

I. Building 4 Design Review - Overview

Project Summary

Building 4 is a proposed 426,146 gfa mixed use building located on Building Site 4 in the PUD-5 District of Kendall Square. It is one of five buildings approved by the Planning Board as part of Special Permit #303. Building 4 will incorporate the existing buildings located at 292 Main Street (MIT E38) and 290 Main Street (MIT E39), and a new 28 story graduate student housing tower above and to the south of MIT E39. Compositionally, Building 4 consists of four primary components:

- Existing MIT E38, renovated to include ground floor retail, a new home for MIT Admissions on the second level, and five levels of academic office space housing MIT's Innovation and Entrepreneurship program.
- Existing MIT E39, renovated to include ground floor retail and 2 floors of academic office space
- Graduate Student Housing Podium and Tower
 - A three-level "Podium" to the south of the existing buildings, containing an active use "Forum" on the ground level, a second level childcare facility 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 stories for MIT graduate students in a mix of 2-bedroom, 1-bedroom, and efficiency apartments. The tower spans over the podium and MIT E39.

In total, Building 4 uses are proposed to include 319,085 gfa of graduate student housing and 18,893 gfa of childcare in the tower, 67,560 gfa of academic office primarily located in the existing buildings and 20,608 gfa of retail and active uses at the ground floor of both the existing buildings and the tower.

Parking for Building 4 uses is included in the 1,459 aggregate spaces approved for the SoMa development and will be accommodated in a six level underground parking garage located below the graduate student tower and adjacent open space to the south of the project designed to serve Site 4 and adjacent Sites 3, 5 and 6. Loading facilities, all of which are situated below grade, are accessed from a ramp off Hayward Street and the entry to the loading ramp is incorporated into the Building 4 project. Automobiles seeking to park will access the underground garage via ramps on Amherst Street located to the west of its intersection with Hayward Street and at Wadsworth Street. The parking garage design is consistent with what was approved through the Special Permit process and has progressed through the administrative review process. Related enabling activities have commenced and the garage construction is expected to begin in early 2017.

Long-term bicycle parking, with elevator access, is accommodated in the first level of the underground garage. No fewer than the approximately 242 of the long term bicycle parking spaces in the garage required per the program components of Building 4 will be available at the opening of Building 4. Likewise the Building 4 program requires 44 short term bicycle parking spaces. These will be provided near the main entries of Building 4 as part of the landscape construction, as shown on Page 17 of the accompanying landscape materials.

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. Consistent with MIT's PUD-5 retail strategy, entries to active ground floor uses will occur on all four sides of the building and the mix of uses will keep the ground floor dynamic throughout the day, evening and weekend. Ground floor uses will include entrances to the dormitory, daycare and MIT admissions. The MIT Forum is situated on the southwest corner and will include ground floor permeability in the form of vision glass and nanowalls that can be opened to connect directly with the abutting landscape. Although tenants for the ground floor of E38 and E39 are not yet identified, the spaces are designed to accommodate active retailers that will complement the significant level of energy expected along Main Street and in the area of the MBTA headhouse and station.

Construction of Building 4 is expected to begin in 2017, with completion expected in 2020. MIT has worked closely with each of the individual retail tenants of Buildings E38 and E39 over the past year to devise smooth exits or relocations from their current locations. Rebecca's elected to close their Kendall Square location at the end of their lease in July 2016. MIT Press Bookstore will relocate to temporary space at 301 Mass Ave in October 2016. The owners of Kendall Market & Deli took this opportunity to retire and will close at the end of October. Cosi is considering its options amid its recent bankruptcy filing.

Consistency with Special Permit

Special Permit #303 provides for a building having a total approved Gross Floor Area of 458,178 square feet of which 165,656 square feet is exempt from the calculation of GFA either as Active Uses or new Dormitory GFA. As set forth above, the Building measures 426,146 square feet of GFA and is consistent with the Special Permit. Additionally, the Building height does not exceed 300 feet, which is the building height approved for Building 4 in the Special Permit. We do note that the land area of Building Site 4 has changed a bit as a result of a need to reconfigure slightly the southwesterly corner of the underground garage to provide for the inclusion of certain equipment within the garage. As a result, according to the draft parcelization/subdivision plan included with this filing, Building Site 4 measures approximately 89,129 square feet, which is an increase in the lot size of Building Site 4 of 157 square feet, which 157 square feet is taken from other land contained in Development Parcel C under the Special Permit.

The Development Program contained in this Design Review Submission is consistent with the Development Program for Building Site 4 contained in the Special Permit. The GFA, building height, setbacks and mix of uses of Building 4 has not changed in any material way as indicated by the Dimensional Table attached to this application.

Planning Board Review

In connection with granting Design Review approval, MIT requests that the Planning Board, pursuant to the provisions of Section 14 of the Special Permit, approve the revised subdivision plan and layout of Building Site 4 as depicted on said Plan.

The Special Permit requires the review of Publically Beneficial Open Space located on a particular building site to be reviewed as part of the design review process for each individual building site. Further, open space on Building Sites 3 and 4 shall be reviewed in combination prior to the issuance of a building permit for either Building 3 or 4 and the public space around the MBTA head house shall be reviewed in combination prior to the issuance of a building permit for either Building 4 or 5. Therefore, landscape materials for the above referenced areas are included in this submission for review.

Status of Mitigation and Commitments

Housing Contribution

In connection with the development of Building 4, no Housing Contribution will be required as the amount of GFA being demolished and removed from Building Site 4 exceeds the amount of the GFA that would be considered to be an Incentive Project under the provisions of Article 11.201 of the Ordinance. The amount of commercial GFA being demolished and removed totals 55,403 square feet, while the maximum amount of new non-dormitory commercial space contained in Building 4 will only total 20,608 square feet. As a result, there is no new GFA that would qualify as Incentive Project space under the Ordinance, so no Housing Contribution is payable in connection with Building Site 4.

Traffic

Per Appendix B of Special Permit #303, MIT will finance and purchase the installation of two Hubway stations as shown on Page 17 of the landscape section of this Document. MIT will pay ongoing operations and maintenance fees to the City for these stations.

Community Fund Payments and Community Benefit Organization Contributions

As required by Section 13.810.2 of the Ordinance and Paragraph G of the Commitment Letter, respectively, the first and second Community Fund Payments and Community Benefit Organization Contributions have been made by MIT to the City, with the first being paid in July 2013, and the second being paid in April 2016. As a result of the above, MIT has satisfied its payment and contribution obligations relative to each of these items until such time as MIT applies for a building permit for new commercial square footage in excess of 500,000 square feet. As the commercial space contained in Building 4 will not result in any new commercial space (and, as the first Building to proceed through Design Review under the Final Development Plan, would not result in the aggregate new commercial square footage exceeding 500,000 square feet), no Community Fund Payment or Community Benefit Organization Contribution will be required in connection with the construction and occupancy of Building 4.

November 2, 2016

Other April 8, 2013 Commitments

All other commitments contained in the Commitment Letter from MIT to the City of Cambridge dated April 8, 2013, have been and continue to be satisfied by MIT to the extent implicated by the proposed development on Building Site 4.

Dimensional Form

The Standard Cambridge Form with revisions to show progress toward maximum allowable Gross Floor Area of overall PUD Final Development Plan is included in this submission.

II. Building 4 Urban Design Narrative

Urban Design Objectives

The proposed design is consistent with the Building 4 guidelines and objectives as described in the *Kendall Square PUD-5 Design Guidelines*. A principal urban design objective for Building 4 is to enhance the quality of Main Street for the Kendall Square community. By preserving E38 and E39, Building 4 will reinforce the historic scale and character of Main Street. The facades of E38 and E39 will be repaired and improved for better thermal performance. E38 will receive a new parging layer to replace the current EIFS cladding, and to recall the original cast in place concrete façade. The brick of the E39 façade will be repointed as necessary. Both buildings will feature new, energy efficient windows that will recall the original historic windows in proportion, detail, color and character. These changes have been reviewed with the Executive Director of the Cambridge Historical Commission (CHC).

Retail space along Main Street, currently elevated several feet above street level, will be lowered to grade to allow for universal accessibility and to enhance the pedestrian experience. In both E38 and E39, full height storefront glazing will be installed within the ground floor bays, allowing for maximum visual transparency between the sidewalk and retail spaces, while allowing for the future incorporation of additional entrances to optimize pedestrian flow in and out of the buildings. Pedestrian entrances will be provided from Hayward Street to the East, along Main Street to the North, and from the Gateway to the West.

Also along the Gateway, located across from the Kendall Square MBTA Headhouse, is the main entrance to the Forum, marked by a dramatic light bronze colored canopy. The Forum is an active community and academic space that will feature a 200 seat auditorium and pre-function space. As the kick-off point for prospective student tours, the Forum will serve as the unofficial front door to MIT, and will provide a bridge between the MIT campus and the greater Cambridge Community. The entire ground floor of the Forum will feature floor-to-ceiling glass to encourage views to the activity occurring within. The Forum façade will also feature a large, glazed folding wall along the southern edge, which, when opened, will further reinforce the connection between interior and exterior, and between MIT and Cambridge. The Forum will be strongly associated with the adjacent landscape, which will feature an outdoor room for event spillover or pre-function gatherings.

Next to the south Forum entrance is the main entry and lobby for the graduate student dormitory (“the tower”). The tower entrance provides an inviting terminus to the MIT Infinite Corridor, and will serve as a catalyst for pedestrian activity and gatherings in the adjacent Open Space. At the southeast corner of Site 4 is one of two headhouses associated with the Parking Garage, with a stair and elevator that connect to the Open Space via a weather protected vestibule.

Another important urban design goal of the Building 4 project, together with neighboring Buildings 3 and 5, is the open space running along their respective southern edges. 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. The open space itself will provide trees, landscape, and seating, as well as space for special and seasonal events. Native and Adaptive plantings have been carefully selected and located to mitigate pedestrian wind impact, as demonstrated through iterative wind tunnel tests. The open space will provide an exciting urban amenity for the growing Kendall Square community.

The façade of the tower will be largely clad in bronzed anodized aluminum panels. The panels are inflected to provide passive solar shading on the residential windows, as well as to activate the façade as its visual appearance dynamically changes depending on the time of day or season. Openings will be limited to 30-40% of the exterior envelope in order to achieve sustainability goals targeted for the project. The rhythm and scale of panels and windows in the Tower are proportioned to suggest a domestic scale while visually relating to the adjacent towers of Sites 3 and 5. The color and finish of the Tower panels have been selected and composed to produce an overall ombré effect, gradually shift from a warm bronze at the base to a silver champagne at the top. The color gradation serves to lighten the visual mass of the Tower while providing a warm natural color base that relates to the architectural fabric of Cambridge.

The building has been designed to mitigate adverse environmental impacts upon its neighbors. The tower is oriented north-south in order to minimize the shadow impacts on Main Street, in particular at the plaza in front of the Marriott Hotel. Building 4 shadow impact is consistent with the shadow studies presented as part of the Special Permit submission. Since the granting of the Special Permit the team has continued to test wind conditions in SoMa to reflect planting, landscape and other design changes. An update on wind study tests is included in this submission.

Mechanical equipment will be carefully designed to minimize noise and exhaust, and has been located out of sight in mechanical rooms at Levels 5 and 6, as well as in the screened penthouse of the tower. An acoustical report for Building 4 is included in this submission. Waste and recycling compactors are located below grade, at Level P1 of the parking garage, as are loading docks.

Building Sustainability

MIT’s Kendall Square Initiative is designed to be a leader in urban sustainability revitalization and renewal. MIT has made sustainability an integral part of the project and Building 4’s design process and is committed to developing buildings that are sustainably designed, energy efficient, environmentally conscious and healthy for the occupants and visitors that enhance the community.

MIT has embraced an integrated design process and includes technical experts who are actively engaged with the design process of both the site and overall SoMa District. This comprehensive view allows the development to incorporate sustainability best practices in design and operation, stormwater capture and reuse, transportation and landscape strategies.

MIT established a minimum commitment to Leadership in Energy and Environmental Design (LEED) Gold and Building 4 will achieve a LEED Gold Rating under the v4 system. The team’s efforts have been in developing a building that is sustainably designed, energy efficient, environmentally conscious, and healthy for the occupants, visitors, and community and committed to earn the buildings at least 60 credit points under the more stringent LEED v4 system, for LEED Gold ratings.

As required by Special Permit #303 included in this submission are a LEED Checklist and Narrative for Building 4 consistent with Article 22.20. These materials address the sustainability standards contained in Section 13.89.4 and the sustainability strategies and guidelines set forth in Appendix D of Special Permit #303.

Dimensional Form for SoMa Building 4

	Allowed/ Required	Existing*	Removed **	Proposed Building 4	Total
Land Area	25,000	89,129	0	0	89,129
Total Non-Exempt GFA	277,911	150,274	150,274	260,490	260,490
Residential	N/A	N/A	0	0	0
Commercial	14,000	55,403	55,403	10,304	10,304
Office	0	42,797	42,797	0	0
Lab	0	0	0	0	0
Innovation	0	0	0	0	0
Retail	14,000	12,606	12,606	10,304	10,304
Academic (all types)	100,178	94,871	94,871	86,453	86,453
Non-Exempt Dormitory	163,733	0	0	163,733	163,733
Structured Parking	N/A	0	0	0	0
Total Non-Exempt FAR	Max. 3.9 across PUD-5	1.69	1.69	2.92	2.92
Total Exempt GFA	180,267	0	0	165,656	165,656
Ground-Floor Retail	14,000	0	0	10,304	10,304
Public Transportation	N/A	0	0	0	0
Residential/Dormitory	166,267	0	0	155,352	155,352
Innovation	N/A	0	0	0	0
Total Dwelling Units	N/A	0	0	0	0
Market Rate Units	No max. or min.	0	0	0	0
Affordable Units	N/A	0	0	0	0
Dormitory Beds/Units	450	0	0	450-460	450-460
Publicly Beneficial Open Space	15% in PUD-5 total	3,920 (4.4%)	3,920 (4.4%)	40,973 (46%)	40,973 (46%)
Max Height	300 ft.	N/A	N/A	300 ft.	300 ft.
Min Yard Setbacks	0	0	0	0	0
Off Street Parking	See Note 1 below	See Note 1 below	See Note 1 below	See Note 1 below	See Note 1 below
Bicycle Parking	242	0	0	242	242

*GFA that is existing on Building Site 4 as of January 1, 2013.

**Building Site GFA that is demolished or significantly renovated. Includes existing E33, E34, RIMAC, E38 and E39.

Note 1: 32 commercial and 189 academic parking spaces exist on Building Site 4. These are being discontinued as part of the SoMa enabling and garage construction that has progressed separately through the administrative review process. Parking will be located in subsurface garage following construction of same.