Design Review Revisions
Child Street Open Space

Presented by:
DW NP Property, LLC
c/o DivcoWest Real Estate Investments
200 State Street, 12th Floor
Boston, MA 02109

Prepared by:
Beals and Thomas, Inc.
Michael Van Valkenburgh Associates, Inc
Galluccio & Watson, LLP
Goulston & Storrs PC

Submitted in Compliance with the City of Cambridge Zoning Ordinance and M.G.L. c.40A
December 11, 2020

Ms. Catherine Preston Connolly, Chair
Cambridge Planning Board
344 Broadway
Cambridge, MA 02139

Via: Electronic Mail and Hand Delivery

Reference: Child Street Open Space – Design Revisions and Temporary Power Station
PB #179
Cambridge Crossing
Cambridge, Massachusetts

Dear Chair Connolly and Members of the Board:

DivcoWest Real Estate Investments and its affiliate DW NP Property, LLC (collectively, “DivcoWest”) respectfully submit this update package for Design Review for Child Street Open Space, which is part of the Cambridge Crossing development. As you are aware, the Child Street Open Space (formerly known as Ellipse Park) was originally approved in connection with the development of Parcel N, which the Planning Board approved in 2012. The Planning Board approved revisions to the northeasterly corner of Child Street Open Space as part of its Design Review approval of the building currently being constructed on Parcel H on November 28, 2018.

Proposed Revitalization

Currently, Child Street Open Space is comprised of three separated green spaces surrounded by hardscaped pedestrian plaza. As part of its revitalization program and to upgrade site amenities, DivcoWest desires to alter Child Street Open Space by connecting the two southerly green spaces to create an enclosed dog park for use by the public. The revitalization will also include the relocation of bicycle racks and picnic tables within the revised hardscaped pedestrian plazas.

Temporary Condition

DivcoWest desires to undertake this revitalization project in connection with the development of Parcel U. The majority of the revitalization and construction of the dog park, the installation of picnic tables and the relocation of the existing bicycle racks will occur immediately. In order to be able to carry out the construction of Parcel U, and subsequently to construct Parcel LM, DivcoWest needs to utilize a small portion of the southwesterly area of Child Street Open Space for a temporary electric substation, which is depicted on the enclosed plans. The temporary substation is required because of the particular type of existing electrical service in this area of Cambridge, and because it must be located within a certain distance of the parcel under construction. (See plan entitled “Temporary Electric Substation Location”).
This temporary condition would last from the time of the commencement of construction on Parcel U until the activation of permanent power on either Parcel U or Parcel LM, whichever is later.

As indicated on the enclosed plans, the temporary power station will be surrounded by public art (mounted on chain link fence) as screening to buffer the pedestrian realm from any visual impact that would be caused by locating the temporary power station within the Child Street Open Space. Temporary construction power for Parcel U would be provided through a conduit running from Child Street Open Space under Jacobs Street, CX Common and Morgan Avenue to Parcel U along the route depicted on the plan entitled “Temporary Electric Substation Route at the Common.”

**Conduit to Parcel U**

DivcoWest recommends the proposed route across the Common to minimize disruption to the residents of CX and the public. The streets and bicycle lanes at the intersection of Jacobs Street and Morgan Avenue are full of underground utilities and routing the temporary conduit through this intersection would be difficult and time consuming. By contrast, the path through the Common could be constructed quickly, and without harming any trees. The enclosed plan shows the proposed location of the temporary conduit, avoiding all trees in the Common.

**New Trees in Child Street Open Space**

As indicated on the enclosed plans, this revitalization work will replace six (6) dead trees with new trees. Additionally, the plan will include the removal of three (3) additional trees to allow for the construction of the new dog parks and amenities. These nine (9) trees will be replaced by twenty-two (22) trees. The replacement trees will have diameters at breast height that are greater than those of the trees removed. The number of trees having a 4” dBH will double (from 6 to 12) and a 6” dBH more than tripling (from 3 to 10) upon final completion, which will increase the overall dBH within the Child Street Open Space by 70.5”.

We note that the dead trees that exist today in the Child Street Open Space were planted in small tree pits with impermeable paving surrounding them. The proposed replacement trees will be planted in larger plant beds with additional structural soil under newly paved areas, to provide for a greater tree vitality. In addition, DivcoWest will investigate soil conditions after demolition of existing paving to determine if there are any other factors adversely affecting the health of these existing trees and anything that can be done to improve the vitality of the replacements. We also note that the larger replacement trees and their larger root balls have been located to avoid conflicts between the larger root balls and the existing underground cisterns.

**Permanent Condition**

Following permanent power activation, DivcoWest will complete the installation of the dog park for small dogs as depicted on the plan entitled “Child St Open Space – Proposed Final Condition.”
As depicted on the enclosed plans and the pedestrian circulation diagrams, the revitalization project will not impede pedestrian and/or bicycle traffic flow through the Child Street Open Space from the Common. In fact, the design retains the open nature of the north/south movement across the Child Street Open Space. Additionally, as requested by City staff, DivcoWest the proposed design includes two (2) additional trees along the easterly side of the Child Street Open Space as requested by City Staff.

As more specifically described on the enclosed plans and filing materials, DivcoWest believes that this important revitalization project will enhance the pedestrian experience and the overall use and performance of the public realm within Cambridge Crossing.

**Conclusion**

As part of this Application, we have included eight (8) copies, as well as an emailed electronic version, of plans depicting the existing conditions, the revisions approved by the Planning Board as part of the Parcel H Design Review approval process, the proposed interim condition, and the proposed final condition. The enclosed also provides precedent images of the dog parks as well as perspectives of the interim and final conditions.

We look forward to the opportunity to meet with the Planning Board to discuss this Application.

Thank you for your consideration.

Sincerely,
DIVCOWEST REAL ESTATE INVESTMENTS

Mark Johnson
Mark Johnson, FAIA
Director of Development

Attachment
Cambridge Crossing

Temporary Electric Substation
Child St Open Space - Dog Park
APPROVED MASTERPLAN PER AMENDMENT #7 (MINOR)
Criteria for Selected Location:

- DW Property within 350’ duct run from Parcel U and Parcel L/M.
- Avoid street/pedestrian path.
- Enough space to fit 22’ X 36’
- Minimal impact to Public Realm and Residents.
- Minimal tree impact.
- Cannot be located on top of a below grade structure or utility.
- Cannot be placed under the Bridge per Eversource standard.

*Connection shown for illustrative purpose only. See Appendix for the proposed routing.
EXISTING CONDITIONS - AERIAL
EXISTING CONDITIONS - CHILD ST OPEN SPACE
EXISTING CONDITIONS - CHILD ST OPEN SPACE

View A from NW Corner

View B from SW Corner
• Child St Open Space will continue to serve as a connector open space connecting people arriving from the Common to turn west towards Water street and east towards Brian Murphy Memorial Staircase.
• Mid-block crossing from Twenty/20 to Child St and Parcel L/M is not encouraged.
CHILD ST OPEN SPACE - AMENDED BY PARCEL H
ELEVATION A
PUBLIC ART ON CHAIN LINK FENCE (36'X22'X10')
Artwork To Be Determined
CIRCULATION DIAGRAM - INTERIM CONDITION
CHILD ST OPEN SPACE - PROPOSED FINAL CONDITION

Dog Park for Small Dogs

Double Crushed Stone Dust Paving, Typ.
Bench, Typ.
Concrete Ring, Existing to be Revised
Reclaimed Boulders
Existing Bike Racks, Relocated
Picnic Table with Umbrella, Typ.
Dog Agility Weave Poles
Double Gates, Typ.
Dog Waste Station
Existing Bike Racks, Relocated
Picnic Table with Umbrella, Typ.
Dog Agility Weave Poles
Double Crushed Stone Dust Paving, Typ.
Dog Park Fence, Typ.
Bench, Typ.
Double Gates, Typ.
Dog Waste Station
Dog Walk Ramp
VIEW FROM SW CORNER - FINAL CONDITION
VIEW FROM THE LAWN - INTERIM CONDITION
SITE MATERIAL AND FURNISHINGS
Amelanchier canadensis
Serviceberry

Ostrya virginiana
Hop Hornbeam

Trees being Removed (9)

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<tr>
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Proposed Trees (21)

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<td><strong>TOTAL</strong></td>
<td><strong>21</strong></td>
<td><strong>99.5</strong></td>
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All trees are included in the City of Cambridge recommended species list and additional recommended list from Urban Forest Master Plan.
PROPOSED UTILITY LOCATION SHOWN WITH FLAGS
8 Way Duct Bank

Finish Grade
6" Warning Tape Approx. 1'-0" Below Finished Grade

Excavation and Back Fill, Restore in Kind Existing Subgrade
3'-6" Wide (Width of the Excavator Bucket)
Existing Tree to Remain and be Protected
Min. 2'-6" from the Existing Tree

Min. 24"

TEMPORARY ELECTRIC SUBSTATION ROUTE AT THE COMMON
Design Review
Lot U - View Glass

Presented by:
DW NP Property, LLC
c/o DivcoWest Real Estate Investments
200 State Street, 12th Floor
Boston, MA 02109

Prepared by:
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Jacobs
Ennead
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December 11, 2020

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Cambridge Planning Board
344 Broadway
Cambridge, MA 02139

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Reference: Parcel U Design Review Revision – View Glass
PB #179
Cambridge Crossing
Cambridge, Massachusetts

Dear Chair Connolly and Members of the Board:

DivcoWest Real Estate Investments and its affiliates DW NP Property, LLC DW Propco U, LLC(collectively, “DivcoWest”) respectfully submit this package for amending the existing Design Review approval already granted by the Planning Board for Parcel U, which is part of the Cambridge Crossing development. As you are aware, on September 22, 2020, the Planning Board approved the design of a proposed twelve (12)-story office/laboratory building consisting of approximately 313,270 square feet of Gross Floor Area (“GFA”) and other public realm improvements on Parcel U (the “Project”).

As we have advanced the design of the Project, we are considering the inclusion of smart windows manufactured by View, Inc. (“View Glass”) on the southeasterly and southwesterly façades of the Project, those with solar exposure. These areas are more particularly shown on the attached renderings and elevations.

As you may be aware, View Glass is an emerging technology which allows the glass to tint dynamically across four gradients as it is exposed to varying degrees of direct sunlight, all of which are depicted in the enclosed materials. The tinting of the windows is controlled by running electrical current through the windows. For example, on a cloudy day, the glass will revert to Tint State 1, which is the most transparent and least reflective of the four tint states. With progressively more sunlight falling on the façade, View Glass will automatically tint to progressively darker tint states. With direct, bright sunshine, the glass will reach its darkest state, which is more transparent than a window with the shade drawn.

We are aware of the priority that the Planning Board places on the transparency of glass facades and believe that this proposal is responsive to those concerns. First, darker tint states should not be compared to clear glass, but instead to windows with the shades down, as shades are often left down even when they are not needed and by their nature make the building less transparent. In addition to obscuring otherwise clear windows, this also gives building facades an uneven appearance – each floor and each room has its shade in a different position, giving the building a “toothless smile” appearance.
This technology will help control interior solar glare, allowing the shades to remain up during the
daytime. Thus, View Glass will result in façades that are functionally more transparent, not less.

Second, at Parcel U, the glass in the northwestern façade, facing Leighton Street and the Common, and
the northeastern façade, facing Morgan Avenue and the Common, would remain as approved by the
Planning Board. DivcoWest is proposing to be allowed to use View Glass on the two facades,
southwestern and southeastern, that have solar exposure. These two façades do not face city streets or
open space, so any reduction in transparency in these facades will have a correspondingly reduced
impact on the public realm.

Third, as was discussed with the Planning Board, the southwestern and southeastern façades also face
and are proximate to residential buildings. The allowed lab use of Parcel U creates a unique concern –
that of light trespass at night from the lab spaces, which are lit 24 hours a day, to residential neighbors.
To address this concern, DivcoWest has already committed to and the Planning Board has already
affirmed the use of motorized shades that deploy at night within the Parcel U building. This will block
light from escaping from the building at night. DivcoWest wishes to utilize View Glass to further reduce
light trespass on the southwestern and southeastern facades as described below.

DivcoWest wishes to customize the View Glass installation at Parcel U to address two concerns that we
discussed with City staff: namely, maintaining the most transparency into the building while reducing
light trespass to residential neighbors to the southeast and southwest. Within a pre-established range
of light transmittance and glass reflectivity, DivcoWest can modify the View Glass settings for any of the
four tint states. We propose setting the four tints states as follows:

**Tint State 1** – Highest visible light transmittance and least reflectivity available. This tint state is
very similar to the glass that the Planning Board already approved for Parcel U.

**Tint State 2** – Mid-Point between States 1 and 3

**Tint State 3** – Reduced visible light transmittance and increased reflectivity, very similar to those
of another project that the Planning Board approved that we discussed with City staff. Allowing
this reduction would mean that shades would remain up and the windows unblocked, even on
sunny days.

**Tint State 4** – Least visible light transmission and highest reflectivity available. Windows would
be programmed to enter this state every night between 10 pm and 7 am to further reduce light
trespass from Parcel U to neighboring residential buildings to the southwest and southeast. This
tint state would not be used from 7 am to 10 pm.

If utilized, DivcoWest would program the windows to enter into tint states 1, 2 and 3 during the daytime,
and would utilize tint state 4 utilized only at night.

While this technology is enticing, it is relatively new and, as such, DivcoWest is currently investigating
whether it would be viable for use on the Project. DivcoWest desires to have the Planning Board approve
the potential inclusion of View Glass within the Project in the areas depicted in the attached renderings
and elevations without prescribing it. This approach would allow DivcoWest to incorporate the
technology into the building design if it determines that it is viable without having to return to the Planning
Board for additional approval. If View Glass did not prove viable, then DivcoWest would install windows that comply with the Design Review Approval already issued by the Planning Board. This would benefit the overall planning and development timeline as it would allow DivcoWest to pass straight from the design phase to the development phase without an additional cycle of review and approval by the Planning Board.

As part of this Application, we have included eight (8) copies, as well as an email containing an electronic version, of the following materials for review by the Cambridge Planning Board:

- View Glass information; and
- Depictions showing how the potential inclusion of View Glass could impact the aesthetics of the proposed building.

This proposed change to the glass does not change GFA or any of the other dimensions or massing of the Project as previously approved by the Planning Board.

We look forward to the opportunity to meet with the Planning Board to discuss the Application and to potentially bringing this emerging technology to Cambridge Crossing.

Thank you for your consideration.

Sincerely,
DIVCOWEST REAL ESTATE INVESTMENTS

Mark Johnson
Mark Johnson, FAIA
Director of Development

Attachment
Connection to Gilmore Bridge shown pending approval from MassDOT
The southeast and southwest elevations adopt metal panel cladding in context with adjacent buildings.

The distinct base, middle and top are further accentuated by the large picture window on the south façade. The bottom of this large picture window is aligned with the setbacks that create the ‘base’ on the northeast and northwest façades. Similarly, the top of the window delineates a ‘top’ that is aligned with the top that is expressed on the northeast and northwest façades.

441 Morgan uses variable pilasters along its Gilmore Bridge frontage to create a striking visual ripple, with vertical cuts and a picture window opening to relate to the scale of the bridge. The faceting and terraced setbacks of the Leighton Street and Morgan Avenue elevations create a complementary iconic presence on these frontages. The prominent material palette of glass and natural-toned materials also creates a striking presence on all sides.

Connection to Gilmore Bridge shown pending approval from MassDOT
Solid façade on sun-facing elevations with earth-toned rippling angled pilasters.

**FAÇADES: SOUTHEAST AND SOUTHWEST**

- Pilasters: printed metal panel
- Spandrel & mullion: painted medium-dark metal panel
- Glazing: Interpane, Stopray Ultra-70, VLT: 67%, Reflectivity out: 10%
  - Winter U value: 0.23
  - Summer U value: 0.21
  - SHGC: 0.29, 12mm air

Presentation Submission p. 14
Images below illustrate the varying tint states of view glass—this is best observed by viewing the varying tints in person.

FOUR TINT STATES OF VIEW GLASS

Tint 1
is clear and lets in the most sunlight and warmth. It is the default level.

Tint 2
manages some solar heat, while still remaining clear.

Tint 3
diverts glare and heat while still allowing for daylight.

Tint 4
controls glare and keeps you cool.
Images below illustrate the varying tint states of view glass - this is best observed by viewing the varying tints in person.

FOUR TINT STATES OF VIEW GLASS
DESIGN CONCEPTS: SOLAR ADAPTATION

Open north façade allows for diffuse sunlight.

Dense south façade protects from solar glare and heat gain.
Connection to Gilmore Bridge shown pending approval from MassDOT

441 MORGAN: SOUTHEAST TINT STATE 1
Connection to Gilmore Bridge shown pending approval from MassDOT
441 MORGAN: SOUTHEAST TINT STATE 3

Connection to Gilmore Bridge shown pending approval from MassDOT
Connection to Gilmore Bridge shown pending approval from MassDOT
Connection to Gilmore Bridge shown pending approval from MassDOT
441 MORGAN: SOUTHEAST NIGHT WITH SHADES

Connection to Gilmore Bridge shown pending approval from MassDOT
Connection to Gilmore Bridge shown pending approval from MassDOT
APPENDIX
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<th>GLASS VALUES</th>
<th>VLT (VISIBLE LIGHT TRANSMITTANCE)</th>
<th>VLR (VISIBLE LIGHT REFLECTANCE-OUT)</th>
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