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CITY OF CAMBRIDGE  
COMMUNITY DEVELOPMENT DEPARTMENT

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Director

To: Planning Board

**Iram Farooq**

From: CDD staff

*Assistant City Manager for  
Community Development*

Date: September 18, 2020

**Sandra Clarke**

Re: **PB #179, North Point PUD Parcel U Office/Laboratory Building**

*Deputy Director  
Chief of Administration*

This memo contains an overview of the proposed project at North Point Parcel U, the relevant design guidelines, and related comments.

**Khalil Mogassabi**

*Deputy Director  
Chief of Planning*

### **Design Process and Staff Review**

Over the last few months, the Applicant has met with staff regarding the project's design. Staff appreciates their efforts and cooperation in working out the critical design issues. The submission package incorporates design changes in response to the issues discussed in the meetings.

### **Planning Board Action**

As a reminder, the Special Permit for the North Point Planned Unit Development (PUD), now known as Cambridge Crossing, was originally granted by the Planning Board in 2003, and since that time has been modified several times through the PUD amendment process.

DivcoWest is now seeking design review approval for an office/laboratory building on Parcel U. North Point's special permit requires that each building and its associated park, street segment cross-section, streetscape details, and other associated physical improvements be subject to design review and approval by the Planning Board.

The Planning Board's review of the buildings and landscape design is guided by the conditions of the special permit, which includes the goals and objectives of the *Eastern Cambridge Planning Study*, the guidelines established in the *Eastern Cambridge Design Guidelines*, and utilization of the *North Point Design Guidelines* as a design reference.

### Relevant Design Objectives and Guidelines

In addition to the *Eastern Cambridge Design Guidelines*, guidelines specific to the site were developed as part of the original PUD process in 2003 and have subsequently been amended as part of Major Amendment 6 approved in 2016. The *North Point Design Guidelines* that are most relevant to Parcel U are summarized in the attached Appendix.

The guidelines recommend that buildings have a clearly expressed base, middle, and top. The facades and massing of tall buildings should emphasize vertical proportions, their heights and setbacks should be proportional to the width of the Common, their facades should be articulated to avoid continuous massings longer than 200', and their ground floors should be transparent, well detailed, and incorporate numerous entrances on principal pedestrian routes.

The Special Permit strongly endorses the need to set back the upper floors of tall buildings "in order to celebrate a strong cornice line at lower levels of those buildings."

### **Staff Comments**

Key issues raised in staff's review of the project's architectural and landscape design follow. The building's overall design and massing is an excellent response to the site. The comments pertain mostly to the building's ground floor and sitework.

### **Architectural Design**

#### *Building massing and facades*

The building's overall massing is an appropriate response to the context. The multi-faceted articulation of the north façade emphasizes vertical proportions. It gives the Commons an appropriately scaled architectural frame, yet at the same time its faceted planes break up the bulk of the building and contribute visual interest. On the southwest façade, facing the Avalon Building, and on the southeast façade, facing Gilmore Bridge, changes in color establish visual relationships to the scale of the Avalon building, as does the multi-floor window at the building's south corner. It would be helpful to see the building model in context.

The building massing at the north façade has a setback at about 65', as recommended by the North Point Design Guidelines. Its depth varies, but is generally more than 10'.

The building façades are given a finer grained three-dimensional character by the curtain wall's vertical ribs or fin-like shape between the windows. These give the facades a vertical emphasis that complements the proportions of the massing and angled facets. The slight tilts of the juxtaposed volumes provide the building with an expression of building base, middle and top.

The different, but visually related, building façade systems on the northeast and north west sides (facing the Commons), and on its southeast and southwest sides (facing Gilmore Bridge and the Avalon Building) strengthen the building placement within its immediate site, context and its response to solar orientation (see sheets 14, 16, and 30).

The window-to-wall ratio and widths of vertical projecting fins are adjusted in response to solar orientation. Consideration could be given to also adjusting the depths of the fins depending on solar orientation.

The mechanical floors at the top of the building are treated in the same architectural language as the lower facades, giving the facades a height appropriate to the size of the Commons and the nearby buildings.

At the building's northeast corner (at the connection to Gilmore Bridge), the façade is angled outward in plan, extending slightly beyond the site's build-to line. (see sheets, 21, 22, and 32). Staff supports this adjustment, as it helps enclose the corner of the Commons and screen the space under the Gilmore Bridge from view.

The building's south corner is visible between the intervening buildings when seen from Longfellow Bridge, and has been treated as a multi-floor vertical corner window (See sheet 25).

According to the shadow studies (sheet 49), the building does not create significant additional shadows on the Commons.

#### *Ground Floor Facades*

The ground floor façade on Morgan Avenue is fully glazed from the central entrance to the western corner. The pedestrian experience at the ground level is highlighted by the elegant canopy at the entrances which strengthen the presence of an entrance and signal a node for building access. The canopy also delineates the ground floor widow wall from the curtain wall of the typical floors above.

Staff understands that the ground floor spaces will be occupied by office tenants rather than retail.

#### *Connection to Gilmore Bridge*

Pedestrian and cyclist access from the bridge level to the ground level building entrance is provided by an elevator inside the building. Entrances at both levels are emphasized by canopies cantilevering from the building façade. The curvy stainless-steel tube arms are covered with greenery and appear to enhance the building entry points. Currently, the bridge is altered to provide access to building only at the area directly in front of the entrance. The possibility of an open exterior stair (outside communicating stair) between ground and the bridge level has also been discussed. The stair was suggested as a means to provide a more visible exterior route. However, ground level space limitations, exposure to the elements, size of stair, landing area, extent of connection to the bridge structure and the narrow public right of way were identified as some of the challenges that seemed to preclude that idea. The need for bollards on the connection from the Gilmore Bridge level to the building entrance should be reviewed to facilitate and direct circulation to the entry point.

### *Roofs*

The roofs will be light colored and reflective. The lower roofs at the 65' stepback will be designed so that tenants can later install a vegetated roof area. It is not clear if the roofs at stepbacks will be usable by the building's occupants.

### **Sitework and Landscape Design**

#### *Morgan Avenue setback, sidewalk, and planting*

The street trees along Morgan Avenue will shade the street and sidewalk, and will help frame the Common.

The North Point Design Guidelines recommend that the bases and middles of buildings be built to the street line, with courtyard openings and setbacks for cafes where appropriate. Consideration could be given to moving the building's north façade slightly north, to align with the north façade of Building T. (see sheet 55)

The North Point Design Guidelines discourage providing deep setbacks to accommodate ornamental plants. The landscaping along the building face on the south side of the sidewalk appears to be ornamental, rather than intended to frame the sidewalk as a legible space. Consideration could be given to creating a more coherent edge along the pedestrian sidewalk by the arrangement of plantings and species selection. (See sheets 55, 62, and 65). A more continuous trellis could be considered on the Morgan Avenue frontage – treating it as a lattice rather than as independent elements. (See sheets 56, 60, and 61)

Benches with backs would be more useful than backless benches, and movable furniture could be considered.

A smoother and more direct alignment of the building's sidewalk with the sidewalk under Gilmore Bridge, and also between the Morgan Avenue crosswalk and the entrances to the Bike Room and Elevator at the building's northeast corner, could be considered. (See sheet 55.)

#### *Leighton Street*

Much of Leighton Street's ground level facade is consumed by the loading dock and the parking garage entries and exits. The appearance of first floor façade is not clearly conveyed by the perspectives (sheets 24 and 62). The doors of the loading dock bays are deeply recessed (sheet 38). Consideration could be given to recessing the doors less deeply.

#### *Lighting*

Lighting should preferably follow the recommendations of Cambridge's Draft Outdoor Lighting Ordinance. Consideration should be given to eliminating in-grade uplighting.

#### *Gilmore Bridge Underpass*

The possibility of providing artwork in the area under the bridge could be considered, in coordination with MASSDOT and other parties as appropriate.

## **Pedestrian, Bicycle, and Vehicular Circulation**

### *Connection to Gilmore Bridge*

Providing an open exterior stair between ground level and the bridge, in addition to the interior elevator has been discussed as highlighted above.

### *Leighton Street Loading dock and Garage entry*

At about 65', the curb cut on Leighton Street far exceeds the 30' allowed by zoning. Consideration could be given to reducing the width of the loading dock curb cut to a maximum of 30', reducing the parking garage curb cut to 22' to 24', and to creating at least 10' separation between them. If more width is required for 3 loading dock doors, staff suggests that the dock flare out inside the doors. Note that curb cuts need to be a minimum of 15' from crosswalks and 25' from intersections; the status of the alley along the south side of the property should be investigated.

Alternatively, the possibility of relocating either or both of the entrances to the alley on the south side of the building (next to the Avalon Building) was discussed in meetings with the applicant, who noted that this would be difficult to do programmatically, and also since the alley is outside both the property line and the Cambridge Crossing/North Point PUD's boundary.

### *Morgan Avenue Pedestrian Crossing*

Staff supports the raised crossing table proposed at Earhart Park (sheet 123). As details are developed, they should be coordinated with City staff.

### *Loading, parking and bicycles*

The proposed parking ratio is A 0.9. Should the building be used for R&D, however, the parking ratio will be limited to 0.8. Parking spaces above that would need to be blocked off. It would be preferable if spaces were built at no more than 0.8 ratio, as it is difficult for the City to monitor blocked off spaces. If the building accommodates office tenants rather than labs, a 0.8 ratio would simply require tenants to keep their driving rate low. Note that there are unassigned parking spaces at other buildings in the area, available for use by the tenants of this project.

### *Short Term Bicycle Parking*

The spaces and clearances should be dimensioned.

### *Long Term Bicycle parking*

The door to access the bike room should be wider than minimum (maybe double wide), and have an automatic button. Additional dimensions and clearances should be provided.

The ramp should have a less than 8% slope if possible. A wider ramp would be preferable, to allow for people to pass. Consideration could be given to moving the ramp closer to the entry door, to create more space in the Bicycle Room and allow for a more efficient arrangement of bicycles.

## **Sustainability**

The Parcel U project is subject to the City's Green Building requirements that were in effect in 2016, which mandated meeting the LEED Silver requirements. It is currently targeting LEED Gold, under LEED v4 BD+C: Core and Shell and meeting the minimum requirement with 61 credit points. Additional 3 points have been designated as possible points. The Green Building Report for this project is anticipated to be complete and meets Article 22 requirements.

The North Point Design Guidelines encourage consideration of the City's Net Zero Action Plan, including projects being built "net-zero ready", or providing a technical narrative for transitioning to net zero in the future. A Net Zero narrative has been submitted as part of the Green Building narrative.

While there are no plans to install Photovoltaics (PVs) at this time, a small portion of the roof is designated as "solar ready".

Staff also encourage the Applicant to consider and pursue available technical and financial incentive packages that can assist in achieving higher levels of building performance to better satisfy the City's goals of promoting environmentally sustainable and energy-efficient design.

## **Continuing review**

The following is a summary of items that staff recommends might be subject to further exploration by the Applicant, either in preparing revised materials, should the Planning Board decide to continue its review to a future date, or as items for ongoing design review by staff if the Board decides to approve the design review:

- Review of detailed planting plan.
- Further information on the transparency and reflectance of glazing, with a particular focus on the visibility of tenant interiors.
- Review of all building mechanicals and appurtenances, including the need to ensure that parking exhaust and ventilation is located away from the public realm.
- Review of all exterior materials, colors, and details, including a materials mock-up on the site prior to any exterior materials being ordered.
- Updates on the LEED process, including energy modeling and assessment of available energy incentives.
- Review of potential opportunities to improve projected building energy performance through envelope design, or other measures.
- Review of recommended measures to improve pedestrian wind conditions at specific locations based on intended pedestrian usage.
- Review of all proposed public realm, open space and streetscape design details, including study of the landscape design on Morgan Avenue and Leighton Street.
- Review of ADA access, including at the bridge from Gilmore Bridge to the building. Are the bollards necessary?

The following continuing review issues have been assembled in consultation with TP&T:

- Review of details of the proposed bicycle racks, including type(s), dimensions, clearances, and clarification that City standards are being met.
- Review of parking, loading, bicycle parking, access and egress, and sidewalk design details by the TP&T and DPW.
- Assuming curb cuts will be on Leighton Street, the applicant should work with City staff on the final design details as part of their Building Permit application. A break between the curb cut for the parking garage access and access for the loading dock should continue to be explored by the applicant. Pavement marking, different pavement material or concrete slab jointing might be needed to also provide a 'break' between the two. These details will need to be coordinated and reviewed by DPW, TPT and CDD.
- Detailed review of the proposed raised crossing on Morgan Avenue at Earhart Park.

## Appendix: Relevant North Point Design Guidelines

The *North Point Design Guidelines* integrate and incorporate all North Point-related text of the City's adopted *Eastern Cambridge Design Guidelines* document with the Applicant's suggested elaborations.

The urban design goals for the district are:

- Create a lively new mixed-use district with strong visual, bicycle and pedestrian connections to East Cambridge
- The new district should be a place to live, work, and enjoy a variety of parks and public spaces
- Establish a new east-west street through the center of North Point, connecting East Cambridge and North Point Park
- Extend First Street into North Point to connect existing and new neighborhoods
- Create a major new public park easily accessible from the relocated Lechmere T station, First Street, and O'Brien Highway
- Form a new retail edge near the relocated Lechmere T station at the intersection of First Street, Cambridge Street, and O'Brien Highway that will complement, rather than compete with, the existing retail on Cambridge Street

### Siting, Scale and Massing

- The layout of the North Point neighborhood is driven in large part by the desire to create a contiguous public realm, which is also well integrated into with the surrounding neighborhoods
- Orientation of buildings is suggested to take advantage of exposure to sun and views to the green spaces and surrounding attractions.
- Buildings should avoid continuous massing longer than 100 feet facing residential streets and 200 feet facing mixed-use and retail streets. If massing extends beyond this length it should be made permeable and visually articulated as several smaller masses using different materials or colors, vertical breaks, bays, or other architectural elements.
- In addition to the above limits, buildings should reflect a rhythm and variation appropriate to the urban context. For example, this can be achieved by expressing bay widths of 16 to 25 feet for residential buildings and 25 to 50 feet for mixed-use and retail buildings.
- Buildings should have a clearly expressed base, middle, and top. This may be achieved through a variety of materials, fenestration, architectural detailing, massing, or other elements. Includes:
  - A line of expression at the second floor to humanize the scale of the buildings
  - The mid-section of the building should consider light penetration, continuity and consistency of built mass while allowing for individual architectural detailing
  - The base and middle should be built to the street line with courtyard openings and setbacks for cafes, where appropriate
  - Use variations in height and architectural elements such as parapets, cornices and other details to create interesting and varied roof lines and to clearly express the tops of buildings
- Taller buildings should be articulated to avoid a monolithic appearance and should emphasize vertically-oriented proportions. This should be achieved by setting back the taller portions from



the base and middle. Where appropriate the top sections of the buildings should be designed to emphasize variety within the development.

*Public streets*

- Set back portions of the building above 65 feet by at least 10 feet from the principal façade where possible.
- Use architectural expression on any portion of the building above 65 feet to prevent continuous massing.
- Corner articulation of buildings is encouraged.

*Park edges*

- Buildings on parcels facing these open spaces are encouraged to maintain consistent massing and scale that is required for the success of these open spaces (A useful benchmark suggested in the Eastern Cambridge Design Guidelines is that the height of the principal façade of buildings surrounding a park should be no greater than 1/3 the width of the park. For additional height above this limit, buildings should be stepped back by at least ten feet from the principal façade)
- Greater height without setbacks may be appropriate at corners or in specific locations to create architectural variety
- Locate buildings to minimize shadows on North Point Common especially in the afternoon and, where feasible, on other open spaces
- Surround public parks with uses that create an active ground floor environment throughout the day and evening and increase safety for park users, such as:
  - Shops, cafés and other public uses that enliven the parks are encouraged adjacent to open spaces
- For retail and office uses, build to the lot line or provide small setbacks (5 to 15 feet) from the right-of-way for café seating, benches, or small open spaces
- Setbacks used exclusively for ornamental landscaping are discouraged

*Rooftops*

- The design of rooftops, including mechanical equipment and cellular installations, should be conceived as integral to the rest of the architecture of the building.
- Screening is encouraged to conceal rooftop mechanicals, and the screening should be in the same idiom as the rest of the architecture
- Rooftop mechanicals may be designed to stand out as machinery, in which case it needs to be carefully arranged to give a pleasing visual image
- It may be possible to use both techniques listed above.
- Rooftop mechanical equipment should be designed in accordance with the Cambridge Noise Ordinance, and attention should be given to the placement and shielding of mechanical equipment so as to reduce the noise experienced by receptors on other parcels.

### Ground level design and uses

- Street-level façades within the designated retail zone should include active uses such as:
  - Shops, restaurants, and cafes
  - Services for the public or for commercial offices such as fitness centers, cafeterias, daycare centers, etc.
  - Community spaces, such as exhibition or meeting space
  - Art exhibition space/display windows
  - Commercial lobbies and front doors
  - Numerous entrances along principal pedestrian routes are encouraged both for safety and to enhance the pedestrian environment
- Office/ R&D uses are discouraged from occupying extensive ground-floor frontage. Where these uses do occur, they should occupy no more than 200 to 250 feet of continuous frontage along public streets
- Ground floor frontage should generally be permeable, and massing elements and architectural details should be human scaled
- Entrances should be located on public streets, and at or near corners wherever possible. Entrances should relate well to crosswalks and pathways that lead to bus stops and transit stations
- Buildings should have a carefully articulated base of one or two floors with high level of transparency and lightness (30-50 percent transparent) at the ground floors allowing views inward and outward. Blank walls should be avoided along all public streets, courts, and pedestrian walkways.

### Ground Floor Retail

- At least seventy-five percent of the street frontage of the proposed retail should be occupied by retail uses, including cafés and restaurants
- Retail entrances should be located on public streets, or primary pedestrian areas and on corners wherever possible
- Retail entrances should relate to crosswalks and pathways that lead to bus stops and transit stations
- Retail within North Point should be as transparent as possible to maximize visibility of street-level uses
- Ground floor façades should permit a clear view from the sidewalk to the interior space of the building (seventy-five percent transparent surface is encouraged, and reflective glass is discouraged)
- Blank walls should be avoided along all public streets, courts, and pedestrian walkways
- Create a horizontal change in plane as the building approaches the ground plane
- Plan for tenant awnings or canopies that create a sense of enclosure over sidewalks and provide identity for tenants

- Design the building to accommodate changes in retailers and retail store size over time. This may entail making the ground floor retail façade bay structure flexible, so that in the future retail spaces can be demised to include multiple bays or portions of a single bay
- The design should seek an optimal balance between the architectural identity of the building and that of individual retailers
- Where appropriate, provide a façade bay structure that relates to the architecture of the building while allowing for signage, storefront and architecture within each bay that offers an opportunity for the individual expression of each retail storefront
- Use signage and graphics to create both retail identity and a lively streetscape
- Base building design should consider tenant signage visually as well as structurally
- Signage on multi-tenant buildings should be coordinated and incorporated into the building's architecture

#### Stand Alone Retail Buildings

- The architectural language of these buildings should be distinctive from the overall architecture of North Point and should belong to and enhance the character of the public realm
- These structures should have interesting roofscapes as they will be highly visible from the majority of the buildings at North Point
- Ground floor and second floor terraces are encouraged to engage and activate the public realm
- Restaurants and cafes are encouraged in stand-alone retail buildings.
- Special attention should be given to the location of commercial kitchen exhaust vents and mechanical equipment, as these can cause noise and other environmental impacts, such as odor, that negatively impact the public realm.
- Design the building to accommodate changes in retailers and retail store size over time
- Make the ground floor retail façade bay structure flexible, so that in the future retail spaces can be demised to include multiple bays or portions of a single bay

#### Architectural Character

- Careful articulation of large commercial buildings is critical in establishing a human scale at North Point.
- Create varied architecture and avoid flat façades by using recessed or projected entryways, bays, canopies, awnings, and other architectural elements.
- Vary the architecture of individual buildings to create architecturally diverse districts.
- Where buildings are set back at upper stories, lower roofs may be used as balconies, balustrades, and gardens.
- Utilize architectural articulation such as, varied façade planes, changes in material, fenestration, architectural detailing, or other elements to break down the scale.

Residential architecture should follow the below guidelines.

- Create varied architecture and avoid flat façades by using bays, balconies, porches, and other projecting elements
- Maximize the number of windows facing public streets to increase safety
- Where buildings are set back at upper stories, lower roofs may be used as balconies, balustrades, and gardens
- Utilize architectural articulation such as varied façade planes, changes in material, fenestration, architectural detailing, or other elements to break down the scale of large buildings

#### Parking/Service

- Locate vehicular parking entrances and loading docks on side streets and alleys and provide safe pedestrian access from public streets. Where it is necessary to locate them on the major streets, building design shall try to make them unobtrusive to the pedestrian movement and shall maintain the quality of public realm.
- All parking garages must provide direct pedestrian access to the street.
- The primary pedestrian exit/access to all garages serving non-residential uses should be to the street or a public area.
- Design and locate lighting fixtures in surface parking lots and garages to enhance safety while minimizing light spillover onto adjacent properties and neighborhoods.

#### Parcel I Block Guidelines

- The building on Parcel I should resolve multiple geometries that converge on this site to create an iconic top of the building that also becomes a visual landmark for North Point
- In designing the top of the building, its presence as it is seen from First Street in East Cambridge, North Point Common and Water Street Park should be considered
- The building design shall give special consideration to the streetscape, scale and character of the park at the end of Water Street, North First Street, Dawes Street and the retail plaza
- Retail frontage should be maximized along North First Street and the retail plaza
- Building configuration shall positively use the orientation and exposure to sun by means of balconies, terraces and bay windows and minimize shadows on parks and surrounding buildings
- Top portion of the building should be set back from the retail plaza and open space to create a comfortable human scale along the plaza and in relationship to small retail buildings
- Massing and articulation of the base/middle/top and horizontal articulation of the length of the façade are critical in defining the character of Dawes and North First Street
- Relationship to Parcel JK and Parcel D buildings should be carefully studied in creating an overall skyline identity
- The design should recognize that the building on this parcel abuts public open space, and take into consideration views, shadows, noise and the public character of these open spaces