Cambridge, Massachusetts

Design Review Application – Parcel I Residential

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.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA  01772

In collaboration with:
CBT Architects
Galluccio & Watson, LLP
Goulston & Storrs PC
Michael Van Valkenburgh Associates, Inc.

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

March 16, 2018
March 16, 2018

Mr. H. Theodore Cohen, Chair
Cambridge Planning Board
344 Broadway
Cambridge, MA 02139

Via: Hand Delivery

Reference: Cambridge Crossing Parcel I Residential Design Review Application
PB #179
Cambridge, Massachusetts
B+T Project No. 2084.56

Dear Chairman Cohen and Members of the Board:

On behalf of the Applicant, DW NP Property, LLC (an affiliate of DivcoWest), Beals and Thomas, Inc., respectfully submits this Design Review Application for Parcel I Residential (the Site), which is part of the larger Cambridge Crossing (formerly known as NorthPoint) development. The proposed development on Parcel I Residential is proposed to contain a residential building containing approximately 475 to 500 dwelling units comprising approximately 390,000 sf of Gross Floor Area (GFA). Parcel I is located entirely within Cambridge.

The attached Revised Package includes additional items which were identified by the Community Development Department as missing from the original submission on March 1, 2018. Please find the following items included as part of this Revised Package:

- A statistical Summary of the residential and affordable dwelling units constructed, in conformance with the requirements of Condition 19.d. of Special Permit #179;
- Revisions to drawings showing the overall dimensions, dimensions of major massing elements, and floor-to-floor dimensions;
- The inclusion of window and door openings on all floor plans;
- Labelling of exterior materials and colors on the elevations;
- Detailed elevations of the primary façade systems with section information to describe depth;
- Materials/color palette, additional details on window systems, and glazing specifications;
- Labelling of roof plan uses;
- Wind study;
An exterior lighting plan depicting site, façade, and rooftop lighting;
Preliminary Signage Plan;
Massing studies/diagrams investigating the angling of the small building toward the park;
A study of additional height for the podium as discussed at a previous meeting.

As shown on the master plan included as part of this Application, the Site is bounded by Dawes Street to the north, Parcel I open space to the west, Parcel I Retail to the south, and North First Street to the east.

The Site is currently undeveloped vacant land. Parcel I is one of twenty (20) building parcels in the Cambridge Crossing mixed-use development. To date, condominium buildings on Lot S and Lot T, a rental residential building on Lot N, North Point Common, Child Street Park and related infrastructure and other public amenities (including the Brian P. Murphy Memorial Staircase) have been constructed at Cambridge Crossing. In addition, Parcel JK has obtained Design Review approval in Cambridge and Somerville, and building permit applications have been procured in both cities. The Parcel JK building is currently under construction. The surrounding roadway network was approved by the Planning Board on September 2, 2016, as part of Major Amendment #6, and is currently under construction.

The Parcel I Residential building contains approximately 475 to 500 dwelling units and ±390,000 sf of GFA. The building is proposed to be 20 stories of occupied floors with mechanical penthouse. The proposed building will be 220 feet in height, based on the Cambridge definition of building height. Approximately 238 to 250 parking spaces are proposed for Parcel I Residential, all of which will be internal to the building. Approximately 499 to 525 total bicycle parking spaces will be provided on-site.

A total of 73 short-term bicycle parking spaces will be provided on-site, which includes those located as part of Parcel I Residential, Parcel I Retail, and Parcel I Open Space.

In addition, the Applicant intends to subdivide the Parcel in the manner depicted on the enclosed Draft Subdivision Plan prepared by Beals & Thomas, Inc., dated December 21, 2016, and last updated February 23, 2018, to create three (3) separate parcels within what is now Parcel I: Parcel I-1, I-2, and I-3. The final subdivision plan will be submitted at a later date for approval and endorsement by the Planning Board.
As part of this application, we have included fifteen (15) copies, as well as a flash drive containing an electronic version, of the following materials for review by the Cambridge Planning Board:

- Site Plans;
- Floor Plans and Building Sections;
- Architectural Elevations;
- A Zoning Compliance Summary;
- LEED/Green Building Compliance Summary;
- Shadow Study;
- Wind Study;
- Acoustical Report and Noise Mitigation Narrative;
- Preliminary Signage Plan;
- Compliance Checklist – Zoning Ordinance and NorthPoint Design Guidelines;
- Materials showing the cross-sections of abutting streets;
- Subdivision Plan, previously approved by the Cambridge Planning Board; and
- Draft Subdivision Plan.

There are no changes proposed to the approved uses on the Site nor are there any changes to the layout of roads serving the Site from that shown on the approved 40-scale Roadway Network Schematic Plan.

The Cambridge Crossing team is excited to meet with the Planning Board to review and discuss the evolution of design of the proposed project. Thank you for your consideration of the enclosed.

Very truly yours,

BEALS AND THOMAS, INC.

John P. Gelcich, AICP
Senior Planner

Enclosures
# CAMBRIDGE CROSSING

## DEVELOPMENT STATUS TABLE

### Phase 1a

<table>
<thead>
<tr>
<th>Building</th>
<th>Use(s)</th>
<th>Approved GFA per Special Permit Appendix I</th>
<th>GFA approved in thru Design Review</th>
<th>Project Status (i.e., Special Permit, Design Review Completed, Under Construction, Construction Completed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Residential</td>
<td>394,000</td>
<td>394,000¹</td>
<td>Construction Completed. Occupied.</td>
</tr>
<tr>
<td></td>
<td>Retail</td>
<td>8,600</td>
<td>8,600</td>
<td>Construction Completed. Occupied.</td>
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<tr>
<td>JK</td>
<td>Office/Laboratory</td>
<td>370,000 Total</td>
<td>351,192</td>
<td>Under construction.</td>
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<tr>
<td></td>
<td>Retail</td>
<td>TBD</td>
<td>14,700</td>
<td>Under construction.</td>
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<td>W</td>
<td>Retail</td>
<td>18,000</td>
<td>16,337</td>
<td>Design Review Complete.</td>
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<td>Q1</td>
<td>Retail</td>
<td>17,675²</td>
<td>17,675</td>
<td>Minor Amendment Approved for GFA Increase. Revised Design Review to be submitted.</td>
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<td>L</td>
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<td>286,000 Total</td>
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<td>M</td>
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<tr>
<td>I</td>
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<td>390,000 Total</td>
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<tr>
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<td>Retail</td>
<td>TBD</td>
<td></td>
<td>Special Permit approval. Design Review timing TBD.</td>
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</table>

¹ Development of Parcels N, S and T was completed before issuance of Major Amendment No. 6, and, therefore, the revision of Appendix I. As a result, Appendix I reflects the as-built GFA of each of N, S and T.

² Increased by Amendment No. 7 (Minor) from 14,000 square feet of GFA to 17,675 square feet of GFA.
**Phase 1b**

<table>
<thead>
<tr>
<th>Building</th>
<th>Use(s)</th>
<th>Approved GFA per Special Permit Appendix I</th>
<th>GFA approved in thru Design Review</th>
<th>Project Status (i.e., Special Permit, Design Review Completed, Under Construction, Construction Completed)</th>
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<tbody>
<tr>
<td>G</td>
<td>Office/Laboratory</td>
<td>410,000</td>
<td>451,000</td>
<td>Special Permit approval. Design Review Submitted. Design Review completed in Boston.</td>
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<td>H</td>
<td>Office/Laboratory</td>
<td>375,000</td>
<td>347,600</td>
<td>Special Permit approval. Design Review Submitted. Design Review completed in Boston.</td>
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<td>EF</td>
<td>Office/Laboratory</td>
<td>400,000 Total</td>
<td>410,590</td>
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<td></td>
<td>Retail</td>
<td>TBD</td>
<td></td>
<td>Special Permit approval. Design Review submitted in Somerville.</td>
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<tr>
<td>C</td>
<td>Mixed-Use</td>
<td>348,000</td>
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<td>Special Permit approval. Design Review timing TBD.</td>
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<td>U</td>
<td>Office/Laboratory</td>
<td>320,000</td>
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### Phase 2

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<th>Building</th>
<th>Use(s)</th>
<th>Approved GFA per Special Permit Appendix I</th>
<th>GFA approved in thru Design Review</th>
<th>Project Status (i.e., Special Permit, Design Review Completed, Under Construction, Construction Completed)</th>
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<tbody>
<tr>
<td>A</td>
<td>Residential</td>
<td>175,000</td>
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<td>Special Permit approval. Design Review timing TBD.</td>
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<td>B</td>
<td>Residential</td>
<td>373,000 (Total)</td>
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<td>Retail</td>
<td>TBD (Allowed)</td>
<td></td>
<td>Special Permit approval. Design Review timing TBD.</td>
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<td>Mixed Use</td>
<td>340,000</td>
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<td>Q2</td>
<td>Office/Laboratory</td>
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<td>Retail</td>
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<td>R</td>
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<td>148,945 (Total)</td>
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<td>V</td>
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Special Permit #179, Condition 19.d.

Statistical Summary of Dwelling Units Constructed

<table>
<thead>
<tr>
<th>Parcel</th>
<th>Total Residential Units</th>
<th>Approved GFA</th>
<th>Use(s)</th>
<th>All Residential Units</th>
<th>Affordable Residential Units¹</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No. Units</td>
<td>Avg. SF</td>
</tr>
<tr>
<td>N</td>
<td>355</td>
<td>402,600</td>
<td>Residential Retail</td>
<td>74</td>
<td>501</td>
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<tr>
<td>S</td>
<td>99</td>
<td>112,398</td>
<td>Residential</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>T</td>
<td>230</td>
<td>242,194</td>
<td>Residential</td>
<td>40</td>
<td>663</td>
</tr>
<tr>
<td>JK</td>
<td>--</td>
<td>365,892</td>
<td>Office/Laboratory Retail</td>
<td>--</td>
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</table>

<table>
<thead>
<tr>
<th>Parcel</th>
<th>Affordable Residential Units</th>
<th>Approved GFA</th>
<th>Use(s)</th>
<th>Affordable Residential Units¹</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No. Units</td>
</tr>
<tr>
<td>N</td>
<td>41</td>
<td>402,600</td>
<td>Residential Retail</td>
<td>8</td>
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<td>S</td>
<td>12</td>
<td>112,398</td>
<td>Residential</td>
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<td>T</td>
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<td>242,194</td>
<td>Residential</td>
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<tr>
<td>JK</td>
<td>--</td>
<td>365,892</td>
<td>Office/Laboratory Retail</td>
<td>--</td>
</tr>
</tbody>
</table>

Issued: March 16, 2018

¹ This chart assumes that these residential properties and affordable units are in compliance with the associated affordable housing covenants on record at the Middlesex County Registry of Deeds (Parcel N: Book 61574 Page 442; Parcel S: Book 45918 Page 224; Parcel T: Book 46408 Page 98). Additional information regarding these properties is available from the Housing Department at CDD.
PARCEL I - RESIDENTIAL
EXISTING CONDITIONS

CAMBRIDGE CROSSING - PARCEL I
390,000 GROSS FLOOR AREA
220' TALL
20 FLOORS (OCCUPIED)
475-500 UNITS

250 PARKING SPACES
0.5 VEHICLE SPACES PER UNIT

526 LONG TERM BICYCLE PARKING SPACES (INCLUDING RETAIL)
1.05 BICYCLE SPACES PER UNIT
STEP DOWN TOWARDS PARK (HEIGHT ZONE COMPLIANT)

SIMPLE MASSING FORMS WITH LIGHT/DARK FENESTRATION

HEIGHT ALONG NORTH FIRST STREET TO HOLD URBAN EDGE

TOWER PULLED AWAY FROM RETAIL PLAZA TO CREATE SCALE TRANSITION

PODIUM PULLED IN TO CREATE MORE OPEN SPACE (OPENS UP TOWARDS PARK)

PODIUM EXPRESSED TO CREATE PEDESTRIAN SCALE AND RETAIL IDENTITY

TOWER MEETS GRADE TO EMPHASIZE ENTRY
HEIGHT ZONE COMPLIANCE

ALLOWABLE
MECHANICAL PENTHOUSE

ZONING HEIGHT: 220'

150-220'

120'

65-85'

65'

CAMBRIDGE CROSSING - PARCEL I
TOWER MASSING PULLED AWAY FROM RETAIL BUILDINGS TO HELP WITH SCALE TRANSITION

DARK & LIGHT COLOR SCHEME HELPS DEFINE MASSING VOLUMES AND BREAK DOWN SCALE OF BUILDING

POROUS RETAIL FACADES TO ENCOURAGE INDOOR/OUTDOOR EXPERIENCE

MASSING OPENS UP TOWARDS EVENT LAWN
*REFER TO PG 17 FOR UPDATED PODIUM RENDERING
Southern facing balconies create residential scale.

Retail podium has its own identity.

Tower height located along North First Street to reinforce urban street edge.
*REFER TO PG 17 FOR UPDATED PODIUM RENDERING
ADDITIONAL URBAN VIEWS

VIEW FROM DAWES STREET

VIEW FROM NORTH FIRST STREET (ELEVATED PERSPECTIVE)

*REFER TO PG 17 FOR UPDATED PODIUM RENDERING
CAMBRIDGE CROSSING - PARCEL I

REVISED PODIUM DESIGN

PREVIOUS PODIUM

UPDATED PODIUM

42" SOLID PARAPET TO EXPRESS HEIGHT AND CABLE RAILING AT CENTER OF SOUTH FACADE TO ALLOW MORE VISION
REVISED PODIUM DESIGN

PREVIOUS PODIUM

UPDATED PODIUM

36'-2"

0

42" SOLID PARAPET TO EXPRESS HEIGHT
TOWER FACADE SYSTEM
PRECAST CONCRETE W/ MINERAL WOOL INSULATION
PAINTED ALUMINUM GLAZING SYSTEM W/ METAL PANEL SPANDREL
GLAZING BASIS OF DESIGN: SOLARBAN 60

PODIUM FACADE SYSTEM
COMPOSITE METAL OR PHENOLIC PANEL SYSTEM
PAINTED ALUMINUM GLAZING SYSTEM
GLAZING BASIS OF DESIGN: SOLARBAN 60

ROOFING SYSTEM 1 - HIGH ROOF
HIGH ALBEDO ADHERED MEMBRANE ROOFING SYSTEM

ROOFING SYSTEM 2 - GREEN ROOF
FUNCTIONAL GREEN ROOF SYSTEM - 2” MIN. PLANTING TRAYS AS DEFINED
BY ARTICLE 22.30

ROOFING SYSTEM 3 - AMENITY DECK
LEED COMPLIANT (SRI) PAVER/PEDESTAL SYSTEM

ENERGY MODEL PERFORMANCE CRITERIA
ROOF U-VALUE: 0.032
WALL U-VALUE: 0.055
VERTICAL GLAZING: U-VALUE 0.36, SHGC 0.27
WINDOW/WALL RATIO: 40%

BUILDING MATERIALITY
LIGHT COLORED PRECAST
DARK COLORED PRECAST
SIMULATED WOOD METAL PANEL OR PHENOLIC PANEL SYSTEM
PODIUM - FACADE DETAILS

*REFER TO PG 17 FOR UPDATED PODIUM RENDERING

- SIMULATED WOOD METAL PANEL OR PHENOLIC PANEL SYSTEM
- PAINTED ALUMINUM GLAZING SYSTEM
- COMPOSITE METAL PANEL SYSTEM
- PAINTED ALUMINUM LOUVER BAND
- METAL PANEL CANOPY OR SIGNAGE (BY TENANT)
- STOREFRONT (BY TENANT)
- STONE BASE
- METAL GUARDRAIL SYSTEM W/ HORIZONTAL CABLES
- METAL PANEL PARAPET SYSTEM

CAMBRIDGE CROSSING - PARCEL I

20
CAMBRIDGE CROSSING - PARCEL I
TOWER - FACADE DETAILS

LIGHT COLORED PRECAST  OR  DARK COLORED PRECAST

PRECAST CONCRETE

METAL PANEL SPANDREL

MULLION CAP EXTENSION

PAINTED ALUMINUM
GLAZING SYSTEM

TOWER AXON

TOWER SECTION
CAMBRIDGE CROSSING - PARCEL I
SOUTH BUILDING ELEVATION

SIGNAGE ZONES
STOREFRONT, SIGNAGE, AND AWNINGS BY TENANT

10'-0" FTF TYP.

18' TALL MONOPOLE FIRE ANTENNA

250'-0"
TOP OF MECH SCREEN

220'-0"
ZONING HEIGHT
TOP OF OCCUPIED SPACE

120'-0"
ZONING HEIGHT

32'-8"
PÓDIUM HEIGHT

0'-0"

*REFER TO PG 17 FOR UPDATED PODIUM RENDERING
WEST BUILDING ELEVATION

- **0' - 10'**
  - SIGNAGE ZONES
  - STOREFRONT, SIGNAGE, AND AWNINGS BY TENANT

- **10' - 0' FTF TYP.**
  - 18' TALL MONOPOLE FIRE ANTENNA

- **250' - 0'**
  - TOP OF MESH SCREEN

- **220' - 0'**
  - ZONING HEIGHT
  - TOP OF OCCUPIED SPACE

- **120' - 0'**
  - ZONING HEIGHT

- **32' - 8'**
  - PODIUM HEIGHT

- **0' - 0'**
  - PUBLIC RESTROOMS
  - SIGNAGE ZONES

*REFER TO PG 17 FOR UPDATED PODIUM RENDERING*
CAMBRIDGE CROSSING - PARCEL I

PLAN - LEVEL P3

Compact (7 1/2 ft x 16 ft): 38
Standard (8 1/2 ft x 16 ft): 46
Handicap (12 ft x 18 ft): 2
Tandem (7 1/2 x 16 ft): 6 (not included in parking count)

P3 Total Spaces: 86

P1 Total Spaces: 81
P2 Total Spaces: 83
P3 Total Spaces: 86
Total Parking Spaces: 250

- Residential
- Residential Circulation
- Bldg / Loading
- Bike Parking
- Retail
Compact (7 1/2 ft x 16 ft): 37
Standard (8 1/2 ft x 16 ft): 44
Handicap (12 ft x 18 ft): 2
Tandem (7 1/2 ft x 16 ft): 6 (not included in parking count)

P2 Total Spaces: 83

P1 Total Spaces: 81
P2 Total Spaces: 83
P3 Total Spaces: 86
Total Parking Spaces: 250
PLAN - LEVEL P1

Compact (7 1/2 ft x 16 ft): 38
Standard (8 1/2 ft x 16 ft): 41
Handicap (12 ft x 18 ft): 2
Van (12 ft x 18 ft): 1 (not included in parking total)

P1 Total Spaces: 81
P2 Total Spaces: 83
P3 Total Spaces: 86
Total Parking Spaces: 250

RESIDENTIAL
RES. CIRCULATION
BOX / LOADING
BIKE PARKING
RETAIL

ADA VAN ZONE
CLEAR HEIGHT 8' 2"
CAMBRIDGE CROSSING - PARCEL I
PLAN - LEVELS 04-10

RESIDENTIAL
RES. CIRCULATION
BOH / LOADING
BIKE PARKING
RETAIL

SCALE 1" = 50'-0"

DATE ISSUED: 02.08.2018
PROJECT #: 169021.00

PARCEL I

CAMBRIDGE CROSSING - PARCEL I
ROOFING SYSTEM 1 - HIGH ROOF
HIGH ALBEDO ADHERED MEMBRANE ROOFING SYSTEM

ROOFING SYSTEM 2 - GREEN ROOF
FUNCTIONAL GREEN ROOF SYSTEM - 2" MIN. PLANTING TRAYS AS DEFINED BY ARTICLE 22.30

ROOFING SYSTEM 3 - AMENITY DECK
LEED COMPLIANT (SR) PAVER/PEDESTAL SYSTEM
CAMBRIDGE CROSSING - PARCEL I

SOLAR READY ROOF STUDY

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QUANTITY/AREA</th>
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<tbody>
<tr>
<td>Quantity of red panels</td>
<td>284 panels</td>
</tr>
<tr>
<td>Area per panel</td>
<td>10 ft²</td>
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<tr>
<td>Area of useable panels</td>
<td>2830 ft²</td>
</tr>
<tr>
<td>Energy output</td>
<td>175 W/ft²</td>
</tr>
<tr>
<td>Output capacity</td>
<td>49,525 Watt-hr</td>
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<tr>
<td>Output capacity</td>
<td>50 kWh</td>
</tr>
<tr>
<td>Annual production</td>
<td>55 MWh/Year</td>
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<tr>
<td>Estimated building annual electrical consumption</td>
<td>7,350 MWh/year</td>
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<tr>
<td>PV Panels (% of annual consumption)</td>
<td>0.74 %</td>
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Area of useable panels: 2830 ft²
Energy output: 175 W/ft²
Output capacity: 49,525 Watt-hr
Output capacity: 50 kWh
Annual production: 55 MWh/Year
Estimated building annual electrical consumption: 7,350 MWh/year
PV Panels (% of annual consumption): 0.74 %
P1 BICYCLE PLANS

KEY PLAN
P1 LEVEL

106 - P1 BICYCLE SPACES
80 - LEVEL 1 BICYCLE SPACES
340 - LEVEL 2 BICYCLE SPACES
526 TOTAL BICYCLE SPACES
GROUND FLOOR BICYCLE PLANS

KEY PLAN
GROUND LEVEL

106 - P1 BICYCLE SPACES
80 - LEVEL 1 BICYCLE SPACES
340 - LEVEL 2 BICYCLE SPACES
526 TOTAL BICYCLE SPACES

BIKE FIX-IT STAND

BIKE WASH

TANDEM SPACES: 26
BIKE SPACES: 54
TOTAL: 80

BIKE RACK BASIS OF
DESIGN

CAMBRIDGE CROSSING - PARCEL I

106 - P1 BICYCLE SPACES
80 - LEVEL 1 BICYCLE SPACES
340 - LEVEL 2 BICYCLE SPACES
526 TOTAL BICYCLE SPACES

TANDEM SPACES: 26
BIKE SPACES: 54
TOTAL: 80

BIKE RACK BASIS OF
DESIGN
LEVEL 2 BICYCLE PLANS

106 - P1 BICYCLE SPACES
80 - LEVEL 1 BICYCLE SPACES
340 - LEVEL 2 BICYCLE SPACES
526 TOTAL BICYCLE SPACES
CAMBRIDGE CROSSING - PARCEL I

BUILDING LIGHTING PLAN

BUILDING MOUNTED PEDESTRIAN DOWNLIGHTING

AMENITY TERRACE DOWNLIGHTING
CAMBRIDGE CROSSING - PARCEL I

SHADOW STUDY

FALL & SPRING EQUINOX
09:00 AM

SUMMER SOLSTICE
9:00 AM

WINTER SOLSTICE
9:00 AM

FALL & SPRING EQUINOX
12:00 NOON

SUMMER SOLSTICE
12:00 NOON

WINTER SOLSTICE
12:00 NOON

FALL & SPRING EQUINOX
3:00 PM

SUMMER SOLSTICE
3:00 PM

WINTER SOLSTICE
3:00 PM

= NET NEW SHADOW

CAMBRIDGE CROSSING - PARCEL I
March 1, 2018

Jim Burke
CBT Architects
110 Canal Street
Boston, MA 02114

Subject: Community Noise Criteria and Control

Cambridge Crossing Parcel I
Cambridge, MA
Acentech Project No. 628587

Dear Jim:

This letter describes the environmental noise criteria applicable to the Cambridge Crossing Parcel I residential project that you are designing, along with the noise mitigation strategies that the project will utilize in order to comply with those criteria.

ENVIRONMENTAL NOISE CRITERIA

MassDEP Noise Regulation

MassDEP has a noise policy that prohibits building mechanical equipment from increasing the existing ambient noise levels by more than 10 dBA (A-weighted decibels); it also prohibits tonal noise. Measurements in the Cambridge Crossing (formerly Northpoint) area, including at Parcel J/K by Cavanaugh Tocci, and at both Parcel N and at the Zinc Apartments site by Acentech, indicate that the existing ambient noise levels on site are approximately 53 dBA, suggesting that allowable noise levels under the MassDEP regulation could be as high as 63 dBA at abutting properties. A design that complies with the Cambridge noise ordinance (discussed below) will also meet this regulation. Further, the Cambridge Crossing Parcel I building emissions will be designed to avoid the tonal characteristic prohibited by the MassDEP regulation.

Cambridge Noise Ordinance

Parcel JK is an office/lab building. The Cambridge noise requirement for commercial areas is 65 dBA as measured at the property line of the abutting commercial property. Parcels C, D, and R are the nearest residential parcels to the project site, and we understand that they are protected by the Cambridge noise control ordinance. The residential limits of the Cambridge regulation require that the building emissions not exceed 60 dBA during the daytime and 50 dBA at other times, as measured at the property lines of the abutting residential properties.

The Cambridge Crossing Parcel I building will be designed to meet the noise limits of the Cambridge regulation. As discussed below, our calculations indicate that the current design meets this standard.

NOISE MITIGATION MEASURES

The project’s mechanical and architectural design takes a number of steps to limit noise emissions, as needed to meet applicable noise regulations including the residential limits of the Cambridge noise ordinance described above. These noise mitigation measures include the following, organized according to the major mechanical equipment planned for the project:

Cooling Towers, at Upper Level Roof
- Low-noise equipment selection
- Variable speed drives, arranged so that the cooling towers will operate at slower/quieter speeds when cooling load is reduced, including at night
- Equipment location, upper mechanical screening, and building massing, arranged to create a comprehensive acoustical barrier such that the upper floors the residential buildings at Parcels C and D will not have line-of-sight to the cooling tower equipment

Energy Recovery Units, at Lower Level Mechanical Penthouse
- Intake and discharge louvers sized to minimize velocities/sound
- Louver locations oriented to minimize residential exposure
- Sound attenuators at intake and/or discharge as necessary to comply with the Cambridge noise regulation

Emergency Generator (Approx. 800 KW, Diesel Fired), at Lower Level Mechanical Penthouse
- Located inside the mechanical penthouse
- Sound attenuators at both intake and discharge, specified in coordination with the generator selection in order to comply with the Cambridge noise regulation
- Critical grade muffler at generator exhaust, which will rise up through the roof
- Administrative control over testing schedule, to avoid times when residences are most likely to be occupied

SUMMARY

In summary, we are working with the project team to design the building to help ensure reasonable and appropriate sound level emissions that comply with the applicable environmental noise regulations. Based on our current calculations, the current design meets those criteria.

Please let me know if you have any questions about the information in this report; my direct telephone number is 617.499.8086.

Sincerely,

Benjamin E. Markham, LEED AP
Director, Architectural Acoustics
PEDESTRIAN WIND COMFORT CONDITIONS
FULL BUILD WITH LANDSCAPING
SUMMER (MAY TO OCTOBER, 6:00 TO 23:00)

* REFER TO FULL WIND STUDY FOR ADDITIONAL INFORMATION

LEGEND:
MEAN SPEED CATEGORIES:
- Sitting
- Standing
- Strolling
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level

LANDSCAPING:
- Existing Trees
- Proposed Trees

CAMBRIDGE CROSSING - PARCEL I
WIND STUDY