CITY OF CAMBRIDGE
COMMUNITY DEVELOPMENT DEPARTMENT

IRAM FAROOQ
Assistant City Manager for Community Development

SANDRA CLARKE
Deputy Director
Chief of Administration

To: Planning Board

From: CDD Staff

Date: July 13, 2017

Re: **PB #303, MIT "SoMa" PUD Building 3 Design Review & Minor Amendment**

This memo and the attached materials are a supplement to the Design Review meetings held on March 7th and 28th regarding the MIT "SoMa" Building 3. The Applicant's recent submission provides additional information about the project in graphic form and supplementary energy performance details. This memo comments on the new materials.

Planning Board Action

The Planning Board's review of Building 3 is guided by the conditions of the "SoMa" Planned Unit Development (PUD) special permit (PB-303, granted in 2016), which references the design standards specified in the *Kendall Square PUD-5 Design Guidelines, 2016* (see appendix for relevant excerpts), the *Sustainability Strategies* described in Appendix D of the Final Development Plan, and the *Kendall Square Design Guidelines*, *2013* which were presented to the Board as a consolidated file at the prior review session.

This design review also includes a change to the calculated Gross Floor Area (GFA) of the site, which can be approved as a minor amendment (see discussion further below).

Planning Board Comments from March 28, 2017

While some positive features of the design, such as the atrium and the handsome detailing, were recognized by the Planning Board at the March 28 meeting, significant concerns about various elements of the building were raised. Some of the key design issues include:

- The building will look like a big, gray box, reflecting the other buildings without any activity or liveliness inside.
- Although exquisitely detailed up close, from further away the project will be relatively featureless and only affected by large scale reflection.
- The design has short and squat proportions, the 40 feet of mechanical penthouse is not a good scale.
- All the facades will be much the same, which is a concern.
- Mechanicals will appear dark due to the louvers, and the fins seem to fold over and close off the building.
- Renderings appear contradictory and unreliable. For example, the interior lighting and reflections are inaccurate.

344 Broadway
Cambridge, MA 02139
Voice: 617 349-4600
Fax: 617 349-4669
TTY: 617 349-4621
www.cambridgema.gov

- Building sustainability is a concern. Is this an appropriate design expression for a world headed towards climate change? The building fins provide no thermal benefit.
- The cantilever appears to be an afterthought, the wrong size, scale and proportions. Some Board members thought it should be bigger and bolder, others were hopeful about the future artwork.
- The façade on Main Street does not relate to the clock tower and appears to loom in the background.
- Views from the Charles River and the bridge will not have enough of a Kendall Square identity.
- There needs to be more knitting together of the landscaping and building architecture to evaluate the design.

Staff Comments on New Materials

In response to the Planning Board's comments, the applicant has submitted a set of revised design materials and a supplement describing the energy performance of the building envelope, dated June 21, 2017. Staff has worked with the City's urban design consultants, Over Under, to review these materials and provides the following comments:

Massing

- Overall building massing remains unchanged. As suggested in an earlier CDD memo, scale-enhancing massing variations, or shifts, could be explored to further address concerns about the building's boxiness. Such changes to the massing could match the strategies employed on Building 4 (which has a vertical reveal in a thinner massing) and Building 5 (which has a folded facade).

Façade Patterning

- The façade system has been made more animated and more varied across the four faces of the building, using fins, mullions, and silicon joints in patterns that change for each orientation and context. This is a direct response to the Planning Board's concerns about what was perceived as the excessive uniformity of the previous facade system. The use of the Fibonacci series is proposed to give a logic to the animation of the façade. The gradient of fins and mullions is quite complex, ranging from a very high density of fins on the south, to minimal fins on the north.

Façade Variation

- The south façade has an array of shadows, a compelling density of fins, and variations in pattern.
- The removal of the mechanical louvers on the north façade presents a cleaner and more vertically proportioned face toward Main Street behind the clock tower.
- The north façade is relatively flat, with fewer elements. Because there are so few fins and they are spaced so widely, these elements appear to be applied over a flat, glass surface, rather than integral to the façade system.

Landscape design

- Various changes to the south entry design and the landscape below the cantilever help to define an outdoor room and celebrate the presence of the projection above.

Some concerns raised by staff at previous meetings remain unresolved, including:

- Ground floor façades are unchanged and remain relatively undifferentiated. While it is understood the opportunities to express tenant identity and structural columns will advance in the future, as recommended in the *PUD-5 Design Guidelines,* facades should be carefully detailed to create visual interest with changes in light, shadow and texture.
- On the east facade, staff concern remains that the ground-level framing element has the effect of being squat in proportion. It visually interrupts the vertical proportion of the glazed atrium facade, rather than celebrating the scale change for the atrium on the facade.
- Wind conditions have generally improved; however, there remains one area of concern to the south-west of the building on Hayward Street, where uncomfortable conditions are predicted.

Continuing Design Review

It is anticipated that design details will be refined as the project advances. The following is a summary of issues that staff recommends should be further studied by the Applicant, either in preparing revised materials if the Planning Board continues the meeting to a future date, or as items for ongoing design review by staff if the Board decides to approve the design review:

- Review of all proposed landscape and open space design details.
- Review of the storefront designs and interior layouts of retail spaces to ensure that optimum levels of transparency between interior activities and pedestrian activity on sidewalks, are provided.
- Further study of creating a physical connection from the atrium, through the retail space to Haywood Street.
- Review of all exterior materials, colors, and details, and a mockup of all wall assemblies (including the ground floor façade and penthouse). Given the project's emphasis on a unitized curtainwall system, the character of the glass and its transparency will be an important element of this review.
- Further study and review of wind mitigation measures.
- Approval of construction details and windows, and field review and approval of masonry restoration by the Cambridge Historical Commission.
- Currently, there is no specific art proposal being considered for the cantilever as this requires an internal MIT process. Staff suggest that once a proposal has been selected the conceptual design be presented to the Board for comment prior to finalization.

Requested Minor Amendments

The initial submission for Building Site 3 indicated an increase in the total GFA on that site, though the site area and building height remain the same. The increased GFA mostly results from a reassessment of the existing 238 Main Street building that confirmed increased existing and future office and retail area (including lower level) in that building (as indicated by the first footnote on the attached dimensional table), and amounts to approximately 5% of the approved GFA. In combination with the approved GFA changes on Building Site 5, the overall GFA in the "SoMa" PUD would be increased by about 5% from the approved amount, but would remain in conformance with zoning requirements (see attached table).

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. In addition, 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.

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.*
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> *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:*
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> *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.*

The Board may approve a minor amendment on the affirmative vote of five Planning Board members.

Appendix: Relevant 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 design objectives most relevant to the review of Building 3 are:

Site Planning and Open Space

- Transform existing parking lots and streets into new publicly accessible and porous open space that will extend the network of open spaces currently existing within and adjacent to the PUD-5 District.
- Design the landscape to be a cohesive and pedestrian-oriented open space, the connective tissue of the Kendall Square Development, connecting the MIT east and main campuses, and connecting the campus, the community and the Charles River.
- Create a series of places designed to become gateways and gathering spaces for the MIT and Cambridge communities, and anchors for various locations within the PUD area. Each space should have a unique sense of place designed to complement the surrounding architecture, but also to provide a unifying element between individual buildings across the PUD development parcels.
- Design connecting pathways and streets to be welcoming and comfortable for all users, including pedestrians and people traveling by bicycle.
- Enhance and improve wayfinding for all users, including bicyclists, to make it easier to find the campus, the river, neighborhoods and the center of Kendall Square.

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.
- Site and shape buildings to minimize their impact on the historical buildings, as well as the public realm, particularly associated with Main Street and Broad Canal Way.

- 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.

Dimensional Form for SoMa Building 3

	Allowed/ Required	Existing*	Removed **	Proposed Building 3	Total
Land Area	25,000	60,954	0	0	60,954
Total Non-Exempt GFA	348,619	94,413	94,413	363,437	363,437
Residential	N/A	0	0	0	0
Commercial	348,619	94,413	94,413	363,437	363,437
Office	*65,119*	*76,918*	*76,918*	*74,843*	*74,843*
Lab	*270,000*	*0*	*0*	271,830	271,830
Innovation	*0*	*0*	*0*	*0*	*0*
Retail	*13,500*	*17,495*	*17,495*	*16,764*	*16,764*
Academic (all types)	N/A	0	0	0	0
Non-Exempt Dormitory	N/A	0	0	0	0
Structured Parking	N/A	0	0	0	0
Total Non-Exempt FAR	Max. 3.9 across PUD-5	**1.55**	**1.55**	**6.0**	**6.0**
Total Exempt GFA * **	**13,500**	**0**	**0**	**16,764**	**16,764**
Ground-Floor Retail	13,500	0	0	16,764	16,764
Public Transportation	N/A	0	0	0	0
Residential/ Dormitory	N/A	0	0	0	0
Innovation	See Note 2	0	0	See Note 2	See Note 2
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	N/A	0	0	0	0
Publicly Beneficial Open Space	**15% in PUD-5 total**	**See Note 3 Below**	**See Note 3 Below**	**See Note 3 Below**	**See Note 3 Below**
Max Height	**200 ft.**	**N/A**	**N/A**	**200 ft.**	**200 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	**98**	**0**	**0**	**98**	**98**

**GFA that is existing on Building Site 3 as of January 1, 2013. For the Building 3 Project, the existing number has been amended to reflect 16,000 sf of existing GFA, primarily basement storage, that was unaccounted for in Special Permit #303.*

***Building Site GFA that is demolished or renovated. Includes existing upper floor office space at 238 Main Street.*

**** Proposed retail GFA is conceptually estimated at 50% exempt. Actual exemption will be known at building occupancy.*

Note 1: 70 commercial and 49 academic parking spaces exist on Building Site 3. 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.

Note 2: Innovation Space as required by section 13.89.3 of the Ordinance is provided in PUD-5 as described in Special Permits #303 and #302.

Note 3: 40,973 (46%) included in previously submitted SoMa landscape proposal for area generally bordered by Main Street, Carlton Street, Amherst Street and Wadsworth Street.