Building Materials and Facade Types

Partial North Facade Elevation

North Facade Detailed Perspective

- Metal Panel
- Vision Glass
- Spandrel Glass
- Vision Glass
- Spandrel Glass
- Metal Louvers
- Vision Glass
- IGU with Wood Veneer Panel Insert
- Vision Glass
- Vision Glass
- Metal Panel
- Vision Glass
- Metal Panel
- Metal Louvers at Podium
- Vision and Spandrel Glass
- Window System
Building Materials and Facade Types

Partial South Podium Facade Perspective

- Glass Parapet
- Metal Panel
- Vision Glass
- Metal Louver
- Spandrel Glass
- Zone for Retail Signage
- IGU with Wood Veneer Panel Insert
- Metal Panel
- Vision and Spandrel Glass
- IGU with Wood Veneer Panel Insert
- Window System
- Metal Frame
- Spandrel Glass
- Glass Parapet
This project is targeting Silver level certification under LEED V4 for Core & Shell Development. The adjacent scorecard and accompanying narrative shows how the design teams intends to meet this goal.
LEED Certification Overview - Northpoint Parcel JK is currently registered in the in the U.S. Green Building Council's LEED 2009 Core & Shell (LEED-CS) program and is targeting LEED Gold Certification. The project team anticipates filing for a Preliminary Design Review with the U.S. Green Building Council in the summer of 2016 and Final Design and Construction Review after completion of construction in late 2019.

The team is reviewing the building's performance under the new LEED V4 rating system. The below narrative documents a preliminary analysis of the LEED V4 prerequisites and credits and identifies which the building would pursue to reach a target of LEED Silver Certification under the new rating system.

Integrative Design

IDc1 Integrative Process - Throughout the design phases the team has studied site conditions, basic envelope attributes, energy-related systems, and water-related systems to identify potential synergies across disciplines and building systems. These studies have been used to inform the Owner's project requirements and the design documents.

Location and Transportation

LTC2 Sensitive Land Protection - The Northpoint Parcel JK site is not Prime Farmland, not parkland, not on previously undeveloped land, not designated as habitat for endangered species, and not in proximity to wetlands or water bodies.

LTC3 High Priority Site - The site is in active remediation with subsurface impacts identified within the parcel boundary. Documentation of impacts and remediation is provided in reports as required under the Massachusetts Department of Environmental Protection (MassDEP) Bureau of Waste Site Cleanup (BWSC) Massachusetts Contingency Plan (310 CMR 40.0000). The release is being tracked under release tracking number 3-11533

LTC4 Surrounding Density and Diverse Uses - The Northpoint Parcel JK site is in a dense urban Cambridge neighborhood, was previously developed, is adjacent to residential areas, and is close to many basic services, all connected with pedestrian and bicycle access.

LTC5 Access to Quality Transit - Northpoint Parcel JK is 0.25 miles from the Lechmere MBTA station and 0.5 miles from the Community College MBTA station. In addition to the “T”, both of these stations are served by multiple bus routes

LTC6 Bicycle Facilities - The project is located adjacent to an existing bicycle network which connects many diverse uses as well as multiple public transportation routes. A secure bicycle storage room inside the building on the ground floor will provide 110 secure bicycle rack spaces for full-time building occupants. Locker/changing rooms, with a total of nine showers, are immediately adjacent to the bicycle storage room. Also provided within the LEED Project boundary is a total of 42 outdoor secure bicycle racks.

LTC8 Green Vehicles - Preferred parking for low-emitting and fuel-efficient vehicles will be provided for 5% of the total vehicle parking capacity for the site. 2% of all spaces will include charging stations and will be designated for use by plug-in electric vehicles only.

Sustainable Sites

SSp1 Construction Activity Pollution Prevention - A project-specific erosion and sedimentation control plan will be created and monitored with the objective of preventing loss of soil during construction, sedimentation of storm sewers, and pollution of the air with dust and particulate matter.

SSc1 Site Assessment - A site assessment including topography, hydrology, climate, vegetation, soils, human uses, and human health effects has been performed and will inform the design of the project.

SSc3 Open Space - The project will provide a minimum of 30% of open space within the site area. A minimum of 25% of that outdoor space will be vegetated. The outdoor space will be physically accessible and includes pedestrian-oriented paving with physical site elements that accommodate outdoor social activities.

SSc5 Heat Island Reduction - The solar reflectance index on the light-colored and reflective low-low-sloped roofing, which cover more than 75% of the overall building roof surface, will exceed an initial SRI of 82 and a 3-year SRI of 64. The lower roofs at level 3 will be designed so that tenants can later install a vegetated roof area. In addition, all parking associated with the site will be located in a garage under the building to reduce the heat island effect created by surface parking lots.

SSc6 Light Pollution Reduction - Input power to all nonemergency interior light fixtures will be reduced by at least 50% between 11PM and 5AM (with the exception of an allowable 30 minute override). Exterior lighting power densities will be below the ASSI/ASHRAE/IESNA Standard 90.1-2007 for Lighting Zone 4 (high-activity commercial districts in major metropolitan areas) considering allowable light trespass on the three sides of the site abutting public ways.

SSc7 Tenant Design and Construction Guidelines - Tenant design and construction guidelines will be issued to all building tenants to educate tenants about implementing sustainable design and construction features in their tenant improvement fit-out. These guidelines will encourage building tenants to earn LEED-CI Certification for their interior fit-out.
Water Efficiency

WEp1
Outdoor Water Use Reduction - Plant selection and an efficient irrigation system will reduce the potable water used for irrigation by at least 30% from a calculated midsummer baseline case. For additional planned savings see WEc2 below.

WEp2
Indoor Water Use Reduction - Water-efficient plumbing fixtures will reduce domestic water use by at least 20% below the LEED water use baseline. For additional savings see WEc3 below.

WEp3
Building Level Water Metering - Permanent water meters will be installed which will measure the total potable water use for the building and its associated grounds.

WEc1
Outdoor Water Use Reduction - Plant selection and an efficient irrigation system will reduce the potable water used for irrigation by at least 50% from a calculated midsummer baseline case. Rainwater and condensation from mechanical systems will be captured to provide irrigation water.

WEc2
Indoor Water Use Reduction - Water-efficient plumbing fixtures will reduce domestic water use by at least 35% below the LEED water use baseline.

WEc3
Cooling Tower Water Use - A potable water analysis has been conducted to measure concentrations of undesirable elements which cause corrosion, scale, and microbes. The cooling tower cycles have been limited to avoid exceeding any filtration levels of these elements.

WEc4
Water Metering - Permanent water meters will be installed to monitor water subsystems in the building in addition to the whole building potable water use. Examples of these subsystems include irrigation, indoor plumbing fixtures, domestic hot water, and reclaimed water.

Energy and Atmosphere

EAp1
Fundamental Commissioning - A Third-party Commissioning Agent will review and comment on the project Owner’s Requirements, Basis of Design, draft Design Development & Construction Documents. Additionally he/she will develop and implement a Commissioning Plan for the building HVAC, plumbing, lighting systems and envelope, review construction submittals, and then issue a summary Commissioning Report. Finally, the Commissioning Agent will participate in training for the building operational staff. (See EAc1 for additional commissioning scope)

EAp2
Minimum Energy Performance - An energy model (calculated according to the building performance method described in Appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2010) will describe how an energy-efficient building envelope and base building mechanical systems will reduce the building performance rating by at least 2% below the baseline building performance rating. (See EAc2 below for additional anticipated energy savings.)

EAp3
Building Level Energy Metering - Permanently installed meters will measure total building energy consumption.

EAp4
Fundamental Refrigerant Management - Building refrigerants will be selected to minimize the emission of compounds that contribute to ozone depletion and global climate change. Building refrigerants will not exceed maximum threshold allowances for contributions to ozone depletion and global warming potential. (See EAc4 below.)

EAc1
Enhanced Commissioning - In addition to the scope listed under EAp1 a third-party commissioning agent will verify the following for mechanical, electrical, plumbing, energy systems, and building envelope:
- Inclusion of systems manuals and operator training requirements in the construction documents
- Verify systems manual updates and delivery
- Verify operator and tenant training delivery and effectiveness
- Verify seasonal testing
- Review building operations 10 months after substantial completion.
- Develop an on-going commissioning plan

EAc2
Optimize Energy Performance - An energy model (calculated according to the building performance method described in Appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2010) will describe how an energy-efficient building envelope and base building mechanical systems will reduce the building performance rating by at least 7% below the baseline building performance rating. DivcoWest is also considering including additional energy conservation measures in the tenant leases to ensure further energy reductions.

EAc7
Green Power - DivcoWest has committed to engage in a contract to provide at least 100% of the buildings electricity from renewable sources for at least two years.

Materials and Resources

MRp1
Storage and Collection of Recyclables - A 500 SF Recycling Staging Room at the building loading dock will support a recycling program for paper, corrugated cardboard, glass, plastic, and metal. A zone for the safe collection, storage, and disposal of batteries, mercury-containing lamps, and electronic waste will also be provided.

MRp2
Construction and Demolition Waste Management Planning - A construction and demolition waste management plan will be developed prior to the start of construction which will identify at least five materials targeted for diversion, whether these materials will be separated or comingled, and will approximate a percentage of the overall project waste that these will represent.

MRc5
Construction and Demolition Waste Management - At least 75% of the construction and demolition debris and a minimum of four material streams will be diverted from landfill and incineration facilities and redirected instead for recycling to the manufacturing process and reusable materials to appropriate sites.
Indoor Environmental Quality

IEQp1
Minimum Indoor Air Quality Performance - Building HVAC systems will meet the minimum requirements of Sections 4 through 7 of ASHRAE Standard 62.1-2010 - Ventilation for Acceptable Indoor Air Quality, based on anticipated future tenant requirements.

IEQp2
Environmental Tobbaco Smoke (ETS) Control - Smoking will be prohibited inside the building and within 25 feet of building entrances and outdoor air intakes.

IEQc1
Enhanced Indoor Air Quality Strategies - To promote a healthy indoor air quality, permanent entryway systems will be installed at all main building entrances, any room with hazardous gases or chemicals will be negatively pressured to contain such elements, and MERV 13 or higher filters will be provided in all ventilation systems providing outdoor air to occupied spaces.

IEQc3
Construction IAQ Management Plan - An indoor air quality plan during construction will require the builder to follow industry best-practices such as SMACNA IAQ Guidelines for Occupied Buildings Under Construction, protecting absorptive materials stored on site from moisture damage, and replacing air-handling equipment media prior to occupancy.

Innovation and Design Process

IDPc1.1, & 1.2
Innovation - The project will target two points for participating in Innovation Credits recognized by USGBC.

- Green Education – Public education focusing on green building strategies and solutions will be provided by incorporating a comprehensive signage program into the building’s spaces to bring attention to sustainable strategies as well as developing a case study of the building to inform the design of other buildings.

- Occupant Comfort Survey – DivcoWest will require their tenants to perform an occupant comfort survey as part of the lease.

IDPc1.3 & 1.4
Pilot Credits - The project will target two points for participating in Pilot Credits recognized by USGBC.

- Walkable Project Site – design elements that promote walking, biking, and other non-motorized transportation on the project site will be included such as continuous sidewalks that are a minimum of 10 feet in width and a main entrance on the primary façade that looks into a public space.

- Enhanced Acoustical Performance for Exterior Noise Control - environmental noise from buildings and site will be reduced to meet the requirements outlined by USGBC for maximum exterior noise levels at the property line.

IDPc2
LEED Accredited Professionals - The project team includes several LEED Accredited Professionals.

Regional Priority Credits

RPC1.1
Regional Priority Credit for LtC3 - High Priority Site

Sustainability Narrative
Enlarged Indoor Bicycle Room Plan

(6) BICYCLE SPACES PROVIDED TO ACCOMMODATE TANDEM OR BICYCLES WITH TRAILERS

TYPICAL BICYCLE RACK

GLASS WALL

110 BICYCLE PARKING SPACES PROVIDED
1. INTRODUCTION

The wind study was conducted for the NorthPoint site in Cambridge, MA. The study was performed to assess the pedestrian comfort conditions at the site. The study was conducted using wind tunnel testing. The study was conducted by RWDI, a firm specializing in wind engineering and pedestrian comfort. The study was conducted in June 2016, and the report was issued in October 2016.

2. SUMMARY OF FINDINGS

The wind study was conducted on 139 locations around the proposed building. The results showed that the wind conditions were generally suitable for pedestrian comfort. However, there were some isolated areas with uncomfortable wind conditions, which may require wind mitigation measures.

3. METHODOLOGY

The study was conducted using wind tunnel testing. The model included the proposed development and all relevant surrounding buildings. The model was instrumented with 158 wind speed sensors to measure mean and gust wind speeds. The study was conducted in two seasons: summer (May to October) and winter (November to April).

5. DESIGN CRITERIA

The design criteria for pedestrian comfort were developed based on the American Society for Testing and Materials (ASTM) standards. The criteria were developed for two building heights: Level 3 and Level 4.

6. RESULTS

The results showed that the wind conditions were generally suitable for pedestrian comfort. However, there were some isolated areas with uncomfortable wind conditions, which may require wind mitigation measures.

7. APPLICABILITY

The findings of this study may be applied to similar developments in the Cambridge area. The study was conducted in a moderate climate, and the findings may not be applicable to other climates.

REFERENCES


For more information, please visit www.rwdi.com.
November 1, 2016

Northpoint Parcel J K – Noise Design Criteria and Control

This report describes the noise design criteria for the new office and lab building at Northpoint Parcel J K. Recommended noise control strategies and for the major items of mechanical equipment are also presented.

General
The Parcel J K building straddles the border between Cambridge and Somerville. The project will be designed to meet the applicable noise regulations for both cities, as well as the MassDEP regulation. The Cambridge noise regulation is more stringent, so we used the Cambridge regulation as the design criterion.

MassDEP Noise Regulation
Our noise monitoring at the site found that the lowest overnight sound levels were 53 dBA. Based on this, the allowable limit under the MDEP noise regulation would be 63 dBA. A noise design that meets the Cambridge limits for residential zones will also meet the MassDEP regulations.

Cambridge Noise Control Ordinance
In accordance with Table 8.16.060E of the Ordinance (reproduced below), the project will abide by the noise standards, as measured at the property lines of affected properties.

<table>
<thead>
<tr>
<th>Octave Band center Frequency Measurement (Hz)</th>
<th>Residential Area</th>
<th>Residential in Industrial Area</th>
<th>Commercial Area</th>
<th>Industry Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daytime</td>
<td>Other</td>
<td>Daytime</td>
<td>Other</td>
<td>Anytime</td>
</tr>
<tr>
<td>31.5</td>
<td>76</td>
<td>68</td>
<td>79</td>
<td>72</td>
</tr>
<tr>
<td>63</td>
<td>75</td>
<td>67</td>
<td>78</td>
<td>71</td>
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<td>125</td>
<td>69</td>
<td>61</td>
<td>73</td>
<td>65</td>
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<tr>
<td>250</td>
<td>62</td>
<td>52</td>
<td>68</td>
<td>57</td>
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<td>500</td>
<td>56</td>
<td>46</td>
<td>62</td>
<td>51</td>
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<td>1,000</td>
<td>50</td>
<td>40</td>
<td>56</td>
<td>45</td>
</tr>
<tr>
<td>2,000</td>
<td>45</td>
<td>33</td>
<td>51</td>
<td>39</td>
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<tr>
<td>4,000</td>
<td>40</td>
<td>36</td>
<td>47</td>
<td>34</td>
</tr>
<tr>
<td>8,000</td>
<td>38</td>
<td>32</td>
<td>44</td>
<td>32</td>
</tr>
<tr>
<td>Single Number Equivalent (dBA)</td>
<td>60 dBA</td>
<td>50 dBA</td>
<td>65 dBA</td>
<td>55 dBA</td>
</tr>
</tbody>
</table>

Two of the adjacent parcels in Northpoint are planned to be residential buildings, so noise emissions from outdoor mechanical equipment on the Parcel J K building needs to meet the residential limits of the Cambridge noise regulation. Noise emissions to the future Parcel E F building will need to meet the commercial area limits.

Noise Mitigation Measures
Sound emanating from the project’s rooftop mechanical equipment will be minimized by adopting best available and feasible practices regarding the location and sizing of equipment, selecting appropriate equipment, and implementing sound attenuation measures, as needed to meet local noise regulations including the requirements of the City of Cambridge, as presented above.

The following is a list of major mechanical equipment on the project and their noise control measures.

Northpoint Parcel J-K Building - Noise Control Measures For Large Mechanical Equipment

1. Evaporative cooling towers – the engineer has selected low noise cooling towers. The cooling towers are controlled by variable speed circuits so they will run at a lower (quieter) speed when the cooling load is reduced, including nights.
2. Makeup air units – these are located inside mechanical penthouse and they are equipped with inlet attenuators.
3. Lab exhaust fans – located at penthouse level under a roof, these will have sound attenuators at the discharge.
4. The emergency generators are located inside a noise enclosure, on the roof, surrounded on 3 sides by the upper mechanical penthouse.
5. Chillers are located inside mechanical penthouse.

In summary, we are working with the project team to design a building that meets the applicable noise requirements and does not create a noise nuisance for the surrounding area. Based on our calculations, the current design meets those criteria.

Please call if you need further information,

CAVANAUGH TOCCI ASSOCIATES

Timothy J. Foulkes
Ground Floor Retail Tenant Signage – Individual retail and restaurant tenants will incorporate individual signage features into their façade and entrance design.

Building identity signage – Signage communicating the building address is anticipated at the main lobby entrance door. This signage may be in the form of letter and number graphics on the lobby facade glazing (i.e. above or next to the front door) or in the form of freestanding letters and numbers on the building entrance canopy. This signage may also identify the building tenants.

Ground Floor Utility Signage – Small signs will identify the purpose of multiple doors (i.e. Fire Command Center, Electrical Utility Vault, Indoor Bicycle Parking, Loading Dock Entrances) around the Ground Floor of the building.

Parking Signage - Signage mounted above the parking vehicular entrance will direct motorists into the parking garage. Additional signage at the parking entrance will provide information about the parking facility. Additional parking signage will direct pedestrians to the parking vehicular entrance, mounted at the pedestrian entrance.

Ground Floor Pedestrian Signage – Small sign communicating the location of the elevator lobby for direct pedestrian access to the underground parking garage.

Proposed locations for exterior signage:

General Note: Northpoint wayfinding graphics – Similar to other developments in Somerville and Cambridge, we anticipate a neighborhood-wide graphics identity and wayfinding program, in the form of freestanding signs or kiosks, on the sidewalks and in the park adjacent to the building.
Building Mounted Exterior Lighting

- The wood pilasters on all facades of the building will have internal lighting that will make the surfaces of the pilasters a soft glow at night. The light sources will be a low-power linear LED source that will be fully concealed within the pilaster structure and not visible to direct view. The intensity of this lighting effect will be able to be adjusted with a dimmer control.
- Recessed low-brightness LED downlights will be incorporated into the exterior soffit along the southeast corner of the building.
- Fully-shielded low-power LED fixtures will be wall mounted at any egress doors as required by code.
- There is no building mounted exterior lighting planned for the loading dock opening.
- There will be no “rooftop” lighting, or any other exterior lighting above level 2.

Site Lighting

- Site lighting will be limited to the Plaza at the Southeast corner.
- The site lighting will be the same as in the adjacent Baldwin Park.
- A pedestrian-scale post-top fully-shielded LED fixture will be used as necessary to light walkways for security and comfort.
- Low-brightness decorative lighting bollards will be integrated with the seating/planters.

All exterior lighting for Parcel JK is being designed to minimize light pollution and light trespass and in accordance with the requirements of the LEED v4 Light Pollution Reduction credit.”
<table>
<thead>
<tr>
<th>#</th>
<th>Page</th>
<th>Section</th>
<th>Guideline Description</th>
<th>Compliance</th>
<th>Check</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>Preface</td>
<td>Buildings exhibiting a diversity of architectural expression, establish a comfortable pedestrian scale common to all buildings types, framing streets and enlivening the sidewalks with entrances, life and activity.</td>
<td></td>
<td>✅</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>Preface</td>
<td>Each parcel is intended to relate to its immediate surroundings as well as the larger context.</td>
<td></td>
<td>✅</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>1.3 Masterplan Exhibit: 07 zoning envelope</td>
<td>The building sits within the 150'-0&quot; maximum zoning height limit</td>
<td>Top of the last occupied floor is 143'-3&quot; measured from the mean grade.</td>
<td>✅</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>1.3 Masterplan Exhibit: 09 conceptual retail plan</td>
<td>Proposed Retail location per Masterplan</td>
<td>Ground level retail will be provide where indicated</td>
<td>✅</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>2.1 Scale and Massing</td>
<td>Buildings should avoid continuous massing longer than about 200 feet facing streets. If massing extends beyond this length, it should be visually articulated as a composition of smaller masses using different materials or colors, vertical breaks, bays, or other architectural elements.</td>
<td>The building incorporates a number of &quot;breaks&quot; in the façade to visually reduce its continuous length. The north façade has no massing longer than 65' feet. The south façade gently bends towards Baldwin park with two separate façade treatments and a change in plane between the two.</td>
<td>✅</td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td>2.1 Scale and Massing</td>
<td>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 and 25 to 50 feet for mixed-use and retail.</td>
<td>The typical bay width for the building is 21'-0&quot;</td>
<td>✅</td>
</tr>
<tr>
<td>7</td>
<td>20</td>
<td>2.1 Scale and Massing</td>
<td>Buildings should have a clearly expressed base, middle, and top.</td>
<td>The building incorporates a podium, tower and penthouse.</td>
<td>✅</td>
</tr>
<tr>
<td>8</td>
<td>20</td>
<td>2.1 Scale and Massing</td>
<td>Buildings should have a carefully articulated base of one of two floors with a high level of transparency, lightness, and detail at the ground floors allowing views inward and outward</td>
<td>The two level podium has incorporated a number of small profiles, frames and a mix of materials to define the pedestrian scale. Large amounts of glass are used throughout.</td>
<td>✅</td>
</tr>
<tr>
<td>9</td>
<td>20</td>
<td>2.1 Scale and Massing</td>
<td>A line of expression at the second floor is encouraged to humanize the scale of the buildings and create an intimate pedestrian experience. This should be achieved by means of material articulation or architectural detailing</td>
<td>The first floor will be articulated with deeper mullion profiles that help define the pedestrian scale. The one story retail store fronts will be designed to &quot;fit&quot; within the vertical wood pilasters to enhances the human scale of the building.</td>
<td>✅</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>2.1 Scale and Massing</td>
<td>The mid-section of the building should consider light penetration, continuity and consistency of built mass while allowing for individual architectural detailing</td>
<td>The building has incorporated a series external sun shades to reduce solar heat gain and glare which articulates the façade.</td>
<td>✅</td>
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</tr>
<tr>
<td>11</td>
<td>20</td>
<td>2.1 Scale and Massing</td>
<td>The base and middle should be built to the street line with courtyard openings and setbacks for cafes where appropriate</td>
<td>The building complies with the Northpoint East Cambridge design guidelines for setbacks and build to lines. The northwest corner of the building has been set back further to allow areas for café seating.</td>
<td>✔</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>2.1 Scale and Massing</td>
<td>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</td>
<td>The tower of the building is set back from the podium to create a change in plane and to express the southern roof terrace. The penthouse is set back slightly from the facade below</td>
<td>✔</td>
</tr>
<tr>
<td>13</td>
<td>21</td>
<td>2.1 Scale and Massing</td>
<td>Demonstrate responsible use of lighting and energy consistent with sustainability requirements.</td>
<td>The building exterior light sources will be low-power LED fixtures. Refer to exterior lighting plan</td>
<td>✔</td>
</tr>
<tr>
<td>14</td>
<td>21</td>
<td>2.1.1 Build to Line</td>
<td>Build to line is a line that runs parallel to the property line at which construction of a building facade is to occur at NorthPoint that. It is a suggested set back from the property line and varies from street to street and parcel by parcel and is intended to provide a generous sidewalk and public realm design along all NorthPoint streets. While no structural elements can be placed beyond the build to line, certain architectural elements and projections that maintain the spirit of the set back can be considered as a part of the design review. See &quot;EXHIBIT: 12 BUILD-TO LINE DIAGRAM&quot;</td>
<td>The building is set back from the property line 5' along Dawes Street and North First Street. Along North Street the building is set back 9'-9&quot; or more in some places from the property line</td>
<td>✔</td>
</tr>
<tr>
<td>15</td>
<td>21</td>
<td>2.1.2 Public Streets</td>
<td>Use architectural expression on any portion of the building above 65 feet to prevent continuous massing. Buildings should have a clearly expressed base, middle, and top. This may be achieved through changes in material, fenestration, architectural detailing, or other elements</td>
<td>The building is separated into a base, middle and top. There are 4 difference façade types used in the main portion of the tower. Each façade has incorporated a number of techniques to vertically break the façade.</td>
<td>✔</td>
</tr>
<tr>
<td>16</td>
<td>21</td>
<td>2.1.2 Public Streets</td>
<td>Plot guidelines provide for additional sidewalk width by defining parcel and build to line to provide for wider sidewalks. 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</td>
<td>15'-0&quot; min. sidewalks are provided around the building.</td>
<td>✔</td>
</tr>
<tr>
<td>17</td>
<td>21</td>
<td>2.1.2 Public Streets</td>
<td>Locate loading docks on side streets or service alleys whenever possible, and away from residential areas and open spaces</td>
<td>The loading docks are located on Dawes Street and away from adjacent residential building to the east and west.</td>
<td>✔</td>
</tr>
<tr>
<td>18</td>
<td>21</td>
<td>2.1.3 Park Edges</td>
<td>Locate buildings to minimize shadows on NorthPoint Common, especially in the afternoon</td>
<td>The building is located north of NorthPoint Common and will not cast shadows on the park.</td>
<td>✔</td>
</tr>
<tr>
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<td>Section</td>
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</tr>
<tr>
<td>19</td>
<td>21</td>
<td>2.1.3 Park Edges</td>
<td>Surround public parks with uses that create an active ground floor environment throughout the day and evening and increase safety for park users</td>
<td>The retail tenant will front onto Northpoint common.</td>
<td>✔</td>
</tr>
<tr>
<td>20</td>
<td>21</td>
<td>2.1.3 Park Edges</td>
<td>Shops, cafés and other public uses that enliven the parks are encouraged adjacent to open spaces</td>
<td>Outdoor seating is proposed for the southwest corner of the building.</td>
<td>✔</td>
</tr>
<tr>
<td>21</td>
<td>21</td>
<td>2.1.3 Park Edges</td>
<td>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</td>
<td>The building is set back 5 feet from the lot lines</td>
<td>✔</td>
</tr>
<tr>
<td>22</td>
<td>23</td>
<td>2.1.6 Commercial Massing and Articulation</td>
<td>Exhibit: 17 Commercial Massing Precedent</td>
<td>The projects use a similar design vocabulary as shown in exhibit 17 massing and Precedents.</td>
<td>✔</td>
</tr>
<tr>
<td>23</td>
<td>25</td>
<td>2.2 Street Level Use and Design</td>
<td>Exhibit: 19 Small Retail Massing Precedent</td>
<td>The projects locates the main lobby, retail and active uses per exhibit 19.</td>
<td>✔</td>
</tr>
<tr>
<td>24</td>
<td>27</td>
<td>2.2 Mixed Use Blocks or Commercial Blocks</td>
<td>Street-level facades within the designated retail zone should include active uses such as: shops, restaurants, and cafés.</td>
<td>Retail area provided at the southeast corner.</td>
<td>✔</td>
</tr>
<tr>
<td>25</td>
<td>27</td>
<td>2.2 Mixed Use Blocks or Commercial Blocks</td>
<td>Office/ R&amp;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</td>
<td>The North Street frontage of the ground floor tenant is 98’-11”.</td>
<td>✔</td>
</tr>
<tr>
<td>26</td>
<td>27</td>
<td>2.2 Mixed Use Blocks or Commercial Blocks</td>
<td>Ground floor frontage should generally be permeable and massing elements should be human scaled</td>
<td>Large amounts of glass will be used for the retail tenants. The façade treatments are in keeping with the human scale.</td>
<td>✔</td>
</tr>
<tr>
<td>27</td>
<td>27</td>
<td>2.2 Mixed Use Blocks or Commercial Blocks</td>
<td>Entrances should be located on public streets, and at or near corners when appropriate. Entrances should relate well to crosswalks and pathways that lead to bus stops and transit stations</td>
<td>The main entrance is located directly off of North Street and fronting onto Northpoint common. Crosswalks and a pedestrian table is provides to the left and right of the entry.</td>
<td>✔</td>
</tr>
<tr>
<td>29</td>
<td>27</td>
<td>2.2 Mixed Use Blocks or Commercial Blocks</td>
<td>Blank walls should be avoided along all public streets, courts, and pedestrian walkways</td>
<td>A large amount of the wall along the pedestrian walkways will have vision glazing including the service doors, indoor bike parking and fire pump room.</td>
<td>✔</td>
</tr>
<tr>
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<td>Page</td>
<td>Section</td>
<td>Guideline Description</td>
<td>Compliance</td>
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<tr>
<td>30</td>
<td>31</td>
<td>2.3.2</td>
<td>Architectural Character - Commercial</td>
<td>The building is composed of multiple fenestration types and includes a roof terrace provided by the tenant. The building includes a number of recesses and projecting elements on the facade.</td>
<td>✓</td>
</tr>
<tr>
<td>31</td>
<td>31</td>
<td>2.3.3</td>
<td>Architectural Character - Lighting</td>
<td>All of the exterior lighting for the building will be limited to below the 4th level. The lighting design is intended to enhance the public areas of the building and to respect the neighboring properties. All exterior lighting for Parcel JK is being designed to minimize light pollution and light trespass and in accordance with the requirements of the LEED v4 Light Pollution Reduction credit.</td>
<td>✓</td>
</tr>
<tr>
<td>32</td>
<td>32</td>
<td>2.4</td>
<td>Environmental Guidelines (LEED Principles)</td>
<td>The building is targeting certification under LEED v4 BD+C for core and shell.</td>
<td>✓</td>
</tr>
<tr>
<td>33</td>
<td>33</td>
<td>2.5</td>
<td>Parking / Service</td>
<td>Loading and parking garage entrances are located along Dawes Street as shown in Exhibit 26. All of the parking will be provided underground on 3 levels. A parking elevator lobby is provided on the west side of the building for direct pedestrian access.</td>
<td>✓</td>
</tr>
<tr>
<td>#</td>
<td>Page</td>
<td>Section</td>
<td>Guideline Description</td>
<td>Compliance</td>
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</tr>
<tr>
<td>34</td>
<td>47</td>
<td>3.2 Streetscape and Circulation</td>
<td>Refer to Cambridge Pedestrian Plan and the Cambridge Bicycle Plan for additional guidance on creating a safe and pleasant environment for pedestrians and bicyclists and for guidance on sidewalk width and street trees. The pedestrian experience in and around transit stops should be designed to be pedestrian and bicycle friendly. Expanded sidewalks in public realm in and around such stations are encouraged whenever feasible.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>47</td>
<td>3.2A Character</td>
<td>Use streetscape elements such as trees, benches, signage, and lighting to support active pedestrian uses and to reinforce the character and identity of each district.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>47</td>
<td>3.2A Character</td>
<td>Design streets to encourage pedestrian and cycle activity, and to control vehicle speed in residential areas.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>47</td>
<td>3.2A Character</td>
<td>In the design of new streets, provide sufficient pavement width to accommodate on-street parking and short-term loading where appropriate in order to provide short-term parking and to serve local retail and building uses.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>47</td>
<td>3.2A Character</td>
<td>In the design of new streets, pathways, and parks, provide pedestrian-scale lighting to enhance pedestrian safety.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>47</td>
<td>3.2A Character</td>
<td>Numerous entrances along principal pedestrian routes are encouraged both for safety and to enhance the pedestrian environment.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>47</td>
<td>3.2A Character</td>
<td>Major 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 sections.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>48</td>
<td>3.2.1 First Street</td>
<td>Setbacks will allow space for continuous rows of trees connecting Monsignor O’Brien Highway to the open space at the heart of NorthPoint.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>48</td>
<td>3.2.1 First Street</td>
<td>The developer will provide expanded sidewalks and bicycle accommodation from the transit hub to the center of the NorthPoint.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>50</td>
<td>3.2.2 Dawes Street</td>
<td>Street trees will be planted on both sides of the street.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>55</td>
<td>3.2.5 North Street</td>
<td>Will have a single row of street trees on its north side to shade the sidewalk.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>Zoning Requirement</td>
<td>Compliance</td>
<td>Check</td>
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</tr>
</tbody>
</table>
| **CAMBRIDGE ZONING ORDINANCE**
**Article 16.51.2**
Per Article 16.51.2, the below uses are to be regulated as follows. All other uses not listed in this Article shall be subject to the requirements of Article 6.

<table>
<thead>
<tr>
<th>MINIMUM PARKING:</th>
<th>MAXIMUM PARKING:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 / 1,250 GSF (OFFICE)</td>
<td>1 / 625 GSF (OFFICE)</td>
</tr>
<tr>
<td>1 / 1,675 GSF (R&amp;D)</td>
<td>1 / 840 GSF (R&amp;D)</td>
</tr>
<tr>
<td>None Required (Retail)</td>
<td>None Required (Retail)</td>
</tr>
</tbody>
</table>

This project includes a total of 14,550 GSF of retail space and 384,556 GSF of Office/Lab space, the remaining 224,619 GSF is penthouse and parking, which does not have a parking requirement.

Two potential scenarios are outlined below:

<table>
<thead>
<tr>
<th>60/40 Lab-Office:</th>
</tr>
</thead>
<tbody>
<tr>
<td>14,550 GSF (Retail) = 0 - 0 Spaces</td>
</tr>
<tr>
<td>230,734 GSF (R&amp;D) = 134 - 267 Spaces</td>
</tr>
<tr>
<td>153,822 GSF (Office) = 120 - 239 Spaces</td>
</tr>
<tr>
<td>TOTAL SPACES REQ'D = 254 (min.) - 506 (max.) Spaces</td>
</tr>
</tbody>
</table>

**CAMBRIDGE ZONING ORDINANCE**
**Article 6**

Article 6 bases its requirements on GFA. Per the definition of GFA, the parking levels and penthouse levels are excluded and therefore do not require any additional parking.

<table>
<thead>
<tr>
<th>100% Office:</th>
</tr>
</thead>
<tbody>
<tr>
<td>14,550 GSF (Retail) = 0 - 0 Spaces</td>
</tr>
<tr>
<td>384,556 GSF (Office) = 299 - 597 Spaces</td>
</tr>
<tr>
<td>TOTAL SPACES REQ'D = 299 (min.) - 597 (max.)</td>
</tr>
</tbody>
</table>

The current project provides 348 spaces which satisfies both scenarios.

**521 CMR - SECTION 23.2.1**
301 - 400 Spaces requires a minimum of 8 accessible spaces.

This project will provide 9 ACCESSIBLE SPACES

**521 CMR - SECTION 23.2.2**
One in every eight accessible spaces, but not less than one shall be van accessible.

This project will dedicate 1 of the 9 ACCESSIBLE SPACES for accessible van parking.

**521 CMR - SECTION 23.4.1**
**521 CMR - SECTION 23.4.2**

Accessible Parking: 8'-0" Wide + 5'-0" Access aisle Length equal to local zoning req's

<table>
<thead>
<tr>
<th>Maneuvering Aisle Width:</th>
<th>22'-0&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Spaces:</td>
<td>8'-6&quot; x 18'-0&quot;</td>
</tr>
<tr>
<td>Compact Spaces:</td>
<td>7'-6&quot; x 16'-0&quot; (50% Maximum)</td>
</tr>
<tr>
<td>Handicap Spaces:</td>
<td>12'-0&quot; x 18'-0&quot;</td>
</tr>
</tbody>
</table>

Parking spaces which lie wholly within or partially within Somerville comply with Somerville size requirements as they are more stringent than Cambridge. Parking spaces which lie fully within Cambridge comply with the size requirements outlined in Article 6.42. This project will also provide compact spaces in compliance with Cambridge zoning. Parking summary as follows

<table>
<thead>
<tr>
<th>Accessible: 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somerville Typical: 93</td>
</tr>
<tr>
<td>Somerville Compact: 23 (19.8%)</td>
</tr>
<tr>
<td>Cambridge Typical: 163</td>
</tr>
<tr>
<td>Cambridge Compact: 60 (27%)</td>
</tr>
<tr>
<td>TOTAL PARKING COUNT: 348</td>
</tr>
</tbody>
</table>

**Zoning Compliance**

**NorthPoint - Parcel JK**
### CAMBRIDGE ZONING ORDINANCE

**Article 6.104.1**

Long Term Bicycle Parking shall be provided within the building containing the use or uses that it is intended to serve, or within a structure whose pedestrian entrance is no more than two hundred feet (200’) from a pedestrian entrance to such building.

Short term bicycle parking on a private lot shall be located within fifty (50’) feet of a pedestrian entrance to the building or buildings containing the use or uses it serves. For buildings or uses requiring more than eight (8) Short-Term Bicycle Parking Spaces, some of the required spaces may be located at a greater distance from the entrances, so long as eight (8) Short-Term Bicycle Parking Spaces are available within fifty (50’) feet of any entrance.

**Article 6.104.2**

Long term bicycle parking is located within the building. Access to the parking is off of an entrance on Dawes street or through the main lobby on North Street.

Short term bicycle parking is located throughout the site. A minimum of (8) short term bicycle parking spaces are located within 50 feet of any building entrance.

(Refer to Diagram Below)

---

**Diagram Below**

- **50’ RADIUS FROM RETAIL ENTRANCE**
- **SHORT TERM PARKING LOCATIONS, TYP.**
- **LONG TERM BICYCLE PARKING**

---

**Zoning Compliance**

**NorthPoint - Parcel JK**

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**November 3, 2016**

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<table>
<thead>
<tr>
<th>Section</th>
<th>Zoning Requirement</th>
<th>Compliance</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>CAMBRIDGE ZONING ORDINANCE</strong>&lt;br&gt;Article 6.105.1 - e</td>
<td>Where twenty (20) or more Bicycle Parking Spaces are required, at least five percent (5%) of the required spaces must provide an additional two feet (2') of space parallel to the length of the bicycle to accommodate tandem bicycles or bicycles with trailers.</td>
<td>(6) Long-Term Bicycle Parking Spaces are sized to accommodate tandem bicycles or bicycles with trailers.</td>
<td>✓</td>
</tr>
<tr>
<td><strong>CAMBRIDGE ZONING ORDINANCE</strong>&lt;br&gt;Article 6.107.2</td>
<td>LONG TERM BICYCLE PARKING REQUIREMENTS:&lt;br&gt;0.30 / 1,000 GFA (OFFICE)&lt;br&gt;0.22 / 1,000 GFA (LABS)&lt;br&gt;0.10 / 1,000 GFA (RETAIL)</td>
<td>This project includes a total of 14,550 GFA of retail space and 357,378 GFA of Office/Lab space. Two potential scenarios are outlined below:</td>
<td>✓</td>
</tr>
<tr>
<td>Article 6.107.3</td>
<td>SHORT TERM BICYCLE PARKING REQUIREMENTS:&lt;br&gt;0.06 / 1,000 GFA (OFFICE)&lt;br&gt;0.06 / 1,000 GFA (LABS)&lt;br&gt;1.00 / 1,000 GFA (RESTAURANT)</td>
<td>60/40 Lab-Office:&lt;br&gt;14,550 GFA (Rest.) = 3 Long Term 15 Short Term&lt;br&gt;214,427 GFA (R&amp;D) = 47 Long Term 13 Short Term&lt;br&gt;142,951 GFA (Office) = 43 Long Term 9 Short Term&lt;br&gt;TOTAL SPACES REQ'D = 91 Long Term 36 Short Term</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100% Office:&lt;br&gt;14,550 GFA (Rest.) = 3 Long Term 15 Short Term&lt;br&gt;357,378 GFA (Office) = 107 Long Term 21 Short Term&lt;br&gt;TOTAL SPACES REQ'D = 110 Long Term 36 Short Term</td>
<td>The current project provides 110 Long Term spaces and 44 Short Term spaces.</td>
<td></td>
</tr>
</tbody>
</table>
CAMBRIDGE ZONING ORDINANCE
Article 6.83

Minimum Number of Off Street Loading Bays to be as follows:

OFFICE / R&D (Category F)
(0) < 10,000 GFA
(1) 10,000 GFA - 99,999 GFA
(2) 100,000 GFA - 299,999 GFA
(+1) Per additional 200,000 GFA

RETAIL - RESTAURANT (Category C)
(0) < 10,000 GFA
(1) 10,000 GFA - 24,999 GFA
(2) 25,000 GFA - 64,999 GFA

This project includes a total of 14,550 GFA of retail space and 357,378 GFA of Office/Lab space.

Loading requirements are as outlined below:
Retail = 1 TOTAL
Lab / Office = 3 TOTAL

This project will provide a total of 4 LOADING BAYS

(Refer to Loading Dock Diagram below)

CAMBRIDGE ZONING ORDINANCE
Article 6.91

Where a building or lot contains uses requiring compliance with loading facility categories C,D,E, and F, the first required bay shall be no less than ten (10) feet in width, thirty (30) feet in length and fourteen (14) feet in height.

Each additional required loading bay for categories C,D,E, and F... shall be no less than ten (10) feet in width, fifty (50) feet in length, and fourteen (14) feet in height.

The following sized loading docks are provided in this project:
Loading Bay 1: 48' L x 13' W x 14' H
Loading Bay 2: 55.5' L x 13' W x 14' H
Loading Bay 3: 56' L x 14' W x 14' H
Loading Bay 4: 56' L x 14' W x 14' H

(Refer to Loading Dock Diagram below)
### LEGEND AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Legend</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>Abbreviation 1</td>
</tr>
<tr>
<td>Item 2</td>
<td>Abbreviation 2</td>
</tr>
</tbody>
</table>

### DRAWING LIST

**C1.0** NOTES, REFERENCES AND LEGEND

**TP-1** TOPOGRAPHIC PLAN

**C2.0** SITE PREPARATION, SITE DEMOLITION, AND EROSION CONTROL PLAN

**C3.0** LAYOUT AND MATERIALS PLAN

**C4.0** GRADING, DRAINAGE AND UTILITY PLAN

**C5.0** SITE DETAILS
This plan is not to be used for conveyance purposes. A subdivision plan creating this lot is required to be prepared and recorded at the Registry of Deeds.

The parcel shown hereon has benefit of and is subject to rights, restrictions, and easements not shown.