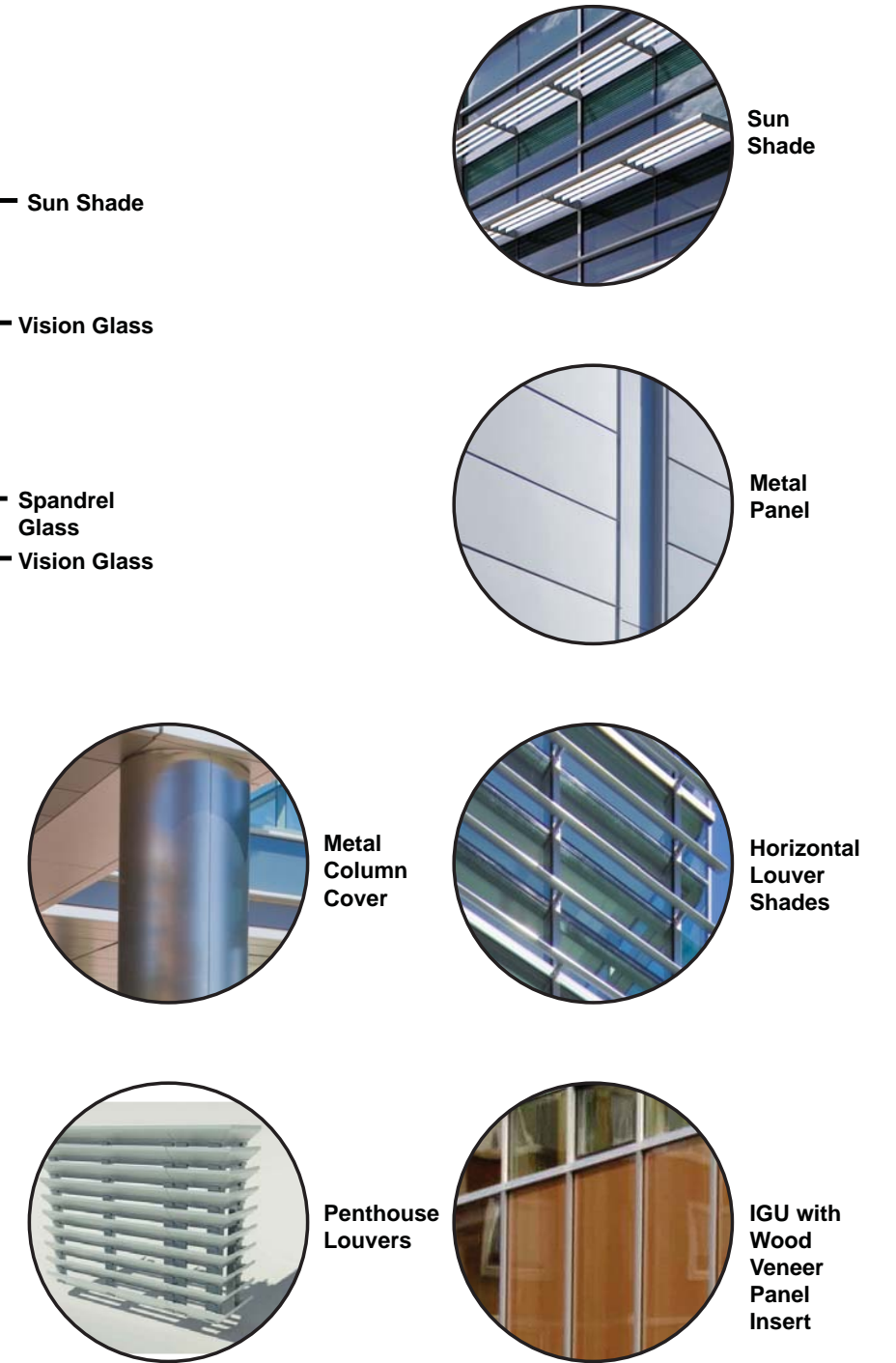
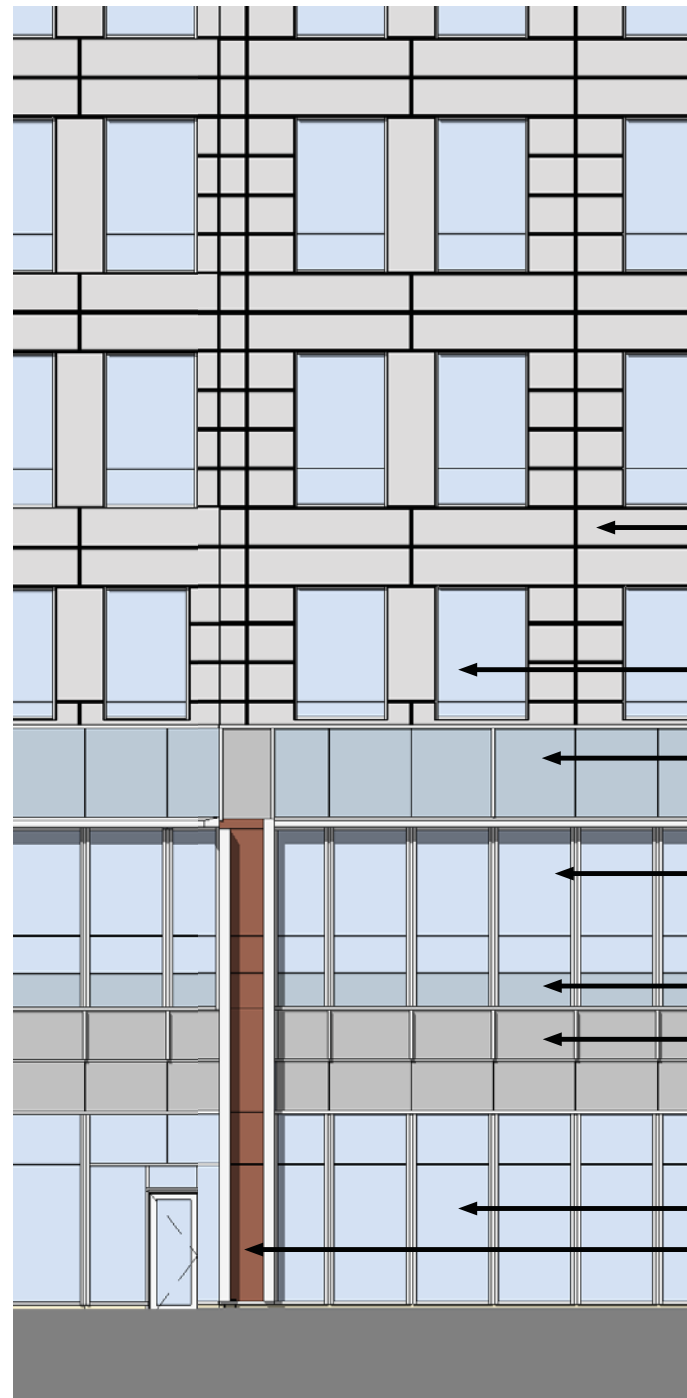


Partial South Facade Elevation



South Facade Detailed Perspective





Metal Panel

Vision Glass

Spandrel Glass

Vision Glass

Spandrel Glass

Metal Louvers

Vision Glass

IGU with Wood Veneer Panel Insert



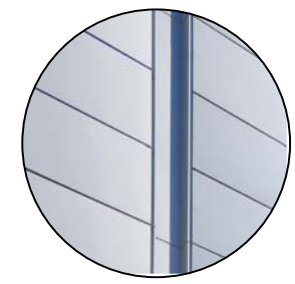
Metal Panel

Vision Glass

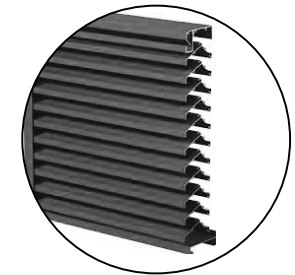
Vision Glass

Vision Glass

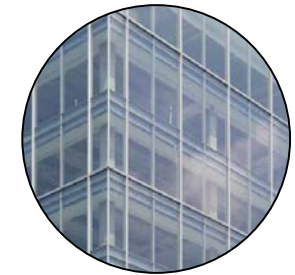
Metal Panel



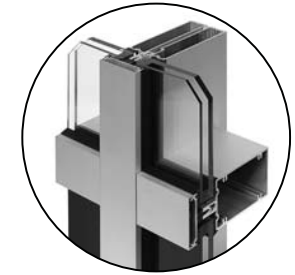
Metal Panel



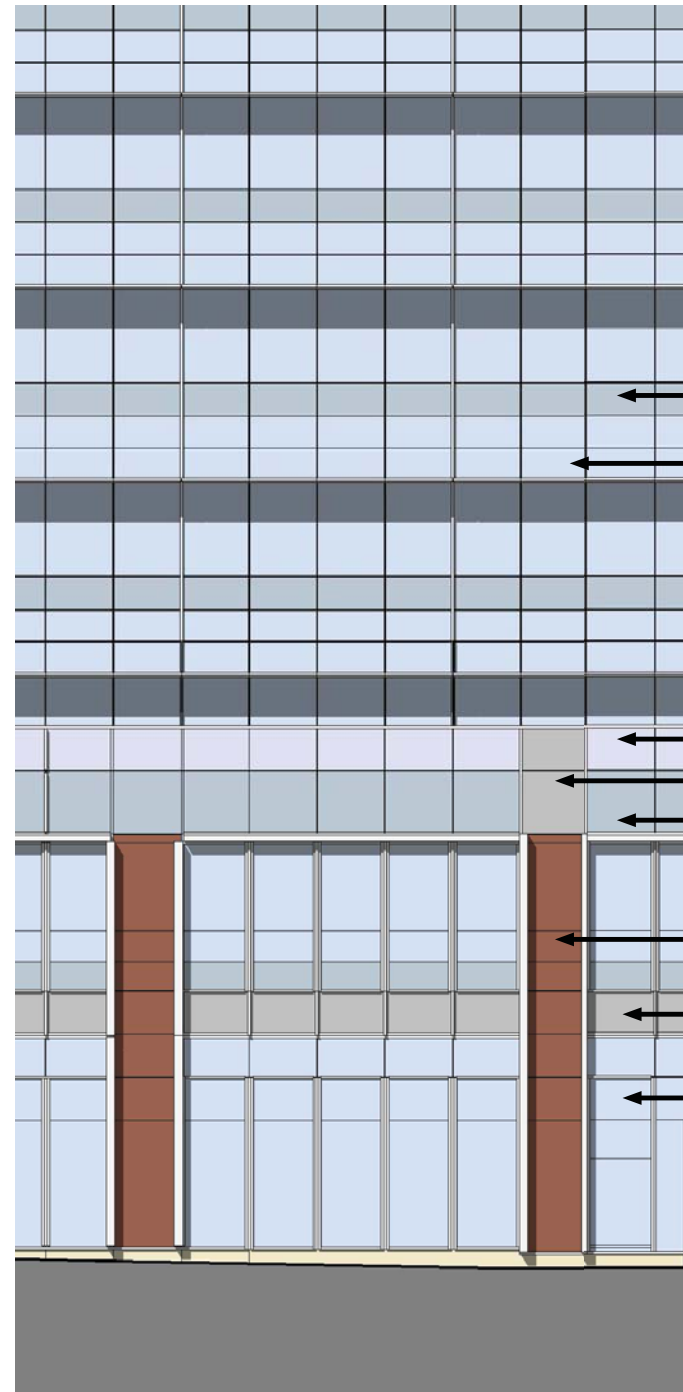
Metal Louvers at Podium



Vision and Spandrel Glass



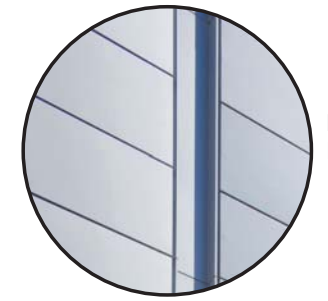
Window System



Partial South Podium Facade



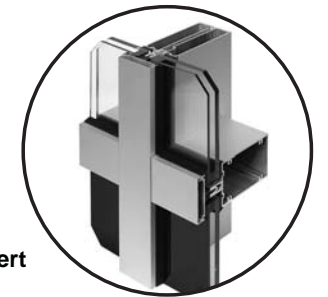
Partial South Podium Facade Perspective



Metal Panel



Vision and Spandrel Glass



Window System



IGU with Wood Veneer Panel Insert



LEED v4 for BD+C: Core & Shell
Project Checklist

Y N

1	0	Credit	Integrative Process	1
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19	1	Location and Transportation		20
0	0	Credit 1	LEED for Neighborhood Development Location	16
2	0	Credit 2	Sensitive Land Protection	1
3	0	Credit 3	High Priority Site	2
6	0	Credit 4	Surrounding Density and Diverse Uses	5
6	0	Credit 5	Access to Quality Transit	5
1	0	Credit 6	Bicycle Facilities	1
0	1	Credit 7	Reduced Parking Footprint	1
1	0	Credit 8	Green Vehicles	1

6	5	Sustainable Sites		11
Y		Prereq 1	Construction Activity Pollution Prevention	Required
1	0	Credit 1	Site Assessment	1
0	2	Credit 2	Site Development - Protect or Restore Habitat	2
1	0	Credit 3	Open Space	1
0	3	Credit 4	Rainwater Management	3
2	0	Credit 5	Heat Island Reduction	2
1	0	Credit 6	Light Pollution Reduction	1
1	0	Credit 7	Tenant Design and Construction Guidelines	1

7	4	Water Efficiency		11
Y		Prereq 1	Outdoor Water Use Reduction	Required
Y		Prereq 2	Indoor Water Use Reduction	Required
Y		Prereq 3	Building-Level Water Metering	Required
2	0	Credit 1	Outdoor Water Use Reduction	2
3	3	Credit 2	Indoor Water Use Reduction	6
1	1	Credit 3	Cooling Tower Water Use	2
1	0	Credit 4	Water Metering	1

11	22	Energy and Atmosphere		33
Y		Prereq 1	Fundamental Commissioning and Verification	Required
Y		Prereq 2	Minimum Energy Performance	Required
Y		Prereq 3	Building-Level Energy Metering	Required
Y		Prereq 4	Fundamental Refrigerant Management	Required
5	1	Credit 1	Enhanced Commissioning	6
4	14	Credit 2	Optimize Energy Performance	18
0	1	Credit 3	Advanced Energy Metering	1
0	2	Credit 4	Demand Response	2
0	3	Credit 5	Renewable Energy Production	3
0	1	Credit 6	Enhanced Refrigerant Management	1
2	0	Credit 7	Green Power and Carbon Offsets	2

2	12	Materials and Resources		14
Y		Prereq 1	Storage and Collection of Recyclables	Required
Y		Prereq 2	Construction and Demolition Waste Management Planning	Required
0	6	Credit 1	Building Life-Cycle Impact Reduction	6
0	2	Credit 2	Building Product Disclosure and Optimization - Environmental Product Declarations	2
0	2	Credit 3	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
0	2	Credit 4	Building Product Disclosure and Optimization - Material Ingredients	2
2	0	Credit 5	Construction and Demolition Waste Management	2

2	8	Indoor Environmental Quality		10
Y		Prereq 1	Minimum Indoor Air Quality Performance	Required
Y		Prereq 2	Environmental Tobacco Smoke Control	Required
1	1	Credit 1	Enhanced Indoor Air Quality Strategies	2
0	3	Credit 2	Low-Emitting Materials	3
1	0	Credit 3	Construction Indoor Air Quality Management Plan	1
0	3	Credit 7	Daylight	3
	1	Credit 8	Quality Views	1

5	1	Innovation		6
1	0	Credit 1	Innovation: Green Education	1
1	0	Credit 1	Innovation: Occupant Comfort Survey	1
1	0	Credit 1	Pilot Credit: Walkable Project Site	1
1	0	Credit 1	Pilot Credit: Enhanced Acoustic Performance - Exterior Noise	1
0	1	Credit 1	Exemplary Performance: LTc5	1
1	0	Credit 2	LEED Accredited Professional	1

1	3	Regional Priority		4
1	0	Credit 1	Regional Priority: LTc3 High Priority Site	1
0	1	Credit 2	Regional Priority: Specific Credit	1
0	1	Credit 3	Regional Priority: Specific Credit	1
0	1	Credit 4	Regional Priority: Specific Credit	1

54	56	TOTALS	Possible Points:	110
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Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110

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.

Introduction

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.

Sustainability Narrative

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.)

Energy and Atmosphere (Cont'd)

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 occupant 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 building-wide 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.

Sustainability Narrative

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 Tobacco 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

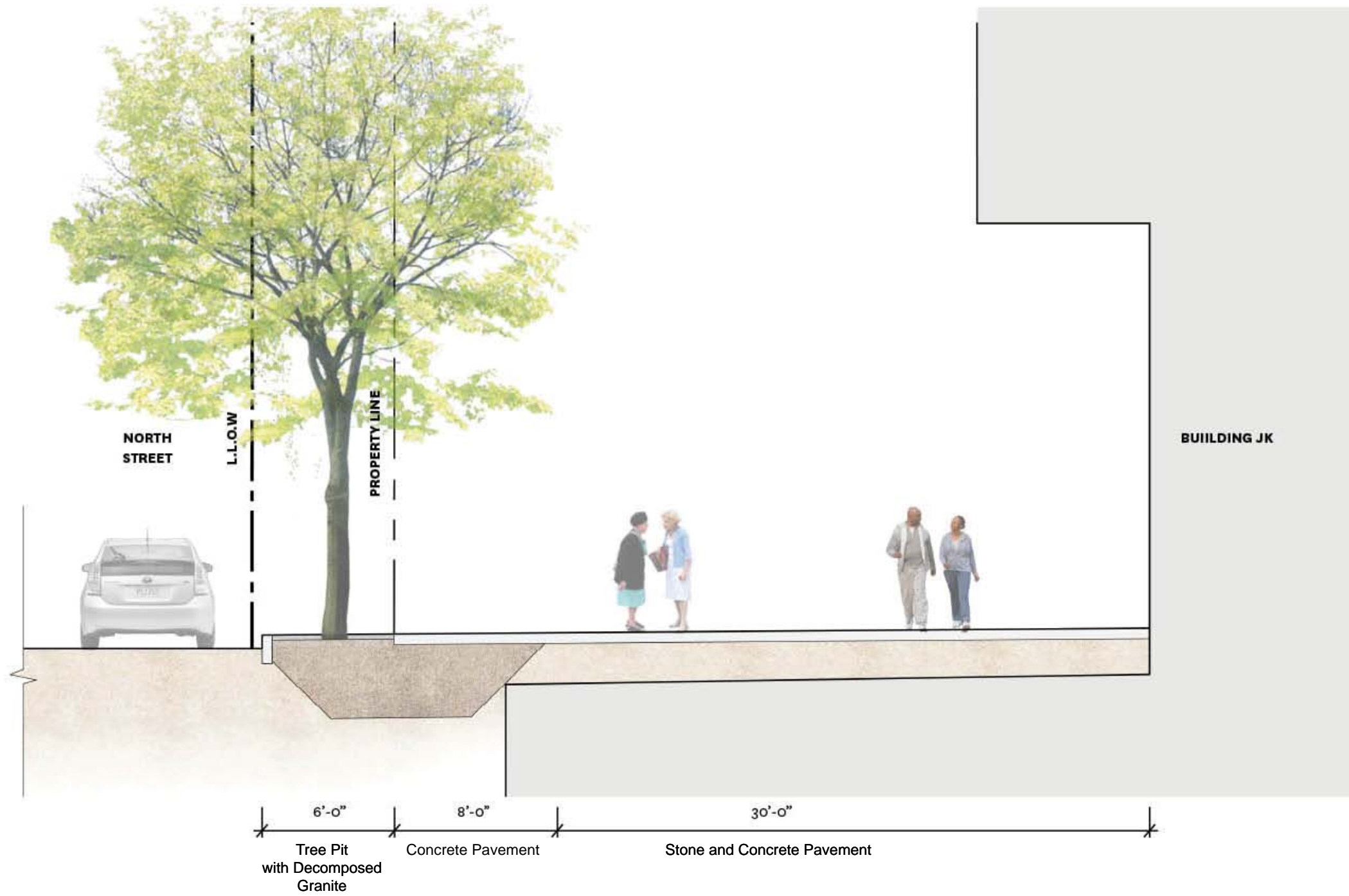
LEED Accredited Professionals - The project team includes several LEED Accredited Professionals.

Regional Priority Credits

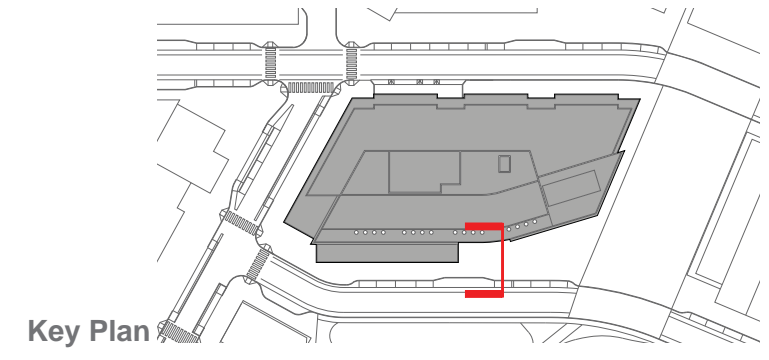
RPc1.1

Regional Priority Credit for LTc3 - High Priority Site

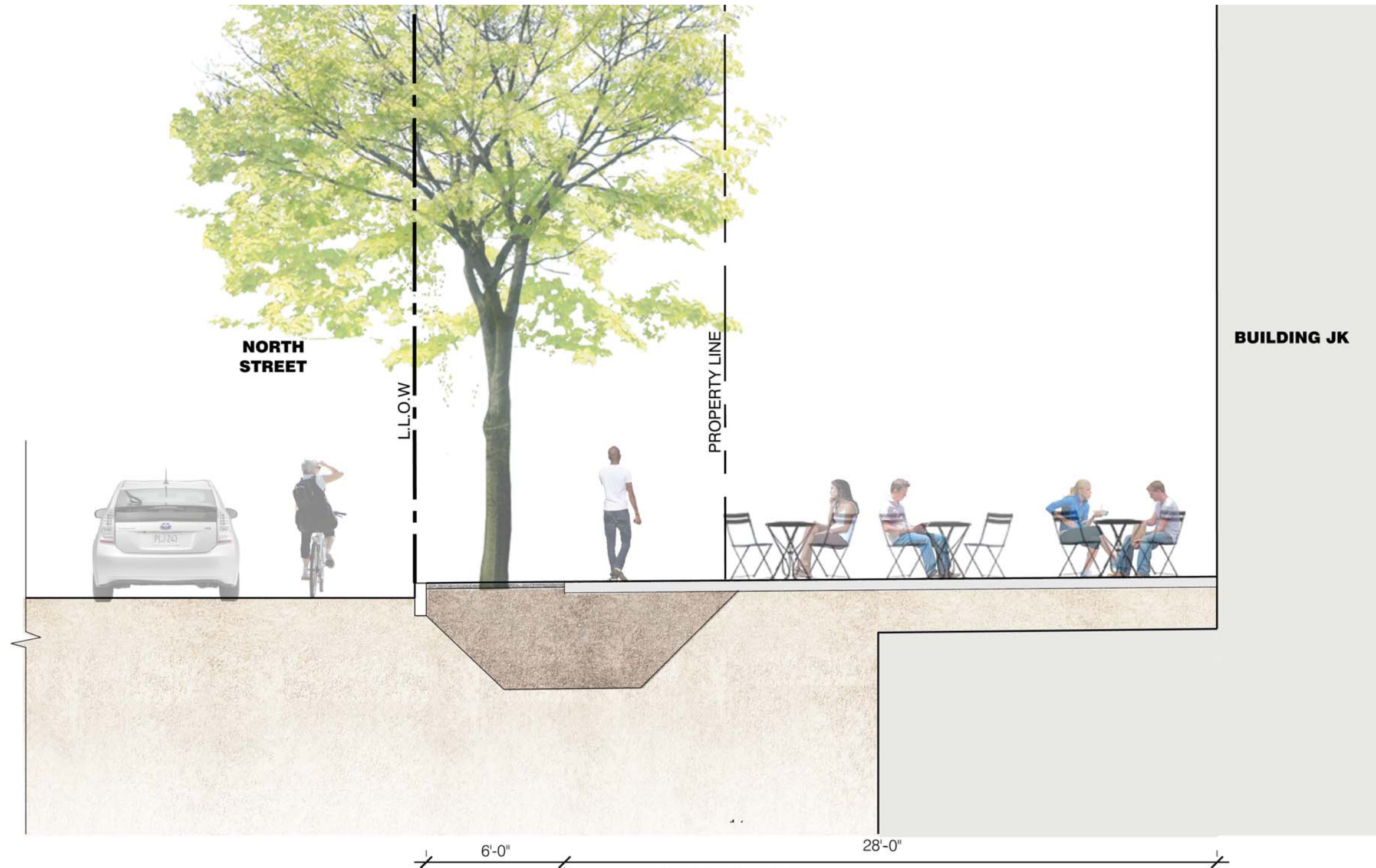
Sustainability Narrative



0' 4' 8' 16'



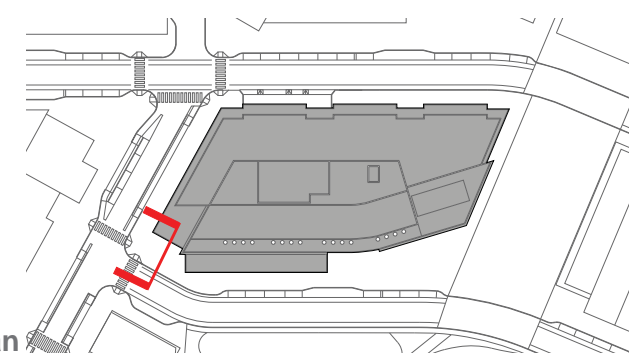
Section - Main Entry



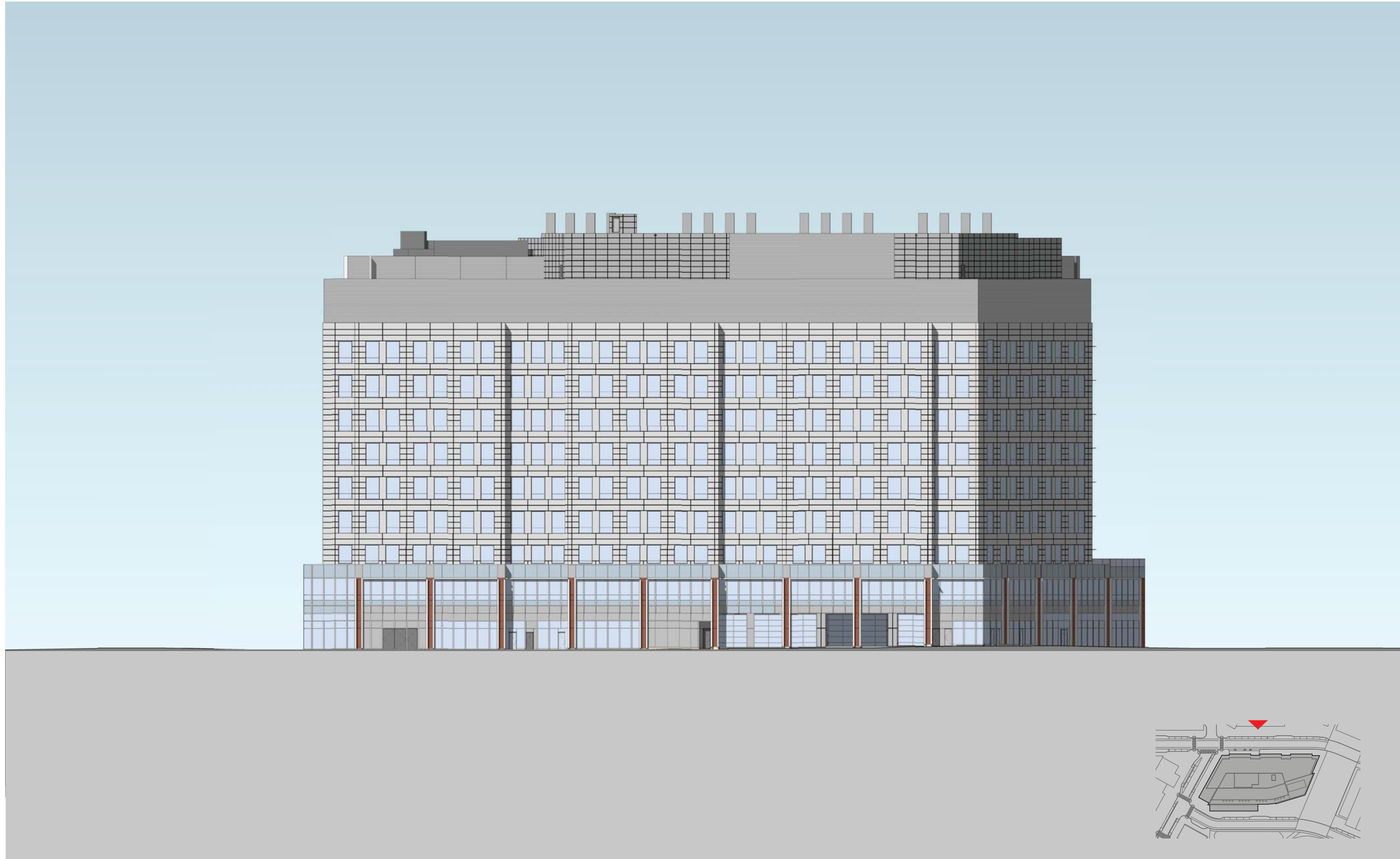
6'-0" 28'-0"

Tree Pit with Decomposed Granite Exposed Aggregate and Concrete Pavement

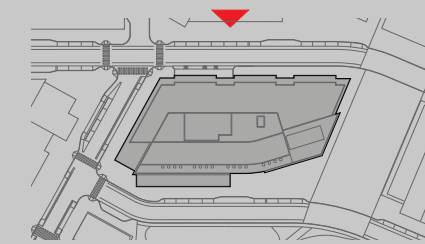
2' 4' 8'



Section - Retail



- CORE ROOF 186' - 0"
- PH 2 - ROOF 184' - 0"
- PH 2 164' - 0"
- PH 1 144' - 0"
- LEVEL 9 128' - 6"
- LEVEL 8 113' - 6"
- LEVEL 7 98' - 6"
- LEVEL 6 83' - 6"
- LEVEL 5 68' - 6"
- LEVEL 4 53' - 6"
- LEVEL 3 38' - 6"
- LEVEL 2 23' - 6"
- GROUND FLOOR 0"
- PARKING L1 -12' - 0"
- PARKING L2 -22' - 7 1/2"
- PARKING L3 -4' - 11"



North Elevation - Somerville Facade

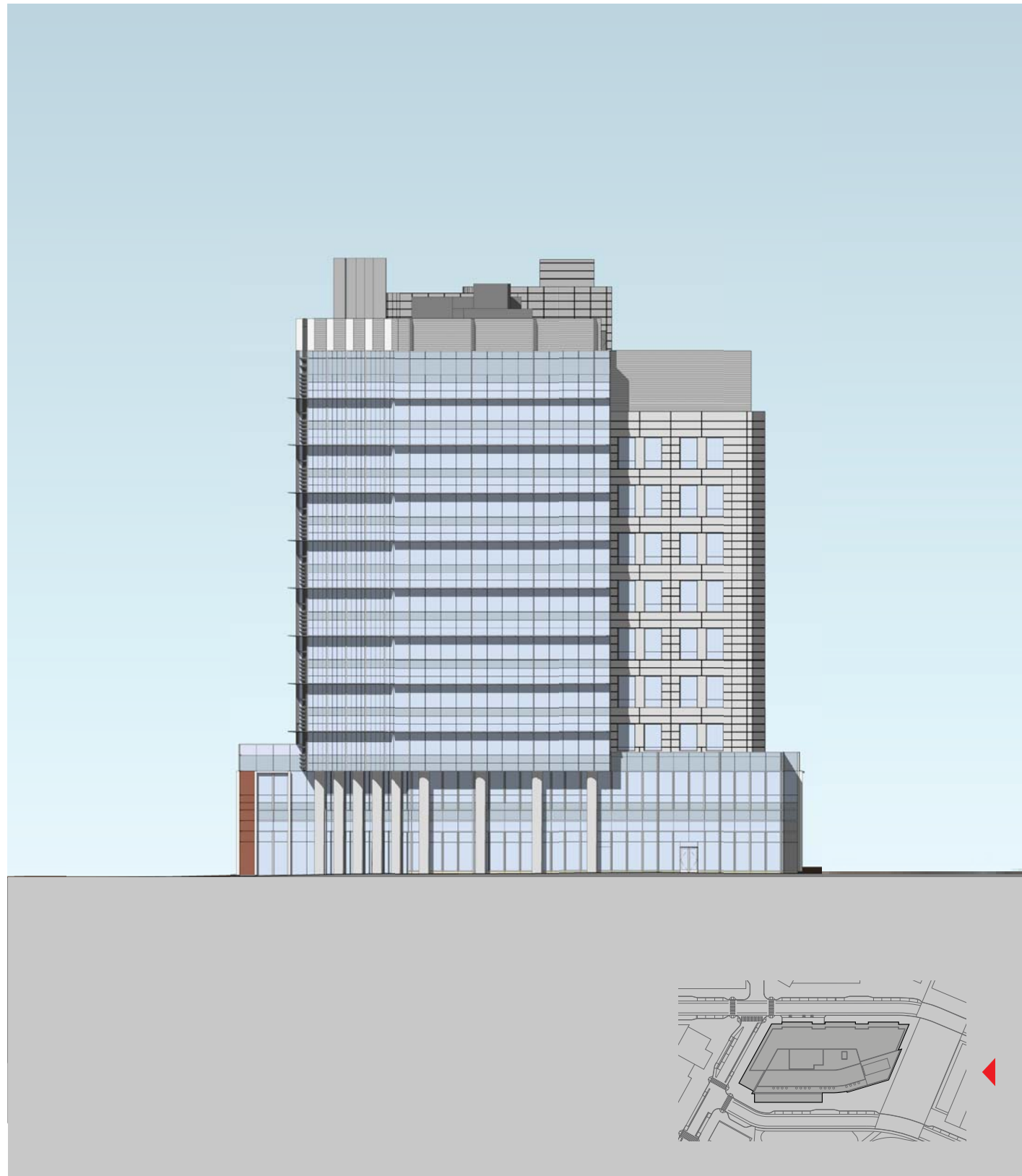
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- CORE ROOF 186'-0"
- PH 2 - ROOF 184'-0"
- PH 2 164'-0"
- PH 1 144'-0"
- LEVEL 9 128'-6"
- LEVEL 8 113'-6"
- LEVEL 7 98'-6"
- LEVEL 6 83'-6"
- LEVEL 5 68'-6"
- LEVEL 4 53'-6"
- LEVEL 3 38'-6"
- LEVEL 2 23'-6"
- GROUND FLOOR 0"
- PARKING L1 -12'-0"
- PARKING L2 -22'-7 1/2"
- PARKING L3 -4'-11"

South Elevation - Cambridge Facade

Scale: 1/16"=1'-0" 0 25' 50' 100' 150'

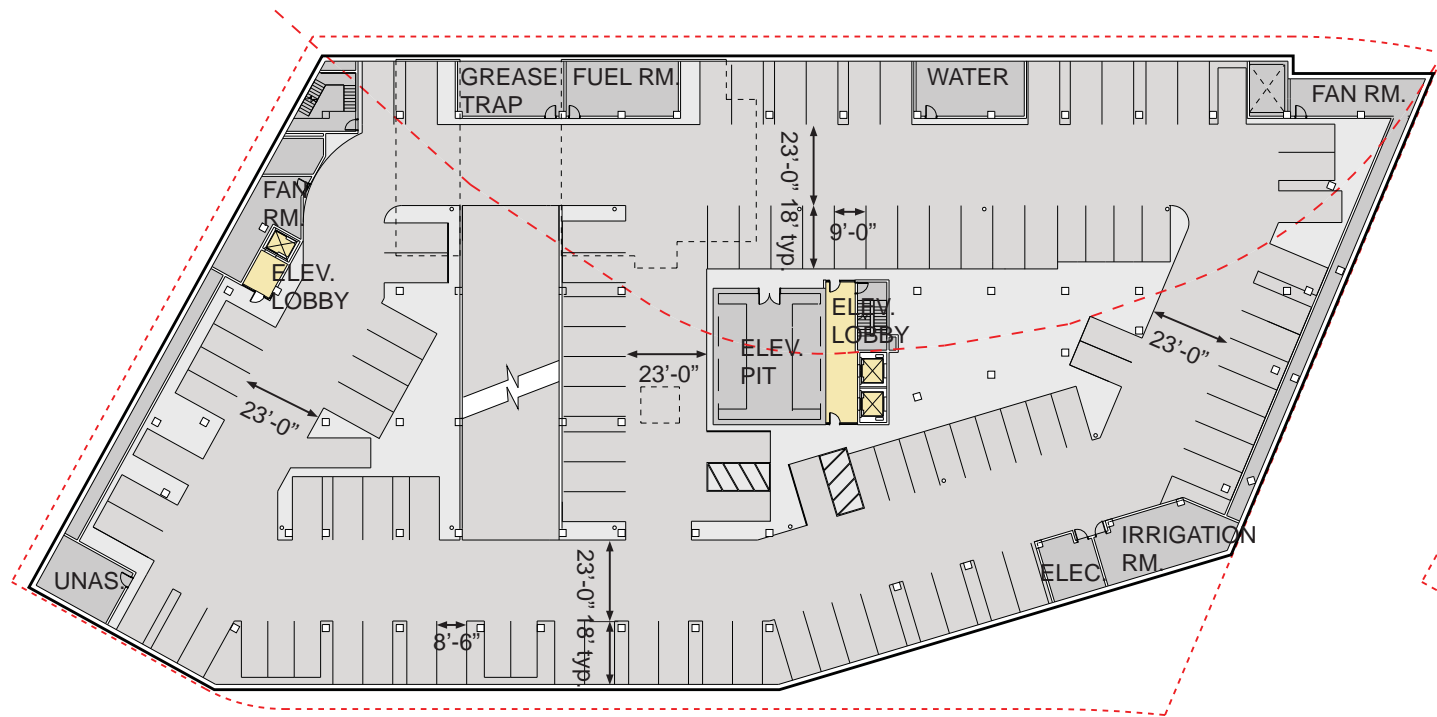


- CORE ROOF 186'-0"
- PH 2 ROOF 184'-0"
- PH 2 164'-0"
- PH 1 144'-0"
- LEVEL 9 128'-6"
- LEVEL 8 113'-6"
- LEVEL 7 98'-6"
- LEVEL 6 83'-6"
- LEVEL 5 68'-6"
- LEVEL 4 53'-6"
- LEVEL 3 38'-6"
- LEVEL 2 23'-6"
- GROUND FLOOR 0'
- PARKING L1 -12'-0"
- PARKING L2 -22'-7 1/2"
- PARKING L3 -4'-11"

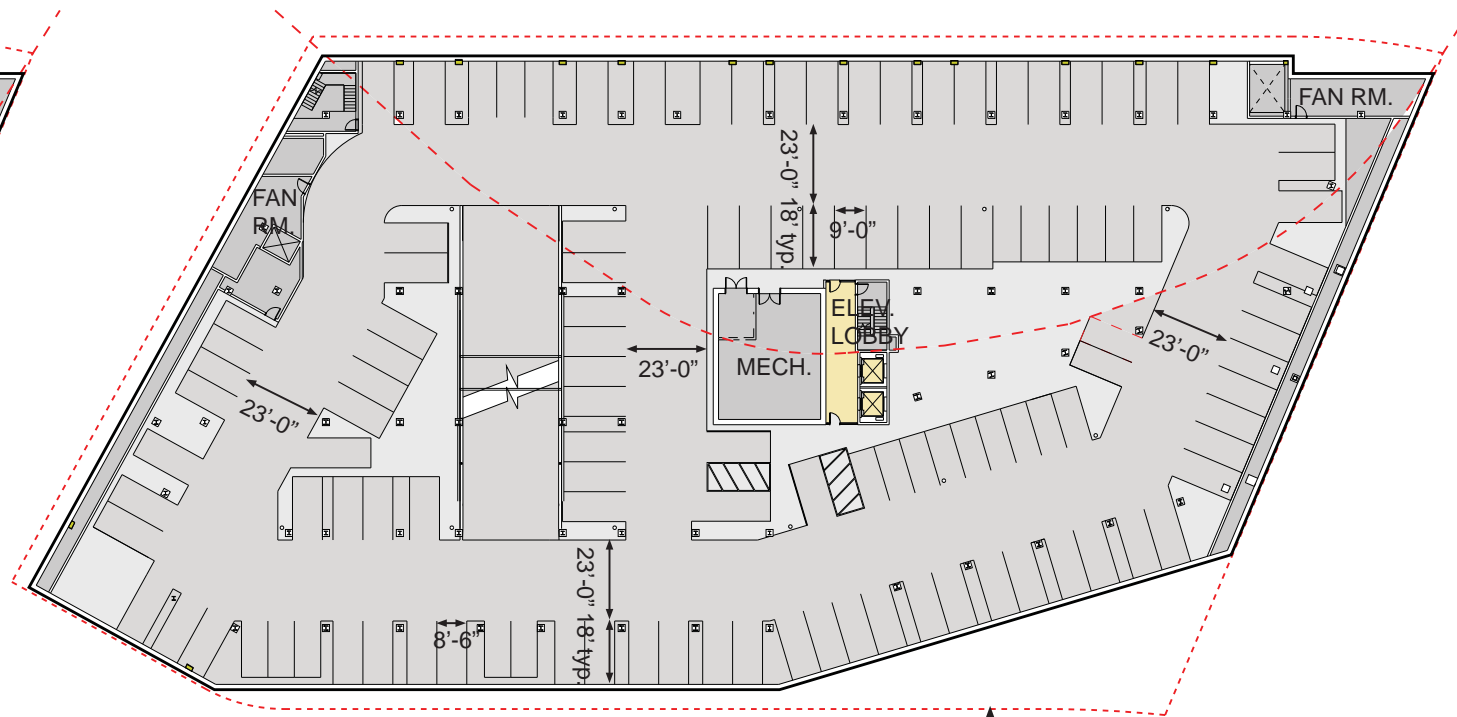
East Elevation

West Elevation

Scale: 1/16"=1'-0" 0 25' 50' 100' 150'

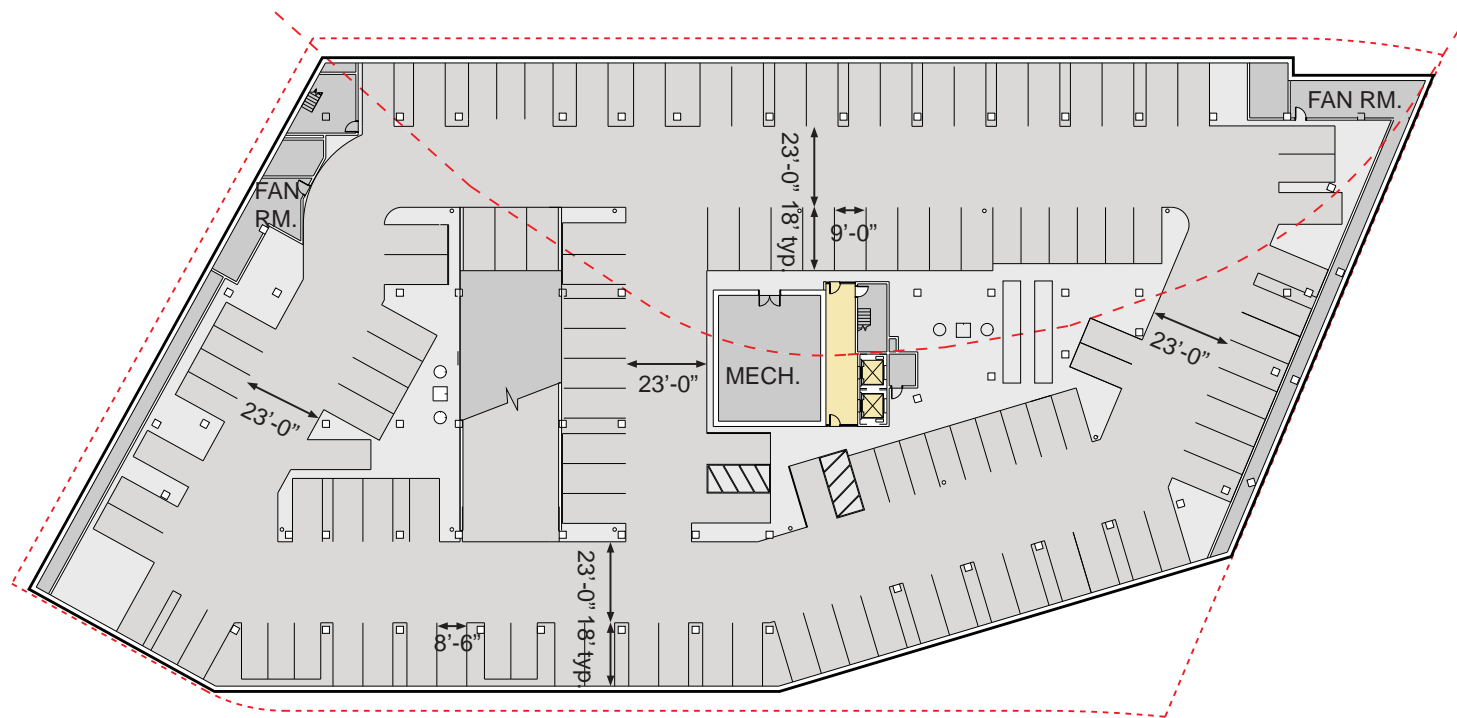


Parking Plan - Level 1



Parking Plan - Level 2

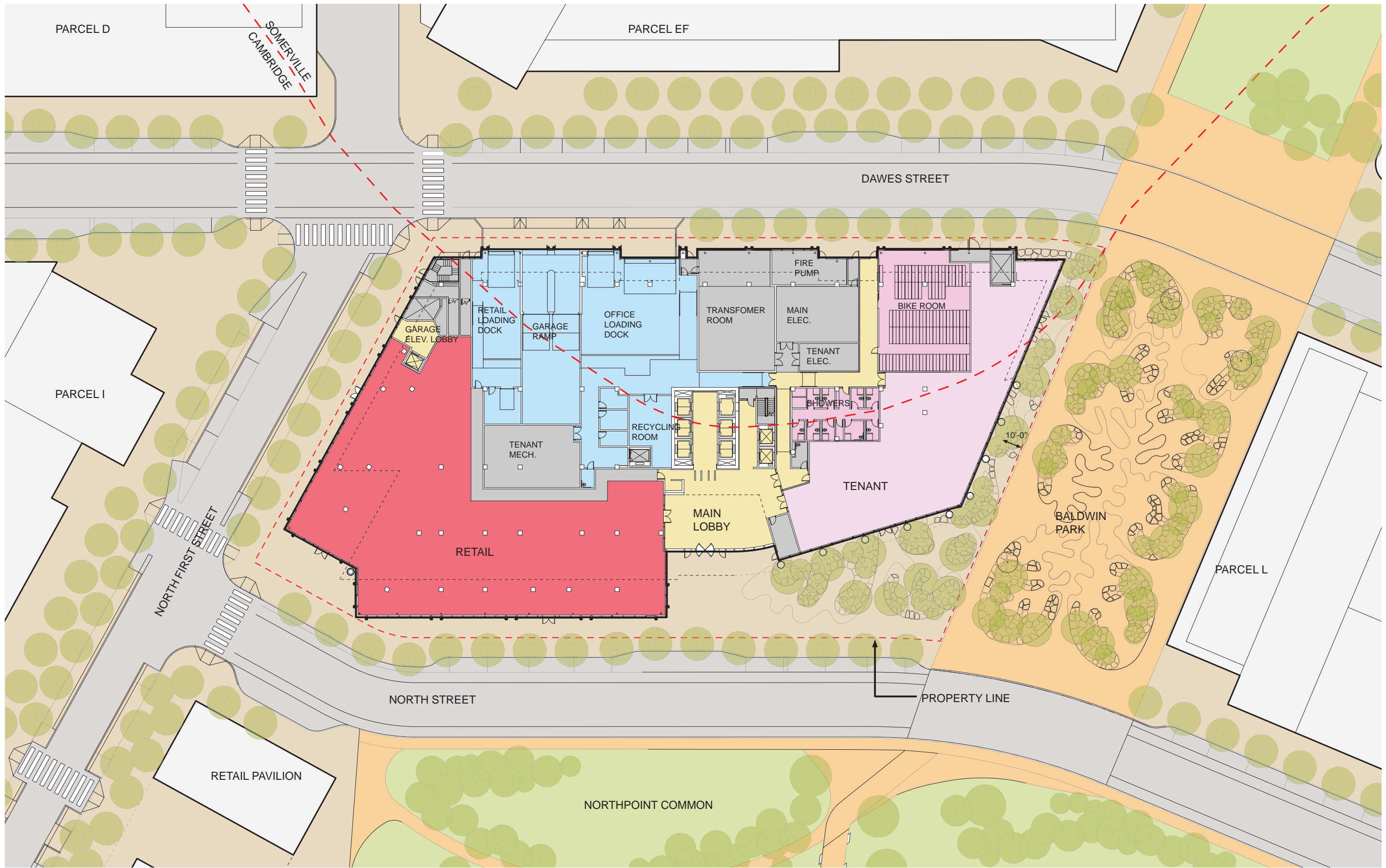
PROPERTY LINE



Parking Plan - Level 3

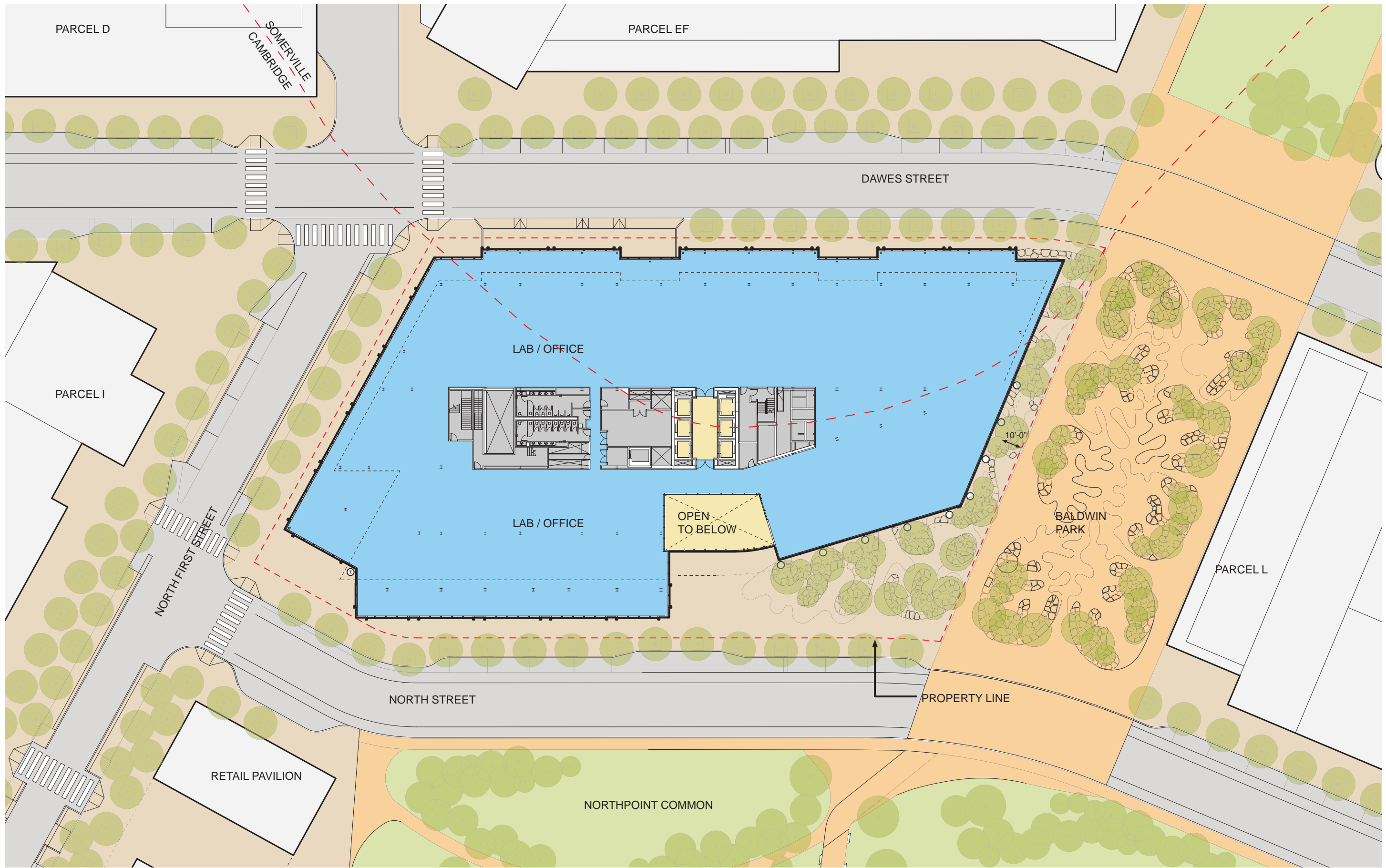
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Underground Parking Plans



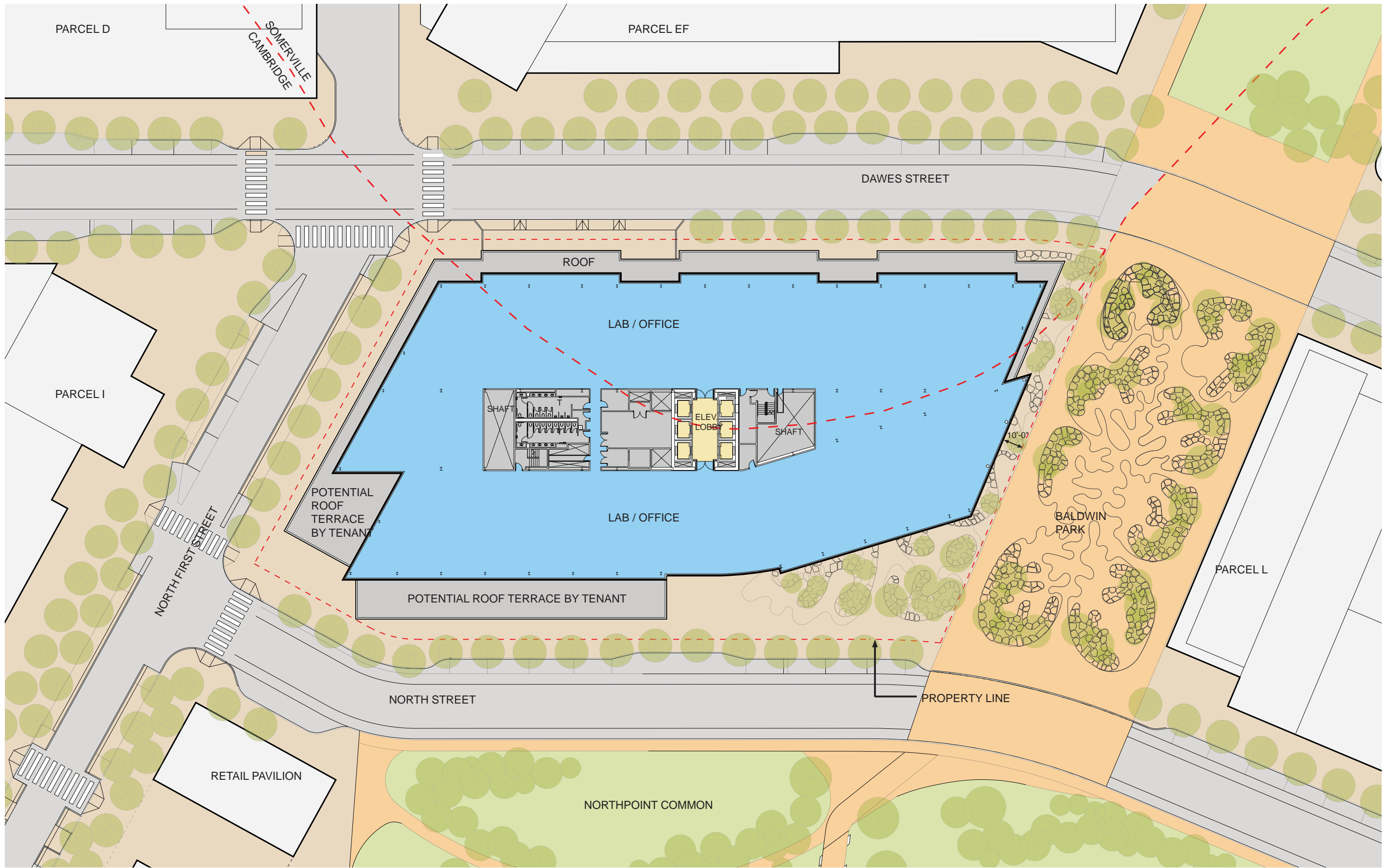
Ground Level Plan

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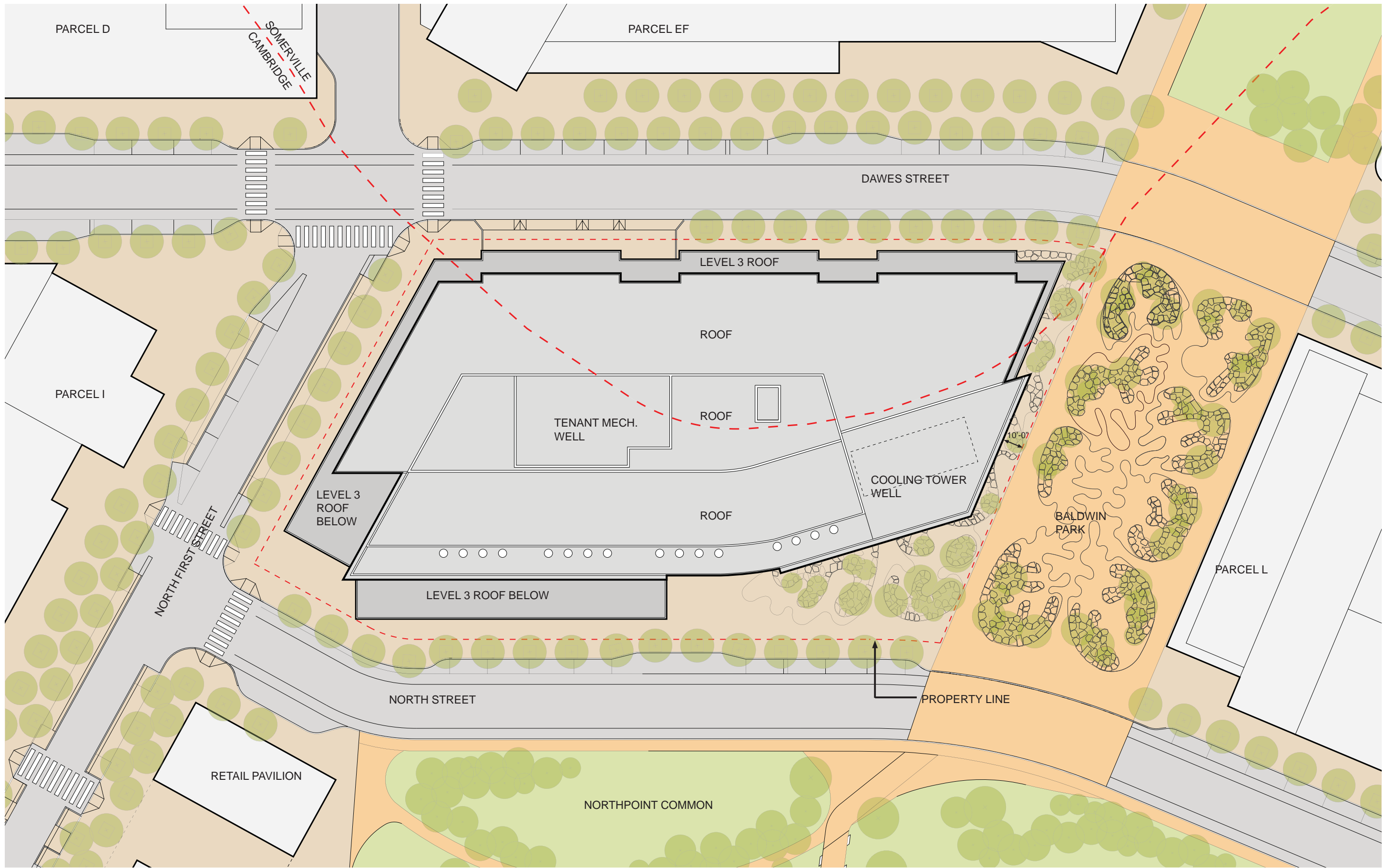
Level 2 Plan

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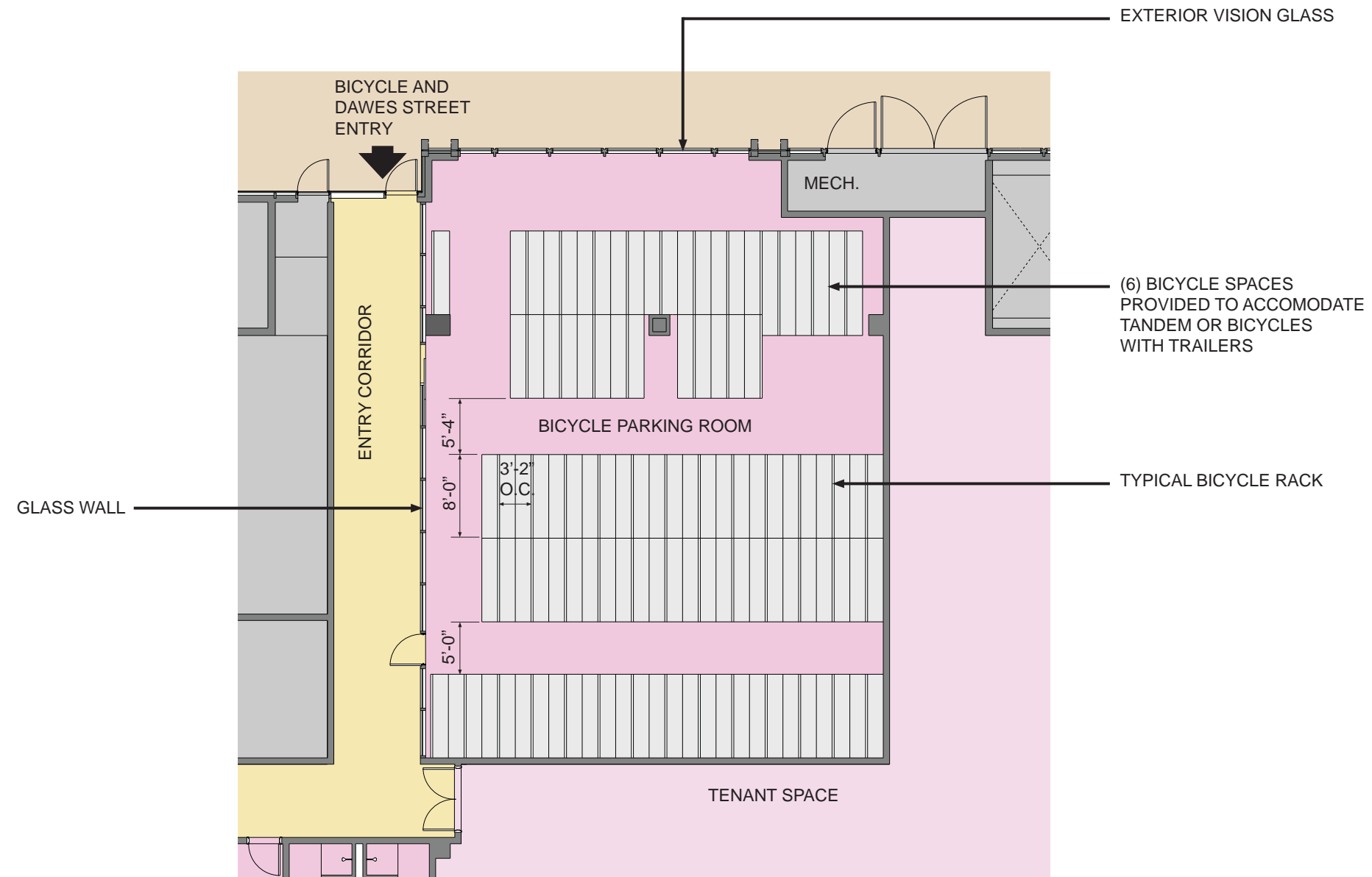
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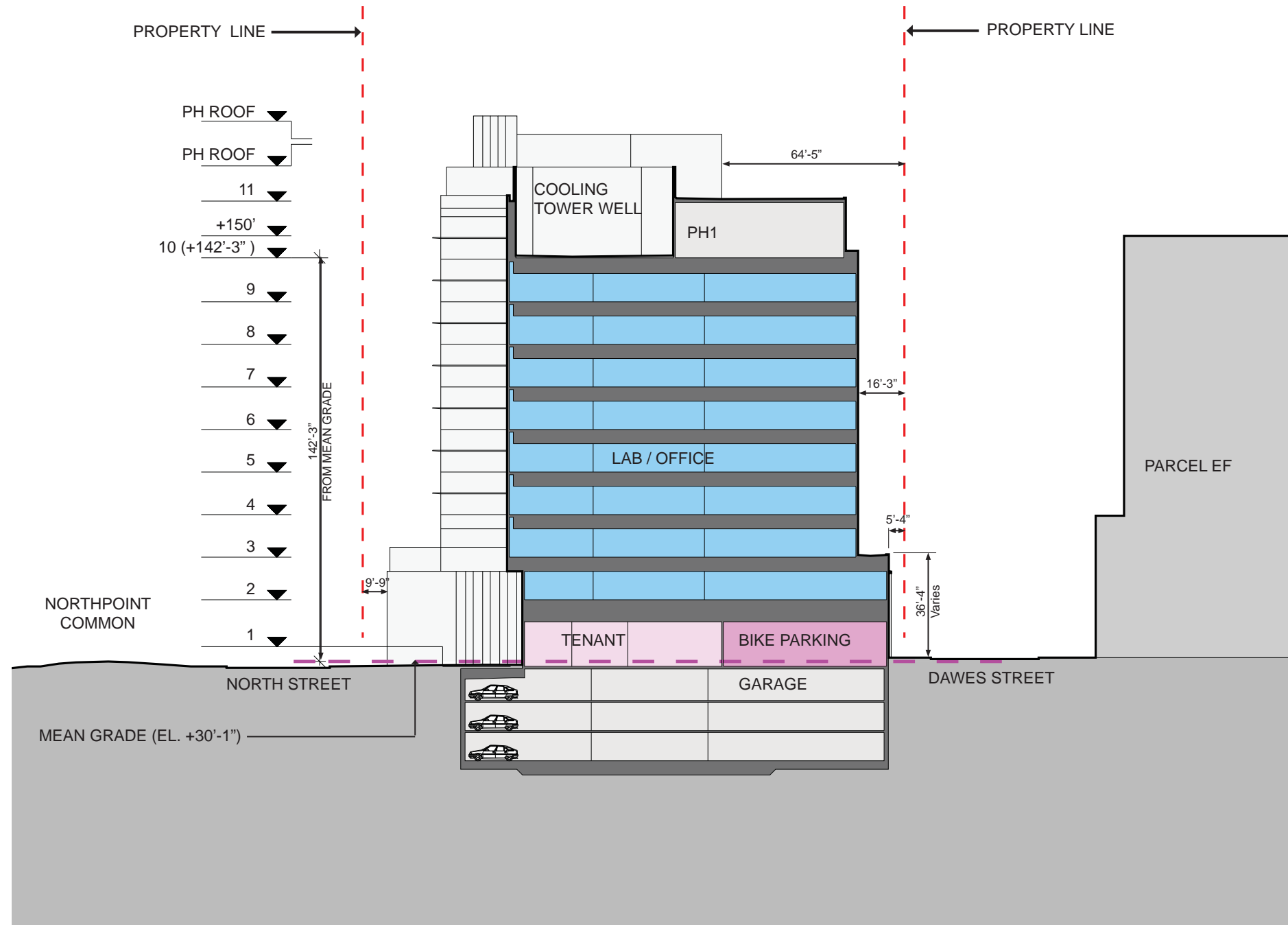


Roof Plan

Scale: 1/16"=1'-0" 0 25' 50' 100' 150'



110 BICYCLE PARKING SPACES PROVIDED



PROPERTY LINE →

PH ROOF

PH ROOF

11

+150'

10 (+142'-3")

9

8

7

6

5

4

3

2

1

142'-3" FROM MEAN GRADE

9'-9"

NORTHPOINT COMMON

NORTH STREET

MEAN GRADE (EL. +30'-1")

← PROPERTY LINE

64'-5"

COOLING TOWER WELL

PH1

16'-3"

LAB / OFFICE

5'-4"

36'-4" Varies

TENANT

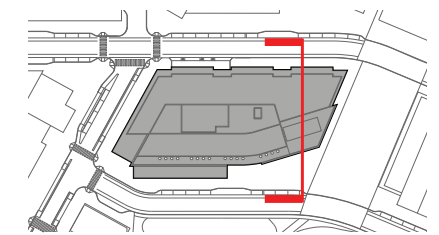
BIKE PARKING

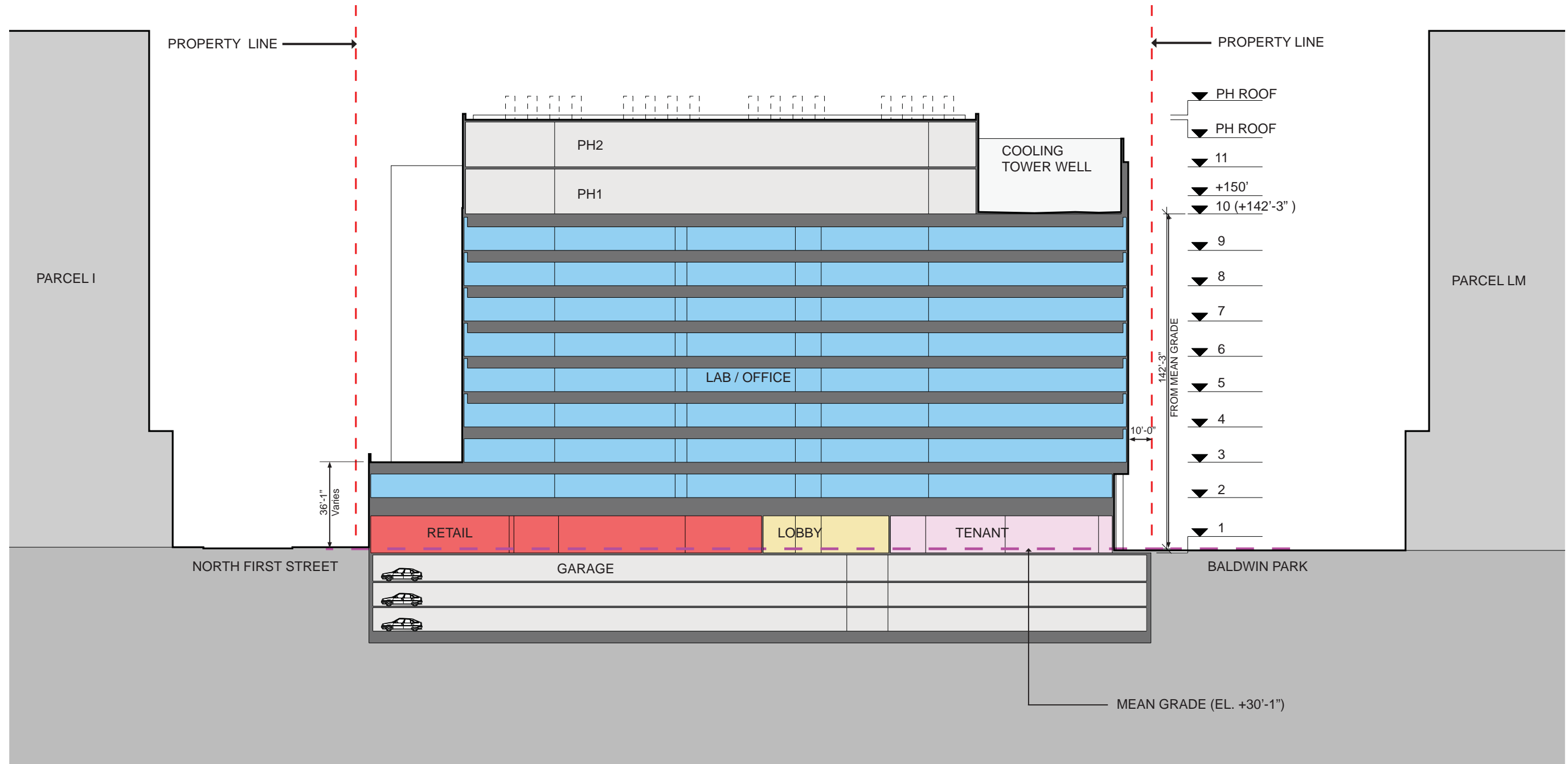
GARAGE

DAWES STREET

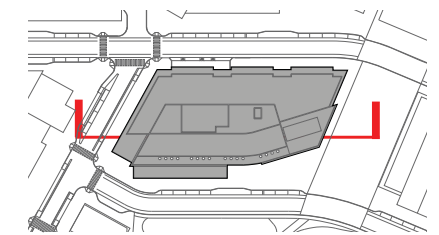
PARCEL EF

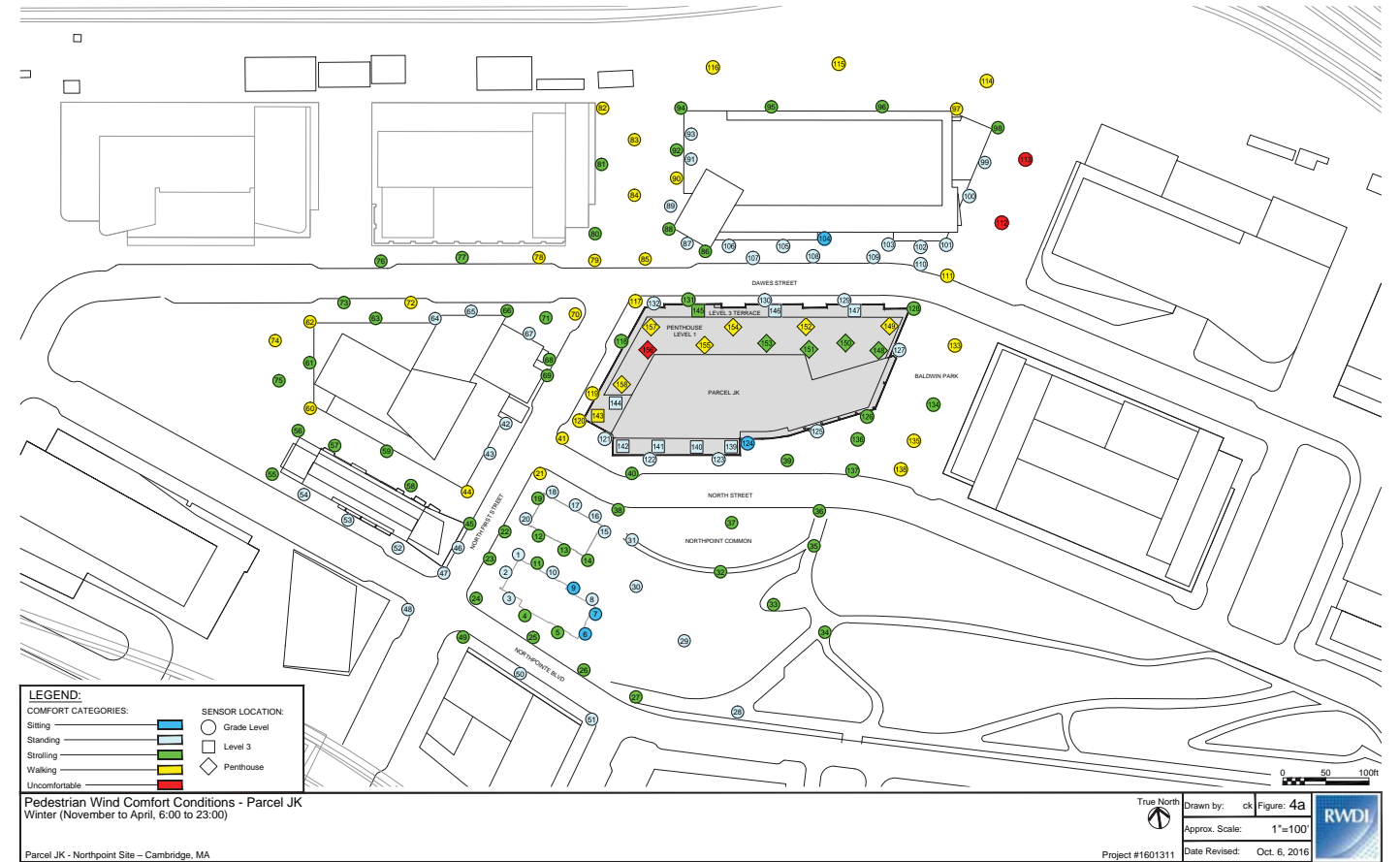
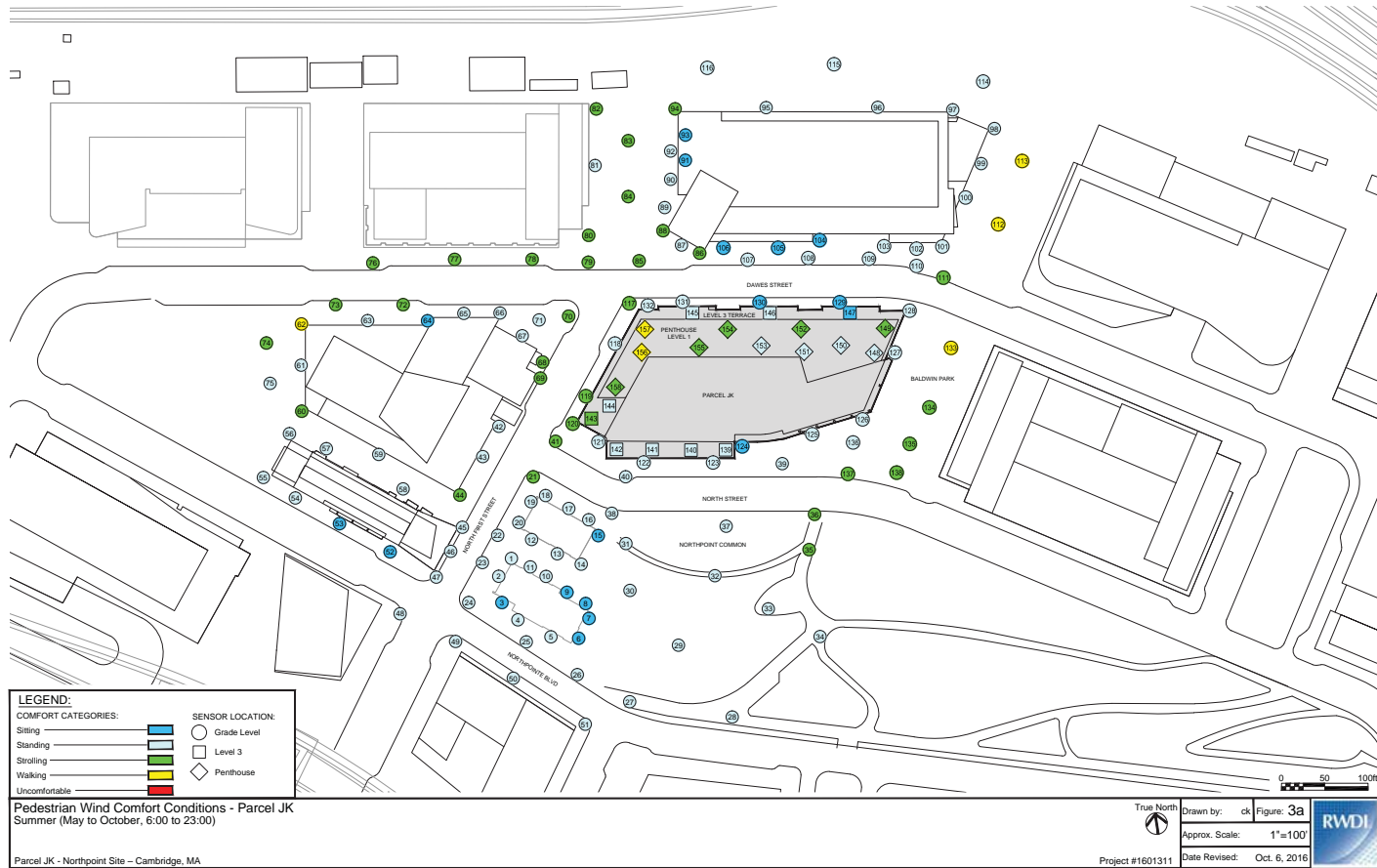
Building Section





Building Section





1. INTRODUCTION

Rowan Williams Davies & Irwin Inc. (RWDI) was retained by Jacobs to conduct a pedestrian wind study for the proposed Parcel JK - Northpoint Site in Cambridge, MA. Parcel JK consists of a 9-story building that extends 184 ft above grade and a three-story podium. The purpose of the study was to assess the wind environment around the development in terms of pedestrian wind comfort and safety.

RWDI originally conducted wind tunnel testing on the proposed development in June of 2016 and provided results from the test in a Pedestrian Wind Study report dated June 29, 2016. Since that time, architectural changes were made to the design. As a result of the changes, a second wind tunnel test was conducted to determine the impact of the revised geometry on the pedestrian wind conditions. The revised wind tunnel model was constructed using architectural drawings listed in Table 1, which reflect the changes to the design. This report pertains to the findings of that test, and supersedes all results previously issued. This draft report presents the methodology, criteria, results and recommendations from RWDI's assessment. A summary of the overall recommendations from the study are below.

2. SUMMARY OF FINDINGS

The wind conditions around the proposed Parcel JK - Northpoint Site are discussed in detail in Section 6 of this report and may be summarized as follows:

- All pedestrian locations are predicted to meet the wind criterion used to assess pedestrian wind safety.
- Wind comfort conditions for the proposed development are predicted to be acceptable at grade for most of the locations tested. However, uncomfortable wind conditions are expected to occur in isolated areas to the northeast of the proposed building.
- Wind conditions on the upper levels of the proposed building are generally expected to be comfortable for standing on the terrace levels and comfortable for walking or better on the penthouse level. If passive pedestrian activities are proposed for the upper penthouse, porous parapets are recommended around the perimeter of this area.

3. METHODOLOGY

As shown in Figure 1, the wind tunnel model included the proposed development and all relevant surrounding buildings and topography within a 1200 ft radius of the study site. The test model was constructed using the design information and drawings listed in Appendix A.

The boundary-layer wind conditions beyond the modelled area were also simulated in RWDI's wind tunnel. The model was instrumented with 158 wind speed sensors to measure mean and gust wind speeds at a full-scale height of approximately 5 ft. The placement of wind measurement locations was based on our experience and understanding of the pedestrian usage for this site, and reviewed by Jacobs. These measurements were recorded for 36 equally incremented wind directions.

4. WIND CLIMATE

Wind statistics recorded at the Boston Logan International Airport between 1985 and 2015 were analyzed for the Summer (May through October) and Winter (November through April) seasons. Figure 2 graphically depicts the directional distributions of wind frequencies and speeds for the two seasons. Winds are frequent from the southwest and northwest quadrants during the summer, with secondary winds present from the east. During the winter, the prevailing winds are from the northwest quadrant, with secondary winds from the southwest quadrant, as indicated by the wind roses. Strong winds of a mean speed greater than 20 mph measured at the airport (at an anemometer height of 30 ft) occur more often in the winter (12.4%) than in the summer (4.7%).

Wind statistics from the Boston Logan International Airport were combined with the wind tunnel data in order to predict the frequency of occurrence of full-scale wind speeds. The full-scale wind predictions were then compared with the RWDI criteria for pedestrian comfort and safety.

5. DESIGN CRITERIA

The RWDI pedestrian wind criterion was used in the current study. These criteria have been developed by RWDI through research and consulting practice since 1974 (References 1 through 6). They have also been widely accepted by municipal authorities as well as by the building design and city planning community.

RWDI Pedestrian Wind Criteria		
Comfort Category	GEM Speed (mph)	Description
Sitting	≤ 6	Calm or light breezes desired for outdoor restaurants and seating areas where one can read a paper without having it blown away
Standing	≤ 8	Gentle breezes suitable for main building entrances and bus stops
Strolling	≤ 10	Moderate winds that would be appropriate for window shopping and strolling along a downtown street, plaza or park
Walking	≤ 12	Relatively high speeds that can be tolerated if one's objective is to walk, run or cycle without lingering.
Uncomfortable	> 12	Strong winds of this magnitude are considered a nuisance for most activities, and wind mitigation is typically recommended

Notes: (1) Gust Equivalent Mean (GEM) speed = max(mean speed, gust speed/1.85); and (2) GEM speeds listed above are based on a seasonal exceedance of 20% of the time between 6:00 and 23:00.

Safety Criterion		
Safety Criterion	Gust Speed (mph)	Description
Exceeded	> 56	Excessive gust speeds that can adversely affect a pedestrian's balance and footing. Wind mitigation is typically required.

Note: Based on an annual exceedance of 9 hours or 0.1% of the time for 24 hours a day.

A few additional comments are provided below to further explain the wind criteria and their applications.

- Both mean and gust speeds can affect pedestrian comfort and their combined effect is typically quantified by a Gust Equivalent Mean (GEM) speed, with a gust factor of 1.85 (References 1, 5, 7 and 8).
- Instead of standard four seasons, two periods of summer (May to October) and winter (November to April) are adopted in the wind analysis, because in a moderate or cold climate such as that found in Cambridge, there are distinct differences in pedestrian outdoor behaviours between these two time periods.
- Nightly hours between midnight and 5 o'clock in the morning are excluded from the wind analysis for wind comfort since limited usage of outdoor spaces is anticipated.
- A 20% exceedance is used in these criteria to determine the comfort category, which suggests that wind speeds would be comfortable for the corresponding activity at least 80% of the time or four out of five days.
- Only gust winds need to be considered in the wind safety criterion. These are usually rare events, but deserve special attention in city planning and building design due to their potential safety impact on pedestrians.
- These criteria for wind forces represent average wind tolerance. They are sometimes subjective and regional differences in wind climate and thermal conditions as well as variations in age, health, clothing, etc. can also affect people's perception of the wind climate. Comparisons of wind speeds for different building configurations are the most objective way in assessing local pedestrian wind conditions.

6. RESULTS

Table 1, located in the Tables section of this report, presents the predicted wind comfort and safety conditions pertaining to the test configuration. These conditions are graphically depicted on a site plan in Figures 3 and 4.

Wind conditions which pass the safety criterion are predicted for the tested configuration. The following is a detailed discussion of the suitability of the predicted wind safety and comfort conditions for the anticipated pedestrian use of each area.

6.1 Pedestrian Safety

Wind conditions which pass the safety criterion are predicted at all locations. No modifications are required to reduce wind gusts at the site.

6.2 Pedestrian Comfort

Wind conditions comfortable for walking or strolling is appropriate for sidewalks. Lower wind speeds conducive to standing are preferred at main entrances where pedestrians are apt to linger.

6.2.1 Grade Level (Locations 1 through 138)

Wind conditions at the main entrance on the south facade (Location 124) and north facade (Location 130) are expected to be comfortable for sitting or standing throughout the year, which is ideal (Figures 3 and 4).

Wind conditions around the building perimeter and along sidewalks are generally expected to be suitable for strolling, standing or sitting during the summer months (Figure 3). Wind speeds will increase during the winter months, and wind conditions are expected to be primarily comfortable for walking or more passive activities at these areas (Figure 4). Isolated areas with uncomfortable wind conditions are expected northeast of the proposed building site (Locations 112 and 113, in Figure 4).

The use of landscaping along the northern and southern edges of this northeast location is expected to improve the wind conditions across the open space.

6.2.2 Terrace and Penthouse Levels

It is generally desirable for wind conditions on terraces to be comfortable for sitting more than 80% of the time in the summer. During the winter, the area would not be used frequently and increased wind activity would be considered appropriate.

Wind conditions on the Level 3 terrace (Locations 139 through 142) and the Level 3 roof (Locations 143 through 147) are generally expected to be suitable for standing throughout the year. Higher wind activity is however expected at the southwest corner of Level 3 where wind conditions suitable for strolling during the summer and walking during the winter (Location 143 in Figure 3) are predicted. These conditions are considered appropriate for the intended use.

On the upper penthouse, wind speeds suitable for walking during the summer are predicted at Locations 157 and 158 in Figure 3. Winds appropriate for sitting and strolling are expected over the rest of the terrace area. If the area encompassed within Locations 157 and 158 is used for passive pedestrian activities, the addition of a porous parapet (5-6 feet, 20-30% porous) along the perimeter of the upper penthouse roof is recommended. Additionally, the use of localized mitigation measures such as planters and trellises along the areas outside in red within Image 1 are also expected to improve wind conditions across the penthouse level. Examples of these mitigation measures are presented in Image 2. During the winter, wind conditions are generally expected to be comfortable for walking or strolling, with isolated locations of uncomfortable winds to the west of the roof (Location 156 in Figure 4). It is recommended that pedestrian activity be limited during the winter season.

7. APPLICABILITY

The wind conditions presented in this report pertain to the proposed Parcel JK - Northpoint Site development as detailed in the architectural drawings listed in Appendix A. Should there be any design changes that deviate from this list of drawings, the wind condition predictions presented may change. Therefore, if changes in the design are made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

8. REFERENCES

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Wind Study



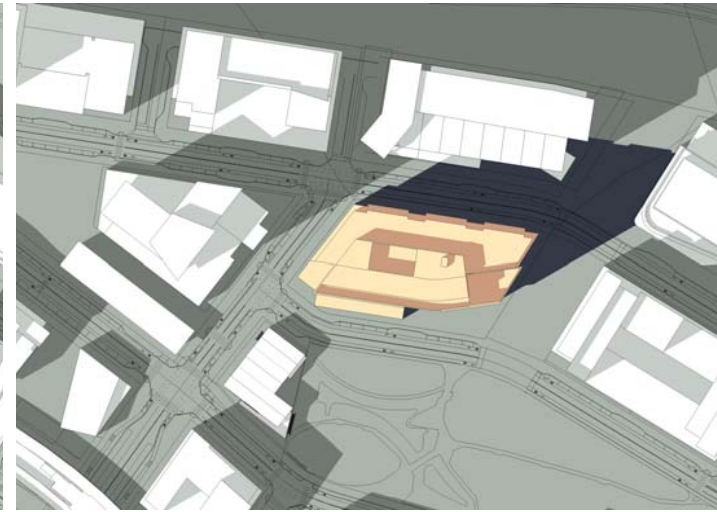
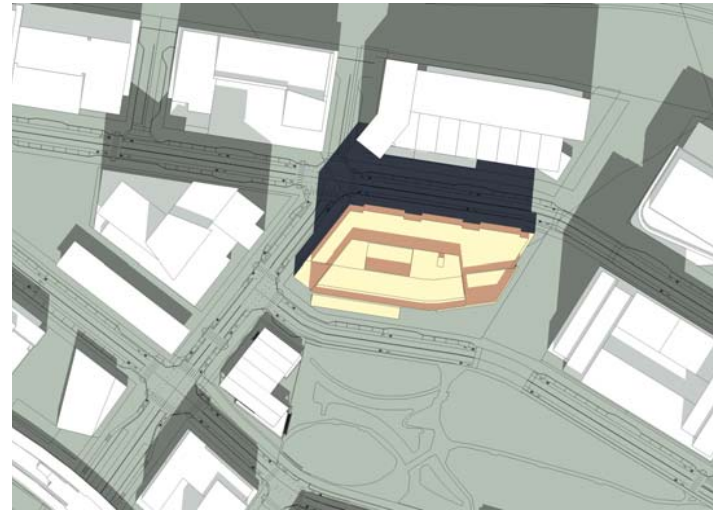
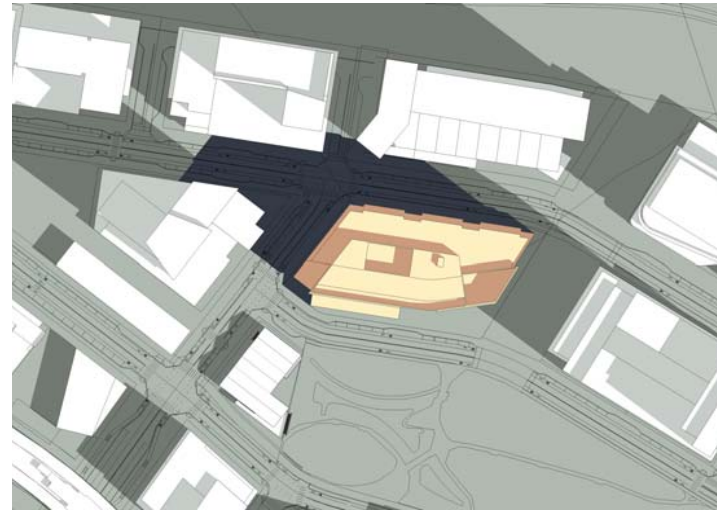
NorthPoint - Parcel JK



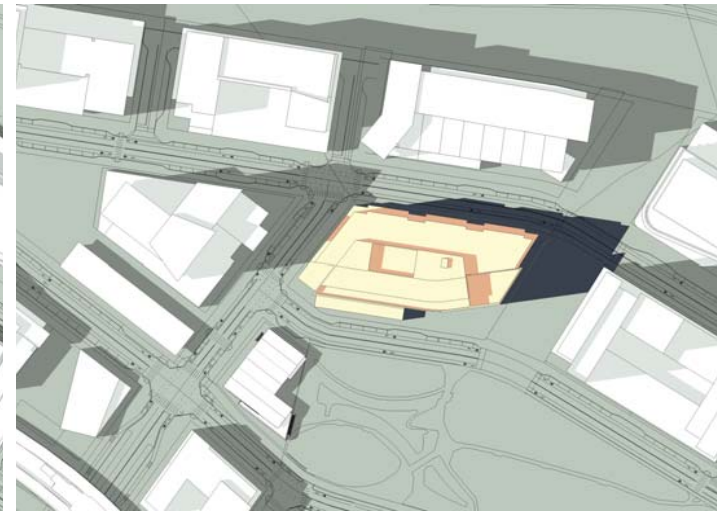
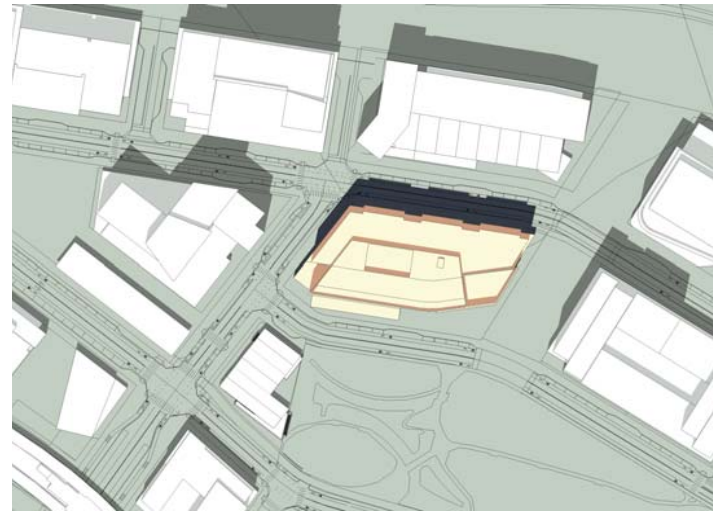
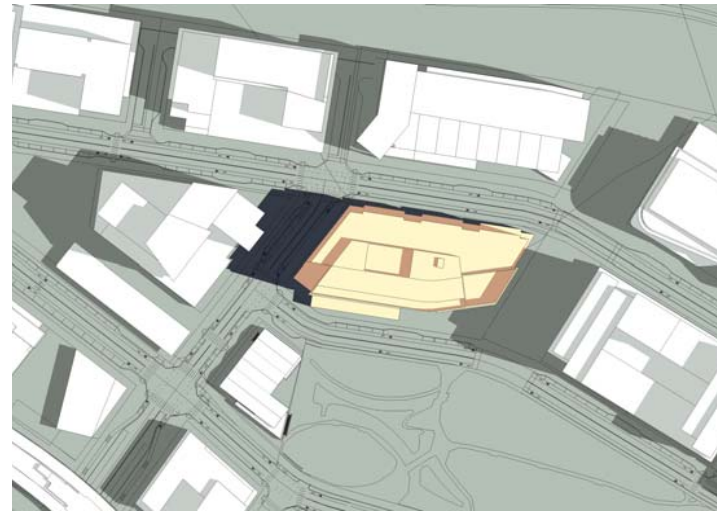
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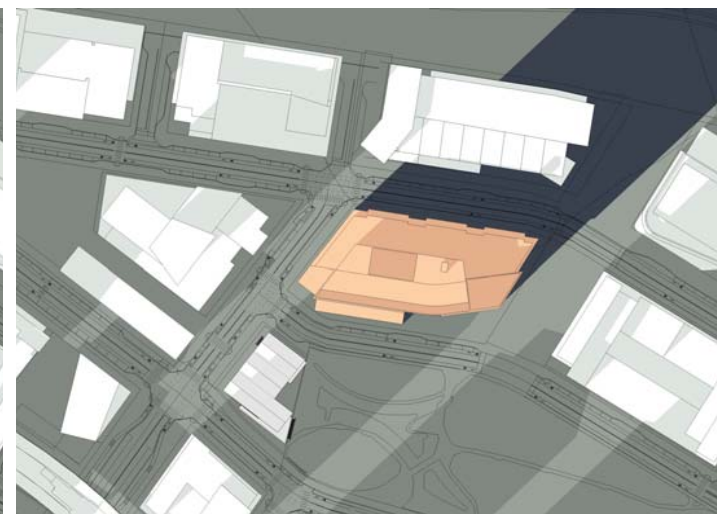
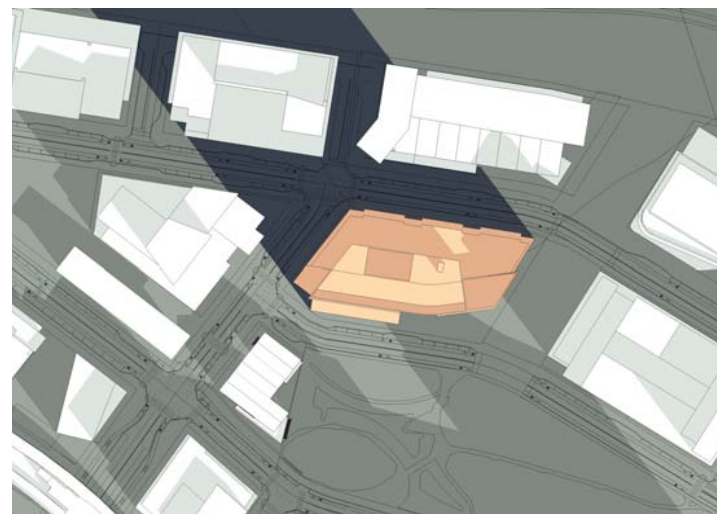
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Spring & Fall Equinox



Summer Solstice



Winter Solstice

Shadow Study

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 zone 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 of Zoning District Noise Standards (maximum octave band sound pressure levels).

Octave Band center Frequency Measurement (Hz)	Residential Area		Residential in Industrial		Commercial Area	Industry Area
	Daytime	Other	Daytime	Other	Anytime	Anytime
31.5	76	68	79	72	79	83
63	75	67	78	71	78	82
125	69	61	73	65	73	77
250	62	52	68	57	68	73
500	56	46	62	51	62	67
1,000	50	40	56	45	56	61
2,000	45	33	51	39	51	57
4,000	40	28	47	34	47	53
8,000	38	26	44	32	44	50
Single Number Equivalent (dB(A))	60 dBA	50 dBA	65 dBA	55 dBA	65 dBA	70 dBA

Northpoint J K Noise Compliance

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.

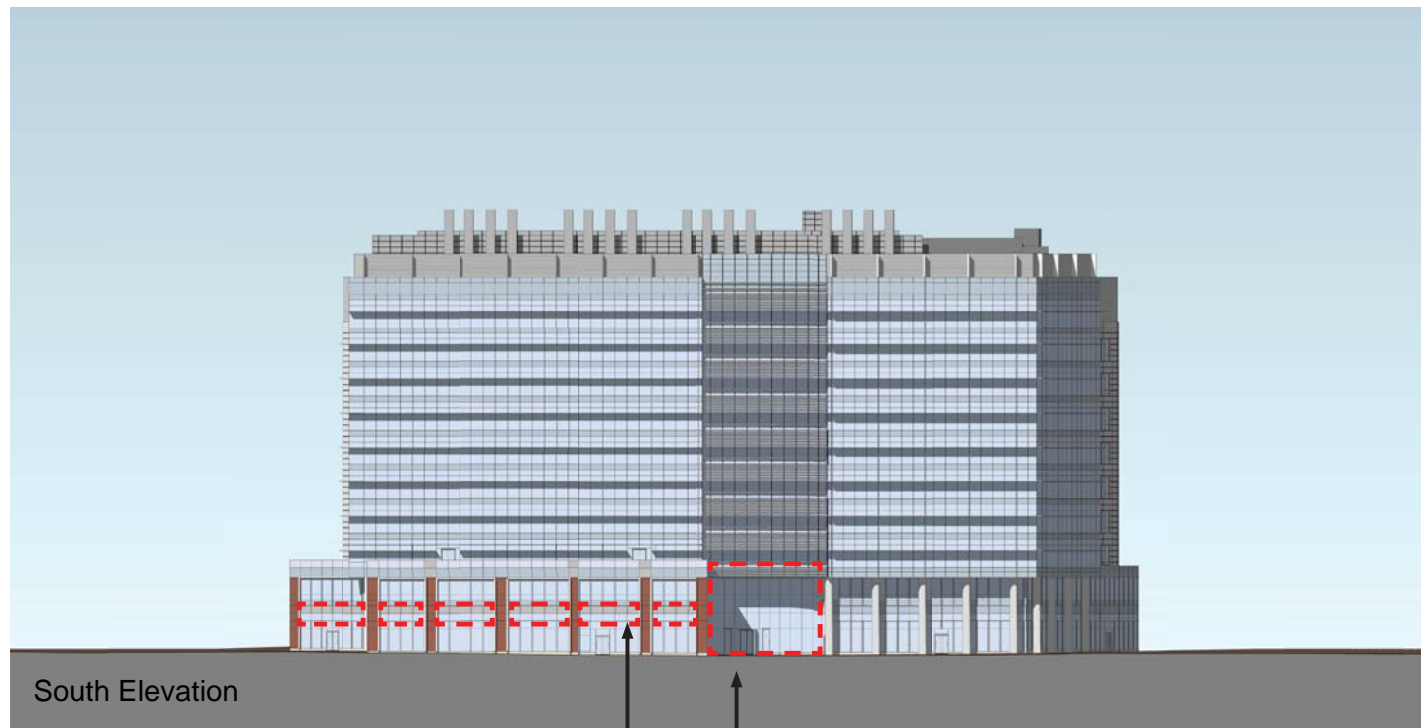
In Summary, we are working with the project team to design a building that meets the applicable noise requirements and does not create a noise nuisance for the surrounding area. Based on our calculations, the current design meets those criteria.

Please call if you need further information,

CAVANAUGH TOCCI ASSOCIATES



Timothy J. Foulkes



South Elevation

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

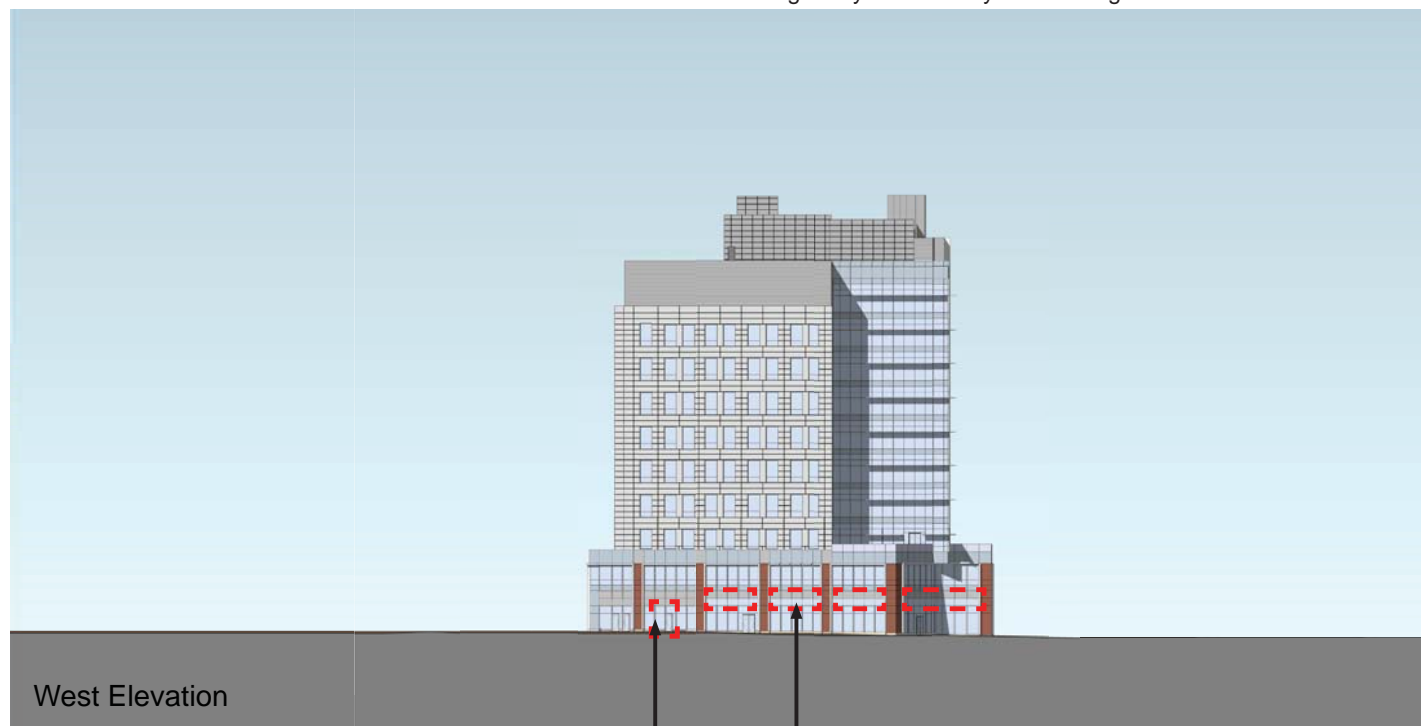
Building identity signage – Signage communicating the building address is anticipated at the main lobby entrance door. This signage may be in the form of letter and number graphics on the lobby facade glazing (i.e. above or next to the front door) or in the form of freestanding letters and numbers on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



North Elevation

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.



West Elevation

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

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



East Elevation

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.

Proposed locations for exterior signage

Building Mounted Exterior Lighting

- The wood pilasters on all facades of the building will have internal lighting that will make give 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."







Exterior Lighting Plan












#	Page	Section	Guideline Description	Compliance	Check
1	5	Preface	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.		
2	5	Preface	Each parcel is intended to relate to its immediate surroundings as well as the larger context.		
3	14	1.3 Masterplan Exhibit: 07 zoning envelope	The building sits within the 150'-0" maximum zoning height limit	Top of the last occupied floor is 143'-3" measured from the mean grade.	
4	16	1.3 Masterplan Exhibit: 09 conceptual retail plan	Proposed Retail location per Masterplan	Ground level retail will be provide where indicated	
5	20	2.1 Scale and Massing	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.	The building incorporates a number of "breaks" 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.	
6	20	2.1 Scale and Massing	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.	The typical bay width for the building is 21'-0"	
7	20	2.1 Scale and Massing	Buildings should have a clearly expressed base, middle, and top.	The building incorporates a podium, tower and penthouse.	
8	20	2.1 Scale and Massing	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	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.	
9	20	2.1 Scale and Massing	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	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 "fit" within the vertical wood pilasters to enhances the human scale of the building.	
10	20	2.1 Scale and Massing	The mid-section of the building should consider light penetration, continuity and consistency of built mass while allowing for individual architectural detailing	The building has incorporated a series external sun shades to reduce solar heat gain and glare which articulates the façade.	




#	Page	Section	Guideline Description	Compliance	Check
11	20	2.1 Scale and Massing	The base and middle should be built to the street line with courtyard openings and setbacks for cafes where appropriate	The building complies with the Northpoint East Cambridge design guidelines for setbacks and build to lines. The north west corner of the building has been set back further to allow areas for café seating.	
12	12	2.1 Scale and Massing	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	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 setback slightly from the facade below	
13	21	2.1 Scale and Massing	Demonstrate responsible use of lighting and energy consistent with sustainability requirements.	The building exterior light sources will be low-power LED fixtures. Refer to exterior lighting plan	
14	21	2.1.1 Build to Line	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 "EXHIBIT: 12 BUILD-TO LINE DIAGRAM"	The build 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" or more in some places from the property line	
15	21	2.1.2 Public Streets	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	The building is separated into a base, middle and top. There are 4 different facade types used in the main portion of the tower. Each facade has incorporated a number of techniques to vertically break the facade.	
16	21	2.1.2 Public Streets	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	15'-0" min. sidewalks are provided around the building.	
17	21	2.1.2 Public Streets	Locate loading docks on side streets or service alleys whenever possible, and away from residential areas and open spaces	The loading docks are located on Dawes Street and away from adjacent residential building to the east and west.	
18	21	2.1.3 Park Edges	Locate buildings to minimize shadows on NorthPoint Common, especially in the afternoon	The building is located north of Northpoint Common and will not cast shadows on the park.	


#	Page	Section	Guideline Description	Compliance	Check
19	21	2.1.3 Park Edges	Surround public parks with uses that create an active ground floor environment throughout the day and evening and increase safety for park users	The retail tenant will front onto Northpoint common.	
20	21	2.1.3 Park Edges	Shops, cafés and other public uses that enliven the parks are encouraged adjacent to open spaces	Outdoor seating is proposed for the southwest corner of the building.	
21	21	2.1.3 Park Edges	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	The building is set back 5 feet from the lot lines	
22	23	2.1.6 Commercial Massing and Articulation	Exhibit: 17 Commercial Massing Precedent	The projects use a similar design vocabulary as shown in exhibit 17 massing and Precedents.	
23	25	2.2 Street Level Use and Design	Exhibit: 19 Small Retail Massing Precedent	The projects locates the main lobby, retail and active uses per exhibit 19.	
24	27	2.2 Mixed Use Blocks or Commercial Blocks	Street-level facades within the designated retail zone should include active uses such as: shops, restaurants, and cafes.	Retail area provided at the southeast corner.	
25	27	2.2 Mixed Use Blocks or Commercial Blocks	Office/ R&D uses are discouraged from occupying extensive ground-floor frontage. Where these uses do occur, they should occupy no more than 200 to 250 feet of continuous frontage along public streets	The North Street frontage of the ground floor tenant is 98'-11".	
26	27	2.2 Mixed Use Blocks or Commercial Blocks	Ground floor frontage should generally be permeable and massing elements should be human scaled	Large amounts of glass will be used for the retail tenants. The façade treatments are in keeping with the human scale.	
27	27	2.2 Mixed Use Blocks or Commercial Blocks	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	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.	
29	27	2.2 Mixed Use Blocks or Commercial Blocks	Blank walls should be avoided along all public streets, courts, and pedestrian walkways	A large of amount of the wall along the pedestrian walkways will have vision glazing including the service doors, indoor bike parking and fire pump room.	

Northpoint East Cambridge Design Guidelines Checklist

#	Page	Section	Guideline Description	Compliance	Check
30	31	2.3.2 Architectural Character - Commercial	Create varied architecture and avoid flat facades by using recessed or projected entryways, bays, canopies, awnings, and other architectural elements. Where buildings are set back at upper stories, lower roofs may be used as balconies, balustrades, and gardens. Utilize architectural articulation such as changes in material, fenestration, architectural detailing, or other elements to break down the scale.	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 façade.	
31	31	2.3.3 Architectural Character - Lighting	Public Realm and exterior building lighting is an important consideration for the identity of the project and enhancing the retail, pedestrian nighttime safety and neighborhood connectivity for NorthPoint. However, lighting design shall be respectful of its impact on surrounding context including the other residential buildings in NorthPoint and surrounding neighborhoods including East Cambridge.	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.	
32	32	2.4 Environmental Guidelines (LEED Principles)		The building is targeting certification under LEED v4 BD+C for core and shell.	
33	33	2.5 Parking / Service	Underground parking is preferable. All parking garages must provide direct pedestrian access to the street	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.	



#	Page	Section	Guideline Description	Compliance	Check
34	47	3.2 Streetscape and Circulation	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.		
35	47	3.2A Character	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.		
36	47	3.2A Character	Design streets to encourage pedestrian and cycle activity, and to control vehicle speed in residential areas.		
37	47	3.2A Character	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.	On street parking and short-term loading provided along North St.	
38	47	3.2A Character	In the design of new streets, pathways, and parks, provide pedestrian-scale lighting to enhance pedestrian safety.		
39	47	3.2A Character	Numerous entrances along principal pedestrian routes are encouraged both for safety and to enhance the pedestrian environment.		
40	47	3.2A Character	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.		
41	48	3.2.1 First Street	Setbacks will allow space for continuous rows of trees connecting Monsignor O'Brien Highway to the open space at the heart of NorthPoint.		
42	48	3.2.1 First Street	The developer will provide expanded sidewalks and bicycle accommodation from the transit hub to the center of the NorthPoint.	Dedicated bike lane provided within sidewalk.	
43	50	3.2.2 Dawes Street	Street trees will be planted on both sides of the street.		
44	55	3.2.5 North Street	Will have a single row of street trees on its north side to shade the sidewalk.		



Section	Zoning Requirement	Compliance	Check																				
<p>CAMBRIDGE ZONING ORDINANCE Article 16.51.2</p> <p>CAMBRIDGE ZONING ORDINANCE Article 6</p>	<p>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.</p> <table border="0"> <tr> <td>MINIMUM PARKING:</td> <td>MAXIMUM PARKING:</td> </tr> <tr> <td>1 / 1,250 GSF (OFFICE)</td> <td>1 / 625 GSF (OFFICE)</td> </tr> <tr> <td>1 / 1,675 GSF (R&D)</td> <td>1 / 840 GSF (R&D)</td> </tr> <tr> <td>None Required (Retail)</td> <td>None Required (Retail)</td> </tr> </table> <p>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.</p>	MINIMUM PARKING:	MAXIMUM PARKING:	1 / 1,250 GSF (OFFICE)	1 / 625 GSF (OFFICE)	1 / 1,675 GSF (R&D)	1 / 840 GSF (R&D)	None Required (Retail)	None Required (Retail)	<p>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.</p> <p>Two potential scenarios are outlined below:</p> <p><u>60/40 Lab-Office:</u> 14,550 GSF (Retail) = 0 - 0 Spaces 230,734 GSF (R&D) = 134 - 267 Spaces 153,822 GSF (Office) = 120 - 239 Spaces TOTAL SPACES REQ'D = 254 (min.) - 506 (max.) Spaces</p> <p><u>100% Office:</u> 14,550 GSF (Retail) = 0 - 0 Spaces 384,556 GSF (Office) = 299 - 597 Spaces TOTAL SPACES REQ'D = 299 (min.) - 597 (max.)</p> <p>The current project provides 348 spaces which satisfies both scenarios.</p>													
MINIMUM PARKING:	MAXIMUM PARKING:																						
1 / 1,250 GSF (OFFICE)	1 / 625 GSF (OFFICE)																						
1 / 1,675 GSF (R&D)	1 / 840 GSF (R&D)																						
None Required (Retail)	None Required (Retail)																						
<p>521 CMR - SECTION 23.2.1</p> <p>521 CMR - SECTION 23.2.2</p>	<p>301 - 400 Spaces requires a minimum of 8 accessible spaces.</p> <p>One in every eight accessible spaces, but not less than one shall be van accessible.</p>	<p>This project will provide 9 ACCESSIBLE SPACES</p> <p>This project will dedicate 1 of the 9 ACCESSIBLE SPACES for accessible van parking.</p>																					
<p>521 CMR - SECTION 23.4.1</p> <p>521 CMR - SECTION 23.4.2</p> <p>CAMBRIDGE ZONING ORDINANCE Article 6.42</p> <p>Zoning Compliance</p>	<table border="0"> <tr> <td>Accessible Parking:</td> <td>8'-0" Wide + 5'-0" Access aisle Length equal to local zoning req's</td> </tr> <tr> <td>Maneuvering Aisle Width:</td> <td>22'-0"</td> </tr> <tr> <td>Regular Spaces:</td> <td>8'-6" x 18'-0"</td> </tr> <tr> <td>Compact Spaces:</td> <td>7'-6" x 16'-0" (50% Maximum)</td> </tr> <tr> <td>Handicap Spaces:</td> <td>12'-0" x 18'-0"</td> </tr> </table>	Accessible Parking:	8'-0" Wide + 5'-0" Access aisle Length equal to local zoning req's	Maneuvering Aisle Width:	22'-0"	Regular Spaces:	8'-6" x 18'-0"	Compact Spaces:	7'-6" x 16'-0" (50% Maximum)	Handicap Spaces:	12'-0" x 18'-0"	<p>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</p> <table border="0"> <tr> <td>Accessible:</td> <td>9</td> </tr> <tr> <td>Somerville Typical:</td> <td>93</td> </tr> <tr> <td>Somerville Compact:</td> <td>23 (19.8%)</td> </tr> <tr> <td>Cambridge Typical:</td> <td>163</td> </tr> <tr> <td>Cambridge Compact:</td> <td>60 (27%)</td> </tr> </table> <p>TOTAL PARKING COUNT: 348</p>	Accessible:	9	Somerville Typical:	93	Somerville Compact:	23 (19.8%)	Cambridge Typical:	163	Cambridge Compact:	60 (27%)	
Accessible Parking:	8'-0" Wide + 5'-0" Access aisle Length equal to local zoning req's																						
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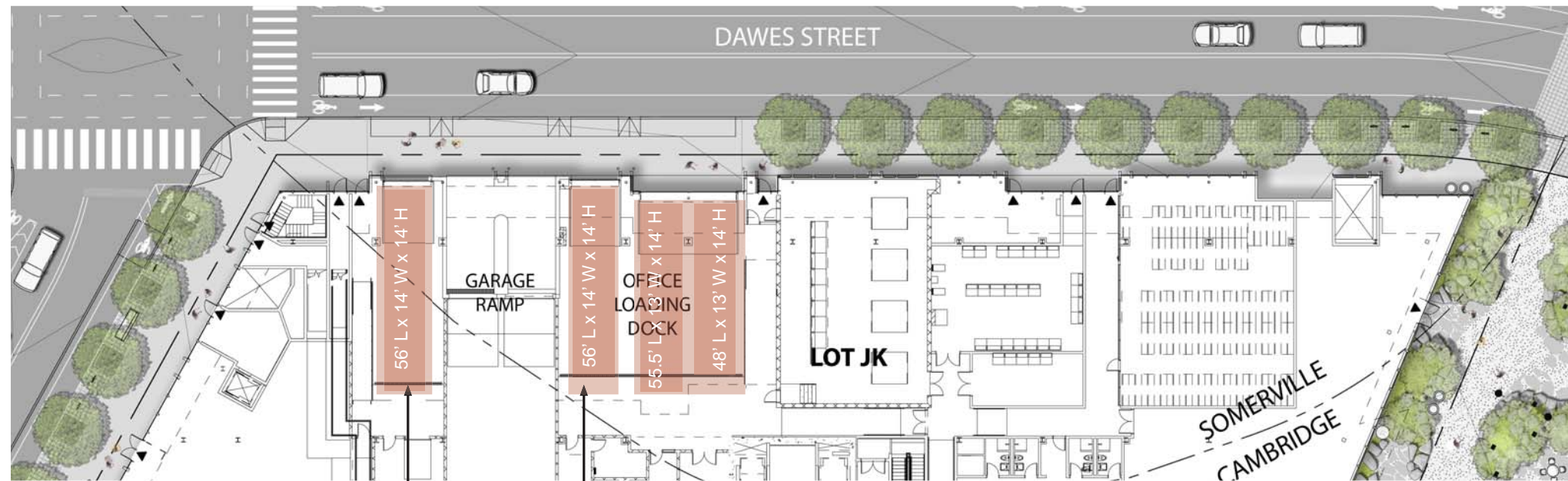
Section	Zoning Requirement	Compliance	Check
<p>CAMBRIDGE ZONING ORDINANCE Article 6.104.1</p> <p>Article 6.104.2</p>	<p>Long Term Bicycle Parking shall be provided within the building containing the use or uses that it is intended to serve, or within a structure whose pedestrian entrance is no more than two hundred feet (200') from a pedestrian entrance to such building.</p> <p>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.</p>	<p>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.</p> <p>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.</p> <p>(Refer to Diagram Below)</p>	



Zoning Compliance

Section	Zoning Requirement	Compliance	Check
CAMBRIDGE ZONING ORDINANCE Article 6.105.1 - e	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.	(6) Long-Term Bicycle Parking Spaces are sized to accommodate tandem bicycles or bicycles with trailers. (2) Short-Term Bicycle Parking Spaces are sized to accommodate tandem bicycles or bicycles with trailers.	
CAMBRIDGE ZONING ORDINANCE Article 6.107.2 Article 6.107.3	LONG TERM BICYCLE PARKING REQUIREMENTS: 0.30 / 1,000 GFA (OFFICE) 0.22 / 1,000 GFA (LABS) 0.10 / 1,000 GFA (RETAIL) SHORT TERM BICYCLE PARKING REQUIREMENTS: 0.06 / 1,000 GFA (OFFICE) 0.06 / 1,000 GFA (LABS) 1.00 / 1,000 GFA (RESTAURANT)	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: <u>60/40 Lab-Office:</u> 14,550 GFA (Rest.) = 3 Long Term 15 Short Term 214,427 GFA (R&D) = 47 Long Term 13 Short Term 142,951 GFA (Office) = 43 Long Term 9 Short Term TOTAL SPACES REQ'D = 91 Long Term 36 Short Term <u>100% Office:</u> 14,550 GFA (Rest.) = 3 Long Term 15 Short Term 357,378 GFA (Office) = 107 Long Term 21 Short Term TOTAL SPACES REQ'D = 110 Long Term 36 Short Term The current project provides 110 Long Term spaces and 44 Short Term spaces.	

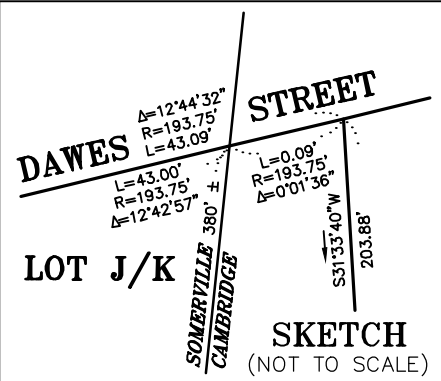
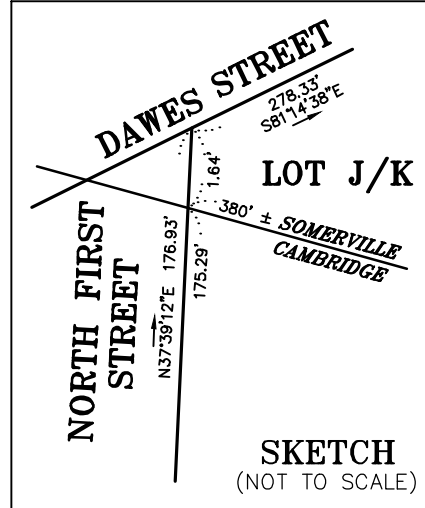
Section	Zoning Requirement	Compliance	Check
<p>CAMBRIDGE ZONING ORDINANCE Article 6.83</p>	<p>Minimum Number of Off Street Loading Bays to be as follows:</p> <p><u>OFFICE / R&D (Category F)</u></p> <p>(0) < 10,000 GFA (1) 10,000 GFA - 99,999 GFA (2) 100,000 GFA - 299,999 GFA (+1) Per additional 200,000 GFA</p> <p><u>RETAIL - RESTAURANT (Category C)</u></p> <p>(0) < 10,000 GFA (1) 10,000 GFA - 24,999 GFA (2) 25,000 GFA - 64,999 GFA</p>	<p>This project includes a total of 14,550 GFA of retail space and 357,378 GFA of Office/Lab space</p> <p><u>Loading requirements are as outlined below:</u> Retail = 1 TOTAL Lab / Office = 3 TOTAL</p> <p>This project will provide a total of 4 LOADING BAYS</p> <p>(Refer to Loading Dock Diagram below)</p>	
<p>CAMBRIDGE ZONING ORDINANCE Article 6.91</p>	<p>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.</p> <p>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.</p>	<p>The following sized loading docks are provided in this project:</p> <p>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</p> <p>(Refer to Loading Dock Diagram below)</p>	



(1) LOADING DOCK DEDICATED TO FOOD DELIVERIES FOR RESTAURANT TENANTS

(3) LOADING DOCKS FOR OFFICE/LAB TENANTS

Zoning Compliance



LOT J/K
 CAMBRIDGE= 42,461±S.F. or 0.975±AC.
 SOMERVILLE= 20,040±S.F. or 0.460±AC.
 TOTAL= 62,501±S.F. or 1.435±AC.

N/F
 MBTA
 13117/113
 24467/562
 PLAN No. 546 OF 1992

N/F
 DW NP PROPERTY, LLC
 65949/156
 PARCEL 1
 (PLAN No. 597 OF 2010)
 PARCEL 1-A
 (PLAN No. 937 OF 2012)

WEST BOULEVARD
 (VARIABLE WIDTH)

NORTH POINT BOULEVARD
 (VARIABLE WIDTH)

NORTH FIRST STREET
 (VARIABLE WIDTH)

LOT J/K

EAST STREET
 (VARIABLE WIDTH)

NORTH POINT BOULEVARD
 (VARIABLE WIDTH)

LEIGHTON STREET
 (VARIABLE WIDTH)

CHARLESTOWN AVENUE
 (PUBLIC - VARIABLE WIDTH) 10721/202 & 2815/145

N/F
 BEHRINGER HARVARD 22 WATER STREET PROJECT OWNER, LLC
 60804/121
 PLAN No. 963 OF 2012

N/F
 MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
 19402/34

N/F
 SIERRA + TANGO CONDOMINIUM (MASTER DEED)
 51285/331 LOT S
 (PLAN No. 742 OF 2005, PLAN No. 449 OF 2008)

N/F
 SIERRA + TANGO CONDOMINIUM (MASTER DEED)
 51285/331 LOT T
 (PLAN No. 742 OF 2005, PLAN No. 449 OF 2008)

N/F
 AVB MAPLE LEAF APARTMENTS L.P.
 62362/572
 (PLAN No. 325 OF 2002)
 (PLAN No. 90 OF 2008)

N/F
 DW NP PROPERTY, LLC
 65949/156
 LOT FP
 (PLAN No. 449 OF 2008)

N/F
 ARCHSTONE NORTH POINT II LLC
 56599/194
 (PLAN No. 90 OF 2008)

N/F
 ARCHSTONE NORTH POINT II LLC
 56009/206
 (PLAN No. 90 OF 2008)

N/F
 NORTH POINT APARTMENTS LIMITED PARTNERSHIP
 57238/245
 (PLAN No. 90 OF 2008)

N/F
 ARCHSTONE NORTH POINT II LLC
 56599/194
 (PLAN No. 90 OF 2008)

MSGR. O'BRIEN 1984 MDC HIGHWAY LAYOUT No. 6643 HIGHWAY
 (PUBLIC - VARIABLE WIDTH)

MSGR. O'BRIEN HIGHWAY
 1925 MDC HIGHWAY LAYOUT
 (PUBLIC - VARIABLE WIDTH)

NOTES:
 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.

PROPOSED LOTTING EXHIBIT PLAN

 Prepared by: Beals and Thomas, Inc.
 B+T Plan No. 208402P262A-001
 B+T Project No. 2084.02
 Scale: 1"=150'
 Date: September 27, 2016

PROPOSED LOT J/K
NORTHPOINT
CAMBRIDGE, MA &
SOMERVILLE, MA

