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CITY OF CAMBRIDGE  
COMMUNITY DEVELOPMENT DEPARTMENT

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To: Planning Board  
From: CDD Staff  
Date: April 14, 2017  
Re: **PB #303, MIT "SoMa" Building 5 PUD Minor Amendment and Design Review**

The Special Permit for the "SoMa" Planned Unit Development (PUD) was granted by the Planning Board on May 17, 2016. The third building in the PUD, "Building 5" (commercial office, MIT museum and retail) has been submitted for review, along with a request for a minor amendments. This memo summarizes the key areas of focus associated with each element of the review.

#### **Requested Minor Amendments**

The submission for Building Site 5 proposes an increase in the total Gross Floor Area (GFA) on that site, though the site area and building height remain the same. The increased GFA results partly from an expansion of the proposed building footprint by about 5 feet to the south (the side of the building opposite Main Street), enlarging the building floorplates by about 1,000 square feet per floor, but mostly results from a reassessment of how space within the building is counted relative to the zoning definition of GFA.

The special permit for the SoMa PUD specifically authorizes some changes as minor amendments – provided those changes remain consistent with zoning requirements and are generally consistent with the original findings of the PUD approval – subject to review and approval by the Planning Board. Otherwise, the Planning Board must determine whether a change is minor or major depending on the criteria in the zoning ordinance (see below).

Across the PUD as a whole, the SoMa special permit decision authorizes changes in GFA devoted to various uses as minor amendments if the magnitude of those changes is no more than 10% of the total approved GFA in the project. Combining this site with Building Site 3, the other commercial site that is currently in the design review phase (which has also proposed a modest floor area increase), the proposed commercial GFA is increased by approximately 5% of the total approved GFA for the project. These changes remain within the zoning district limitations.

In addition to the aggregate GFA changes authorized above, changes to the dimensional characteristics of a particular site such as land area, open space, and height are authorized as minor amendments that may be granted during the design review process if they do not vary more than 10% from the approved characteristics.

For this proposal, the only dimensional modifications are the increase in footprint size and increase in total GFA from 390,000 square feet to 436,365 square feet (not counting GFA that is exempt from zoning limitations, the increase is from 380,000 to 429,836 square feet), constituting about a 12% increase (or 13% if exempt GFA is not counted).

Section 12.37 of the Zoning Ordinance provides the following guidance regarding determination of major and minor amendments:

*12.37.2 Minor amendments are changes which do not alter the concept of the PUD in terms of density, floor area ratio, land usage, height, provision of open space, or the physical relationship of elements of the development. Minor amendments shall include, but not be limited to, small changes in the location of buildings, open space, or parking; or realignment of minor streets.*

*12.37.3 Major amendments represent substantial deviations from the PUD concept approved by the Planning Board. Major amendments shall include, but not be limited to, large changes in floor space, mix of uses, density, lot coverage, height, setbacks, lot sizes, open space; changes in the location of buildings, open space, or parking; or changes in the circulation system.*

The special permit also provides the following guidance for approval of a minor or major amendment:

*[PB-303, Condition 15-b.] Minor Amendments. A Minor Amendment to this Decision shall be approved by an affirmative vote of at least five (5) members of the Planning Board after consideration of the proposed change, as enumerated on the Agenda, at an appropriately noticed meeting of the Planning Board. In approving a Minor Amendment, the Board shall issue a written determination that:*

- i. The change does not violate applicable Sections of the Zoning Ordinance, or if the change requires relief pursuant to a special permit or variance, such relief has been granted.*
- ii. The change will not substantially alter the Findings upon which this Decision is based.*

*[PB-303, Condition 15-c.] Major Amendments. Notwithstanding the provisions of Article 12.000, any Major Amendment shall only be granted after an affirmative vote of at least five (5) members of the Planning Board and only after the proposed change has been advertised as a new Special Permit subject to the procedural requirements of Section 10.40. The Planning Board shall consider the substance of the change as presented in the amendment application documents and shall not be reviewing this Decision in its entirety. Upon granting a Major Amendment, the Board shall issue written Findings that the amended portions of the Final Development Plan remain in conformance with all special permit criteria applicable to the PUD. However, if the Board finds that a requested Major Amendment to this Decision constitutes a substantial alteration to the intent, purpose and substance of this Decision, such Major Amendment shall be considered under the procedures established in Article 12.000 as if it were a new Planned Unit Development Special Permit after the submission of all required application materials.*

## **Design Review Process**

The review of the building design is guided by the conditions of the special permit, which references the design standards specified in the *Kendall Square PUD-5 Design Guidelines, 2016* (Appendix C of Final Development Plan), the *Sustainability Strategies* described in Appendix D of the Final Development Plan, and the *Kendall Square Design Guidelines, 2013*. A compilation of these guidance documents was previously sent to the Planning Board and is available on the CDD web site.

## **SoMa Urban Design Objectives**

In addition to the *Kendall Square Design Guidelines*, design objectives and strategies specific to the site were developed as part of the PUD process. The objectives most relevant to the review of Building 5 are:

### Ground level design and uses

- Establish a seamlessly integrated pattern of robust retail and active uses that contribute to an active and pleasant ground floor environment from Ames Street to the Sloan School on the south side of Main Street.
- Enhance the area around the MBTA station where Main Street and Carleton Street connect as a crossroads of Kendall Square – the nexus where business, academic, community and visitors connect.
- To the greatest extent possible, activate the edges of secondary streets and the interior open spaces to provide activity and interest for pedestrians.

### Siting, Scale and Massing

- Employ creative siting and massing approaches that maximize physical and visual porosity on Main Street, both at grade and volumetrically.
- Create a strong pedestrian scaled street wall throughout the PUD area and particularly on Main Street to align with the existing historic fabric, and achieve the level of public realm activity desired in the heart of Kendall Square.
- Enhance the pedestrian experience along the secondary streets.

### Architectural Character

- Create a family of buildings that work harmoniously together while allowing for individual character and definition to be developed and celebrated.
- Integrate and celebrate the existing ensemble of historical buildings on Main Street 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 its many innovative partners in this district and beyond.
- Create an architectural approach that will distinctly represent Kendall Square, employing innovative, contemporary architecture and the latest cost-effective green building design technologies
- Enable each building to maintain a distinct character due to its unique context, use and relationship to the public realm. This could include integration with the historic buildings or the

specific uses programmed for the building, such as the MIT Museum or academic housing or a significant ground floor retail or active use.

Specific Building 1 Design Guidelines include:

*As a corner site, the Building 5 parcel should 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’s ground floor should be transparent on the north and east elevations to enhance the visual and physical connections between interior and exterior spaces.*

*To the extent possible, the massing should give an independent expression and distinct identity to the plinth of the building mass occupied in large part by the MIT Museum. The plinth should also establish an urban scale compatible with adjacent historic buildings and appropriately scaled for pedestrians. It should give special attention to the interface with the new T-Station plaza and positively contribute to the activities, character and scale of that space.....The entrance to the MIT Museum should have a strong architectural response, which should also consider opportunities to mitigate wind impacts.*

### **Staff Comments**

Since the PUD approval, this project has continued to be refined, and staff is very supportive of the innovative design approach and elegantly detailed building skin. The design for the tall mass is characterized by folded, curtainwall facades and warm, red fins of varying depth, which provides a thoughtful urban scale and rhythm. The base of the building is formed from one story of retail/active functions surmounted by two stories of museum space. The base design has changed somewhat, and now has more of an opaque appearance with additional panels of etched, colored glass introduced to the cladding system.

### Scale and Massing

As described in the submitted materials, Building 5 has increased in scale with a dimensional increase of 5 feet to the south, however, the design and massing approach remains generally consistent with the PUD approval. At a height of 250 feet, the building will be comparable with other existing and proposed buildings in Kendall Square. The *K2 Design Guidelines* that are relevant to the consideration of building heights up to 250 feet include:

- Maximum plan dimensions of 175’ x 175’ above 125’.
- Set back two thirds of facades above the podium by a depth of 15’ facing major streets and plazas, and 10’ facing secondary streets.
- Provide distinct horizontal articulation at the datum height that relates to the façades of adjacent buildings.
- Façades above the podium facing parks and plazas exceeding 100’ in length should be separated by a gap of approximately 50 feet, extending back 50 feet from the ground level façade.
- Create a major vertical break for every 100’ of façade length with a displacement of approximately 8’ in depth.
- Avoid broad “slab” volumes that make buildings appear bulky. Point towers expressing vertical volumes are encouraged.

With regard to these guidelines, the tower has overall floorplate dimensions of approximately 191 feet by 146 feet, with breaks on all facades resulting from the folded massing. The setback of the tower generally responds to the intent of the guidelines and varies from 16 feet at the midpoint on Main Street to less than zero where it overhangs the plaza. The lesser setbacks within the narrower environs of the plaza and side streets are more challenging; however, the guidelines allow for variations at corners or in specific locations to create architectural variety.

### Façades

The facades are carefully detailed and retain the warm, red coloration, which was most appreciated by the Planning Board, staff, and members of the public. The fins, combined with the folded facades, create a rich and varied visual experience, and help "thin" down the tower. The massing of the mechanical penthouse, which is incorporated into the architecture of the building, also helps accentuate the building's vertical proportions, as does the angled roofline, which celebrates the corner of Main Street and the plaza.

It would be helpful to review a more detailed drawing of the upper office building corners to understand how the glass and fins relate to corner conditions. The transparency of the glass on the office floors is another area of concern. Some images show it looking reflective, while others transparent. Preference should be given to making the glass as transparent as possible.

Continuing review of the project will need to focus on exterior materials, colors and details, especially understanding the proposed fin and glass finishes, and a mockup of all wall assemblies (including the ground floor) provided on site.

### Podium and ground floor design

The Building 5 ground floor is thoughtfully designed with extensive areas of active use and transparency proposed on Main Street and adjacent to the plaza. The use of wood on the soffit treatment further enhances the sense of color and warmth spilling down to the street from the fins and glass above.

From the materials submitted, it is unclear if “active use” indicated on the ground floor along Main Street is part of the museum. A museum presence on Main Street via ground-floor frontage is important to its public engagement and civic role. At the moment, the Museum appears tucked away, beyond the T-head house. As suggested in the *PUD-5 Design Guidelines*, the opportunity to give the museum entrance a strong architectural response that also considers wind mitigation should be explored.

Consolidating the services and mechanicals area in the southwest corner of the ground floor is logical and is generally consistent with the citywide urban design objectives. However, the extent of blank walls does exceed the 25 percent suggested for secondary streets in Kendall Square. Staff would encourage further study of these surfaces to investigate alternative solutions that might help to animate the walls, such as utilizing portions of the facades as displays for the museum, or art. In addition, the earlier PUD design provided better ground floor permeability, with a north south pedestrian connection provided through the building, which is no longer proposed.

The addition of delicately etched, colored panels to levels two and three enhances the relationship with the adjoining historic buildings, and helps to demarcate the base from the tower above. The proposed

reflective glass coating, particularly at the podium level, is not supported by staff. While some images show a similar level of transparency to the ground floor, other renderings show a pattern of color and reflectivity that does not enable much view into the interior spaces. A greater degree of transparency toward street level should be considered, which could include opportunities for the museum to have items on display, or interesting galleries, in the upper windows.

Further details regarding the wind screen at the corner of Main Street and the T-Plaza should be provided. The printed materials only show the screen in plan, while the pdf shows the screen in perspective views on pages 26 and 28. It is unfortunate to have the screen on the corner that is meant to draw people around to the MIT Museum and the plaza, and other approaches to mitigating wind impacts should be explored.

### Mechanicals

The mechanical penthouse is successfully integrated into the overall form of the building, and the curtain wall façade continues to the roofline. To ensure that the quality of the public realm is not diminished, the location of exhaust vents and mechanical equipment needed to service the lower-level active uses should be provided.

### Wind

Wind impacts appear to have been addressed, particularly with the introduction of the wind screen at the Main Street corner. As mentioned above, while the wind screen is a successful mitigation approach, it is in a sensitive location where more attention needs to be given to drawing pedestrians around the corner. Staff also note that the site’s wind mitigation also relies on strategic plantings, rather than modifications to the built form, which should be a priority.

### Sustainability and Green Building Review

MIT and staff worked collaboratively during the PUD process to prepare the Sustainability Appendix that was incorporated into the special permit decision. The appendix articulates the strategies and objectives for this particular project and establishes guidelines to be incorporated into ongoing design review. A special permit condition also requires that future buildings in the PUD meet future sustainability requirements at the time a building is designed. There are no specific staff comments on the sustainability narrative at this stage.

Presently, this project is set to achieve LEED Gold using the current “Version 4” rating system, with a projected 62 points, with an additional 9 points listed as “likely”. At this stage, staff is confident that Building 5 will meet, at minimum, its projected certification level and point totals.

Staff also note that the PUD proposal showed a green roof, which appears not to be included in the design review submission.

### **Continuing review**

The following is a summary of issues that staff recommends should be subject to continuing design review by staff if the Board approves the building design:

- Updated plans with a correct scale and all key dimensions.
- Review of all exterior materials, colors, and details, including materials mock-ups of all wall assemblies on the site.
- Continuing study and review of wind mitigation measures, particularly the design and detailing of the wind screen.
- Rendering on page 32 should be revised to show a City standard, raised pedestrian crossing at Dock Street.
- Review of all rooftop HVAC, exhausts, and mechanical equipment screening and penthouse treatments.