. The Museum will naturally serve as a new anchor in the neighborhood and provide an activity center that extends past weekday work hours. The innovative design will make it a signature piece of architecture that gives Kendall Square an enhanced identity. MIT sees this parcel as a nexus point that connects the community to the MBTA, MIT, and Main Street.

Building 6 will contain two stories of approximately 6,000 SF of retail located on the northeast portion of the E19 Loading facility and parking lot. The loading facility will continue to serve the academic uses of the East Campus, however, the curb-cut will be minimized and moved slightly to the west to accommodate the proposed building. This new building helps to create continuous active storefronts all the way from E19 to MIT's Sloan School.

MIT's Kendall Square Initiative design team has conducted extensive technical feasibility and design analysis associated with the opportunity for a new headhouse for the inbound Red Line at Carleton Street. MIT has evaluated structural engineering, constructability, operations and building code issues. The images shown on Figures E81 – E86 of the Final Development Plan accurately show the potential location of a new headhouse and how it would interface with the existing platforms and tunnels below grade. MIT favors a translucent and modern design similar to what is shown because it will act as a design feature in the plaza. However, final design would occur in collaboration with the City and State. Ultimately the MBTA must approve the concept of a new station, including its location and design, and MIT has begun discussions with the agency.

Table B: Proposed Development Program (Gross Floor Area)

	Office	R&D	Retail	Museum	Grad Housing	Child Care	Total
Building	(GFA)	(GFA)	(GFA)	(GFA)	(GFA)	(GFA)	(GFA)
Development Parcel B							
Building 2	298,000	0	18,000	0	0	0	316,000
Development Parcel C							
Building 3	0	270,000	27,000	0	0	0	297,000
Building 4	0	0	28,000	0	330,000 *	9,000	367,000
Building 5	305,000	0	20,000	65,000	0	0	390,000
Building 6	0	0	6,000	0	0	0	6,000
Development Parcel C	305,000	270000	81,000	65000	330000	9000	1,060,000
Total SoMa	603,000	270,000	99,000	65,000	330,000	9,000	1,376,000

v. Vehicular and Bicycle Parking and Loading

The SoMa Project will include 1,494 (809 net new) parking spaces primarily located in two below-grade garages.

The proposed SoMa office, R&D and retail project uses will generate a demand for 809 spaces based on the maximum parking ratios prescribed in the PUD-5 zoning and in conjunction with the Kendall Square Planning Study (K2). Additionally, 485 existing surface spaces will be replaced within the new project. Finally, MIT will relocate 200 spaces from other locations on campus to the proposed parking garage at Development Parcel C. No net new parking is associated with the graduate housing, MIT Museum or childcare facility.

Approximately 278 parking spaces to serve the building uses will be provided in a below-grade garage beneath Building 2 (Development Parcel B). These spaces will be accessed via a single ramp located on the easterly side of Wadsworth Street. In addition, loading and service trucks will access at-grade loading docks from Wadsworth Street.

Parking for 1,216 cars will be included on Development Parcel C in an 1,156 space below-grade parking garage located beneath Building 4 and the open space located to the south of Building 4 and accessed via Wadsworth Street and Amherst Street and in a 60-space surface lot accessed from Amherst Street. Loading and service for the office, R&D, museum, retail, graduate housing and daycare will take place in the designated loading docks below grade. These loading facilities will be accessed from Hayward Street.

Table C: Vehicle Parking Demand

Office Building (.9/1000)		R&D .8/1000)	Retail (.5/1000)	Museum	Grad Housing	Child Care	Total
Development Parcel B Uses							
Building 2	269	0	9	0	0	0	278
Development Parcel C Uses							
Building 3	0	216	13	0	0	0	229
Building 4	0	0	14	0	0	0	14
Building 5	275	0	10	0	0	0	285
Building 6	0	0	3	0	0	0	3
Development Parcel C Total	275	216	40	0	0	0	531
Replaced Surface							485
Relocated Academic							200
Total Parking Demand							1494

Table D: Vehicle Parking Supply

							Total
Development Parcel B Garage							278
Development Parcel C Garage ("SoMa Garage") Development Parcel C							1156
Surface Lot							60
Total Parking Supply							1494

Bike storage spaces will be provided consistent with the City of Cambridge Bicycle Parking Requirements as shown on Tables E and F below.

Table E: Long Term Bike Parking Demand

	Office	R&D	Retail	Museum	Grad Housing	Child Care	Total
Development Parcel B							
Building 2	90	0	3	0	0	0	93
Development Parcel C							
Building 3	0	60	4	0	0	0	64
Building 4	0	0	4	0	236	2	242
Building 5	92	0	3	8	0	0	103
Building 6	0	0	2	0	0	0	2
Development Parcel C	92	60	13	8	236	2	411
Total SoMa	182	60	16	8	236	2	504

Table F: Short Term Bike Parking Demand

	Office	R&D	Retail	Museum	Grad Housing	Child Care	Total
Development Parcel B							
Building 2	19	0	12	0	0	0	31
Development Parcel C							
Building 3	0	17	17	0	0	0	34
Building 4	0	0	17	0	25	2	44
Building 5	19	0	13	8	0	0	40
Building 6	0	0	5	0	0	0	5
Development Parcel C	19	17	52	8	25	2	123
Total SoMa	38	17	64	8	25	2	154

Loading for Buildings 3-5 is accommodated in a consolidated loading facility in the first below grade level. Trucks will enter the loading area at Building 4 off of Hayward Street. Parking garage functionality with respect to loading, including separation of loading, parking and pedestrian activities, is shown on Figure E87.

Garage intake and exhaust have been carefully located in each building to minimize impact to pedestrians and adjacent uses. Locations are shown on Figure E95 Garage Intake and Exhaust.

The garage exhaust will be in shafts from the lowest garage level to a minimum of 9 feet above the

adjacent sidewalk. Louvers will be integrated into the architectural materials maintaining the same finish and rhythm as the adjacent architecture. The garage exhaust will have sound attenuation in order to meet the sound requirements.

The garage intake will either be located in ground level areaways covered by grating (high heel friendly) or in louvers at the buildings. The intakes are not attached to fans and will not require sound attenuation.

The team has also carefully considered the integration of the below grade garage and landscape design. The site will be regraded and, as shown in Figures B22 – B23 Carleton Street and Hayward Street, there will be a minimum of 3 feet depth of planting soil to accommodate the variety of trees shown in the Final Development Plan.

Hubway stations are very well utilized in Kendall Square. There are currently 4 Hubway stations within the PUD-5 boundary or in close proximity. The project will add two additional Hubway stations, one on Broad Canal Way, as requested by the City, and the other adjacent to Building 2.

B. Project Commitments and Community Benefits

The SoMa Project proposal incorporates a number of benefits including the addition of over two acres of open space, new ground floor retail and active uses, space for the MIT Museum, additional graduate student housing, new office/R&D space including innovation space and, as part of the companion NoMa Final Development Plan, additional market-rate and affordable housing. In addition, MIT has agreed to a number of other benefits related to the PUD-5 Zoning and the Commitment Letter. Due to the interrelationship of the SoMa and NoMa Final Development Plans, particularly as it relates to the public realm, the public benefits are best understood when described together, and, therefore, appear verbatim in both the SoMa and NoMa Final Development Plans.

i. Preservation and Adaptive Reuse of Existing Buildings

MIT has worked closely with the Cambridge Historical Commission to develop a design plan that integrates the existing ensemble of historical buildings on Main Street. Kendall Square has always been a hotbed for innovation, from large manufacturers in the 1880s to the 'clean' industries that valued the newly filled land near the Broad Canal in the 1920s. Recognizing that the spirit of innovation is reflected in the Kendall, Hammett and Suffolk Buildings and the long history that has led Kendall Square to what it is today, the SoMa Project integrates the existing historic buildings in order to preserve and honor this important industrial heritage while simultaneously preparing for the groundbreaking work of the future — the work that defines MIT's mission and that of our many innovative partners in this district and beyond.

a. Building 3: The building will connect to and integrate with 238 Main Street at the first two levels through a common entranceway off Main Street.
b. Building 4: We will drop the first floors of the Hammett (264 Main Street) and Suffolk (292 Main Street) Buildings to the ground level to create more active and accessible retail for everyone. We have also designed the new building to be positioned over the top of the Hammett building, which integrates it into the design and creates an innovative juxtaposition of new and old.

ii. Transportation Improvements

a. Public Transportation Improvements: We are in discussions with the MBTA to create a new MBTA headhouse that would reflect the uniqueness of Kendall Square and Cambridge. The new headhouse will be subject to the MBTA's approval.

b. Pedestrian Improvements: The porous design of the project allows the community to access the open space and the newly activated retail from a number of different directions, and provides a clear path from Third Street to the river. The new development will create a clear path starting at Parcel A in the NoMa Project between Building 1 and the Red Cross, crossing Main Street on the proposed new crosswalk and entering Parcel B that will activate Wadsworth Street and continue the new path all the way to the river. We are making sure pathways to the river, through the open space, are enhanced for pedestrians and bikers visiting, working and living in Kendall Square and the surrounding neighborhoods.

c. Bicycle Accommodations: Walking and bicycling will be encouraged through an enhanced connection between NoMa Development Parcel A and the Red Cross building on Main Street that will provide a connection to existing bicycle lanes on Broadway/Main Street and Third Street, and over the Longfellow Bridge. In addition, we will be adding both short-term and long-term bicycle storage in the residential building and additional bicycle parking throughout Kendall Square.

iii. Open Space Network

MIT committed to providing a minimum of 15% of the land as accessible and welcoming open space for all in the community to enjoy so MIT will transform more than two acres of existing parking lots into accessible open space. To ensure the public has ample access to the open space, we have created a porous plan that draws the public into the open space at a number of access points and provides a clear path to the river. There will be activities that bring everyone in and it is envisioned as a nexus for business, MIT and the community to meet, socialize, converse and relax.

iv. Neighborhood Retail/Amenities

MIT will bring a new vitality to Kendall Square with practical ground floor retail—such as an urban grocer and a pharmacy; connected gathering and open spaces; and year-round programmable activities that draw people in. We are working with a retail consultant and are carefully curating the retail to meet the community's needs, including child and family-friendly retail and spaces and practical retail for residents that exists beyond the traditional workday. The MIT Museum will be a strong draw that will anchor activity in the area and create an extended hours environment

v. Labor and Workforce Development

a. Union Labor: It is anticipated that the SoMa Project combined with the NoMa Project will generate approximately 1,300 construction jobs and 2,500 permanent new jobs. MIT will use or cause its contractors to use union labor for all building trades.

b. Apprentice Program: Career development and education are engrained in both Kendall Square and MIT's fabric. MIT will contribute up to $20,000 annually for a period of 10 years, commencing upon the Building Trade Council's creation of an apprentice Pathways Program for Cambridge residents. This will create approximately 15 new apprentice opportunities for Cambridge residents.

c. Workforce Development: MIT has been and will continue to include in new leases of commercial space in the PUD-5 District a covenant requiring that tenants notify the City of Cambridge Office of Workforce Development of all new job opportunities as they become available.

vi. Cherry Street Lot

MIT has committed land situated at 35 Cherry Street (Assessor's Lot #75-118) to the City of Cambridge or a third party designated by the City - for uses that directly benefit the Area IV community. The appraised value of the lot is $845,000.

vii. Grand Junction Bicycle and Pedestrian Facilities

MIT, jointly with the City, completed a study of all parcels it owns adjacent to the portion of the Grand Junction railroad branch between Main Street and Memorial Drive in order to consider the feasibility of granting the City of Cambridge easements for the construction of off-road bicycle and pedestrian facilities adjacent to the railroad line. MIT is also contributing $500,000 to the Cambridge Redevelopment Authority to construct a section of the path from Main Street to Broadway. Construction is underway on this project, and is scheduled to be completed in the spring of 2016.

viii. Innovation Space

In addition to the innovation space included in PUD-5, MIT will provide an area equal to 5% of the gross floor area approved in the Final Development Plan for office use for innovation space for tenants not greater than 5,000 sf within 1.25 miles of PUD-5. MIT takes great pride in being a world leader in innovation and has helped create Kendall Square and the surrounding area into an Innovation and Academic District. Even though it has not yet begun to construct new buildings, MIT has already begun

to expand the innovation area by working with Lab|Central to establish space for start-up tenants requiring laboratory facilities. Lab|Central is expected to expand in early 2016 when space becomes available and will occupy nearly 70,000 square feet. MIT has also historically used One Broadway to house Cambridge Innovation Center (CIC) and expects that relationship to continue and grow where possible.

ix. Community Contributions

a. Community Benefit Organization: MIT shall make a contribution to the City of Cambridge in an amount equal to $4 multiplied by the number of square feet of new gross floor area of commercial uses. This contribution will be used to establish a fund that provides financial support to non-profit charitable community benefit organizations serving the residents of the City of Cambridge. The applicable GFA for the Kendall Square Initiative SoMa and NoMa projects combined is approximately 879,400 GFA, resulting in a total contribution of approximately $3.5 million. MIT has paid $1 million of this contribution.

b. Community Fund Contribution: MIT shall make a contribution to the City of Cambridge in an amount equal to $10 multiplied by the number of square feet of new gross floor area of commercial uses to a Community Fund established by the City Manager. The applicable GFA for the Kendall Square Initiative SoMa and NoMa projects combined is approximately 879,400 GFA, resulting in a total contribution of approximately $8.8 million. MIT has paid $2.5 million of this contribution. It is wholly at the City's discretion as to how the funding will be used, but it could be allocated to things like open space, transit services, and workforce development, which were discussed in the City's Kendall Square Central Square (K2C2) Planning Study.

x. Real Estate Taxes

When stabilized, it is anticipated that the buildings in the Final Development Plan will contribute approximately $10 million annually in real estate taxes to the City of Cambridge.

C. Development Schedule and Phasing

Given the strength of the current commercial real estate market, MIT intends to initiate construction as soon as possible and therefore desires to complete final design review on Buildings 4 and 5 as quickly as possible following receipt of special permits. MIT has worked closely with the Historical Commission, CDD and Planning Board on this project for the past five years and will continue to do so through final design of these buildings. In particular, the Building 4 teams have been meeting with the CHC regarding design advancement of Building 4. MIT anticipates that following the completion of design review on Buildings 4 and 5, MIT will advance into design review for Building 3 and then Building 2. Building 6 is a 6,600 gsf infill retail building that will serve to contribute to continuous streetwall and retail uses on the south side of Main Street. This building does not have interdependencies with the other SoMa buildings, and, therefore, could be built at any time.

The exact construction sequence will be determined based on MIT needs and market conditions. MIT may choose to pursue more than one building simultaneously or in sequential fashion.

The below grade garage situated with SoMa Development Parcel C (the "Parcel C Garage") will be constructed sufficiently in advance to support the initial commercial building(s) as well as to replace the displaced surface parking caused by the initial construction. However, MIT may choose to construct Parcel C Garage at one time in order to take advantage of construction efficiencies and below grade loading requirements.

Building 2 will not be developed until Building 4 is completed and occupied with new graduate housing available to replace the existing graduate housing at Eastgate, thus not causing any loss in available graduate housing. The below-grade parking at SoMa Development Parcel B will be constructed simultaneously with Building 2.

Open space and public realm improvements immediately adjacent to buildings will be constructed in conjunction with the construction of the buildings. The open space above the Parcel C Garage will be constructed immediately following the completion of the Garage. Pedestrian connections will be implemented to connect new open spaces as the spaces come on-line.

Temporary parking or surface loading to service a new building may also be needed during the interim phases of construction.

MIT hopes to take advantage of the strong residential market and move forward with the planning for the activation of Third Street and Broad Canal Way.

MIT expects that the buildings in the SoMa and NoMa Projects will take 7-10 years to construct

D. Future Ownership

MIT intends to develop the SoMa Project and hold ownership interest for the long term while leasing significant portions of the developed space to third party users and occupants. MIT will occupy other portions of the Project including the graduate student housing space in Building 4 and the MIT Museum in Building 5.

E. Financing Plan

To date, MIT has funded all predevelopment costs. Predevelopment costs include the entitlement process, master planning, architectural, engineering, marketing and administrative expenditures.

MIT plans to develop the Project in phases according to market conditions, and may fund project construction through a combination of equity, debt, construction financing, infrastructure financing, and joint venture capital. MIT intends to fund the construction costs on a phase-by-phase basis.

MIT may place permanent financing on each completed phase of the Project.

The total budget amount for the predevelopment and construction periods is approximately $1.2 billion.

SECTION IV: Consistency with Specific Special Permit Criteria

SECTION IV: Consistency with Specific Special Permit Criteria

A. Compliance with 13.80

13.81. - Project Purpose

The plan proposed in SoMa is wholly consistent with the purpose of the PUD-5 district as described in Section 13.81 of the Ordinance:

"The PUD-5 District is intended to provide for Kendall Square's continued prominence as a world-renowned center of innovation and a vibrant neighborhood through the creation of a mixed-use district of high quality general and technical office and laboratory uses with significant retail activity proximate to the MBTA station. The PUD-5 District helps organize placement of commercial and institutional buildings and establishes an additional mixed-use development containing a significant residential component to support the burgeoning residential corridor along Third Street and the strong links to existing neighborhoods and the riverfront. The PUD-5 District allows for continued support of the academic mission at MIT and encourages connective links, physical and otherwise, between the Institute and adjacent neighborhoods.

The PUD-5 District responds to the Kendall Square planning process and is intended to be a smart-growth, transit-oriented district and therefore allows for replacing surface parking lots with larger scale development in Kendall Square and the major public transit services located there. The PUD-5 District encourages low parking ratios, shared parking strategies, the use of public transportation and improved pedestrian and bicycle environments. The PUD-5 District furthers the City's goals for sustainable development through buildings and sites that are planned, designed and constructed in a sustainable way so as to minimize adverse environmental impacts as they are initially constructed and as they are occupied and operated over the course of their useful lives.

The PUD-5 District promotes the creation of a strong retail corridor along Main Street and the enhancement of Broad Canal Way. Combined, this new public crossroads will have broad appeal as a desirable destination during and beyond the traditional workday by providing a critical mass of diverse restaurants, shops, entertainment and programming.

The ground floor space will engage pedestrians and provide a variety of indoor and outdoor gathering spaces, including retail that can address the needs and reflect the creativity of the local community."

13.82. - Uses Allowed in the PUD-5 District

The uses of the Development Parcels will contain the uses set forth in Section 13.82 of the Ordinance. More specifically, the uses in Building 5, will include general office use with the MIT Museum having a presence in the Building, consistent with the uses set forth in Sections 4.33 and 4.34 of the Ordinance. Building 4 will contain a graduate student dormitory use and academic office space, which are uses contained in Section 4.33 of the Ordinance. Buildings 2 and 3 will contain office and/or research laboratory uses, which uses are allowed in Section 4.34 of the Ordinance. All of the proposed buildings, including Building 6, will contain first floor active uses including retail and/or restaurant uses consistent with the provisions of the Section 4.35 of the Ordinance.

13.83. - Floor Area Ratio; Gross Floor Area

The new buildings, once constructed, will not cause the FAR in PUD-5 to exceed 3.9. Under current conditions, the FAR for the entirety of the PUD-5 District equals 2.21 with the current GFA of approximately 2,540,839. The land area of the PUD-5 District is 1,149,765 square feet.

As set forth more particularly on the attached Dimensional Form, the Proposed Buildings in the Development Parcels will contain a total of 1,376,000 square feet of new GFA, which is calculated as follows:

- Building No. 2 will contain approximately 316,000 square feet of Gross Floor Area;
- Building No. 3 will contain approximately 297,000 square feet of Gross Floor Area;
- Building No. 4 will contain approximately 367,000 square feet of Gross Floor Area;
- Building No. 5 will contain approximately 390,000 square feet of Gross Floor Area; and
- Building No. 6 will contain approximately 6,000 square feet of Gross Floor Area.

From the total proposed GFA, a number of exemptions are applied. Following these exclusions described below, the adjusted total proposed GFA for SoMa is 1,160,233.

- Per Section 13.83.2(a) of the zoning ordinance, an exemption of 50% (or 49,500 GFA) is taken for the 99,000 GFA of retail uses included in the buildings above that are of a qualifying average size (generally below 5,000 sf or 10,000 sf if a grocery, market or pharmacy) as described in the ordinance. The exact retail uses and locations are not

finalized. Therefore, this exemption represents an allowance consistent with the commitment that 50% of the retailers will be local and independent.

- Per Section 13.83.2(c) of the zoning ordinance, the 166,267 GFA of institutional dormitory use constructed in Building 4 that exceeds the amount of GFA devoted to such uses in the PUD as of January 1, 2013.

The build-out of the Final Development Plan will include the removal of a number of existing buildings within the PUD-5, which include 322-326 Main Street (Cambridge Trust Bank) situated at the corner of Dock Street and Main Street, three buildings on the east side of Carleton Street across from the MIT Medical Building and the MIT Eastgate graduate student housing. These buildings total 242,414 GFA to be removed.

The removal of the above buildings when taken together with the other exclusions from GFA contained in the Ordinance and Section 13.83 results in a total GFA in the PUD-5 district of 3,836,958 and an FAR of 3.34.

13.83.3 - Gross Floor Area Limitations

13.83.3(b) - Plan Requirements

This filing constitutes a Final Development Plan for the two primary Development Parcels in the Main Street and Transitional Height Sub-District for the PUD-5. A companion filing for a Final Development Plan in the Third Street Transition Subdistrict (NoMa) enumerates new uses in that District.

The Dimensional Tables provided in Section VII of this document present the PUD-5 status of metrics such as FAR and open space that are calculated across the PUD and to place the Final Development Plan in context with existing and potential future development. As shown on Figure 6-3, the proposed 60-space surface parking lot accessible from Amherst Street is a potential location for an academic building in the future. Other deployment of the remaining GFA would be as a result of replacement or expansion of existing academic buildings. There are no plans for additional development at this time.

13.83.3(c) - Commercial Limitation

As set forth above, the new Buildings will contain approximately 922,500 square feet of Office, Laboratory and Retail Uses. When taken together with the proposed retail and office/research laboratory uses contained in the NoMa PUD Filing, the total GFA for such uses will equal approximately 945,500 square feet and will not exceed the 980,000 square

foot maximum contained in Section 13.83.3(b) of the Ordinance. 45,134 of such existing use will be removed, resulting in 900,366 of net new Office, Lab and Retail Uses.

13.84. - Parcel and Lot Requirements

As noted above, each of the Development Parcels have lot areas in excess of 25,000 square feet. Subject to final design review and building siting, the proponent will likely subdivide the land contained within Development Parcel C to create four separate building lots, one for each of buildings 3, 4, 5 and 6, which lots will also contain the garage facilities situated under such building, if any.

13.85. – Setbacks

The new Buildings 2, 3, 4 and 5, will exceed eighty-five (85) feet in height. Each building, as indicated on the elevation plans attached hereto, will conform to the 16-foot setback requirement from the street line of Main Street in accordance with the requirements of section 13.85.1.

13.86. – Height

As indicated on the attached elevations and the Dimensional Form, none of the Buildings will exceed 250 feet, except the graduate student dormitory, which will have a height of approximately 300 feet, which is permitted pursuant to the provisions of Section 13.86.1.1(a). Because Building 4 will be used for institutional dormitory use, and not residential uses, the requirements of 13.86.1.1.b do not apply.

13.87. - Open Space

13.87.1 - Minimum Open Space

As depicted on Figures G-1 and G2 and the Dimensional Form, the PUD-5 will have Publicly Beneficial Open Space that totals approximately thirty-eight percent (38%) of the total land area of the PUD-5, upon completion of the SoMa and NoMa Projects, which is far in excess of the requirements of Section 13.87 of the Ordinance.

13.87.2 - Conceptual Open Space Plan

As this Application, when taken together with the NoMa PUD Filing, constitutes a filing for all of the Development Parcels in the Main Street and Transitional Height Sub-Districts, and includes a robust Open Space Plan for all of said area, there is no need for a separate Conceptual Open Space Plan. A depiction and calculation of the open space following the development proposed in the SoMa and

NoMa filings is included in Figure G-2.

13.88. - Parking and Loading Requirements

The Final Development Plan includes 1,494 parking spaces, of which 809 will satisfy the demand generated by the new uses and the remainder will replace or relocate existing parking. There is no minimum parking requirement for the uses proposed in the Development Plan. The parking allocated to proposed uses in the Final Development Plan will not exceed the maximum parking allowed in this section of the Ordinance. The proponent submitted a Traffic Impact Study for this project on June 22, 2015 and City of Cambridge Traffic, Parking and Transportation Department (TPT) certified the study on July 21, 2015. Due to the size of the study it is not included as an Appendix to this document but is available upon request of the proponent or the TPT. A summary is included in Volume II, Section A.

Parking for all new non-institutional uses in the Final Development Plan are located in underground structured parking. Loading for Buildings 3-5 is consolidated below grade in the Development Parcel C garage. Long term and short term bicycle parking, and its quantity, design and location, is provided per Article 6 and other relevant City guidelines.

The proponent, as part of its analysis, considered whether it could make use of shared parking within the SoMa Project. The non-academic parking within the garages support the primarily office, research laboratory and retail uses, all of which are daytime uses that share the same parking hours. As a result, a shared parking solution was not feasible within the SoMa Project.

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13.89 Special Requirements, Conditions and Standards Applicable to Certain Development Authorized by the Planning Board in the PUD-5 District

13.89. - Special Requirements, Conditions and Standards Applicable to Certain Development Authorized by the Planning Board in the PUD-5 District

13.89.1 - Rooftop Mechanical Equipment Noise Mitigation

The buildings and the rooftop mechanical equipment used in connection with the use and operation of the Buildings will be sized, installed and operated utilizing best available and feasible practices, and the noise or vibration emanating from the equipment situated on the rooftops of Buildings 2, 3, 4, 5 and 6 will comply with the standards set forth in the City of Cambridge Noise Ordinance as well as the provisions of Section 13.89 of the Ordinance, as applicable.

13.89.2 - Required Housing

The Development Plan does not contain any residential uses. The Applicant understands that before the Applicant can obtain a building permit for a building that will result in the New GFA for commercial uses exceeding 600,000 square feet, it must have commenced construction of 240,000 square feet of New residential GFA in the PUD-5 District. Concurrently herewith, an affiliate of the Applicant, MIT One Broadway Fee Owner LLC, has filed the NoMa PUD Filing, which provides, among other things, for a building that will contain first floor retail and amenity space, an 83,000 gfa structured parking garage for 175 vehicles, and approximately 285,000 gfa of multi-family residential space (the "Main Street Residences"). As described with more specificity in the NoMa PUD Filing, said Residences will be developed so that eighteen percent (18%) of the residential units qualify as Affordable Housing Units (as defined in the Ordinance) and will otherwise be consistent with the provisions of Section 11.203.2 of the Zoning Ordinance. The commencement of construction of the Main Street Residences will satisfy the requirements of Section 13.89.2.

In addition, the new commercial space containing office, research laboratory and retail/restaurant space, will be subject to the provisions of Section 11.203.1, and an Incentive Zoning Payment equal to $12 for each square foot of new GFA to be used in connection with any uses set forth in Section 13.82.3-6, will be paid to the Managing Trustee of the Affordable Housing Trust Fund prior to the issuance of a Certificate of Occupancy for such new GFA. The proposed gross floor area identified above for each of the above uses proposed in the SoMa Project and the NoMa project is equal to 1,015,200 GFA, therefore such Incentive Zoning Payments generated by the Final Development Plan will total approximately $12.1 million.

13.89.3 - Innovation Space

The Final Development Plan complies with the requirements of Section 13.89.3.1 because the land within the PUD-5 District contains Innovation Office Space in excess of what is required by the Ordinance. More specifically, the Final Development Plan calls for the creation of as much as approximately 618,000 gfa of new Office Use and the Innovation Office Space requirement is 5% of that number (30,900 gfa). As configured today, the PUD-5 District contains in excess of the requirement in the existing building at One Broadway, which contains the Cambridge Innovation Center ("CIC"). The space within CIC complies with the requirements and limitations of Section 13.89.3. The Lease Agreement between the Owner of One Broadway and CIC requires that CIC maintain space that complies with the requirements of Section 13.89.3 so as to ensure that the Owner of One Broadway has the ability to ensure the existence of the Innovation Office Space for many years to come.

13.89.4 – Sustainability

New buildings in the SoMa Project will comply with the provisions of Section 22.20 of the Ordinance. The proposed project employs a comprehensive approach to achieve sustainability that involves international best practices in establishing a new benchmark in urban sustainable development, community, and innovative solutions to local and regional environmental design issues.

MIT is committed to adopting the next generation of sustainable building benchmarking. Each building is committed to achieving a LEED Gold rating, under the latest, and more stringent LEED version 4 system. In addition, the site area will explore opportunities to align with requirements in the Sustainable Sites Rating System program. Most importantly, the design teams have collaborated to comprehensively respond to local and timely sustainability concerns to address landscape, water, and energy responsibly. Detailed analysis and description of the ways the proposed project is meeting the goals related to Energy and Emissions, Urban Site and Landscaping, Healthy Living and Working, Transportation and Sustainability awareness has been submitted as part of the Article 19 Special Permit Application for this project.

MIT is exploring providing green roofs at this project. Functional Green Roofs, high-albedo "white roofs" or a functionally equivalent roof system will be employed. MIT will comply with the monitoring requirements in specified in 13.89.4(g) of the ordinance

13.810. - Other Provisions

13.810.1 - Active Uses and Pedestrian Activity

As indicated by the first floor plans for each of the Commercial Buildings attached to this Final Development Plan as Figure C-2, the first floors of each of the Commercial Buildings will contain the required Activation Uses along Main Street. As further indicated by the first floor plans, each of these Activation Uses will have at least one direct entrance from the sidewalk or plaza immediately abutting the Activation Use.

13.810.2 - Contribution to Community Fund

In compliance with the provisions of 13.810.2, the Applicant paid the $2,500,000.00 payment to the City in July 2013, within ninety (90) days of the adoption by the City Council of Section 13.80. The Applicant will comply with the provisions for future payments under Section 13.810.2

B. Compliance with 12.00

12.36.4

Pursuant to Section 12.36.4, the Planning Board shall grant a PUD Special Permit upon determination by the Planning Board that the Final Development Plan meets the evaluation criteria set forth in Section 12.35.3 and contains any revisions to the Development Proposal required by the Planning Board. As indicated in the Preliminary Determination issued by the Planning Board on September 8, 2015, a copy of which is attached hereto, the Planning Board made the required findings that the Development Proposal satisfied the requirements for granting a PUD Special Permit set forth in Section 12.35.3(1) – (3), This final Development Plan is a continuation of the Development Proposal and continues to satisfy the above-referenced evaluation criteria, as more specifically set forth below.

12.35.3

Approval of the [Final Development Plan] shall be granted only upon a determination by the Planning Board that the [Final Development Plan]:

(1) Conforms with the General Development Controls set forth in Section 12.50, and the development controls set forth for the specific PUD district in which the project is located. The Project conforms to the General Development Controls set forth in Section 12.50 and the provisions of Section 13.80 of the Ordinance.

12.51 – Applicability and Conformance with Existing Policy Plans.

The Project is consistent with the policy objectives set forth in the Kendall Square Central Square Planning Study issued by the City of Cambridge Community Development Department in 2013 (the "K2 Study"). As indicated by the K2 Study, the Final Development Plan creates a transit-oriented mixed use environment that further bolsters the growing innovation economy in Kendall Square while creating open space amenities and retail and restaurants, thereby further creating a new, lively environment in Kendall Square.

12.52 - Minimum Development Parcel size.

As indicated by Figures A-1 and A-2, the overall area in this PUD-5 Special Permit Application will contain 293,808 square feet and will be separated into two separate Development Parcels. Development Parcel B measures 69,711 square feet and Development Parcel C measures 224,097 square feet, each of which exceeds the minimum parcel size of 25,000 set forth in Section 13.8.

12.53 - Standards for Construction of Roadways.

The Project does not include construction of any new roadways.

12.54 – Standards for Construction of Utilities and Public Works.

The proposed buildings and the other improvements identified in the Final Development Plan that include the installation of utilities, lighting, sewers, and other public works will be constructed in accordance with the requirements of applicable City Departments. Additional information on utilities and infrastructure for each of the Development Parcels can be found in Section V of this Final Development Plan.

12.55 – Landscaping

As indicated by the landscaping plans attached hereto in Figures B-1 to B-28, in compliance with the provisions of Section 13.87 of the Ordinance, all portions of the PUD-5 District not devoted to the location of the proposed buildings, other vertical improvements, roadways, driveways and a single at-grade parking lot situated in the southwest corner of Development Parcel 2, shall be suitably landscaped. The Proposed Project will create a series of large inviting open spaces that will occupy approximately thirty-eight percent (38%) of the land area situated within the PUD-5 District. The creation of this open space and the significant landscaping contained therein will be a substantial positive change from the series of at-grade parking lots that they will replace and, as discussed above, will provide the community with an inviting and dynamic gathering place in the center of Kendall Square.

12.56 – Environmental Performance Standards

The Project and the uses at in the Buildings will conform to all applicable federal, state and local laws and regulations regarding the environment including laws and regulations

applicable to air quality and water quality. As indicated below, the commercial buildings in the Development Plan will comply with the noise limitations and requirements contained in Section 13.89.1. In addition, all new commercial buildings have been designed to meet the LEED Gold Standard.

(2) Conforms with the adopted policy plans or development guidelines for the portion of the city in which the PUD district is located;

The Project is located in the PUD-5 District. Development Controls applicable to the PUD-5 District are set forth in Section 13.80. The proposed changes to the Project conform to the specific Development controls set forth in Section 13.80 as shown on the Dimensional Form submitted with this application. The Applicant's ongoing encouragement of pedestrian, bicycle and public transportation will contribute to the planning goals of emphasizing alternative modes of transportation in the area. The buildings will be designed to create an active edge along the south side of Main Street as well as for the substantial open space amenities to be constructed within the PUD-5 District. The Proposed Project has received the support from the East Cambridge Planning Team ("ECPT").

(3) Provides benefits to the City which outweigh its adverse effects; in making this determination, the Planning Board shall consider the following:

The proposed changes to the property implicated by the SoMa Project provide benefits to the City which substantially outweigh its adverse effects as detailed in the paragraphs below.

a. Quality of site design

Including integration of a variety of land uses, building types, and densities; preservation of natural features; compatibility with adjacent land uses; provision and type of open space; provision of other amenities designed to benefit the general public;

The Project will include a variety of uses and activation along Main Street on parcels historically used for parking lots associated with the buildings within Kendall Square as well as those located on the greater MIT Campus. The Project includes 5 buildings and a central subsurface garage on two Development Parcels. The buildings will range in height from 43 feet (for Building 6) to up to 300 feet (for the graduate student dormitory, i.e., Building 4).

b. Traffic flow and safety;

The proponent has prepared and the City of Cambridge has certified a very detailed Transportation Impact Study that addresses issues of traffic flow and safety. In addition, as indicated in this Final Development Plan, the proponent has agreed to undertake certain additional traffic-related improvements in and around the PUD-5 area to further promote traffic flow and safety.

c. Adequacy of utilities and other public works;

City utilities are generally adequate to support the proposed development. Specific infrastructure improvements and services associated with the proposed project are described in Section V of this Final Development Plan.

d. Impact on existing public facilities within the City;

It is not anticipated that the proposed project will have an impact on City services. The development of the new graduate student dormitory on Development Parcel 2 will be constructed to replace the aged Eastgate Graduate Student Dormitory and, therefore, will not have a significant impact on the City's school system. The proposed buildings contained in the SoMa Project will be constructed from newer materials and will meet the life/safety codes in effect at the time of building construction, including sprinkler systems and other life/safety enhancements as appropriate.

e. Potential fiscal impact.

The SoMa Project is expected to have a significant positive fiscal impact. The planned improvements will change a series of at-grade parking lots used by MIT to a series of mixed use buildings with first floor retail with office, laboratory and, with respect to Building 4, institutional dormitory uses directly abutting Main Street. These improvements will create new, productive uses along Main Street and will substantially increase the value of the properties, thereby substantially increasing the taxable value of the properties to the City and the taxes paid to the City. It is expected that the construction of these new improvements will create 1,300

construction jobs and 2,500 new, permanent jobs in the City of Cambridge. Additionally, the new buildings and the uses therein will attract new workers and residents to Cambridge who will shop in the City and take advantage of the nearby cultural opportunities.

In addition to the above, the Final Development Plan contains responses to the questions and comments raised by the Planning Board in its Preliminary Determination, which responses are contained hereof.

C. Compliance with General Special Permit Criteria

10.43 Criteria Special Permits will normally be granted where specific provisions of this Ordinance are met, except when particulars of the location or use, not generally true of the district or the uses permitted in it, would cause granting of such permit to be to the detriment of the public interest because:

(a) it appears that the requirements of this Ordinance cannot or will not be met

The Project identified in this Application and for which the Special Permit is sought will meet all the requirements of the Ordinance.

(b) traffic generated or patterns of access or egress would cause congestion, hazard or substantial change in established neighborhood character

The proponent has prepared and the City of Cambridge has certified a very detailed Transportation Impact Study that addresses issues of traffic generation and patterns. Generally the trip generation and patterns associated with the project are consistent with those assumed as part of the planning and rezoning for the Kendall Square area.

(c) the continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would be adversely affected by the nature of the proposed use

The Development Plan will not adversely affect the continued operation or future development of adjacent uses. The land uses within the immediate vicinity of the Development Parcels and the PUD-5 are either institutional or commercial uses. To the east and south of the Project area are institutional facilities owned and operated by MIT. There is also one multi-family project situated to the south known as 100 Memorial Drive, the land under which is owned by MIT. To the west are primarily institutional

buildings owned and operated by MIT. Development Parcel C also abuts the Kendall Hotel to the west, which is a commercial hotel containing 77 rooms and a restaurant on the first floor. The placement of a mixed use building immediately adjacent to the Kendall Hotel does not adversely affect the use of the Kendall Hotel as the Kendall Hotel and the addition to it abutting the westerly boundary of the portion of Development Parcel 3 containing Building 5 was constructed with a party wall to allow construction of a building immediately adjacent to the Kendall Hotel's easterly face. To the north is Boston Properties' Kendall Center development, which is high-density development.

The Project will include the creation of substantial open space connecting the uses on Third Street, Main Street and East Cambridge to the MIT campus and to Memorial Drive and the Charles River. Construction of the project will be a dramatic improvement over the existing condition of the parcels as at-grade parking lots and, consistent with the goals of the PUD-5 Zoning contained in Article 13.80 of the Code, will help to create a vibrant neighborhood through the creation of a mixed-use district of high quality general and technical office and laboratory uses with significant retail activity proximate to the existing MBTA transit facilities.

(d) nuisance of hazard would be created to the detriment of the health, safety or welfare of the occupant of the proposed use or the citizens of the City

The SoMa Project will not create any nuisance or hazard to the detriment of the health, safety and/or welfare of the occupants of the proposed uses within the SoMa Project or the City. In fact, the SoMa Project will result in approximately 1,300 construction jobs, 2,500 new permanent jobs and housing for graduate students. The additional residents, employees, workers and visitors to the SoMa Project will further activate the retail and commercial uses in both the SoMa Project as well as the retail on the north side of Main Street and the burgeoning retail corridor on Third Street. The SoMa Project and the open space located throughout the Project with a substantial contiguous massing to the south of proposed buildings 2, 3 and 4 will replace existing at-grade parking lots that currently provide parking for approximately 485 parking spaces and provide a gathering space for users of the Project as well as the community at large, thereby introducing a welcoming open space amenity adjacent to the Project, Kendall Center, Third Street and the MIT campus. The retail, restaurants, MIT Museum and other publicly accessible spaces located on the first floors of the new buildings will be an amenity to the users of the SoMa Project and members of the community and will further activate the open space.

(e) for other reasons, the proposed use would impair the integrity of the district or adjoining district, or otherwise derogate from the intent and purpose of the Ordinance

The Project will not impair the integrity of the district of any adjoining district, or otherwise derogate from the intent of the Ordinance. The Project is located within a Residence C-3 District, the Mixed Use Residential (MXR) District, the MIT Institutional Overlay District and the PUD-5 Overlay District. Properties within the Residence C-3 District in this particular area of the City have long been used for commercial purposes. The uses have been a mix of commercial uses, with MIT having a heavy presence in the District consistent with the provisions of the MIT Institutional Overlay District. The Development Parcels are all located within the PUD-5 District, which is "intended to provide for Kendall Square's continued prominence as a world-renowned center of innovation and a vibrant neighborhood through the creation of a mixed-use district of high quality general and technical office and laboratory uses with significant retails activity proximate to the MBTA station." The Final Development Plan also includes a possible redevelopment of the MBTA head house currently situated on the south side of Main Street (the "South Head House"), which, based on current plans will move the South Head House south of its current location, thereby allowing for the creation of a wide, meaningful gateway from Main Street (and the East Cambridge Community) to the open space situated in the heart of Development Parcel 3, and then further south to the MIT Campus and the Charles River. The PUD-5 District responds to the Kendall Square planning process and is intended to be a smart- growth, transit-oriented district and therefore allows for replacing surface parking lots with larger scale development in Kendall Square and the major public transit services located there. As described above, the Project accomplishes the intent of the PUD-5 District for the parcels south of Main Street by replacing the surface parking lots with new mixed-use buildings, a residential dormitory and a large open space plaza which will support the continuing growth of Cambridge's innovation hub as well as continuing to make Kendall Square a gathering place and a neighborhood. The Adjoining Districts are comprised of Residence C-3 Districts containing a single commercial hotel property and a number of other properties owned by MIT, as well as the MXD District, which contains the densely developed mixed use project known as Kendall Center. The creation of new buildings containing office, research and development uses, retail, restaurants and an institutional dormitory will serve to further enliven this area of the City, thereby bringing more users to the hotel property and providing hotel users with more amenities situated adjacent to the hotel property. The Project will also create a greater connection between the East Cambridge neighborhood, Kendall Square and the MIT campus, serving to create a true gateway to the City of Cambridge.

(f) the new use or building construction is inconsistent with the Urban Design Objectives set forth in Section 19.30.

With regard to the consistency of the Project with the Urban Design Objectives contained in Section 19.30, please see the Article 19 Special Permit Application materials filed with the Planning Board on July 27, 2015, as part of Special Permit Application No. 302. In addition, it should be noted that the Final Development Plan satisfies the requirements of Section 19.25 of the Ordinance, as well.

19.25 Traffic Impact Findings. Pursuant to Section 19.25.1, the Planning Board shall grant a special permit only if it finds that the project will have no substantial adverse impacts on city traffic within the study area as analyzed in the TIS. Substantial adverse impact is measured based on the following indicators, which are set forth in Section 19.25.11: "(1) Project vehicle trip generation on weekdays and weekends for a twenty-four hour period and A.M. and P.M. vehicle trips generated; (2) Change in level of service at identified signalized intersections; (3) increased volume of trips on residential streets; (4) Increase of length of vehicle queues at identified signalized intersections; and (5) Lack of sufficient pedestrian and bicycle facilities".

When one or more of the indicators is exceeded, it will be indicative of a project's potentially substantial adverse impact on city traffic. Notwithstanding such exceedances, the Planning Board can still make a finding that the project will not have a substantial adverse impact on city traffic based on the proposed mitigation efforts offered by the applicant and other supplemental information that identifies circumstances or actions that will reduce such adverse impacts.

With regard to the Project, the TIS identifies exceedances in each category of the Criteria, which exceedances are more specifically set forth on Volume II, Section A attached hereto. While there are a number of exceedances, the proponent has been in a continuous dialogue with the City's Traffic, Parking and Transportation Department concerning on-site and off-site mitigation measures that the proponent will employ in order to reduce the exceedances caused by the SoMa Project. These measures may include:

i. **Traffic Signal Upgrades**. Update outdated traffic signal equipment (controllers, conduits, mast arms, signal heads, etc.) at the Main Street and Ames Street intersection and at the Main Street and Vassar Street intersection.

ii. **Ames Street Redesign.** The proponent will work with the City with regard to the City's proposed redesign of the portion of Ames Street between Main Street and Memorial Drive, in order to accommodate bicycles on Ames Street while balancing pedestrian movements, motor vehicle traffic and public realm needs in general.

iii. **Pedestrian and Bicycle Access to Charles River**. MIT will continue discussions with the City and the State Division of Conservation and Recreation to understand the role of Memorial Drive Phase II improvement project in order to improve pedestrian and bicycle connections from the Charles River over Memorial Drive to Wadsworth and Ames Streets.

iv. **New Hubway Stations.** The Project will include the installation of two (2) additional Hubway Stations to the Kendall Square area: one along Broad Canal Way, as requested by the City, and one adjacent to Building 2, all as shown on Figure B11 to this Final Development Plan.

v. **Bicycle Facilities**. As part of the Project, MIT will construct 154 short-term and 504 long-term bicycle spaces. Additionally, MIT will construct showers to serve building tenants and users of the buildings within the Project within the new buildings. MIT will also construct two (2) publicly accessible fix-it stations in key locations to be determined within the SoMa and NoMa project areas. MIT will continue to discuss what elements the City is interest in accommodating in a public bike station to assess strategies for integrating these amenities into the Project.

vi. **Wadsworth Street**. MIT will reconstruct Wadsworth Street to privilege pedestrian and create an improved link to the Charles River, which will include, among other things, the increase in the width of sidewalks to 8 feet from Main Street to Amherst Street, planting of new street trees, installation of new crosswalks, and the possible raising of the crosswalk that MIT proposes to install just north of Amherst Street. These improvements will strengthen the connection between Main Street and Memorial Drive.

vii. **Hayward and Carleton Streets**. MIT will reconstruct Hayward and Carleton Streets to create a more pedestrian-friendly environment at the center of the SoMa district. Portions of the two streets will be closed to general vehicular traffic and a significant portion of Hayward Street will be limited to pedestrian access only.

viii. **MBTA Headhouse Relocation**. MIT intends to reconstruct the MBTA Red Line Headhouse situated to the South of Main Street in between Buildings Parcels 4 and 5, to the location depicted in this Final Development Plan. MIT's relocation is dependent upon the consent of the MBTA, and MIT is continuing active negotiations with the MBTA on this matter.

The above mitigation measures are discussed in greater detail in the responses to the Preliminary Determination questions.

In addition to the above mitigation measures, the proponent will support a program of transportation demand management (TDM) actions to reduce automobile trips generated by the Project. The goal of the SoMa Project's TDM Plan is to reduce the use of single occupant vehicles by encouraging carpooling and vanpooling, bicycling, walking, and increased use of the area's public transportation system by employees and visitors. In an effort to reduce the number of cars traveling to Kendall Square, the SoMa Project has been developed as a transit-oriented, mixed-use land development, with a constrained parking supply, supportive urban design and a comprehensive transportation demand management plan. MIT is committed to supporting a balanced multimodal transportation system to serve its commuters and visitors and providing a balanced mixed-use development that reduces dependency on the private automobile.

To that end, the proponent has filed two (2) separate draft Parking Transportation Demand Management Plans for the SoMa Project: one for each of Development Parcel B (Building 2) and Development Parcel C (Buildings 3, 4, 5 and 6). The PTDM Plans propose the following TDM measures:

1. **The Designation of an Employee Transportation Coordinator (ETC),** who will manage the implementation of the PTDM programs and monitoring. For the Buildings in SoMa, the ETC will be an employee of MIT, its property management company or an independent provider of such services. The ETC will market and promote transportation alternatives, and be available to assist tenant employees with their commuting needs. The ETC will develop and implement the PTDM programs making best efforts to meet the PTDM target mode share goals. In addition, the ETC will be the liaison between the employees and transportation organizations including, but not limited to, the CRTMA, MBTA and the City of Cambridge. The ETC will also participate in any PTDM or Transportation Coordinator training offered by the CRTMA or the City of Cambridge. The ETC will also compile and provide to all tenants up-to-date transportation information explaining all commute options for distribution to all existing employees and new employees as part of their orientation.

The ETC will provide and maintain a transportation website which will be available to employees of Building 2. The website will have deep links to the key services serving the Kendall Square area. Information to be posted will include, but not be limited to, the following:

a. Links to MBTA Services, Rideshare providers, Car-sharing services, City's website – CitySmart, CharlesRiver TMA, Hubway;
b. MBTA maps, schedules and fares;
c. EZRide shuttle maps and schedules;
d. Bicycle parking locations and routes;
e. Pedestrian routes; and
f. Newsletters and announcements of TDM programs and services.

The ETC will hold an annual employee transportation information event, which may be combined with other events such as health fairs, appreciation days, or benefits fairs. The event may also be held in conjunction with similar events at nearby MIT properties or be coordinated with the Charles River TMA. The ETC will promote the City's GreenStreets Initiative and events.

The proponent will market the availability of non-SOV modes of access to Kendall Square through the provision of transportation kiosk, signage, a website and events. Specifics regarding the possibility to provide a real-time transportation information screen rather than a transportation kiosk will be determined during design review.

2. **Charles River TMA.** The proponent is an active member of the Charles River Transportation Management Association (CRTMA) which works with property owners to help ensure the effective implementation of the PTDM measures. As part of their lease, Tenants will be required to join the Charles River TMA and provide their employees and patrons access to the TMA's programs and EZ Ride fare free. In the case that CRTMA membership is not feasible for a tenant, the proponent will extend TMA benefits to their employees and patrons.

    a. **Ride Matching/Car Pool/Vanpool**. The proponent will market MassRIDES programs and ride matching services to all employees who are eligible to park in the project's parking facility through the ride-matching assistance in the area provided by the CRTMA to assist employees with contacts for appropriate carpool/vanpool partners. The CRTMA assists employees to form or participate in existing vanpools through

MassRides, the state rideshare agency. Vanpools are typically an attractive option, due to costs, for employees who commute at least 25 to 30 miles each way. There are several vanpools that currently serve Cambridge and companies in Kendall Square from locations in New Hampshire, the Cape, and west 495 Corridor communities.

b. **Emergency Ride Home.** An Emergency Ride Home (ERH) program will be provided through the CRTMA. Tenants will be required to offer an ERH for all employees who commute by non-SOV mode at least three days a week and who are eligible to park in the project's parking facility

c. **Car-sharing Program**. The CRTMA has partnered with ZipCar to provide discounted car-share rates for employees of CRTMA member companies. The ETC will promote employee participation in this program and others as car-sharing service options expand.

d. **EZRide Shuttle Service**. The EZRide Shuttle service is provided by the CRTMA and currently stops on MIT Kendall Square. Tenants will provide EZRide Shuttle service, or equivalent shuttle service, to all employees fare free. Bus schedules and services will be marketed and available for tenant employees, retail patrons and visitors to the SoMa Project.

3. **Subsidy Option Program.** The proponent will include language in leases requiring tenants to allow employees to set-side pre-tax funds as allowable under the Commuter Choice provision of the Federal Tax Code. The proponent has developed three Subsidy Options. All tenants will be required as part of their lease, to choose one of the three Subsidy Options and implement it with their employees. As the Project and new innovative approaches develop, The proponent and tenants will be allowed to develop additional subsidy options to either replace or supplement the Subsidy options described, with the approval of the PTDM Officer. The Subsidy options are presented in Table _ below:

TABLE SUBSIDY OPTIONS Subsidy Program	Subsidy Option 1	Subsidy Option 2	Subsidy Option 3
Parking Charge to Employee:	Tenant to charge employees market rate for parking	Employees park for free or subsidized	Employees park for free or subsidized
Parking Cash-Out Program:	No parking Cash-Out Program required	Tenant to provide a $70/month Parking Cash-Out Program to all non-SOV full-time employees (amount to rise with MBTA fare increases)	No parking Cash-Out Program required
Transit Subsidy:	Tenant to provide 60% Transit Subsidy to full-time employees	No Transit Subsidy required	Tenant to provide 100% Transit Subsidy to full-time employees
Hubway	No Hubway membership required	No Hubway membership required	Tenant to provide Hubway Silver level membership to full-time employees

Subsidy Option 1:

As presented in Table 6 above, Subsidy Option 1 requites tenants, regardless of leased square footage, to provide a 60 percent subsidy for monthly transit passes, up to the Federal limit (set at $130 for year 2015) to all full-time employees. In addition, all employees that chose to drive and park on-site will be charged the market rate parking fee.

Subsidy Option 2:

Tenants that chose Subsidy Option 2 will be required to offer a parking cash-out program to their full-time employees. Parking Cash-out is a commuter benefit in which an employer offers employees the option to accept cash income instead of a free or subsidized parking space at work. The parking cash-out under Option 2 is capped at the cost of an unlimited MBTA bus/subway pass. The cost of this pass is currently $70, and this cap will increase with each fare increase initiated by the MBTA, to ensure that this benefit will always allow

employees to purchase an unlimited bus/subway pass each month. Employees will have the option to spend the parking cash-out monies in any way they prefer – on transit fares, bicycle maintenance, gas for carpools, vanpool fees, walking shoes, etc. Employees who drive to work and receive free or subsidized parking will not be eligible to receive this benefit. If drive alone employees pay market rate for on-site parking, they will become eligible to receive a monthly transportation benefit equal to the benefit received by non-SOV employees.

Subsidy Option 3:

Tenants selecting Subsidy Option 3 will be required to provide a 100 percent subsidy for monthly transit passes, up to the Federal limit (set at $130 for year 2015) to all full-time employees. In addition, tenants will be required to offer an annual corporate membership to Hubway at a minimum of a Silver level.

4. Bicycle and Pedestrian Programs. Information on bicycle and walking options will be included in the dissemination of all transportation alternatives information. In accordance with current zoning, ninety three (93) long-term bike parking and 31 short-term bike spaces will be provided at grade around the site of Building 2 and as shown in the attached Figure B11. Additionally, Development Parcel C will containing one hundred and eighty-four (184) long-term bicycle parking spaces for tenant office/R&D and retail employees will be provided and 122 short-term bike parking spaces will be provided at grade around Development Parcel C as shown in the attached Figure B11.

   The elevators serving the garages on Development Parcel B and Development Parcel C will be large enough to comfortably accommodate up to 2 bicycles placed horizontally on the floor of the elevator. All bicycle parking will be designed in full conformance with Article 6 of the Cambridge Zoning Ordinance and the City's Bicycle Parking Guidelines. All tenant employees who walk or bike to work will be provided with access to showers and changing rooms to help facilitate their non-motorized commute. Bicycle repair equipment will be provided.

5. Flexible Work Schedules. Tenants will be encouraged to allow flexible work schedules within the typical work hours, for employees to reduce the peak impacts of commuting, particularly

by SOV. Staggered and flexible work hours facilitate employee ability to rideshare thru carpools and vanpools. It also allows employees to commute on transit on the shoulders of the peak hours, where more capacity for riders maybe available. Providing flexible work hours enhances employee's ability to balance their work and family responsibilities, enabling them to have more choice in their commuting options.

6. **Wayfinding.** The proponent will provide clear wayfinding to transit, biking, car-share, and walking options as part of the overall streetscape. The Buildings in the SoMa Project will provide supportive infrastructure, such as, sidewalks, shade trees, benches, and other street furniture elements for a comfortable pedestrian environment.

7. **Parking Supply Management.** As stated previously in the Final Development Plan, the SoMa Project will comply with parking ratios established in the zoning for the PUD-5. A maximum of 0.9 spaces per 1,000 sf for office, 0.8 spaces per 1,000 sf for R&D and a maximum of 0.5 spaces per 1,000 sf of retail land use will be provided for the SoMa Project. This will limit the amount of parking on-site encouraging the use of alternate modes of transportation for commuters. Initially, seven (7) percent of office/R&D employee parking spaces in each of the Building 2 garage and the shared Building 3 and 4 garage will be allocated for registered carpools/vanpools (19 spaces for the Building 2 garage and 34 for the Building 3 and 4 garage), sited near elevators, and clearly marked with signage. These spaces will be marked for a rideshare vehicle that arrives before 10:00 AM and will be available to other vehicles after 10:00 AM. The ETC will allocate additional registered carpool/vanpool spaces to meet demand as it is identified.

   Subject to interest by a car-sharing company two car-share spaces will be reserved for car-sharing vehicles at a rate negotiated with the car-sharing company in each garage. Pooling of the required car-share spaces into a central location within the SoMa Project or an adjacent garage will be permitted.

8. **Parking Rates for Retail Patrons.** The proponent will charge patrons similar parking fees as charged by other retailers in the Kendall Square area of Cambridge. The proponent will develop a retail parking rate structure that will provide discounted validated parking for customers.

Patrons submitting non-validated parking tickets will be charged the market rate with no discount.

9. **Office of Workforce Development.** To promote the use of alternative transportation, he proponent will strongly encourage tenants to work with the Cambridge Office of Workforce Development to expand employment opportunities for Cambridge residents.

10. **Monitoring and Reporting Plan.** To ensure compliance with the City of Cambridge Trip Reduction Ordinance as well as utilization of the TDM programs, an annual monitoring program will be conducted with the results forwarded to the Cambridge PTDM officer. Where appropriate, TDM measures will be in place before an occupancy permit is obtained.

In addition, the proponent will implement a transportation-monitoring program to assist in determining the need for additional PTDM programs that would encourage alternative mode use among the employees to achieve the PTDM SOV goal. This information will help the proponent to refine approaches to implement and promote PTDM activities and to determine which measures will have the greatest likelihood of success. This survey will also provide the proponent with more exact information regarding commuting patterns. The proponent will use this data as a tool to assist in measuring reduction in SOV trips and related mode shifts.

The proponent is close to finalizing its PTDM Plan for the SoMa Project, and anticipates finalizing the PTDM Plan in the coming weeks.

In addition to the above traffic-related improvements and TDM measures, the TIS also included a detailed study of the operation of the Red Line. As indicated in the response to the issues set forth in the Preliminary Determination, the proponent is willing to consider future financial or in-kind contributions to advance studies associated with improving the operation of the Red Line.

SECTION V: Infrastructure and Utilities Narrative

SECTION V: Infrastructure and Utilities Narrative

Sanitary Sewer

The SoMa Development Parcels have a dedicated sanitary sewer system that collects and conveys flows from the redevelopment area to the Cottage Farm treatment facility. There is an existing gravity collection system that discharges to an existing lift station maintained by the City adjacent to the Kendall Square MBTA headhouse that pumps sanitary flows from the redevelopment area to a gravity main located in Main Street. The sanitary sewerage network is shown graphically in Figures F3 and F4.

SoMa buildings will connect their sanitary sewer services to the existing municipal sanitary sewer system located within and adjacent to each respective building. Individual SoMa buildings may require lift stations to pump flows up to the gravity mains, however, these lift stations will be privately owned and maintained by MIT. New building sanitary service connections will be appropriately sized to carry the anticipated daily flow from the contributing plumbing fixtures internal to the buildings. Once the project program has been finalized, the project team will continue to work with the City of Cambridge Department of Public Works (DPW) to coordinate the new service connection locations to the existing sewer mains.

Based on discussions with and information obtained from the City of Cambridge DPW, the existing lift station described above had not been functioning for several years and has only recently been repaired and continually maintained by the City. The lift station is only needed to overcome a small change in elevation of less than two feet. The existing sewer system still functioned when the lift station was not operating due to the relatively small amount of head or elevation the flow needed to overcome. There have not been issues in the area of surcharged sewer lines. However, sewer lines in the area were in constant need of maintenance and cleaning. The DPW expressed their wish to attempt to provide a gravity connection from the area that would allow the lift station to be removed. The City has performed initial studies into providing a gravity system. The project team will continue to work with the DPW using existing studies that have been done in the area to try to eliminate the need for a municipal lift station.

The initial estimate of the total average daily flow currently generated by the existing SoMa Development Parcels B and C building uses is estimated to be 60,095 gallons per day. The proposed SoMa development Parcels sewer flows are anticpated to be 220,968 gallons per day, or a proposed increase of approximately 160,873 gallons per day. See Table 1 & 2 below for more detail.

Table 1 - Existing Sanitary Design Flows

Building ID	Building	Use Category	Unit Count	Unit Flow (GPD / Unit)	Unit	Flow (GPD)
E28 (Cambridge	4,	Retail	4,027	50	1000	201
8 Carleton	1	Private Office	12,94	20	1000	2,5
E33	2	Private/Academic Offic	2,777	20	1000	55
E34	2	Private/Academi	25,96	20	1000	5,1
E38	6	Office/ 1st floor	63,12	7	1000	4,7
E39	4	Offic	32,66	7	1000	2,4
		Restaurant	8,000	1750	1000	14,000
E48	77,	Office/ 1st floor	77,90	7	1000	5,8
E55	163,7	Residential	223	11	Bed	24,530
TOTAL	391,1				TOTAL FLOW	60,095

Table 2 – Proposed Sanitary Sewer Flow Projections

Building ID	Program GSF	Use Category	Unit Count	Unit Flow (GPD	Unit	Flow (GPD)
Building 2	318,00	-	-	-	-	-
		Offic	300,00	75	1000	22,500
		Combined	18,000	400	1000	7,200
		Parking/Loadin g (B1-	-	-	-	-
		Other (BOH)	-	-	-	-
		Mechanical	From MEP		GPD	9,600
				Building Total		39,300
Building 3	307,00	-	-	-	-	-
		Lab	280,00	200	1000	56,000
		New Combined	13,000	400	1000	5,200
		Reno Combined	14,000	400	1000	5,600
		Parking/Stora ge	-	-	-	-
		Mechanical (PH1 +	From MEP		GPD	9,600
				Building Total		76,400
Building 4	367,00	-	-	-	-	-
		Academic -	330,00	130	1000	42,900
		Academic - Non	9,000	28	1000	2574
		Combined	28,000	40	1000	11200
		Other	-	-	-	-
				Building Total		56,674
Building 5	445,00	-	-	-	-	-
		Offic	360,00	75	1000	27,000
		Combined	20,000	31	1000	6,200
		Museum /	65,000	50	1000	3,250
		Mechanical	from MEP	-	GPD	10,575
				Building Total		47,025
Building 6	6,600	-	-	-	-	-
		Combined	6,600	400	GPD/10 00	2,640
				Building Total		2,640
TOTAL	1,443,6				TOTAL FLOW	220,968

The project team understands that Infiltration and Inflow mitigation will be needed to offset the increase in sewer flows from the SoMa Development Parcels. This mitigation will be required at a rate of four to one per City regulations. Based on the preliminary design flows in Table 1 and Table 2, the increase in flow from the SoMa Development Parcels is 160,873 gallons per day. At a four to one mitigation rate the SoMa Project will need to mitigate for 643,493 gallons per day. The project team will continue to work with the City of Cambridge DPW to finalize the estimate of sanitary sewer flow increase from the new development, identify mitigation projects, and prepare a phasing plan to ensure appropriate mitigation is in place as the various SoMa buildings are constructed and additional sanitary flows are added to the municipal sanitary sewer system.

Water

The SoMa Development Parcels are comprised of variously sized water mains located within and adjacent to the development area. The water distribution system is shown graphically in Figures F7 and F8.

The SoMa buildings will connect both fire and domestic water services to the existing water mains located in the area. Redundant water supply systems will be provided for the new SoMa buildings. Details of the redundant systems will be coordinated with the Cambridge Water Department (CWD) as design of the individual buildings progresses.

The capacity of the existing water supply infrastructure in the area is currently being fully investigated; however, based on initial conversations the DPW has had with the CWD, the capacity of the system in this area appears adequate. Additionally, the Longfellow Bridge project has committed to recreating the redundant connection to the 24-inch water main located under Broadway/Main Street which will provide a reliable secondary source of water for this area of the City. The condition of the water mains in the area is still being investigated; however, it is likely that some of older water mains in the area will need to be lined or replaced as part of the SoMa Project. The design team will continue to coordinate with the CWD to determine which mains may be in need of lining or replacement.

Hydrant flow tests will be performed to determine the capacity and pressures in the water mains surrounding the development area. Should it be determined that there is inadequate pressure to provide the required flows for a SoMa building, a fire flow pump will be provided.

New domestic water and fire protection service connections will be appropriately sized for each SoMa building. The connections to the existing mains are anticipated to be provided through the installation of new tee fittings or tapping sleeves and new valves, and will be fully coordinated with the CWD. Existing fire hydrant locations will be reviewed with the CWD and the Cambridge Fire Department. Additional fire hydrants will be added within the SoMa Development Parcel areas, as required, to supplement the City's firefighting supply system. Additionally, all new building fire protection systems will be coordinated with the Cambridge Fire Department.

Based on current program projections for the SoMa Development Parcels, it is anticipated that the development will use approximately 320,000 gallons per day for its domestic water demand and non-potable uses. Rainwater collection cisterns will be used to supplement demands within the SoMa Development Parcels reducing the actual demand on the municipal water system. The project estimates that approximately 5,000,000 gallons of water per year can be saved with the rainwater collection and reuse system for development areas within the adjacent buildings 2 - 6. It is unknown at this time if one or multiple cisterns will be used to accomplish the reuse. This will be further studied as designs for the SoMa Project are advanced. Possible non-potable uses for the collected rainwater include: MEP makeup water (cooling towers), toilet flushing and landscape irrigation. Rainwater collection and reuse is discussed in further detail in the Stormwater section of this narrative.

Stormwater

The SoMa Development Parcels currently consist predominantly of parking lots, buildings and roadways. The existing development area is approximately 91% impervious. Stormwater run-off in the development area is currently collected via street and parking lot drainage inlets and conveyed south to the Charles River, approximately 500 feet from the southern limit of SoMa Development Parcels, via underground pipe systems of various sizes and capacities. The existing stormwater infrastructure is shown graphically in Figures F2 and F2. Runoff from the SoMa Development Parcels is largely untreated prior to its discharge to the Charles River. Additionally, the drainage systems within and adjacent to the development area convey run-off mostly from within the SoMa Development Parcels. There is very little "pass through" drainage from other areas of the City being conveyed to the Charles

River through the local drainage network.

The SoMa Project plans to take a larger overall "districtwide" view of stormwater within the development area rather than a building by building, site by site approach that is more typically used. The proposed stormwater management system will be designed to mitigate stormwater from the entirety of the SoMa Development Parcels. It will be designed in a manner that will meet or exceed the provisions of the MassDEP Stormwater Management Policy for a redevelopment project and the requirements of the City of Cambridge Stormwater Policy and Stormwater Control Permit. A complete, detailed analysis of the project drainage will be prepared by Nitsch Engineering for submittal to the City under the requirements of the DPW's Stormwater Control Permitting Program. Additionally, each individual building constructed as part of the SoMa Project will submit its own Stormwater Control Permit to be reviewed by the DPW.

The proposed stormwater management collection system will generally consist of area drains, deep-sump, hooded catch basins, manholes, and underground pipes. A rainwater collection cistern and filtration system (located within in the proposed underground parking garage and/or within proposed building footprints) will capture and manage roof and site drainage for reuse within the SoMa Project. Potential non-potable uses for the collected rainwater include: MEP makeup water (cooling towers), toilet flushing, and irrigation demands. The project's goal is to collect and reuse water from the 95^{th} percentile storm event (approximately 1.3" rainfall within 24 hours) and will explore options to increase that to the 98^{th} percentile storm (approximately 1.8" of rainfall within 24 hours) if the relationship between watershed collection area, storages, and non-potable re-use demand is feasible. See Figure B11 for a graphical representation of the reuse strategy described above.

Preliminary stormwater analysis indicates the following (refer to Tables 3 – 5):

- 150,000 gallons of rainwater storage is currently proposed to capture and reuse the volume of runoff from the 95^{th} percentile storm event for Buildings 3 through 6.
- 50,000 gallons of rainwater storage is currently proposed to capture and reuse the volume of runoff from the 95^{th} percentile storm event for Building 2.
- Non-potable water demand of 78,000 gallons per day will be supplied from the 200,000 gallons of rainwater storage, providing an estimated water savings of 5,000,000 gallons per year, on average.
- 8,000,000 gallons of stormwater runoff will be generated by the site every year, on average.

5,000,000 gallons will be diverted for non-potable uses, with the remaining 3,000,000 gallons discharged to the Charles River: a post-development runoff reduction of 60%.

- Preliminary analysis indicates the project will meet the City of Cambridge 65% phosphorus removal requirement by the conversion of parking to non-parking areas, greening of the site, and rainwater reuse.

Table 3 – Preliminary Land Cover Changes

	Existing	Proposed	Change
Roof	112,546	191,803	79,257
Parking and Streets	284,762	141,177	(143,585)
Pedestrian	85,791	100,115	14,323
Porous Pavement	-	36,023	36,023
Grass / Landscape	51,433	65,441	14,008
Total Impermeable	483,100	433,095	(50,005)
Total Permeable	51,433	101,464	50,030

Table 4 – Preliminary Runoff Estimates

	Existing				
	Area	Land Cover Factor	R/f Rate inches/24	Total R/f ac-in	Total R/f gallons
Runoff - 95th Percentile	9.2	0.8	1.3	10.25	278,4
Runoff - Annual	9.2	0.8	40.3	317.90	8,632,3

	Proposed				
	Area	Land Cover Factor	R/f Rate inches/24	Total R/f ac-in	Total R/f gallons
Runoff - 95th Percentile	9.2	0.8	1.3	9.99	271,3
Runoff - Annual	9.2	0.8	40.3	309.75	8,411,0

	Change				
	Area	Land Cover Factor	R/f Rate inches/24	Total R/f ac-in	Total R/f gallons
Runoff - 95th Percentile	0.0	-	0.0	-	-7138
Runoff - Annual	0.0	-	0.0	-	-221289

Table 5 – Preliminary Rainwater Harvesting Estimates

	Tank Volume	Runoff Capture	Avg. Annual Water Savings	Avg. Annl. flow to Charles	Percent Reduction
Sites 3-6: District	150,000	4,000,00	3,700,00	300,000	93%
Site 2: Future Local	50,000	1,400,00	1,300,00	100,000	93%
TOTAL	200,000	5,400,00	5,000,00	400,000	93%

Water quality requirements (both MassDEP and City of Cambridge) will be met through site greening, rainwater collection/reuse, and potentially some proprietary water quality structures. However, the majority of the mitigation will be provided by the rainwater collection and reuse cistern. The proposed reuse cistern will collect stormwater run-off from the proposed site and roofs of new buildings within the Development Parcels and potentially some existing buildings adjacent to the Development Parcels. The run-off will be collected, pre-treated, and discharged directly to the rainwater cistern(s). Maximizing the amount of rainwater reuse will allow the SoMa Project to meet and likely exceed the 65% Phosphorous removal requirements of the City

The soils within the SoMa Parcels are generally consist of a surface fill layer of varying composition and thickness underlaid by marine clays and glacial till. Depending on the location of the sample, these fill materials consisted of a range from gravels from coarse and fine sands to organics and silts/clay. As such, large scale infiltration-type stormwater management practices will be difficult to employ within the SoMa Development Parcels. Although site conditions do not readily support the use of infiltration as a significant stormwater control measure, the project team is proposing to green the site to provide additional opportunity for infiltration. The SoMa Project also includes an underground garage under proposed buildings but also under the open space. The garage areas under the open space will have over four feet of soil above it and will provide sufficient depth of soil that will allow for some capacity to hold rainwater, provide the opportunity for additional evapotranspiration through plants, and slow the rate of stormwater run-off. The project team will continue to explore other locations, which may support infiltration-type Best Management Practices (BMPs) such as tree pits for further management of run-off for satisfaction of City and MassDEP requirements for quality and quantity of run-off. The project team will also continue its cooperation with the City of Cambridge DPW to define the final approach for the mitigation of run-off within the SoMa Development Parcels.

Conformance to Section 19.30:

19.33 – The Building and Site Design Should Mitigate Adverse Environmental Impact on Neighbors

Stormwater BMPs and other measures that minimize run-off and improve water quality will be implemented

The stormwater system for the SoMa Project will be designed to meet the provisions of the MassDEP Stormwater Management Policy for a redevelopment project. Stormwater management strategies for the proposed buildings and site improvements will seek to mitigate the stormwater run-off as required by the City standards and standard engineering practices of the Commonwealth of Massachusetts. Proposed mitigation measures include the use of Cambridge-approved Best Management Practices ("BMP's"), including proprietary water quality management structures and rainwater collection/reuse cistern(s). Rainwater collected from the SoMa Development Parcels (rooftops and site drainage) will be directed to the rainwater reuse cistern(s) and any overflow will be routed to the drainage systems in the surrounding streets that ultimately discharge to the Charles River. Additionally, a significant amount of site greening is planned as part of the development. This will help mitigate both stormwater quantity and quality from the SoMa Development Parcels. Also,wherever possible, run-off will be directed into porous landscaping surfaces to promote increased potential for infiltration.

During construction operations, standard engineering practices for erosion and sedimentation control will be implemented onsite. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared for the site per the requirements of the United States Environmental Protection Agency (US EPA) National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) as project construction will disturb more than one acre. The SWPPP will also be used to document compliance with the Leadership in Energy and Environmental Design (LEED) Sustainable Sites Prerequisite for Erosion and Sedimentation Control.

19.34 – Projects Should Not Overburden City Infrastructure

The building and site design will be designed to make use of water-conserving plumbing where possible and to minimize the amount of stormwater run-off through the use of BMPs for stormwater management.

The following strategies and technologies will be employed in the plumbing design for buildings within the SoMa Development Parcels, which aid in water conservation:

- Low-flow plumbing fixtures in restrooms.
- Rainwater Collection and Reuse Cistern to reduce non-potable water demands.
- Reduced or eliminated irrigation by use of native, tolerant plant species.

The stormwater management system for the SoMa Development Parcels will be designed to meet the provisions of MassDEP's Stormwater Management Policy for a redevelopment project. Stormwater management strategies for the proposed buildings and site improvements will pursue mitigation of stormwater run-off as available and required by the City standards and standard engineering practices of the Commonwealth of Massachusetts.

The capacity and condition of drinking water and wastewater infrastructure systems are shown to be adequate, or the steps necessary to bring them up to an acceptable level are identified.

It is the project team's understanding that based on initial conversations the DPW has had with the CWD, there aren't currently any capacity issues in the vicinity of the SoMa Development Parcels. Hydrant flow tests will be performed to determine the capacity of the water mains within and surrounding the SoMa Development Parcels. Should it be determined that there is inadequate pressure to provide the required flows, booster pumps will be added to any new building within the development area to handle the deficiency. The condition of the water mains in the area is still being investigated, however, it is likely that some of older water mains in the area will need to be lined or replaced as part of the development of this area. The design team will continue to coordinate with the CWD to determine which mains may be in need of upgrading.

Based on discussions with the City of Cambridge DPW, the capacity and condition of the sewer mains in the area of the SoMa Development Parcels vary. There is an existing sewer lift station located adjacent to the Kendall Square "T" Head House that is currently maintained by the City. The project team will be exploring the potential to eliminate the need for the lift station and provide the area with a gravity connection to the Main Street sewer system. The SoMa Development Parcels sewerage service locations and connection points for individual buildings within the development area will continue to be discussed and reviewed with the City of Cambridge DPW.

The project team understands that infiltration and inflow mitigation will be required at a rate of four to one. The project team will continue to work with the Cambridge DPW to finalize the estimate in increase of sanitary sewer flows, identify mitigation projects, and prepare a phasing plan to ensure appropriate mitigation is in place as the various building projects are constructed and additional sanitary flows are added to the municipal sanitary sewer system.

SECTION VI: Consistency with Urban Design Objectives

SECTION VI: Consistency with Urban Design Objectives

A. Introduction

The SoMa Project has been designed to be consistent with the City Of Cambridge Citywide Urban Design objectives (Section 19.30) as well as the dimensional requirements and goals established in the PUD-5 zoning, Eastern Cambridge Plan, the Eastern Cambridge Design Guidelines and the Kendall Square Design Guidelines (June 2013) developed as part of Cambridge's K2C2 study.

The narrative below broadly follows the structure of the Kendall Square Design Guidelines (June 2013), addressing key components of other relevant guidelines within as appropriate. Please reference the accompanying MIT Kendall Square Initiative SoMa Project Graphic Materials dated November 5, 2015 for diagrams illustrating the compliance with the Design Guidelines for each individual building (Figures D36-D80). Figures related to Building Concept Design are D1 - D35.

B. Walkability/ Open Space/ Universal Access/ Ground Floor

The design of the buildings, open space and streetscape in the SoMa Project has been coordinated with the express intent to enhance pedestrian environmental and connections and break down the barriers between inside and outside of the buildings to create a dynamic and integrated public realm. Open Space and Connections are shown on Figures B1 – B48.

Building heights and setbacks are consistent with the requirements of the PUD-5 zoning.

The new buildings respect the established north south street grid and enhance the pedestrian network through the establishment of a new east – west pedestrian access corridor from the MIT medical buildings (E25) to the Sloan School and a pedestrian connection from the Sloan School to East Cambridge at a new pedestrian crossing across Main Street from the Sloan School to East Cambridge near the Red Cross building.

The SoMa Project also enhances the pedestrian experience along the secondary streets. The existing project area includes several narrow streetscapes currently lacking street trees – particularly Carleton Street, Hayward Street, and Wadsworth Street. The proposed plan anticipates widening building setbacks where possible to allow for broader sidewalks and a more heavily vegetated streetscape. These improved streetscapes will encourage neighborhood pedestrian use, enhancing street life along essential urban corridors where the active ground floor experience of buildings engages the public realm. These streetscapes will also contribute to and expand the urban canopy of Cambridge, offering shade for

comfort, mitigation of heat island effect, and contribute to stormwater management. Hayward Street will be partially discontinued to vehicular travel in order to further enhance the pedestrian nature of the area.

The new buildings are sited and oriented on the lots to be consistent with the established streetscape and to enhance the goals of walkability as follows:

- Building 2 is sited on its parcel in such a way as to activate the corner of Main Street and Wadsworth Street in a way that the current use of the site (Eastgate) does not.

- Buildings 3 and 4 are set behind preserved historic buildings resulting in a natural setback from Main Street. These new buildings are integrated with the existing buildings and the ground floors of the historic buildings and the new buildings will be connected to create a dynamic ground floor and pedestrian environment. Active ground floor uses that currently exist only on Main Street will wrap the historic buildings and continue along the secondary streets of Wadsworth, Hayward and Carleton. Active ground floor uses will also occur on the south side of the new buildings as they front the newly created open space.

- Building 5 is a hinge between the new open space to the south, and the vibrant commercial life of Kendall Square and Main Street to the north, and will redefine the arrival to the Kendall Square MBTA Station. At the pedestrian scale, the building plinth folds back from the north east corner to create a generous plaza connection between Main Street, the MBTA station and the new public green space beyond. The small tower cantilever above is pulled well above the street scape to allow sun to reach the new MBTA station and Main Street Plaza and to give the ground floor retail full street frontage exposure. Arriving from the west side of Main Street, the building pulls back at this north east corner on the ground floor to frame the historic Suffolk Engraving Building, further inviting pedestrians into the open green space beyond. The strategic location of Site 5 within East Campus/Kendall Square offers an opportunity to simultaneously collaborate with the scale and character of the historic and contemporary buildings on Main Street and to connect to the MIT campus, creating a gateway to a new emerging campus and city district.

- Building 6 is sited to continue the street wall along Main Street.

- Parking and loading entries are located on secondary streets and consolidated where possible. Building 2 loading is internal to the building. The loading for Buildings 3-6 is consolidated and located below grade with a single access point off of Hayward Street. Parking for buildings 3-6 is also

consolidated with access points off of Wadsworth Street and Amherst Street. Loading facilities are not more than 30 feet wide and will have the ability to be closed off when not in use. There are no turnaround or drop off facilities on public streets.

- The transformation of existing parking lots into a vibrant public realm includes the addition of much needed green open space for the PUD-5 District. Within the core open space, green bands of lawn and gardens provide a diversity of destinations for the MIT and Cambridge communities, offering areas for relaxation, shade, play, and gathering.

- The landscape design of the projects provides pedestrian links from Main Street to this open space at Carleton, Hayward, and Wadsworth Streets. The link at Carleton Street is also intended to serve as a new gateway from Kendall Square to the MIT campus, and will be an opportunity to help orient visitors arriving in Kendall Square via the MBTA. The open space will both continue and complement the Main Street activities. Ground floor uses along the southern edge of Building 4 include additional retail and active uses, entries to the graduate housing and childcare facilities, and an elevator leading from the underground parking. In addition, the open space itself will provide trees, landscape, and seating, as well as space for special and seasonal events. The open space will provide an exciting urban amenity for the growing Kendall Square community.

- The proposed open space plan balances the need for clear and flexible circulation and program space with ample green open space to help manage stormwater. Trees and vegetated softscape are distributed and designed to catch stormwater. This is augmented by areas of permeable pavers to mitigate runoff from paved areas. Located in zones of reduced foot traffic, these areas collect and convey stormwater to an underground cistern, where water is stored for re-use in building systems or on-site irrigation.

- The SoMa Project includes a significant number of new trees in the open space, designed to include a range of species and to contribute to the biodiversity of the urban canopy of Cambridge. Street trees will begin with the preferred street tree list for Cambridge. All plant selections for the public realm are native or adaptive species, minimizing irrigation and maintenance needs.

- The Kendall Square MBTA Station offers an ideal opportunity for the district to link into the regional mass transit network, serving as an essential way for users to access and experience this space. The area around the MBTA station is designed as a distinct welcoming zone for the district.

This area is important for wayfinding and legibility of the district for MBTA users, and serves as a primary point of connection and key node linking the larger community to the core open space of the SoMa Project. MIT has initiated discussions with the MBTA to develop a new MBTA headhouse and landscaped plaza just east of Building 5. If approved by the MBTA, the MBTA station will feature new code compliant stairs, escalator, and elevators and a new canopy. Glass walls will allow light to reach the platform level below and provide a more inviting entry to the T.

- The proposed plan improves accessibility along the west edge of Carleton Street at the entrance to Building E23 by removing the steps and grading to meet the entrance. Raised crossings and a flush interface between Hayward Street and the adjacent open space allows for broad accessible routes through the core open space. Re-grading removes existing site retaining walls.

- As a new, active urban destination in Cambridge, the public realm will include appropriate vehicular and pedestrian lighting to ensure a safe, public environment 24-hours a day. Lighting levels will achieve the standards required for safety and comfort, while remaining below levels that will contribute to light pollution for adjacent properties or users. Feature lighting throughout the public open space will also contribute to wayfinding, district identity, and public realm activation.

- The open space will be programmed for activities to serve the wide variety of community members anticipated to use the space. This includes a variety of ages, abilities, interests and incomes.

- The pedestrian and bicycle improvements will increase the porosity and legibility of the Kendall Square area south of Main Street. Enhanced and improved wayfinding will be an important component of the SoMa Project.

- Buildings entries will meet the sidewalk at grade, including at the historic buildings where the first floors will be lowered to meet this purpose.

- The Parcel C Garage is accessed by ramps off Wadsworth Street and Amherst Street for automobiles and bicycles. Ample automobile parking is provided and bicycles have abundant indoor parking with elevator access as well as shower facilities. The loading docks for Buildings 3, 4 and 5 are accessed via a truck ramp on Hayward Street to a below-grade loading zone which connects directly to the buildings' elevator cores.

- The SoMa Project has been designed to encourage active use at the ground floors. Over 75% of

the street frontage along Main Street will contain retail uses. Throughout all five of the buildings lobbies are minimized in favor of active uses at the ground level.

- Multiple doors and windows at the ground floor emphasize the connection to the public realm and a transparency between inside and outside. Temporary events or activities can spill out from buildings into the open space. The over-arching objective is to blur the distinction between in and out, by maximizing clear glass and operable glazing, maximizing opportunities to occupy both ground floor and immediate exterior space as part of a diverse range of district destination attractors.

- The retail spaces are designed to facilitate small retailers and have many doors on the street. At least 50% of the ground floor space will be leased to small retailers.

- The ground floors have been designed to be flexible in order to accommodate larger retail spaces in order to accommodate larger format retailers that are consistent with articulated neighborhood needs.

- Ground floor heights of all buildings proposed for SoMa are at least 15'.

C. Built Form and Architectural Intent

The designers for the five buildings in the SoMa Project (and the one building in the NoMa Project) have been working with the Dean of MIT's School of Architecture + Planning and the Head of the Architecture Department to ensure that the buildings as a group create a sense of being of a family. The design teams have been coordinating with each other to make the buildings harmonious and, in keeping with the K2 design guideline Built Form, have been creating an architectural approach that will distinctly represent Kendall Square. The buildings will have a similar massing with a base or podium that aligns with the existing historic fabric and then steps back with potential roof terraces at the 4th or 5th floor level. The main tower or office block rises above the step back with the top treated in a different manner at the junction of the program floors and the penthouse level. All the design teams are working on maintaining a simplified form but utilizing other design strategies including differentiating materials, sunshades, and vertical façade. Within the overall massing scheme, each building will maintain a distinct character due to its unique context such as integration with the historic buildings or the uses programmed for the building such as the MIT Museum or academic housing or a significant ground floor retail or active use.

Development Parcel B, Building 2

Building 2 is envisioned as a commercial office/laboratory building as the primary use. The ground floor is intended as a mix of uses including retail, building lobby, campus related active uses and necessary functional access including parking, loading and mechanical. Building 2 is situated on the northeast corner of the parcel and the building's primary frontage to the City is along Main Street to the north and Wadsworth Street to the west. The building fronts newly designed open space to the east and to the south. Building 2 is shown on Figures E2 – E16.

As envisioned by the Kendall Square Initiative planning process, the project maximizes publically accessible uses at the ground level in order to activate the street scape and public realm. The Building siting strategy is intended to define the corner (urban edge) of Main Street and Wadsworth Street, but is deliberately set back slightly from both the northerly and westerly property lines. The setback along the northerly edge of the building is intended to allow for views to the historic clock tower (the Kendall Building at 238 Main Street) when visitors to Cambridge arrive from the east, and the westerly setback is intended to create a generous sidewalk to enhance the pedestrian connection from the neighborhood to the north to the Charles River to the south. Additionally, the new open space to the east and south of Building 2 allows for an alternate pedestrian connection through the site from the Broad Canal Way via a new pedestrian path along the west side of the existing Red Cross building and across a new pedestrian cross walk connecting to the south of Broadway.

Parcel 2 is currently occupied by the Eastgate graduate student housing tower and a parking lot that services Eastgate tower and MIT Sloan Building. The existing parking and roadway system on the site also services as both emergency vehicle access and building service access.
Eastgate tower (E55) is a 29-story (356 ft.) residential building that was completed and first occupied in August 1967. The building hosts graduate student families (students with spouses/partners and/or children) as well as a child care center. The tower is topped by a radio antenna mast for MIT's Class A broadcast radio station, WMBR.

Building 2 is 13 stories with approximately 300,000 gross square feet of office and/or lab space on floors 2 - 13, with up to 18,000 of retail space and active uses located at street level along the perimeter of the building creating a vibrant ground floor environment.

The primary building massing is composed of two volumes. The base volume is composed of a lower mass similar in height to the existing buildings fronting the south side of Main Street and is oriented in a north-south direction parallel to Wadsworth Street. This orientation allows for an increased ground level open space to the east creating an extension of the existing open space fronting the MIT Sloan Building.

The upper volume is rotated 90 degrees to the lower volume orientating the building mass to conform to the primary Main Street frontage. The juxtaposition of the building massing creates a dynamic cantilever and reduces the overall building massing impact on the surrounds. Additionally, the shifting of the masses creates unique outdoor space on the roof of the lower mass and below the building cantilever.

The building's exterior fenestration is composed of a high performance glass curtain wall system. Each of the building's facades address their respective solar exposures with the addition of carefully detailed brise-soleil (solar shade) systems on the east, west and south facades in order to reduce both the heat gain and glare caused by the sun resulting in higher energy efficiency and superior internal working environment.

Development Parcel C, Building 3

Building 3 is sited behind the Kendall Building at 238 Main Street. The 12 story building includes 280,000 gsf flexible commercial lab and office space from level 2-12 as well as 27,000 gsf retail and active uses on the ground floor (including repositioned retail at the ground floor of the Kendall Building). A 2 story penthouse completes the program with area for base building and tenant equipment. Access to the below grade parking garage is off Wadsworth Street. The redevelopment of the Kendall Building is a companion to the project as well. This early 1900's building with its unique clock tower will become the main entry to the complex with a 5 story atrium separating the existing and new buildings' lower masses. Building 3 is shown on Figures E17 E36.

Building 3 reinforces the scale and character of Main Street by preserving the Kendall Building. The new building is sited directly to the south of the Kendall Building and is separated by a 30 wide 5 story high glass atrium that allows abundant light into each building. The atrium, accessed through the front entry of the Kendall Building, provides ground floor entrances to the tenants in both buildings. The ground floor in both buildings expands upon the existing retail activity with retail and active uses on Main Street, Hayward Street, Wadsworth Street, and the public open space to the south.

The building has two dynamic massing moves that connect this building to the ensemble of buildings that MIT is developing south of Main Street in Kendall Square. The first 5 stories of the building create a similarly scaled lower mass to the existing Kendall Building and also relates to the Suffolk Engraving Building (E38) and the J.L. Hammett Building (E39) to the northwest, and to the height and scale of the Muckley Building (E40) to the south. This 5 story expression locks the building into the context of these early 20th century brick and precast manufacturing buildings.

The upper 6 stories dramatically rotates 90 degrees to reinforce Wadsworth Street as the predominate north-south street connector that links East Cambridge to the Charles River. This mass pivots on a

recessed 6th floor that allows the mass to float above its base and creates a living green roof over-looking the new public open space being developed by the larger development. The pivoted mass also creates a gateway expression from the public space to the east towards the Sloan School. This upper mass is composed of a glass curtain wall which will reflect the sky, screen the mechanical penthouse, and create an asymmetric volume behind the clock tower which articulates the end of Third Street.

The new building works with the surrounding 6-story structures to create a pedestrian scaled early 20th century feel. Its ground floor spaces will enliven the area with restaurants, service, specialty retail activities and other active uses. The retail design will create a range of pedestrian oriented expansions with canopies, awnings, and entries that will announce each retail opportunity.

The Kendall Building entry will open into the 5 story atrium anticipated to extend the width of the back with 6 story glass walls on each end filling the Atrium with light throughout the day and connecting to the existing pedestrian system. This interior public space will provide seating display and meeting space for tenants, visitors, students, faculty, and neighbors. The Kendall Building and the new building will each have lobbies to access their upper floors and it is anticipated that sky bridges may connect the Kendall Building and the new lab/office building at upper levels dependent on tenant space requirements.

The lower mass will pick up on the scale of the Kendall Building, and is wrapped in a highly glazed skin with tightly-spaced vertical aluminum fins. The upper portion of the mass will continue the module, scale, and materiality of the lower mass in a transparent, slightly reflective, glass curtain wall. The penthouse will continue this expression with the vertical fins unifying the louvered face with the glazed wall below, such that the screen will appear to disappear into the skyline. This architecture is complimentary of the scale and character of the early 20th century buildings being preserved and a bold new expression of 21st century office/lab buildings.

Development Parcel C, Building 4

The Building 4 Parcel incorporates the existing Suffolk Building at 292 Main Street (E38) and the Hammett Building at 290 Main Street (E39) with new construction to the south. A new 28-story graduate student housing tower will span over E39 and the new construction podium along the open space. Building 4 will have a rich collection of mixed use programs, which will add energy and vitality to Kendall Square and MIT's East Campus and consists of four primary components:

- Existing E38, renovated to include ground floor retail and five levels of academic space housing MIT's innovation and entrepreneurial programs
- Existing E39, renovated to include ground floor retail and 2 floors of office space

- A three-level "podium" to the south of the existing buildings, containing ground floor retail and other active uses (28,000 gsf including repositioned retail in E38 and E39), a second level childcare facility (9,000 gsf) with associated outdoor space, and a third level of common space and outdoor space for use by the resident graduate students
- A housing tower containing 25 levels for MIT graduate students in a mix of 2 bedroom, 1 bedroom, and efficiency apartments (330,000 gsf).

A principal urban design objective of Building 4 is to enhance the quality of Main Street for the Kendall Square community. By preserving E38 and E39, Building 4 reinforces the historic scale and character of Main Street. Retail along Main Street, currently elevated about 3-4 feet above street level, will be lowered to grade to allow for universal accessibility and to enhance the pedestrian experience. The residential tower is oriented north-south in order to minimizing the shadow impacts on Main Street, in particular at the plaza in front of the Marriot Hotel.

The facades of E38 and E39 will be largely preserved. The first floors will be lowered to accommodate at-grade access to the retail spaces within each building. The new podium to the south is designed to relate to the height and massing of E38 and E39, and to provide a transition to the tower above. The ground level will be largely transparent, creating a strong visual connection between indoor and outdoor activities. The façade of the tower will be largely panelized. Openings will be limited to 30-40% of the exterior envelope in order to achieve sustainability goals targeted for the project.

In all, Building 4 will provide a greatly enhanced urban environment in Kendall Square by increasing the quality and quantity of public space amenities to a capacity capable of supporting the growing Kendall Square community well into the future. Building 4 is shown on Figures E37 – E55.

Development Parcel C, Building 5

The design will leverage the site's fortuitous location on Main Street adjacent to the Kendall Square T-Station. As a corner site, the Building 5 parcel will reveal and build upon the existing community of innovation by creating a pedestrian centric gateway from Main Street to the central green space. Building 5 is shown on Figures E56 – E72.

Building 5's ground floor is transparent on the north and east elevations to enhance the visual and physical connections between interior and exterior spaces. The ground floor includes the building lobby, retail space, the MIT Museum, and support facilities to the south. Continuous glass frontage provides street level views into the building lobby, retail, active use, and museum space that front the public north and east faces of the building. The main floors of the MIT Museum will be located on the second and third floor

of the building, creating the plinth that relates in height and scale to the Kendall Hotel and Suffolk Building, the historic buildings adjacent to the site. The MIT Museum will become an active destination for visitors, school groups, students, faculty, and staff. The museum will be an important site linking MIT's legacy of innovation to its future engagement in the Kendall Square neighborhood. The upper floors, floors four through seventeen, contain approximately 305,000 gross square feet of office spaces. The building engages the horizon with a rooftop silhouette scaled to the greater metropolitan context.

The plinth establishes an urban scale compatible with adjacent historic buildings. The two museum levels occupy the plinth of the building mass, giving an independent expression and distinct identity to the MIT Museum. The plinth is distinguished from the tower above through a horizontal office terrace, one floor in height, allowing the Tower to set back 16' from Main Street. This office terrace creates a large outdoor tenant amenity with amazing views of this vibrant district. The plinth and office terrace are positioned to extend the existing horizontal datum created by the low rise historic buildings on Main Street, directly adjacent to Site 5. The museum, located on the second and third floor, is treated with an articulated pattern of opaque and transparent panels calibrated to the exhibition's daylight requirements. This pattern is highly articulated, creating a tactility that relates to the human scale along Main Street. The plinth also creates an overhang shelter for the central office entry, outdoor seating, and retail entries.

Above the plinth, the office tower sets back 16' from Main Street to satisfy the zoning requirements. The tower façade compliments the pattern of the museum façade and, as it travels up the building, it gradients to a more transparent pattern at the corners to maximize daylight and capture panoramic views of both Boston and Cambridge. The tower façade will include a combination of metal, reflective and acid etched glass, and color anodized fins. These materials will de-materialize the tower by alternately reflecting the sky and adjacent structures. The folds on the north and south façades of the tower, and those on the east and west façades, not only allow the plinth and tower to read as distinct but also meter the façades into a scale and rhythm consistent with the context on Main Street, and reduce the visual appearance of the massing with shifting façade fenestration.

Per the Planning Boards comments the façade material chroma considers the historic context. As Kendall Square has a variety of architectural styles and material types, Site 5 integrates the warmer chroma of the adjacent Kendall Square historic brick buildings as an accent color to counteract the modern reflective glass and metal. The plinth and tower each have distinct yet complementary identities and materials. The plinth is clad with pleated metal panels with a bronze anodized chroma and brushed finish that reflect and diffuse the adjacent built context. The tower curtain wall system includes reflective low E and acid etch

glass which is complemented with bronzed anodized fins, accentuating the chroma at oblique views, providing sustainable shading devices, and breaking down the massing.

To the east of Building 5, three 3-6 story early 1900's industrial era buildings of historic significance line Main Street. The Suffolk Engraving Building is directly east of the site and to the east of it, the former J.L. Hammett Building and the Kendall Building continue this mid-rise urban street front. To the west of Site 5 is the Kendall Hotel, distinguished by pitched roofs and dormers. This former fire house, Engine 7 built in 1895, is separated into two masses, one historic three story structure on Main Street and a recent seven story structure set back from the street, which shares the lot line with Site 5. To the west of the Kendall Hotel, a different style emerges with the Ford Building. A seven story concrete and brick building from the 1920's, this represents a style formerly common in Kendall Square.

Building 5 creates a setting that supports retail, academic, and commercial uses to form a new model for a multiuse building - one that reflects the active research and innovation that is prolific throughout this district. Building 5 has the unique opportunity to capitalize on MIT's leadership in research to attract the most active science and technology industries.

The Class A commercial office space in the tower portion of Building 5 will be open and loft like with efficient and flexible floor plates. The building will maximize natural daylighting on all office floors. Large expanses of glass and high floor to floor dimensions create an optimal work environment and provide expansive views. The floor plates support the needs of variously-sized tenants, creating floors that appeal to multiple tenants as easily as to a single, larger tenant. Column free floor plans and flexible mechanical systems will accommodate the widest possible range of potential users while promoting an open, sustainable, and collaborative atmosphere. The building is planned to have 17 occupiable floors and a current height of 250'.

Building 5 is both a gateway on Main Street and a landmark on the Kendall Square horizon. It welcomes the scale of the pedestrian and joins the urban skyline.

Development Parcel C, Building 6

Building 6 is 2 story retail building sited between the Kendall Hotel and the MIT Ford Building (E19). The building will have a total of 6,600 gross square feet of retail on both floors and may be divided into 2 retail occupancies on the ground floor, with one entrance at the Northwest corner off of Main Street and one at the Northeast corner, from a sidewalk courtyard off of Main Street. Building 6 is shown on Figures E73–E80

Building 6 represents a significant placemaking opportunity for MIT's Kendall Square project. As a small building, surrounded by larger ones, it's all retail programming will activate Main Street with pedestrian friendly uses. Currently, the site is used as a parking lot by MIT and provides access to a heavily utilized loading dock at the Ford Building (E19). The proposed Building 6 seeks to minimize the traffic at this loading dock by relocating MIT parking to the larger proposed underground parking garages. By locating the building core at the south end of the building, the building maximizes retail street frontage along Main Street. The resulting width of the loading dock access is reduced to almost a third of the existing situation, with the remainder of the site enlivened by restaurants, service or specialty retail activities.

The sloping roof form of the building responds to the varying existing building heights by angling down towards the Kendall Hotel and sloping up towards the Ford building. The building volume serves to integrate an elevator bulkhead and a roof well to house the mechanical equipment for the building, hiding it from public view and mitigating the noise impact of the equipment. The unique conditions of the site and context result in an iconic form for Building 6 that is also respectful of its context.

Building 6 cants away from the Kendall Hotel and its cupola tower, to create a lively sidewalk courtyard, activated by entrance doors to retail at the ground level. This urban gesture is repeated on the Main Street side with an inward inflection of the volume. In this way, the sidewalk deepens to accommodate pedestrian activity at the entry to the building.

A gradient of fenestration across the façade provides maximum transparency at the ground level along Main Street, but opacity along the loading dock access. The window sizes takes cues from the Kendall Hotel and the Ford Building to further integrate the building within its context while providing a dynamic and engaging façade to help it stand out, not apart. A reflective metal façade will engage the surrounding and provide an 'industrial' aesthetic for Building 6, appropriate to its scale and the innovative ethos of MIT.

D. Environmental Quality

Shadow

The SoMa buildings are sited to activate existing parking lots and are consistent with the shadow impacts associated with a two sided urban street. The net new shadow impact is mitigated by the fact that Buildings 3 and 4 are set behind the existing Kendall Building, Hammett Building and Suffolk Engraving Building, the shadow cast by existing buildings in Kendall Square, and the thoughtful massing and orientation of the proposed buildings. The impacts on new shadows are further mitigated by the addition

of publicly-accessible open space on the south sides of the buildings.

MIT has conducted shadow studies to evaluate the shadow impacts of the proposed buildings on the public realm including the sidewalks on the north and south sides of Main Street, the sidewalks in front of One Broadway, Point Park, the new open space to be created by the proposed project and the sidewalks of Wadsworth Street, Hayward Street and Carleton Street. As requested by the City of Cambridge, the studies expand beyond the traditional hours and include each hour from 9:00am to 6:00pm. These studies are included in Volume II, Section B and are summarized below:

On September 21 and March 21:

- 9:00 am Building 4 and 5 contribute a minor amount of new shadow to the sidewalks on the south side of Main Street around Carleton Street but the majority of the sidewalk on the south side is in shadow from existing buildings. Buildings 3, 4 and 5 cast new shadow on the sidewalks on the north side of Main Street and Building 2 casts new shadow at Point Park.
- By noon, the siting and massing of the buildings results in shadow cast in alternating bands with area in sunshine. Building 6 casts minor shadow to the Main Street south sidewalk directly in front of the building, Building 5 casts shadow on sidewalks to the north and south sidewalks of Main Street, Buildings 4 and 3 cast shadow directly in front of the buildings to the sidewalks on the north side of Main Street and Point Park and Building 2 casts some new shadow on the sidewalk in front of One Broadway. On the south sidewalks new shadow is mitigated by the presence of shadow cast by the existing buildings.
- At 3:00 pm, much of the Kendall area is in long shadows. Building 6 does not contribute new shadow at this time, Building 5 casts new shadow to both the south and north sidewalks on Main Street as well as to the north end of Carleton Street. Building 4 adds shadow to Point Park. Buildings 2, 3+4 add shadow to the sidewalk in front of One Broadway and the Red Cross Building. Buildings 2+3 contribute shadow to the south side of Main Street.

On June 21, the impact of the shadows is minimal and largely confined to the development area. The project buildings do not cast shadow at Point Park or to the sidewalks in front of One Broadway.

- At 9:00 am, no new shadow is cast along Main Street. The shadows are cast toward the west and are added to the first block of Main Street of Wadsworth Street, Hayward Street, Carleton Street and Dock Street.
- At noon, minor net new shadow is cast to Main Street sidewalks directly in front of Buildings 5, 4 and 2.
- At 3:00 pm minor amounts of new shadow is cast on the sidewalks on the south side of Main

Street between Carleton Street and the Sloan School.

On December 21, the shadows are long in the Kendall area and the proposed buildings do not cause significant additional shadow to public spaces in the area.

- At 9:00 am, Building 2 casts new shadow to the eastern edge of Point Park and the sidewalks of Broadway. Buildings 4+5 add minor additional shadow to the Main Street sidewalks and to the first block of Carleton Street.
- At noon, Buildings 5+6 add some new shadow to Main Street sidewalks directly in front of the buildings. The siting and massing of the proposed buildings preserves sunlight along the Wadsworth Street, Hayward Street and Carleton Street corridors.
- At 3:00 pm, most of Kendall Square is in existing shadow. The proposed project adds minimal amounts of shadow to sidewalks on Wadswroth Street and on Main and Broadway between Building 2 and One Broadway.

Wind

A pedestrian wind comfort study was conducted to assess the effect of the proposed development on local conditions in pedestrian areas throughout and around the study site and provide recommendations for minimizing adverse effects. The study involved wind simulations on a 1:300 scale model of the proposed building and surroundings. These simulations were then conducted in RWDI's boundary layer wind tunnel for the purposes of quantifying local wind speed conditions and comparing to appropriate criteria for gauging wind comfort in pedestrian areas. Full results of the study are included as Volume II, Section C to the Final Development Plan. Based on the report, RWDI provides the following conclusions/recommendations:

- In general, the development provides and overall sheltering effect to the wind and improves the existing conditions in many areas.
- Recommend the design team consider recessing entranceways or using vertical wind screens to provide localized wind protection. Recessing entranceways with problematic wind speed conditions can help to protect from strong approaching winds.
- Tall porous parapets (8-10 feet tall and 70%-80% solid) or tall planters and wind screens added around select areas of the podium terraces.

SECTION VII: Market Analysis

SECTION VII: Office/Lab Market Analysis

The East Cambridge office and lab market is comprised of research sectors fueled by both technology tenants' and bio/pharma tenants' desire to be part of an innovative, and collaborative cluster anchored by MIT. Rents have recovered from the lows following the Great Recession, as the need for companies to secure space in Kendall Square combined with a limited supply have powered the recovery. Companies' desire to join the innovation cluster around MIT is further enhanced by the addition of numerous retail, housing, and amenity spaces. With little available space in the market, development is needed to sustain economic growth. Demand is outpacing supply by nearly 4:1 according to real estate companies. Once Alexandria Real Estate Equities completes their development along Binney Street, no large blocks of space will be available in Kendall Square, leaving unmet near term market demand of two to three million square feet. As a result, current tenants in Kendall Square seeking to grow and new companies searching for space are looking to other emerging markets as an alternative, including the Seaport, Fenway, and North Station areas.

The Project is located in the heart of the most innovative technology cluster in the country. Collaboration with MIT and existing and expanding companies is driving the R&D and office market to search for ways to accommodate the desired growth. Access to talented young professionals, access to innovation, access to collaboration for the advancement of ideas, and access to world class venues is further fueling this cluster. This Project is at ground zero for innovative companies, both large and emerging, and for the foreseeable future the anticipated growth is sustainable provided tenants can remain in Kendall Square.

SECTION VIII: Sustainability Narrative

SECTION VIII: Sustainability Narrative

MIT's proposed SoMa Project employs a comprehensive approach to achieve sustainability that involves international best practices in establishing a new benchmark in urban sustainable development, community, and innovative solutions to local and regional environmental design issues. Combined with the proposed NoMa Project, this will be one of the largest LEED developments in the Cambridge and Boston areas.

Consistency with City of Cambridge Zoning and Sustainability Initiatives

The SoMa Project is designed to be consistent with the City of Cambridge's zoning requirements with respect to sustainability broadly in Article 22 of the Ordinance and more specifically in Section 13.89.4 of the PUD-5 zoning. In addition, the City of Cambridge has ongoing initiatives that expand its leadership role in sustainability. MIT has participated with the City in these initiatives and the SoMa Project's approach to energy, stormwater management, transportation, etc. is consistent with the goals and objectives of these two City initiatives as follows.

MIT participated in the City's "Getting to Net Zero" public process which culminated in a City Council-adopted Net Zero Action Plan for the City of Cambridge. Net zero is a target for carbon-neutral building operations and is defined as a community of buildings for which, on an annual basis, all greenhouse gas emissions produced through building operations are offset by carbon-free energy production. Cambridge was one of the first municipalities to adopt the Commonwealth's Stretch Energy Code, and in recent years the City has become more energy efficient, earning an official designation as a Green Community. During the net zero process, MIT provided expertise, shared best practices and knowledge, and assisted in shaping the recommendations, along with residents, sustainability professionals, and other property owners.

MIT was invited by the City to participate in the planning of a proposed Kendall Square EcoDistrict. An EcoDistrict is a neighborhood committed to sustainability that links green buildings, smart infrastructure and behavior to meet ambitious sustainability goals over time. Staff attended a training workshop at the Portland Sustainability Institute in Portland, Oregon, and then joined a City- led working group with other Kendall Square stakeholders. The group is exploring strategies and actions aimed at creating a more sustainable district in Kendall Square, and is working with consultant teams to prepare an energy study and a stormwater study. MIT is providing expertise, knowledge, and is helping to frame the next steps.

Environmental Design Targets

MIT is committed to adopting the next generation of sustainable building benchmarking. Each of the SoMa buildings is committed to achieving a LEED Gold rating, under the latest, and more stringent LEED version 4 system. (See the LEED narratives and affidavit for LEED compliance commitment). In addition, the SoMa Project will explore opportunities to align with requirements in the Sustainable Sites Rating System program. Most importantly, the design teams have collaborated to comprehensively respond to local and timely sustainability concerns to address landscape, water, and energy responsibly.

The mixed-use aspects of the SoMa Project also strives to achieve a social sustainability in its context that helps support a thriving community of students, workers, residents, and visitors. By providing connections and amenities, this development will create a destination that will perpetually enhance Kendall Square, serving as an educational and regional model of how sustainability can integrate into urban existing contexts.

- The development will create a public educational program for green initiatives to foster innovation.

- Depending on the type of use for each building, projects will target 10-20% energy cost when compared to the more stringent LEED v4 code compliant baseline building, which is already 17% more efficient than the baseline referenced in LEED v3. In comparison to the baseline for the City's Net Zero target, the buildings will perform equivalent to a 25-35% improvement over the current baseline.

- SoMa building designs and tenant guidelines will encourage a 20-40% reduction in energy consumption for lighting and equipment

- Each SoMa building will target 30-40% potable water use reduction across the board for fixtures and process/equipment water uses.

- SoMa buildings will aim to collect and reuse runoff from the 95th percentile storm event, and increased landscaping and porous pavement will improve stormwater runoff from existing paved parking conditions.

    - The SoMa Project will embrace climate resilient strategies including elevating mission-critical equipment and residential units above elevation

26 ft, incorporating stormwater mitigation strategies, and providing back-up systems for vital operations.

Cutting-Edge Technology

Educational and cutting edge technologies will be implemented in order to be at the forefront of environmental principles as advancements in strategies and technologies are developed, included as a public educational program for green initiatives to foster innovation. This can include renewable energy demonstrations, energy storage, water management systems, and other sustainability initiatives including the topics below.

Water

- Stormwater Management – The SoMa Project is being designed to collect and store stormwater for reuse within the buildings to minimize potable water consumption. The reuse system will be designed to capture the 95th percentile rain event and will reuse approximately 5 million gallons of water yearly. This will reduce site runoff and improve water quality to City drainage systems while reducing potable water demands on public supplies by using reclaimed water from non-potable uses such as cooling towers, fixtures and irrigation. Moreover, opportunities for combining tank volumes in a district approach within the shared below-grade areas may allow for sharing of stormwater or greywater sources between buildings as needed to optimize potable water use reductions site-wide through centralized storage and reuse. A graphic representation on the rainwater harvesting concept is shown on Figure B17.

- Water Savings - LEED v4 takes a holistic look at building water consumption, including not just building fixtures but also process water which was not previously included in LEED v3. Therefore, each SoMa building will target 30-40% potable water use reduction across the board for fixtures and equipment water uses. Reuse strategies for process water will help maximize water reductions.

Energy

- Energy Savings – SoMa buildings will be designed to a higher performance than is mandated by code, thereby going beyond best practice and local standards to reduce energy consumption, greenhouse gas emission, and the buildings' impact on the grid. Depending on the type of use for each building, projects will target 10-20% energy savings when compared to the more stringent LEED v4 code compliant baseline building, which is already 17% more efficient than the baseline referenced in LEED v3.

- City's Net-Zero target – The City's target for energy performance for new construction references a 22% improvement on the current baseline (i.e. LEED v3). The Kendall Square development is pursuing a more stringent version of LEED, LEED v4, and will achieve an equvalen 25-35% improvement on current baseline.

- Efficiency Improvements - As equipment efficiency and controls are continuously improving, we can expect to see a reduction in energy use of the future fitout beyond even today's best performing buildings. Buildings will encourage a 10-20% reduction in energy consumption for equipment based on using more innovative controls and efficient equipment selections and strategies.

- Reductions in energy consumption can be achieved in different ways, depending on building program and loads and respective major drivers of energy consumption.

- Sustainable buildings must weigh factors such as daylight availability, reduced electric lighting consumption, and preservation of views and connection to the outdoors for occupant health with building solar gains or heat losses through the façade. Likewise, not all buildings are driven primarily by façade performance. All buildings in the Kendall Square development will be specifying high performance glazing, including but not limited to low-e coatings, frit coverage, and well insulated double or triple pane glazing, in conjunction with shading devices, operable windows for natural ventilation, and opaque wall areas. All buildings will utilize numerous cutting-edge sustainable practices and technology in building design and operation.

- In addition, buildings will achieve the most significant energy reductions through efficient HVAC equipment and conditioning systems utilizing heat recovery and heat exchange, installed equipment power density reductions (such as office and lab equipment reductions and/or efficient residential appliances), advanced lighting and controls, and possible district energy connections. High performance design for energy efficiency in Kendall Square takes a holistic look at each building's specific needs to determine the most effective energy efficiency measures while meeting other programmatic or sustainability goals.

- District Energy - Building 4 will be connected to the existing efficient MIT Central Utility Plant. New commercial buildings south of Main Street will continue to study opportunities to share heating and cooling systems and be evaluated against the following criteria: efficiency improvements energy cost savings, emissions reductions, regulatory opportunities, phasing and feasibility.

Site and Transportation

- Landscape - The landscape vision includes increasing the amount of open space by more than 2 acres. The landscape plan also includes boosting softscape, tree cover and utilizing 100% native or adapted species to create a more vibrant and engaging urban landscape and canopy. This will help create comfortable microclimates and shaded spaces to encourage outdoor activities throughout the seasons. The SoMa Development Parcels will be used to demonstrate high performance and sustainable goals possible on a multiple-site scale.

- Transportation - Site infrastructure will be provided to encourage multimodal transportation, including connections to public transit buses, the Kendall MBTA station, and enhancing existing bicycle networks. Building parking areas will include electric charging stations and preferred parking for low-emitting vehicles and carpools to reduce the emissions from vehicles on the road.

Healthy Buildings

Healthy buildings will be encouraged by material palette and promotion of active design for occupant health. SoMa buildings will examine materials for their content to ensure products are being specified that create healthy indoor environments. Materials will be low- emitting, avoiding hazardous chemicals too often found in building materials, and selected based on their reduced embodied emissions as they make their way to be installed on-site. Lastly, active movement through buildings and the open spaces will be encouraged through good design of stairways and circulation to increase appeal of physical activity for some occupants while still providing accessibility for all, to enhance live, work, learn and play opportunities.

LEED

MIT has made sustainability an integral part of the SoMa Project's design process. As required under the PUD-5 Zoning, the SoMa buildings will achieve a minimum of Leadership in Energy and Environmental Design (LEED) Gold. The MIT teams are developing buildings that are sustainably designed, energy efficient, environmentally conscious, and healthy for the occupants, visitors, and community, and are committed to earning at least 60 credit points for each building under the LEED v4 system, for LEED Gold ratings. The SoMa LEED Scorecards are included in Appendix C of this document.

The Kendall Square Development will register an overall LEED Master Site with USGBC for the SoMa Project that will take advantage of combined site, landscape, and transportation strategies. Then, each individual building will achieve the remaining credits required for a Gold rating under either the LEED v4 for Core and Shell system (Buildings 2, 3 and 5) or LEED v4 for New Construction (Buildings 4 and 6).

The SoMa Buildings will be registered with the USGBC and target several credits which span the nine LEED version 4 categories (Integrative Process, Location & Transportation, Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, Innovation in Design Process and the additional Regional Priority Credits) to enable the project to meet the zoning requirements.

In addition to achieving the LEED project goals, the measures will be taken to meet the guidelines outlined in the PUD-5 Zoning Requirements for Sustainability for the Development.

This report provides a discussion of the sustainability efforts related to the Kendall Square Development project. MIT is committed to developing buildings that are sustainably designed, energy efficient, environmentally conscious and healthy for the occupants and visitors that enhance the community.

All points below are being pursued unless noted as a maybe/possible credit, if it is determined that some of the credits under consideration will not be attainable.

All LEED Minimum Program Requirements and Prerequisites will be met.

Master Site Credits

The LEED Master Site credits are applicable to Buildings 2, 3, 4 and 5 as they will share central site amenities. Buildings will meet the credit requirements for these credits with shared amenities as well as local amenities to insure minimum requirements are met for each building's designated occupants and visitors.

29 points targeted in total, +6 Medium probability points to be studied further

Location and Transportation

The SoMa Development Parcels are previously developed sites in urban Cambridge, close to several public transportation services including an MBTA transit stop, and public bus services. Occupants shall have access to bicycle racks and showers, as well as preferred parking for hybrid and/or low- emitting vehicles.

Credit 1 LEED for Neighborhood Development Location

Buildings 2-5 are not part of, or applicable to pursue, a LEED for Neighborhood development, so this credit is not possible.

Credit 2 Sensitive Land Protection

The development parcels are located on a previously developed urban site in Cambridge.

Credit 3 High Priority Site

Cleanup work will be required on site before construction to remediate the open site area. A site environmental survey will be required to confirm soil classification.

In addition, the work on Buildings 3 and 4 will interface with historical buildings that they will abut or connect to.

Credit 4 Surrounding Density and Diverse Uses

The development parcels are the center of Kendall Square in urban Cambridge, Massachusetts. The surrounding community is replete with housing, restaurants, shops, grocery stores, educational and religious institutions, performance venues and other community amenities. In addition, the project itself will add residential, office, lab, retail and services to the community.

Credit 5 Access to Quality Transit

The development parcels are situated directly over a head house for the Kendall Square MBTA Station. In addition, local bus routes connect the location to other areas of the community and Boston. Finally, campus shuttle services will continue to serve the MIT community in Kendall Square, linking to other regions of MIT's campus and student community.

Credit 6 Bicycle Facilities

Short term and long term bicycle parking will be provided for occupants and visitors. In addition, showers will be located in each individual building to serve their full time occupants. The dormitory building will include secure storage as needed. In addition, the PUD-5 District will host a Hubway bike share hub, which is the current bike-share system of Cambridge and the City of Boston. Site and roadway access will be provided to enhance the bicycle network already so prevalent in the City of Cambridge.

Showers will be provided for occupants based on LEED v4 credit guidelines for full time occupants, residents, and visitors.

Credit 7 Reduced Parking Footprint

A below grade centralized garage will be provided for the buildings on Development Parcel C and an additional below grade garage will provide parking for Building 2 on development Parcel B . The top

level of each garage will provide preferred parking for carpools for 5% of spaces.

Credit 8 Green Vehicles

MIT is targeting 5% of parking spaces for fuel-efficient vehicles and charging stations for 2% of all net new parking spaces. MIT will confirm the capacity and number of required spaces through design phases.

Sustainable Sites

MIT is taking a comprehensive approach to site, landscape, habitat creation, stormwater management, and human use.

Prerequisite 1 Construction Activity Pollution Prevention

The contractor shall follow best practice construction methods and submit and implement an Erosion and Sedimentation Control (ESC) Plan for construction activities related to the construction of the new building specific to this project. The ESC Plan shall conform to the erosion and sedimentation requirements of the 2003 EPA Construction General Permit and specific municipal requirements for the City of Cambridge.

Credit 1 Site Assessment

The civil and landscape teams will conduct a comprehensive site survey to study topography, hydrology, climate, vegetation, soils, human use, and human health effects to achieve credit requirements.

Credit 2 Site Development, Protect or Restore Habitat *MAYBE*

MIT is investigating opportunities for restoring landscape in what is currently a primarily hardscaped surface site. The design team is evaluating design options that to specify native or adapted vegetation for trees and green roofs to meet credit requirements and limit turf grass. This credit is not currently anticipated.

Credit 3 Open Space

This development acts as an urban infill project that will enhance the landscape while providing significant services and a thriving 24/7 mixed-use community to the sometimes deserted Kendall Square area. Maintaining pedestrian oriented open space that is inviting and engaging is a top priority for the SoMa Project for the amount of open space that will be provided. Credit to be calculated based on LEED Master

Site boundary for campus based credits, which differs from PUD boundaries.

Credit 4 Rainwater Management

The current design considers a water reuse strategy with stormwater capture from roof and site surfaces for reuse in cooling towers and possibly fixtures. The intent will be to design the system such that the reuse strategy and landscape design meets the more stringent LEED v4 requirements as well as local watershed requirements. The stormwater treatment strategy will include treatment of a majority of stormwater falling on site, including collection from roof and site/landscape runoff strategies, for 80% reduction in total suspended solids (TSS).

Through the design process, some SoMa buildings may choose to pursue Rainwater Management on the building level, rather than a shared Master Site approach.

Credit 5 Heat Island Reduction

All roofs will be designed with high-albedo materials to reflect heat and mitigate the urban heat island effects. In addition, almost all parking on site will be below grade in a shared garage for South of Main properties. The design will include high SRI and permeable pavers, which would comply with the requirements for this credit. Trees and shading elements are being explored to further reduce heat island effects on hard scape areas.

Credit 6 Light Pollution Reduction *MAYBE*

This credit will be pursued under dark-sky lighting strategies. Credit compliance will be fully evaluated in the next phase to determine if team will pursue. Efforts will be made to design the site with night sky friendly fixtures, while maintaining safety and security with the adjacency to the MIT campus.

Water Efficiency

MIT will pursue Water Efficiency credits on a building-by-building approach. However, the Master Site area will have a single approach to outdoor water use for the shared open space. In addition, each building may seek to reduce potable water for any outdoor water use for green roof or planters via elimination of irrigation, non-potable water use for irrigation, or efficient irrigation systems.

Credit 1 Outdoor Water Use Reduction, 50%/No Potable Water

The SoMa Project will target a minimum of 50% reduction through efficient irrigation and/or stormwater reuse for irrigation. To meet the credit requirements of 50% reduction in potable water use for irrigation, potable water use for irrigation will be limited and reuse strategies feasible for irrigation will be explored, including stormwater, reverse osmosis, or other reuse water available for irrigation AND/OR use of native, drought resistant vegetation. Baseline design includes conservation strategies and no reuse.

Regional Priority Credits

Regional Priority Credits (RPC) are established LEED credits designated by the USGBC to have priority for a particular area of the country. When a project team achieves one of the designated RPCs, an additional credit is awarded to the project. Up to four RPCs can be achieved on a project. The following RPCs are applicable to SoMa Development Parcels in LEED v4, under a Master Site approach. Additional Regional Priority credits are only applicable to individual SoMa buildings, and can be found under the building specific narratives.

- High Priority Site (2 pts required, 2 possible)
- Rainwater Management (2 pts required, up to 3 points)
-

Energy Efficiency and District Energy

MIT is committed to developing a sustainable campus, following our reputation as a worldwide leader in energy, engineering, technological advancement, and climate change studies. The SoMa Buildings will strive to establish a precedent for sustainable urban construction and operation efficiency in the Northeast.

Design and engineering must address building energy consumption and loads first in order to maximize energy efficiency and reduce environmental footprints. Once loads are reduced, opportunities for district systems and building interconnections can be investigated to find the optimal solution for meeting energy needs. The SoMa buildings will benchmark performance above peer buildings in the region and seek to serve the community as a guide for how to develop high performance buildings. The Genzyme building, one of the earliest LEED 2.0 Platinum certified projects and often the benchmark case study for sustainable building in Cambridge and beyond, has a site energy use intensity of 90.3 kBtu/sf (2010 data, "The World's Greenest Buildings: Promise Versus Performance in Sustainable Design," p71). By comparison, Building 5 is projecting less than 70 kBtu/sf for site energy use intensity, 20% less than the Genzyme building. With performance tracking and energy education programs, these buildings strive to become the new sustainable performance standard for both the community and international peers.

The SoMa buildings will reduce energy consumption and greenhouse gas emissions through the integration of high performance facades, efficient building systems, reduced lighting power consumption, advanced controls, efficient equipment, and occupant education programs. Each SoMa building will employ envelopes that integrate a mix of insulating materials, advanced glazing materials, external shading, and internal shading to minimize heat gains and losses through the envelope. The mechanical systems are designed to minimize energy use and maximize flexibility and operability, utilizing high efficiency equipment and a next generation approach to building conditioning. By specifying the latest mechanical system elements, the projects establish up to a 10- 20% improvement over similar equipment components that would have been selected even a few years ago.

MIT is one of the first institutions to commit to pursuing the newest and most stringent version of LEED, LEED v4, on all future major construction projects. The SoMa buildings will pursue LEED v4, which requires benchmarking against a more efficient ASHRAE 90.1-2010 code baseline building, as compared to previous versions of LEED. The baseline itself establishes a roughly 17% improvement from the LEED v3 baseline performance. Each SoMa building depending on the building use is targeting a range of 10-20% further reduction in energy consumption from the more stringent LEED v4 current code baseline, achieved solely by efficiency improvements installed within each building's

footprint.

After exploring opportunities for building level efficiency improvements, the team performed a comprehensive energy study that evaluated several district energy options against multiple criteria, including physical, regulatory, market, and financial criteria. The options included energy sourced from onsite generation, MIT's central utility plant, district steam, building by building, and variations of different options. While elements of the study, such as further evaluation of the provision of steam by the local district steam provider, will continue during the iterative design phase, the current results of the study show that the comprehensive building and system design in a building by building approach combined with a hybrid approach to district energy connection for MIT academic buildings results in the optimum performance and meets all criteria including greenhouse gas emissions measurement.

MIT is committed to implementing best practice and meeting or exceeding local standards in incorporating a whole system, integrated approach and to continually revise and reevaluate design strategies to stay at the forefront of adoption of environmental principles. In Kendall Square, sustainability takes an expanded view at the intersection of environmental, economic, and social issues to ensure that all are properly examined and aligned to meet the projects objectives throughout all phases of development. Energy efficiency and resource conservation are at the heart of the sustainability framework developed for Kendall Square, and will remain a focus for the team as the SoMa Project develops.

The iterative process and the analysis to date indicates the following hybrid district energy strategy should be pursued in PUD-5:

- Three buildings Site 4, E38 and E39 will connect to the MIT Central Plant for chilled water, steam, and electricity.
- Site 3 and 238 Main Street will develop a local district energy plant for cooling and heating, powered by gas and electricity sourced from the local utility.
- Sites 1, 2, 5 and 6 will develop building level energy plants for cooling and heating, powered by gas and electricity sourced from the local utility. These plants will be optimized in response to the building load profile and might include local co-generation if it matches the load profile

and improves efficiency. Building-level energy efficiency measures can provide significant energy and emissions savings.

- Site 1 continues to explore opportunities for local/Veolia steam connections to provide heat.
- To the extent Veolia service is extended across Main Street, the commercial buildings (Sites 2, 3, 5, 6) will further investigate opportunities for steam connections.

Resiliency

The topic of resiliency covers a broad range of issues and concerns for response and preparation for climactic or disastrous events. Likewise, different building types will need to provide unique support during such potential occurrences. Office and lab buildings, while not likely a shelter-in-place location, have been designed so that mission critical systems are elevated significantly above the ground floor to ensure building power and conditioning system continuity during significant events. Backup systems will provide critical continuity for tenants during outage situations.

More critically, the residential buildings are being designed to allow for more passive façade design to resist temperature changes and provide user controllability during significant regional outages. Similarly, water, electricity, and building systems have been elevated and designed to maintain connectivity and continuity during major events.

Most importantly, the Kendall Square development intends to help create a sense of community through site, landscape, and urban design that can foster relationships and connectivity among residents, employees, students and faculty, visitors and community members, that when in times of crisis, can share resources and come together to strengthen support for one another.

SECTION IX: Noise Mitigation Narrative

SECTION IX: Noise Mitigation Narrative

The City and the MassDEP have noise requirements that protect residents from excessive sound. The SoMa buildings will comply with Section 13.89.1 Rooftop Mechanical Equipment Noise Mitigation and Section 8.16, Noise Control of the Ordinance as well as meet MassDEP Noise Guidelines. All mechanical equipment components for each of the sites listed in this report will meet specifications outlined in Section 8.16 of the Ordinance. This includes cooling towers, air handling units, exhaust fans, and all mechanical room louver openings.

During the permitting phase it is necessary to determine the degree of sound reduction required. This is based upon estimates of the sound that will propagate from the facility and the sound level criteria appropriate for the neighborhood. The acoustical study is included as Appendix D of this document. The sound criteria for this project will address the following factors:

- Ambient or background sound levels during the quieter times
- Type of neighborhood – residential, business, or industrial
- Character of sound generated by proposed facility – sound level and spectrum

Consistent with Section 13.89.2 of the PUD-5 zoning in the Ordinance, prior to the issuance of the first certificate of occupancy of any SoMa building MIT will submit an acoustical report, including field measurements, demonstrating compliance of such building with all applicable noise requirements.

Emergency Generators

Emergency generator noise emissions from each SoMa building do not need to be included as part of the noise emissions study. Depending on the major equipment and noise control selected for a project, a typical emergency generator facility can emit tonal and/or broadband sounds, low frequency sound, and steady and/or intermittent sounds that are noticeable in the community. However, the emergency generators for this project are exempt from the Cambridge Ordinance, as long as they are tested during the daytime hours.

The SoMa buildings will provide appropriate generator noise control measures to meet the MassDEP Noise Guidelines. The Commonwealth of Massachusetts has enacted regulations for the control of air pollution (310 CMR 7.10). To enforce these regulations, MassDEP has issued guidelines that limit the level

of industrial noise in inhabited areas as follows: a) not to increase the residual ambient sound level by more than 10 dBA and b) not to produce a pure tone condition where the sound pressure level in one octave band exceeds the levels in the two adjacent octave bands by 3 dB or more. The residual ambient sound level may be defined for the purpose of these guidelines as the measurement of the L90 level over the time period of concern or by other means acceptable to MassDEP. In addition, MassDEP typically applies these guidelines both at the property line and at the nearest inhabited residences, with most concern at the residence.

Based on the MassDEP guidelines and the results of our ambient sound survey, we suggest the following sound goals for the emergency generators:

- No Significant tonal sounds at community residences; and
- 60 dBA – maximum sound level at community residences

Loading Dock Noise

A preliminary study has been conducted by the design team regarding the location of the loading dock locations and truck paths at the SoMa Development Parcels. The loading docks are shown in gray for each building on Figure 6 of the acoustical study. Most of the loading dock areas are partially enclosed within the respective buildings, reducing the likelihood of noise impact to the residences. When the trucks are idle, they will be required to shut off their engine for loading and unloading. All deliveries will occur between 9AM and 9PM as agreed under the City of Cambridge Noise Ordinance, limiting truck noise during the nighttime hours.

Rooftop Mechanical Equipment

Based on the equipment layout shown in Figures 1L through 1S of the acoustical study, abatement methods to be employed to control the sound of the SoMa Project will include the following:

Buildings 2 and 3

The following mitigation measures are based on the building systems designed for Buildings 2 and 3:

- Solid acoustical barrier around cooling towers
- Sound attenuators outfitted for the discharge and intake openings of all rooftop lab exhaust fans, visual screens provided as required by Article 19
- Mechanical penthouse enclosing the chillers, boilers, pumps, and air handling units, with louvers and roof openings outfitted with sound attenuators to mitigate sound to the exterior

Building 4

Building 4 will be designed with the following sound mitigation measures;

- All lower level mechanical rooms will be provided with sound attenuators at the louvers
- All residential tower mechanical rooms will be provided with sound attenuators at the louvers
- Solid acoustical barrier around all outdoor equipment on the lower roof and higher roof
- Emergency generator will be provided with an acoustic enclosure to meet the MassDEP noise limit
- Generator exhaust pipe will be outfitted with 'critical hospital' grade muffler
- Visual screen around the emergency generator as required by Article 19

Building 5

Building 5 will be designed with the following sound mitigation measures;

- Solid acoustical barrier around cooling towers and exhaust fans
- Sound attenuators outfitted for all rooftop exhaust fans
- Mechanical penthouse enclosing the chillers, boilers, pumps, and air handling units, with louvers and roof openings outfitted with sound attenuators to mitigate sound to the exterior

- Emergency generator will be provided with an acoustic enclosure to meet the MassDEP noise limit
- Generator exhaust pipe will be outfitted with 'critical hospital' grade muffler

- Visual screen around the emergency generator as required by Article 19
- All ground level mechanical room louvers will be provided with sound attenuators

Building 6

Building 6 will be designed with the following sound mitigation measures;

- Cooling towers and air handling units will be located within a mechanical well, with sound absorptive finishes on the inside face of the mechanical well
- Forced-draft cooling towers with inlet and discharge sound attenuators will be provided
- The air handling unit will be provided with sound attenuators at the outside air opening and the exhaust air opening

Parcel C Garage

The SoMa garage will be designed with the following sound mitigation measures;

- Garage exhaust fans will be provided with sound attenuators
- Louvers will be provided with sound attenuators

The sound emissions from emergency generators for the SoMa Project will be specified to address compliance with the MassDEP noise guidelines and City of Cambridge Noise Standards. Table 3 of the acoustical study presents the initial sound estimates for the project-only equipment only at representative community locations, which include both residential and commercial areas. These estimates are based on information provided us on the equipment that will operate continuously (24/7 operation) and on the recommended noise specification values. Table 4 of the acoustical study presents similar information as Table 3 of the acoustical study, but the estimated total sound levels include the contributions of

both the project equipment sound and the average ambient sound that we measured on the quieter second night in the community across Locations 1 – 10. The estimates, which are based on current project information, address compliance with the applicable noise requirements.

SECTION X: Quantitative Data

SECTION X: Quantitative Data

Land Uses and Development – Aggregate for PUD-5

	Required	**Existing**	**Proposed Removal**	**Proposed Project**	**PUD - 5**
Land Area	As exists	1,149,765	N/A	1,149,765	1,149,765
Total Non-Exempt GFA	**4,484,084 max**	**2,540,839**	**256,914**	**1,553,033**	**3,836,958**
Residential	Min. 240,000 net new	282,816	0	285,000	567,816
Commercial	Max. 980,000 net new	407,176	59,634	947,300	1,294,842
Office (not incl. Innov.)	*N/A*	*338,932*	*21,390*	*609,400*	*926,942*
Lab (not incl. Innov.)	*N/A*	*0*	*0*	*270,000*	*270,000*
Non-Exempt Innovation	*See Note 1*	*30,000*	*0*	*0*	*30,000*
Non-Exempt Retail	*N/A*	*38,244*	*38,244*	*67,900*	*67,900*
Academic (all types)	N/A	1,625,677	33,547	74,000	1,666,130
Non-Exempt Dormitory	N/A	225,170	163,733	163,733	225,170
Structured Parking	N/A	0	0	83,000	83,000
Total Non-Exempt FAR	**Max. 3.9**	**2.21**	**.22**	**1.35**	**3.34**
Total Exempt GFA	**N/A**	**30,000**	**0**	**234,167**	**264,167**
Ground-Floor Retail	N/A	0	0	67,900	67,900
Public Transportation	N/A	0	0	0	0
Residential/Dormitory	(net new S. of Main)	0	0	166,267	166,267
Innovation	See Note 1	30,000	0	0	30,000
Total Dwelling Units	No max. or min.	262	0	290-300	552-562
Market Rate Units		262	0	237-246	499-508
Affordable Units	[Total D.U. * 18% new]	0	0	53-54	53-54
Dormitory Beds/Units	No max. or min.	347	201	450	596
Publicly Beneficial Open Space	**3.96 acres (15%)**	**8.24 acres (31.2%)**	**0**	**1.89 acres**	**10.13 acres (38.35%)**

Parking – Aggregate for PUD-5

	Required	Existing	Removed	Proposed Project	PUD – 5
Total New Parking	**1,050 (max.)**	**N/A**	**N/A**	**984**	**984**
Res. @ 0.5-0.75/unit	145-218 spaces	N/A	N/A	175	175
Office @ 0.9/KSF max.	549 (max.)	N/A	N/A	544	544
Lab @ 0.8/KSF max.	216 (max.)	N/A	N/A	216	216
Retail @ 0.5/KSF max.	67 (max.)	N/A	N/A	49	49
Academic (per zoning)	See Note 2	N/A	N/A	0	0
Dormitory (per zoning)	See Note 2	N/A	N/A	0	0
Total Replacement Parking	**Per PB approval**	**1,420**	**599**	**685**	**1,506**
Residential (note sites)		0	0	0	
Commercial (One Broadway Garage and Surface; SoMa Lots)		546	230 (114 at One Broadway surface and 116 at SoMa surface)	116	432
Academic (SoMa Lots)		874	369	369	874
Dormitory		0	0	0	0
Other (academic replacement)		0	0	200	200
Net Parking	**Per PB approval**	**1,420**	**599**	**1,669**	**2,490**

New Bicycle Parking – Aggregate for PUD-5

	Required	Proposed
Total Long-Term	**816**	**826**
Res. @ 1.00-1.05/unit	306	316
Office @ 0.3/KSF min.	184	184
Lab @ 0.22/KSF min.	60	60
Retail @ 0.1/KSF min.	20	20
Academic @ 0.2/KSF	10	10
Dormitory @ 0.5/bed	236	236
Total Short-Term	**208**	**208**
Res. @ 0.1/unit min.	30	30
Office @ 0.06/KSF min.	39	39
Lab @ 0.06/KSF min.	17	17
Retail @ 0.6/KSF min.	87	87
Academic @ 0.4/KSF	10	10
Dormitory @ 0.05/bed	25	25

Land Uses and Development – SoMa PUD

	Required	Existing	Removed	Proposed Project	SoMa PUD Total
Land Area	1,033,493	1,033,493	N/A	1,033,493	1,033,493
Total Non-Exempt GFA		**2,273,770**	**242,414**	**1,160,233**	**3,191,589**
Residential		282,816	0	0	282,816
Commercial		140,107	45,134	922,500	1,017,473
Office (not incl. Innov.)	*N/A*	*111,943*	*16,970*	*603,000*	*697,973*
Lab (not incl. Innov.)	*N/A*	*0*	*0*	*270,000*	*270,000*
Non-Exempt Innovation	*See Note 1*	*0*	*0*	*0*	*0*
Non-Exempt Retail	*N/A*	*28,164*	*28,164*	*49,500*	*49,500*
Academic (all types)	N/A	1,625,677	33,547	74,000	1,666,130
Non-Exempt Dormitory	N/A	225,170	163,733	163,733	225,170
Structured Parking	N/A	0	0	0	0
Total Non-Exempt FAR		**2.20**	**.23**	**1.12**	**3.09**
Total Exempt GFA	**N/A**	**0**	**0**	**215,767**	**215,767**
Ground-Floor Retail	N/A	0	0	49,500	49,500
Public Transportation	N/A	0	0	0	0
Residential/Dormitory	(net new S. of Main)	0	0	166,267	166,267
Innovation	See Note 1	0	0	0	0
Total Dwelling Units		262	0	0	262
Market Rate Units	No max. or min.	262	0	0	262
Affordable Units	18% of new d.u.	0	0	0	0
Dormitory Beds/Units	No max. or min.	347	201	450	596
Publicly Beneficial Open Space	**15% in PUD-5 total**	**7.82 acres (29.6%)**	**0**	**1.58**	**9.4 acres (35.6%)**

Parking – SoMa PUD

	Required	Existing	Removed	Proposed Project	SoMa PUD - 5 total
Total New Parking	**809**	**N/A**	**N/A**	**809**	**809**
Res. @ 0.5-0.75/unit	0	N/A	N/A	0	0
Office @ 0.9/KSF max.	544	N/A	N/A	544	544
Lab @ 0.8/KSF max.	216	N/A	N/A	216	216
Retail @ 0.5/KSF max.	49	N/A	N/A	49	49
Academic (per zoning)	See Note 2	N/A	N/A	0	0
Dormitory (per zoning)	See Note 2	N/A	N/A	0	0
Total Replacement Parking	**Per PB approval**	**990**	**485**	**685**	**1,190**
Residential (note sites)			0	0	0
Commercial (SoMa Lots)		116	116	116	116
Academic (SoMa Lots)		874	369	369	874
Dormitory		0	0	0	0
Other (academic replacement)		0	0	200	200
Net Parking	**Per PB approval**	**990**	**485**	**1,494**	**1,999**

Bicycle parking – SoMa PUD

	Required	Proposed
Total Long-Term	**504**	**504**
Res. @ 1.00-1.05/unit	0	0
Office @ 0.3/KSF min.	182	182
Lab @ 0.22/KSF min.	60	60
Retail @ 0.1/KSF min.	16	16
Academic @ 0.2/KSF	10	10
Dormitory @ 0.5/bed	236	236
Total Short-Term	**154**	**154**
Res. @ 0.1/unit min.	0	0
Office @ 0.06/KSF min.	38	38
Lab @ 0.06/KSF min.	17	17
Retail @ 0.6/KSF min.	64	64
Academic @ 0.4/KSF	10	10
Dormitory @ 0.05/bed	25	25

Land Uses and Development – NoMa PUD

	Required	Existing	Removed	Proposed	NoMa PUD Total
Land Area	116,272	116,272	N/A	116,272	116,272
Total Non-Exempt GFA		**267,069**	**14,500**	**392,800**	**645,369**
Residential		0	0	285,000	285,000
Commercial		267,069	14,500	24,800	277,369
Office (not incl. Innov.)	*N/A*	*226,989*	*4,420*	*6,400*	*228,969*
Lab (not incl. Innov.)	*N/A*	*0*	*0*	*0*	
Non-Exempt Innovation	*See Note 1*	*30,000*	*0*	*0*	*30,000*
Non-Exempt Retail	*N/A*	*10,080*	*10,080*	*18,400*	*18,400*
Academic (all types)	N/A	0	0	0	0
Non-Exempt Dormitory	N/A	0	0	0	0
Structured Parking	N/A	0	0	83,000	83,000
Total Non-Exempt FAR		2.3	0	3.38	5.55
Total Exempt GFA	**N/A**	**30,000**	**0**	**18,400**	**48,400**
Ground-Floor Retail	N/A	0	0	18,400	18,400
Public Transportation	N/A	0	0	0	0
Residential/Dormitory	(net new S. of Main)	0	0	0	0
Innovation	See Note 1	30,000	0	0	30,000
Total Dwelling Units	No max. or min.	0	0	290-300	290-300
Market Rate Units	No max. or min.	0	0	237-246	237-246
Affordable Units	53-54	0	0	53-54	53-54
Publicly Beneficial Open Space	**15% in PUD-5 total**	**.42 acre**		**.31 acre**	**.73 acre**

Parking – NoMa PUD

	Required	Existing	Removed	Proposed Project	NoMa PUD-5 Total
Total New Parking	**169- 241**	**0**	**0**	**175**	**175**
Res. @ 0.5-0.75/unit	146 – 218 spaces	0	0	175	175
Office @ 0.9/KSF max.	5 (max.)	0	0	0	
Retail @ 0.5/KSF max.	18 (max.)	0	0	0	
Replacement Parking	**Per PB approval**	**430**	**114**	**0**	**316**
Residential (note sites)	0	0	0	0	0
Commercial (note sites)	One Broadway	430	114	0	316
Net Parking	**Per PB approval**	**430**	**114**	**175**	**491**

Bicycle Parking – NoMa PUD

	Required	Proposed
Total Long-Term	**312**	**322**
Res. @ 1.00-1.05/unit	306	316
Office @ 0.3/KSF min.	2	2
Retail @ 0.1/KSF min.	4	4
Total Short-Term	**54**	**54**
Res. @ 0.1/unit min.	30	30
Office @ 0.06/KSF min.	1	1
Retail @ 0.6/KSF min.	23	23

Building by Building Proposed GFA – SoMa

	Proposed GFA in SF – at full build-out (including exempt)						Exemptions		Proposed at full build-out		
Building	**Total**	**Office/Lab**	**Retail**	**Res.**	**Academic**	**Dormitory**	**Retail**	**Other**	**Parking**	**L-T Bike**	**S-T Bike**
B-2	316,000	298,000	18,000	0	0	0	9,000	0	278	93	31
C-3	297,000	270,000	27,000	0	0	0	13,500	30,000	230	64	34
C-4	367,000	0	28,000	0	9,000	330,000	14,000	166,000	14	242	44
C-5	390,000	305,000	20,000	0	65,000	0	10,000	0	284	103	40
C-6	6,000	0	6,000	0	0	0	3,000	0	3	2	5
TOTAL	**1,376,000**	**873,000**	**99,000**	**0**	**74,000**	**330,000**	**49,500**	**196,000**	**809**	**504**	**154**

Building by Building Proposed GFA – NoMa

	Proposed GFA in SF – at full build-out						Exemptions	Proposed at full build-out		
Building	**Total**	**Office/Lab**	**Retail**	**Res.**	**Academic**	**Parking**	**Exempt Retail**	**Parking**	**L-T Bike**	**S-T Bike**
A-1	377,450	0	9,450	285,000	0	83,000	4,725	175	317	36
A-2 (OBW+)	33,750	6,400	27,350	0	0	0	13,675	316	5	18
TOTAL	**411,200**	**6,400**	**36,800**	**285,000**	**0**	**83,000**	**18,400**	**491**	**322**	**54**

Notes:

Note 1: Requirement for Innovation is 5% of the New Gross Floor Area approved in the final development plan for Office uses.

Note 2: Parking for Existing and Proposed Academic and Dormitory uses is included in MIT's pooled parking supply. Therefore, there is no specific requirement for the uses proposed in the Project.

SECTION XI: Appendices

SECTION XI: Appendices

A. Legal Descriptions

B. Certifications of Receipt of Plans

Kendall Square Initiative – Legal Description of Development Parcels

Development Parcel A

A certain parcel of land situated in the City of Cambridge, Middlesex County, Commonwealth of Massachusetts, bounded and described as follows:

Beginning at a point being the intersection of the northerly sideline of Main Street and the northeasterly sideline of Broadway;

Thence running N 60°31'05" W by the sideline of Broadway, a distance of 274.06 feet to a point of curvature on the sideline of Third Street;

Thence, along a curve to the right with a radius of 15.00 feet and an arc length of 23.60 feet to a point of tangency;

Thence turning and running N 29°37'15" E, a distance of 235.59 feet to a point on the sideline of a private way known as Broad Canal Way, the previous two courses by the sideline of Third Street;

Thence turning and running S 72°30'35" E by the sideline of a private way known as Broad Canal Way, a distance of 365.41 feet to a point;

Thence turning and running S 15°50'14" W, a distance of 46.32 feet to a point, the previous two courses by land now or formerly of RREEF American Reit II Corp., PPP;

Thence turning and running S 05°35'50" W in part by land of RREEF American Reit II Corp., PPP and in part by land now or formerly of The American National Red Cross, a distance of 224.70 feet to a point on the sideline of Main Street;

Thence turning and running N 84°31'09" W by the sideline of Main Street, a distance of 187.03 feet to the point of beginning.

Containing an area of 116,272 square feet, more or less, shown as Development Parcel A on a plan entitled “Development Parcel Plan, Massachusetts Institute of Technology, Kendall Square Project, Cambridge, Mass.” dated July 20, 2015, prepared by Feldman Land Surveyors.

Development Parcel B

A certain parcel of land situated in the City of Cambridge, Middlesex County, Commonwealth of Massachusetts, bounded and described as follows:

Beginning at a point being the intersection of the southerly sideline of Main Street and the easterly sideline of Wadsworth Street;

Thence running S 76°52'17" E, a distance of 150.82 feet to a point of curvature;

Thence along a curve to the left with a radius of 1000.00 feet, an arc length of 133.10 feet to a point of tangency;

Thence turning and running S 84°29'51" E, a distance of 86.31 feet to a point, the previous three courses by the sideline of Main Street;

Thence turning and running S 13°47'51" W, a distance of 141.17 feet to a point;

Thence turning and running N 84°29'51" W, a distance of 94.28 feet to a point;

Thence turning and running S 65°25'23" W, a distance of 192.25 feet to a point;

Thence turning and running N 84°29'51" W, a distance of 87.49 feet to a point on the sideline of Wadsworth Street, the previous four courses over land now or formerly of Massachusetts Institute of Technology;

Thence turning and running N 05°30'09" E by the sideline of Wadsworth Street, a distance of 264.91 feet to the point of beginning.

Containing an area of 69,711 square feet, more or less, shown as Development Parcel B on a plan entitled "Development Parcel Plan, Massachusetts Institute of Technology, Kendall Square Project, Cambridge, Mass." dated July 20, 2015, prepared by Feldman Land Surveyors.

Development Parcel C

A certain parcel of land situated in the City of Cambridge, Middlesex County, Commonwealth of Massachusetts, bounded and described as follows:

Beginning at a point being the intersection of the southerly sideline of Main Street and the westerly sideline of Wadsworth Street;

Thence turning and running S 05°30'09" W by the sideline of Wadsworth Street, a distance of 279.34 feet to a point;

Thence turning and running N 84°29'51" W over land of Massachusetts Institute of Technology, a distance of 215.91 feet to a point on the sideline of a private way known as Hayward Street;

Thence turning and running S 05°30'09" W, a distance of 176.49 feet to a point;

Thence along a curve to the left with a radius of 15.00 feet, an arc length of 31.43 feet, a chord bearing of S 54°31'06" E and a chord length of 25.99 feet to a point on the sideline of Amherst Street, the previous two courses by the sideline of a private way known as Hayward Street;

Thence turning and running S 65°27'39" W by the sideline of Amherst Street, a distance of 390.15 feet to a point on the sideline of a private way known as Carleton Street;

Thence along a curve to the left with a radius of 25.00 feet, an arc length of 26.16 feet, a chord bearing of N 35°28'54" E and a chord length of 24.98 feet to a point of tangency;

Thence turning and running N 05°30'09" E by the sideline of a private way known as Carleton Street, a distance of 456.76 feet to a point;

Thence turning and running N 84°29'51" W, a distance of 251.00 feet to a point;

Thence turning and running N 05°30'09" E, a distance of 62.00 feet to a point;

Thence turning and running N 84°29'51" W, a distance of 69.24 feet to a point;

Thence turning and running N 05°11'21" E, a distance of 71.66 feet to a point;

Thence turning and running S 85°07'36" W, a distance of 63.72 feet to a point;

Thence turning and running N 04°52'24" W, a distance of 77.07 feet to a point on the sideline of Main Street, the previous six courses over land now or formerly or Massachusetts Institute of Technology;

Thence turning and running S 84°29'51" E by the sideline of Main Street, a distance of 77.21 feet to a point;

Thence turning and running S 05°11'21" W, a distance of 135.00 feet to a point;

Thence turning and running S 84°29'51" E, a distance of 69.25 feet to a point on the sideline of a private way known as Dock Street;

Thence turning and running S 05°30'09" W, a distance of 62.00 feet to a point on the sideline of a private way known as Deacon Street;

Thence turning and running S 84°29'51" E by the sideline of a private way known as Deacon Street, a distance of 250.00 feet to a point on the sideline of a private way known as Carleton Street, the previous four courses by land now or formerly of Firehouse Inn, LLC;

Thence turning and running N 05°30'09" E by the sideline of a private way known as Carleton Street, a distance of 30.00 feet to a point on the sideline of a private way known as Deacon Street;

Thence turning and running N 84°29'51" W by the sideline of a private way known as Deacon Street, a distance of 220.00 feet to a point on the sideline of a private way known as Dock Street;

Thence turning and running N 05°30'09" E by the sideline of a private way known as Dock Street, a distance of 167.00 feet to a point on the sideline of Main Street;

Thence turning and running S 84°29'51" E by the sideline of Main Street, a distance of 202.00 feet to a point;

Thence turning and running S 05°30'09" W by land now or formerly of Massachusetts Bay Transit Authority, a distance of 86.00 feet to a point on the centerline of 12 foot wide private way;

Thence turning and running S 84°29'51" E by the centerline of a 12 foot wide private way, a distance of 28.00 feet to a point on the sideline of a private way known as Carleton Street;

Thence turning and running N 05°30'09" E the sideline of a private way known as Carleton Street, a distance of 6.00 feet to a point on the southerly terminus of the remaining portion of Carleton Street;

Thence turning and running S 84°29'51" E by the southerly terminus of the remaining portion of Carleton Street, a distance of 40.00 feet to a point on the sideline of the remaining portion of Carleton Street;

Thence turning and running N 05°30'09" E by the sideline of the remaining portion of Carleton Street, a distance of 74.50 feet to a point on the sideline of Main Street;

Thence turning and running S 84°29'51" E, a distance of 159.35 feet to a point of curvature;

Thence along a curve to the right with a radius of 500.00 feet, an arc length of 41.89 feet to a point of reverse curvature;

Thence along a reverse curve to the left with a radius of 500.00 feet, an arc length of 11.58 feet, a chord bearing of S 80°21'38" E and a chord length of 11.58 feet to a point of non tangency;

Thence turning and running S 83°11'31" E, a distance of 40.01 feet to a point;

Thence turning and running S 84°29'51" E, a distance of 158.80 feet to a point;

Thence along a curve turning to the right with a radius of 500.00 feet, an arc length of 57.23 feet, a chord bearing of S 81°13'06" E and a chord length of 57.20 feet to the point of beginning, the previous six courses by the sideline of Main Street;

Containing a total area of 272,224 square feet, more or less, and an area of 224,097 square feet excluding the private ways, more or less, shown as Development Parcel C on a plan entitled “Development Parcel Plan, Massachusetts Institute of Technology, Kendall Square Project, Cambridge, Mass.” dated July 20, 2015, prepared by Feldman Land Surveyors.

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS
BY CITY OF CAMBRIDGE TRAFFIC, PARKING & TRANSPORTATION

City Department/Office:

Project Address:

Applicant Name:

For the purpose of fulfilling the requirements of Section 19.20 and/or 6.35.1 and/or 5.28.2 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a Project Review Special Permit for the above referenced development project: (a) an application narrative, (b) small format application plans at 11" x 17" or the equivalent and (c) Certified Traffic Study. The Department understands that the receipt of these documents does not obligate it to take any action related thereto.

Signature of City Department/Office Representative **Date**

CERTIFICATION OF RECEIPT OF PLANS BY CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

City Department/Office:

Project Address:

Applicant Name:

For the purpose of fulfilling the requirements of Section 19.20 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a Project Review Special Permit for the above referenced development project: (a) an application narrative and (b) small format application plans at 11" x 17" or the equivalent. The Department understands that the receipt of these documents does not obligate it to take any action related thereto.

Signature of City Department/Office Representative **Date**

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS BY CITY OF CAMBRIDGE TREE ARBORIST

City Department/Office:

Project Address:

Applicant Name:

For the purpose of fulfilling the requirements of Section 4.26, 19.20 or 11.10 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a MultiFamily, Project Review or Townhouse Special Permit for the above referenced development project: a Tree Study which shall include (a) Tree Survey, (b) Tree Protection Plan and if applicable, (c) Mitigation Plan, twenty one days before the Special Permit application to Community Development.

Signature of City Department/Office Representative **Date**

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS
BY CITY OF CAMBRIDGE WATER DEPARTMENT

City Department/Office:

Project Address:

Applicant Name:

For the purpose of fulfilling the requirements of Section 19.20 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a Project Review Special Permit for the above referenced development project: (a) an application narrative and (b) small format application plans at 11" x 17" or the equivalent. The Department understands that the receipt of these documents does not obligate it to take any action related thereto.

Signature of City Department/Office Representative **Date**

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS BY CITY OF CAMBRIDGE LEED SPECIALIST

City Department/Office:

Project Address:

Applicant Name:

For the purpose of fulfilling the requirements of Section 22.20 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a Special Permit for the above referenced development project: (a) an application narrative, (b) small format application plans at 11" x 17" or the equivalent and (c) completed LEED Project Checklist for the appropriate LEED building standard, accompanying narrative and affidavit. The Department understands that the receipt of these documents does not obligate it to take any action related thereto.

Signature of City Department/Office Representative **Date**