

# 325 Binney Street

Application for Special Permit

*Volume 1: Project Narrative*

Applicant: Alexandria Real Estate Equities, Inc.  
400 Technology Square, Suite 101  
Cambridge, MA 02139

Date: August 5, 2020





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Certified Transportation Impact Study
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Article 22 Green Building Report

# Project Team

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## OWNER / APPLICANT

**Alexandria Real Estate  
Equities, Inc.**  
**ARE-MA Region No. 61, LLC.**  
400 Technology Square, Suite 101  
Cambridge, MA 02139

## ARCHITECTURE AND URBAN DESIGN

**NBBJ LP**  
1 Beacon Street, Suite 5200  
Boston, MA 02108

## CIVIL ENGINEERING

**Bristol Engineering Advisors**  
11 Playstead Road, 1st Floor  
Boston, MA 02125

## TRANSPORTATION

**VHB**  
99 High Street, 10th Floor  
Boston, MA 02110-2354

## PARKING CONSULTANT

**Walker Consultants**  
20 Park Plaza, Suite 1202  
Boston, MA 02116

## LIGHTING DESIGN

**LAM Partners**  
84 Sherman Street  
Cambridge, MA 02140

## CONSTRUCTION MANAGER

**John Moriarty & Associates**  
3 Church Street, Suite 2  
Winchester, MA 01890

## MEP/FP ENGINEERING

**BR+A Consulting Engineers**  
10 Guest Street, 4th Floor  
Boston, MA 02135

## STRUCTURAL ENGINEERING / ENVELOPE CONSULTANT / SUSTAINABILITY

**Thornton Tomasetti**  
27 Wormwood Street, Suite 200  
Boston, MA 02210-1625

## GEOTECH

**Haley & Aldrich**  
465 Medford Street, Suite 2200  
Charlestown, MA 02129

## CODE CONSULTANT

**Code Red Consultants**  
154 Turnpike Road, Suite 200  
Southborough, MA 01772

## MATERIALS MANAGEMENT

**St. Onge**  
1400 Williams Road  
York, PA 17402

## SPEC WRITER

**Kalin Associates**  
1121 Washington Street  
Newton, MA 02465

## COUNSEL

**Adams & Rafferty**  
907 Massachusetts Ave  
Cambridge, MA 02139

## COUNSEL

**WilmerHale**  
60 State Street  
Boston, MA 02109

## LANDSCAPE ARCHITECTURE

**Halvorson Design Partnership**  
25 Kingston Street, 5th Floor  
Boston, MA 02111-2200

## DOOR HARDWARE

**Robbie McCabe**  
27 Main Street, PO Box 530  
Maynard, MA 01754

## WIND MODELING AND ANALYSIS

**RWDI Consulting Engineers**  
600 Southgate Drive  
Guelph, Ontario N1G 4P6

## ELEVATOR CONSULTANT

**Van Deusen & Associates**  
100 Summer Street, Suite 1600  
Boston, MA 02110

## VIBRATION AND ACOUSTICS

**Acentech**  
33 Moulton Street  
Cambridge, MA 02138





# ALEXANDRIA®

August 5, 2020

Via Email

City of Cambridge  
Office of the Planning Board City Hall Annex  
344 Broadway  
Cambridge, MA 02139

Re: 325 Binney Street Special Permit Application

Ladies and Gentlemen:

On behalf of Alexandria Real Estate Equities, Inc. (ARE), it is my pleasure to submit this request for review of the Special Permit Application for 325 Binney Street, Cambridge. In support of this request, ARE has enclosed the following materials for the Board's review:

- Vol 1: Special Permit narrative materials including the Dimensional Form, notarized Owners Certificate, Fee Schedule, certified Traffic Impact Study, certified Tree Study, and Green Building Report
- Vol 2: Special Permit graphic materials

These materials are submitted pursuant to the Article 19 and Section 20.1000 of the Cambridge Zoning Ordinance, specifically as they relate to the review of 325 Binney Street, Cambridge.

Please do not hesitate to contact me if you have any questions or if I can be of assistance in your review of any the enclosed materials.

On behalf of the entire Alexandria team, we appreciate your consideration of this exciting project and we look forward to working with you to pursue this unique development opportunity.

Sincerely yours,

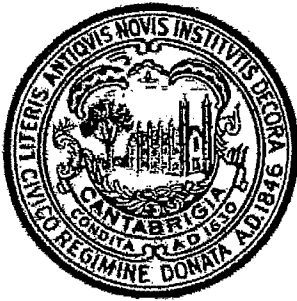
Thomas J. Andrews

Co-President & Regional Market Director-Greater Boston

An architectural rendering of a city street scene. The central focus is a large, modern building with a white facade and a prominent light blue glass entrance. To its left is a long, low building with a dark, textured facade. To its right is a curved building with a white facade and a red section. In the foreground, there is a large, open area with several rectangular structures. The background shows a residential area with smaller houses and a green lawn. The text "Application Forms" is overlaid on the central building.

# Application Forms





CITY OF CAMBRIDGE, MASSACHUSETTS

# PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

## SPECIAL PERMIT APPLICATION • COVER SHEET

In accordance with the requirements of the City of Cambridge Zoning Ordinance, the undersigned hereby petitions the Planning Board for one or more Special Permits for the premises indicated below.

Location of Premises: 325 Binney Street, Cambridge, MA  
Zoning District: Industry A-1 and Residence C-1  
Applicant Name: ARE-MA Region No. 61, LLC  
Applicant Address: c/o Alexandria Real Estate Equities, Inc. 400 Technology Sq, Suite 101, Cambridge, MA 02139  
Contact Information: (617) 551-8544      mlower@are.com      (617) 494-0015  
Telephone #      Email Address      Fax #

List all requested special permit(s) (with reference to zoning section numbers) below. *Note that the Applicant is responsible for seeking all necessary special permits for the project. A special permit cannot be granted if it is not specifically requested in the Application.*

Section 10.40 Special Permit  
Section 19.20 Project Review Special Permit  
Section 20.1000 Grand Junction Overlay District Special Permit

List all submitted materials (include document titles and volume numbers where applicable) below.

Ownership Certificate, Dimensional Form, Application, Supporting Statements;  
materials for the underlying Special Permits which are herein by reference: Volume 1:  
Project Narrative; Volume 2: Site Plan, Survey, Floor Plans, Elevations, Photographs,  
Landscape Plan, Graphics

Signature of Applicant: \_\_\_\_\_

*John J. Anderson*      Co-President

For the Planning Board, this application has been received by the Community Development Department (CDD) on the date specified below:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of CDD Staff

**DIMENSIONAL FORM**

**Project Address:** 325 Binney Street Cambridge, MA      **Application Date:** August 5, 2020

	<b>Existing</b>	<b>Allowed or Required (max/min)</b>	<b>Proposed</b>	<b>Permitted</b>
Lot Area (sq ft)	191,506 SF	5,000 SF	191,506 SF	
Lot Width (ft)	80' to 243'	50'	80' to 243'	
Total Gross Floor Area (sq ft)	0	402,721	370,462	
Residential Base	N/A	N/A	N/A	
Non-Residential Base	0	402,721	370,462	
Inclusionary Housing Bonus	N/A	N/A	N/A	
Total Floor Area Ratio	0	2.10	1.93	
Residential Base	N/A	N/A	N/A	
Non-Residential Base	0	2.10	1.93	
Inclusionary Housing Bonus	N/A	N/A	N/A	
Total Dwelling Units	0	0	0	
Base Units	N/A	N/A	N/A	
Inclusionary Bonus Units	N/A	N/A	N/A	
Base Lot Area / Unit (sq ft)	N/A	N/A	N/A	
Total Lot Area / Unit (sq ft)	N/A	N/A	N/A	
Building Height(s) (ft)	N/A	45', 60', 90'	40', 45', 60', 90'	
Front Yard Setback (Binney) (ft)	N/A	0'	9.5' to 74'	
Front Yard Setback (Fulkerson) (ft)	N/A	0'	2'-3" to 40'	
Side Yard Setback (ft)	N/A	25'	25.25' to 31'	
Rear Yard Setback (ft)	N/A	0'	53' to 628'	
Open Space (% of Lot Area)	5.2%	0	43.5%	
Private Open Space	N/A	0	N/A	
Permeable Open Space	9,900 SF	0	71,050 SF	
Other Open Space (Specify)	N/A	N/A	N/A	
Off-Street Parking Spaces	30	297	286	
Long-Term Bicycle Parking	0	82	88	
Short-Term Bicycle Parking	0	23	24	
Loading Bays	0	3	3	

**Use space below and/or attached pages for additional notes:**

The site has two (2) front yards and one (1) side yard. Binney Street (B:) and Fulkerson Street have a range.

**OWNERSHIP CERTIFICATE**

**Project Address:** 325 Binney Street, Cambridge, MA

**Application Date:** July 27, 2020

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: ARE-MA Region No. 61, LLC, a Delaware limited liability company  
at the following address: c/o Alexandria Real Estate Equities, Inc., 400 Technology Sq, Suite 101, Cambridge, MA 02139  
cc Corporate Secretary, 26 North Euclid Ave, Pasadena CA 91101  
to apply for a special permit for: Project Review and Grand Junction Overlay District  
on premises located at: 325 Binney Street, Cambridge  
for which the record title stands in the name of: ARE-MA Region No. 61, LLC, a Delaware limited liability company  
whose address is: c/o Alexandria Real Estate Equities, Inc., 400 Technology Sq, Suite 101, Cambridge, MA 02139  
cc Corporate Secretary, 26 North Euclid Ave, Pasadena CA 91101

by a deed duly recorded in the:

Registry of Deeds of County: Middlesex South Book: 69074 Page: 323

OR Registry District of the Land Court,  
Certificate No.: \_\_\_\_\_ Book: \_\_\_\_\_ Page: \_\_\_\_\_

Thomas J. Andrews, officer

Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

ARE-MA REGION NO. 61, LLC, a Delaware limited liability company  
By: ALEXANDRIA REAL ESTATE EQUITIES, L.P, a Delaware limited partnership, manager member  
By: ARE-QRS CORP., a Maryland corporation, general partner

To be completed by Notary Public:


Commonwealth of Massachusetts, County of Middlesex

The above named Thomas Andrews personally appeared before me,

on the month, day and year 7/27/20 and made oath that the above statement is true.

Notary: [Signature]

My Commission expires: \_\_\_\_\_

 **MICHAEL D. CARLI**  
Notary Public  
Commonwealth of Massachusetts  
My Commission Expires  
September 2, 2022

**FEE SCHEDULE**

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**Project Address:**325 Binney Street, Cambridge, MA **Application Date:** August 5, 2020

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The Applicant must provide the full fee (by check or money order) with the Special Permit Application. Depending on the nature of the proposed project and the types of Special Permit being sought, the required fee is the larger of the following amounts:

- If the proposed project includes the creation of new or substantially rehabilitated floor area, or a change of use subject to Section 19.20, the fee is ten cents (\$0.10) per square foot of total proposed Gross Floor Area.
- If a Flood Plain Special Permit is being sought as part of the Application, the fee is one thousand dollars (\$1,000.00), unless the amount determined above is greater.
- In any case, the minimum fee is one hundred fifty dollars (\$150.00).

**Fee Calculation**

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New or Substantially Rehabilitated Gross Floor Area (SF): 370,462      × \$0.10 = \$37,046

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Flood Plain Special Permit      Enter \$1,000.00 if applicable: NA

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Other Special Permit      Enter \$150.00 if no other fee is applicable: 150.00

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**TOTAL SPECIAL PERMIT FEE      Enter Larger of the Above Amounts: \$37,046**

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An architectural rendering of a city street scene. The central focus is a large, modern building with a white facade and a prominent cyan-colored section. To the left is a long, low building with a dark, textured facade. To the right is a multi-story building with a curved facade and a red section. In the foreground, there are several white, rectangular structures. The background shows a residential area with small houses and a green lawn. The text "Project Narrative" is overlaid on the central building, underlined.

# Project Narrative

# Project Overview

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## Introduction

This is an application by Alexandria Real Estate Equities, Inc. (the “Applicant”) for a Special Permit to authorize the construction of a 370,462 GFA building containing technical office use at 325 Binney Street (the “Project”). The Project includes the redevelopment of an approximately 4.4 acre site formerly occupied by the Metropolitan Pipe & Supply Company. The site is currently vacant.

The Applicant is seeking a Project Review Special Permit pursuant to Article 19.20 and a Special Permit, pursuant to the provisions of the Grand Junction Overlay District, Article 20.1000.

As set forth in the plans and related materials contained in this Application, the Project has been designed in accordance with the objectives, criteria and guidelines set forth in the Eastern Cambridge Planning Study (ECaPS) and Design Guidelines, and the recently adopted Grand Junction Overlay District.

## Project Description

In the context of Cambridge and Kendall Square, the Project site is quite unique. The new building will complete a very important axial view corridor from Main Street looking north down Galileo Galilei Way, demanding architecture that will sensitively complete this urban space, while becoming highly expressive of the innovation that happens in Kendall Square. It will be a future focused building, maximizing flexibility of use, wellness, and personal choice of circulation. As such, the architecture meets these demands with an inventive shifting façade, expressive of a building that is incorporating collaborative workspaces anchored to an atrium within that maximizes access to natural light.

The building design breaks the mold of the more conventional buildings along Binney Street with its massing acting as a fulcrum transitioning the neighborhood scales from east to west, and south to north. The unique shift in geometry reflecting the zoning height transition from south to north creates a natural middle zone along Fulkerson to place a serene secondary entrance that will include the design of a quiet garden of respite, as well as implement a warm material palette. The shift in material palette continues around the building to further refine the building’s focus on modulating scale and proportion for the surrounding neighborhood context.

The aspirational goals of the 325 Binney Street project to achieve exceptional energy performance aligns with the new energy code requirements for façade design. We are designing the façade to incorporate materials and a façade system that will achieve exceptional insulation values, while balancing the percentage of vision glass achievable to create a building with ample natural light for the tenants.

The façade incorporates a mixture of thin ultra-high performance concrete (UHPC) panels with custom texture and colored metal panels. The UHPC and metal panels will incorporate different ribbed profiles in contrast to smooth panels to achieve different effects with light and shadow.

The materials are seeking to achieve a balance of warmth in color that will work in harmony as a 'transition' massing from the innovation of Binney Street to the housing neighborhoods to the north, as well as the natural landscape surrounding the building. Warmer tones are used specifically at the main entrances to moderate the read and scale of the architecture.

The site is comprised of two parcels that are currently vacant. The south parcel, fronting Binney Street, is located in an Industry A-1 zone consisting of 130,671 square feet; adjacent to the north is a 60,835 square feet parcel in a Residence C-1. The Development Land Lot Area totals approximately 191,506 square feet. The Project use will be a technical office for research and development/laboratory (Section 4.34.f).

The Project will be located entirely in the Industry A-1 zone. The portion of the lot in the Residence C-1 zone will not contain any structures, but rather will house a geothermal well field and be maintained as Publicly Beneficial Open Space. The Project is 6-stories, measuring 90 feet in height in the southern portion (240 feet from Binney Street), and 4-stories measuring 60 feet in height in the northern portion of the site. A two-story, below-grade parking garage accommodates 286 vehicles. Loading will occur through an interior four bay loading dock at the rear northwest corner of the Project accessed from Fulkerson Street.

Long-term bicycle parking for 88 bicycles is provided in a dedicated bicycle room on the first floor, located directly off the west side of the building, abutting the railroad right-of-way. Short-term bicycle parking for 24 bicycles is provided near both the main entrance on Binney Street and the secondary entrance on Fulkerson Street.

The site parcels are bound by Binney Street to the south; Fulkerson Street, and a land parcel owned by others, to the east and north; and railroad tracks to the west. The area to the west of the rail line will be transformed into the Grand Junction Multi-Use Path. The Applicant is funding the design and construction of a 1,800 foot linear segment of the Grand Junction Multi-Use Path that extends between Binney Street and Cambridge Street. A well-landscaped edge will frame the Grand Junction Multi-Use Path and create a buffer between the Project and the Path — a pedestrian and cycle route that will serve the general public and provide a safe and pleasant route to and from the site via Binney Street, and the entire Kendall Square area.

# Compliance with Zoning

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## **20.1002 Purpose.**

The Project meets the requirements of this Section: it provides open space, recreational opportunities, a corridor for non-auto traffic in the City, as well as high quality development, and promote the goals of public health, safety, welfare and economic development.

## **20.1003 Applicability.**

The Project is within the Grand Junction Multi-Use Path Overlay District and shall be controlled by the regulations governing the Industry A-1 District, except as modified by the requirements of Section 20.1000, which shall apply in lieu of the regulations of the Industry A-1 District.

## **20.1004 Procedure.**

The Applicant is seeking a Special Permit under this Section 20.1000 and will satisfy the requirements of this section by conveyance to the City of certain land as described in Section 20.1005 as 'Grand Junction Land.'

## **20.1005 Required Conveyance of Grand Junction Land.**

In connection with Special Permit(s) granted pursuant to Section 20.1000, conveyance to the City, or its designee, of the following land for use on the Grand Junction Multi-Use Path, by fee or easement, shall be required under such Special Permit(s) or have already been made:

- a. Tax Parcel 37-88, comprising approximately 2,600 square feet, and known as 686 Cambridge Street
- b. A fourteen (14) foot wide strip of land along the east boundary of Tax Parcel 37-126, beginning at the north boundary of Tax Parcel 33-111 and continuing approximately 480 feet, and then the land between the east boundary of Tax Parcel 37-126 and the west boundary of Tax Parcel 37-88, continuing approximately fifty (50) feet to Cambridge Street, comprising a total of approximately 7,020 square feet
- c. A fourteen (14) foot wide strip of land along the east boundary of Tax Parcel 33-110 bordering the Grand Junction railroad right-of-way beginning at Binney Street and continuing approximately 511 feet to the south boundary of Tax Parcel 33-111 and Tax Parcel 33-111, comprising a total of 19,916 square feet.

## **20.1006 Other Matters — Grand Junction Land.**

### **20.1008 Permitted Uses.**

The Project uses — office, research lab, and amenity spaces — are within allowable uses of the base zoning.

### **20.1009 Dimensional Requirements**

#### **20.1009.1 Floor Area Ratio.**

The Project complies with the requirements that allow the Gross Floor Area of the Residence C-1 District to be included in the calculation of the allowable GFA of the Industry A-1 District per the following:



The maximum Floor Area Ratio for the Development Land located in the underlying Industry A-1 District (130,671 square feet) shall be 2.5.

Development Land in the underlying Residence C-1 District (60,835 square feet) may be included in the calculation of allowable Gross Floor Area on Development Land located in the Industry A-1 District (for Uses allowed therein) at the Floor Area Ratio allowed in the Industry A-1 District of 1.25, provided that: (i) future use of the Development Land in the Residence C-1 District shall be Publicly Beneficial Open Space, except the fences, berms, sound barriers, maneuvering space to support operations of the loading dock, and underground systems serving the Development Land that may be located in the underlying Residence C-1 District; and (ii) a 25 foot wide landscaped buffer shall be created along the western boundary of that portion of the Development Land located in the Residence C-1 District, abutting the railroad right-of-way.

Given the above zoning, the total allowable GFA on the Industry A-1 portion of the site is 326,677.5 square feet plus the GFA of 76,043.75 square feet from the Residence C-1 District portion the site. This results in a total of 402,721.25 square feet GFA allowable on the Industry A-1 portion of the site.

The portion of the lot zoned Residence C-1 will not contain any structures, however geothermal wells will be located below grade at this portion of the lot.

#### **20.1009.2 Height.**

The Project respects the four height zones stipulated in the zoning: the Binney Street Zone, the Transition Zone, the Rear Zone, and the Base Zoning Zone. The maximum height of the building in the Binney Street Zone is proposed at 90 feet. The maximum height of the portion of the building in the Transition Zone is 60 feet. The height of the Roof Top Mechanical Penthouse in the Binney Street Zone of the Grand Junction Overlay District is proposed to be twenty-five (25) feet and the height of the Roof Top Mechanical Penthouse in the Transition Zone of the Grand Junction Overlay District is proposed to be twenty (20) feet, compliant with the ordinance. There will be no structure in the Residence C-1 portion of the site.

#### **20.1009.3 Setbacks.**

The proposed building will not be constructed within twenty-five (25) feet of the western boundary of Tax Parcel 31-20 (the railroad right of way).

#### **20.1010 Parking Ratio.**

In accordance with this section, the proposed parking supply of 286 vehicles represents a ratio less than the required 0.8 spaces per 1,000 square feet.

#### **20.1011 Timing of Grand Junction Land Conveyance.**

The Grand Junction Land shall be conveyed to the City ninety (90) days after the Special Permit and approvals are granted.

#### **20.1012 Project Review.**

The Project seeks, under Article 19, Planning Board approval based upon the presentation herewith of physical design information in conceptual form. It will be subject to later design review and approval by the Planning Board and a finding that final design of such building(s) is consistent with Section 19.30, as applicable.

# Compliance with Criteria Specific to Special Permits Being Sought

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Based on the below, the Applicant respectfully requests the Planning Board grant the following Special Permits in favor of the Project:

- i. Special Permit under Section 10.40 Special Permits
- ii. Special Permit under Section 19.20 for a Project Review Special Permit consistent with the Design Objections of Section 19.30;
- iii. Special Permit under Section 20.100 Grand Junction Overlay District;

## Compliance with General Special Permit Criteria (Section 10.43)

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### **Article 10.43 Special Permit General Criteria**

Section 10.43 of the Ordinance contains criteria concerning the granting of a Special Permit.

Special permits will normally be granted where specific provisions of the Ordinance are met, except when particulars of the location or use, not generally true of the district or the uses permitted in it, would cause granting of such permit to be to the detriment of the public interest because:

**a. It appears that the requirements of the Ordinance cannot or will not be met.**

With the requested Special Permits, the Project will meet all other requirements of the Ordinance.

**b. Traffic generated or patterns of access or egress would cause congestion, hazard, or substantial change in established neighborhood character.**

The Applicant has completed a detailed analysis of the traffic impacts associated with the Project, as set forth in the Transportation Impact Study (the "TIS") prepared by Vanasse Hangen Brustlin, Inc. submitted to the City of Cambridge Traffic, Parking and Transportation Department ("TP&T") on June 1, 2020. The TIS was certified by the TP&T Department on July 31, 2020 as being accurate and complete in accordance with the City's guidelines for TIS and responds to the TP&T scoping determination. As requested by the City's Scoping Letter and TIS guidelines, a transit analysis has been conducted for the Project. The analysis reviewed existing Red Line and MBTA bus route operations and assessed the impacts of project-generated transit trips and future transit trips.

The Proponent will support a program of transportation demand management ("TDM") actions to reduce single occupancy vehicle ("SOV") automobile trips, encourage car/van-pooling, and expand the use of transit, biking and walking. The draft Parking Transportation Demand Management ("PTDM") was filed with the City's PTDM Officer on June 30, 2020. The applicant will work with the PTDM Officer on finalizing the plan in the coming weeks.

**c. The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would be adversely affected by the nature of the proposed use.**

Adjacent uses will not be adversely affected. The two directly adjacent uses are railroad tracks and a parking garage immediately to the west, and office and laboratory uses (301 Binney Street) to the east — the function of which will not be affected by the Project. To the south, Binney Park will be enhanced as the Project will frame and help activate this public open space.

**d. Nuisance or hazard would be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the citizens of the City.**

The Project will not create any nuisance or hazard to the detriment of the health, safety or welfare of the occupants of the Project or the citizens of Cambridge. The office, research lab, and amenity uses the Project includes are all well understood and regulated in the City of Cambridge.

**e. For other reasons, the proposed use would impair the integrity of the district or adjoining district, or otherwise derogate from the intent and purpose of this Ordinance.**

The Project will enhance, rather than impair, the integrity of the district within which it lies, as well as the adjoining districts, and is fully consistent with the intent and purpose of the Zoning Ordinance. The Project will help to activate Binney Park, bring life to the segment of Binney Street between Cardinal Medeiros Avenue and Galileo Galilei Way as employees and visitors access the building. The planted open space will also provide a visual amenity to the residential neighborhood to the northwest of site. The realization of the Grand Junction Multi-Use Pathway will greatly enhance the district's non-vehicular accessibility.

**f. The new use or building construction is inconsistent with the Urban Design Objectives set forth in Section 19.30.**

This Project is consistent with, and will significantly advance the implementation of, the Urban Design Objectives set forth in Section 19.30, as evidenced by the narrative discussion provided in the Urban Design Objective Narrative below.

An architectural rendering of an urban development project. The central focus is a large, modern building with a white facade and a grid of windows. To its left is a long, low-rise building with a dark, textured facade. To its right is a curved, multi-story building with a white facade and a red section. In the foreground, there is a large, open area with several rectangular structures. The background shows a residential area with smaller houses and a green field. The text "Urban Design Objectives Narrative" is overlaid on the central building.

# Urban Design Objectives Narrative

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# Urban Design Objectives Narrative

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## 19.30 Citywide Urban Design Objectives

**19.31 New projects should be responsive to the existing or anticipated pattern of development. Indicators include:**

***(1) Heights and setbacks provide suitable transition to abutting or nearby residential zoning districts that are generally developed to low scale residential uses.***

Careful attention was paid to building heights in the context of the adjoining residential district during the public hearings on the recently adopted Grand Junction Overlay District. A residential zoning district abuts the northwest portion of the site. With the issuance of a Special Permit by the Planning Board, the height within the Industry A-1 zone identified as the Binney Street Zone is increased to 90 feet for an extent of 240 feet from the Binney Street property line. A Transition Zone is imposed between the Binney Street Zone and a Rear Zone that permits a height of 60 feet. The limits of this Rear Zone extends 92 feet from the Residence C-1 zone to the above mentioned Transition Zone. The height in this zone is permitted to increase to 45 feet. Finally, the portion of the lot located in the Residence C-1 Zoning District is unchanged at 35 feet. Moreover, in the Residence C-1 zone there will be no building structures. As a result, the rear façade of the 60 foot portion of the building is a distance of 287 feet minimum from the closest residential home on Cornelius Way. There is an additional single story stepback in the height of the building in that location.

***(2) New buildings are designed and oriented on the lot so as to be consistent with the established streetscape on those streets on which the project lot abuts. Streetscape is meant to refer to the pattern of building setbacks and heights in relationship to public streets.***

The orientation of the Project is consistent with the established streetscape. The Project contributes to the framing of Binney Street and the proposed Binney Park. The Binney Street façade is proposed at 90 feet (115 feet to the top of the mechanical penthouse). The adjacent parking garage to the west is 66 feet high, while 300 Binney Street is comparable at 96 feet (111 feet to its parapet). Immediately to the east, 301 Binney Street is 66 feet high (88 feet to the penthouse).

Along Fulkerson Street to the north, the Project steps down to 60 feet (80 feet to the top of the penthouse) and is consistent with 320 Bent Street across Fulkerson Street at 64 feet in height (83 feet including the penthouse).

The setback of the Project is consistent with the context. The western portion of the Binney Street façade takes cues from the garage to the west, and is set back approximately 25.5 feet from the property line; the distance of the Project from the back of the curb line ranges from a minimum of 10 feet to a maximum of just over 84 feet at the ground floor.

The primary building entrance is on Binney Street. The building articulates this through an indentation in the building line. The eastern portion of the façade is set back to provide a landscaped plaza at the corner of Binney Street and Fulkerson Street. The plaza is set back from the Binney Street property line by distances ranging from approximately 50 to 90 feet. This area provides seating and planting, perceptually extending the proposed Binney Park across the street. Approaching from the west this setback also reveals the pedestrian/ground plane desire line northward into the neighborhood on the opposite corner.

The south façade and building massing pivots in the middle, creating a fulcrum — a stacked and shifting set of ‘jewel boxes’ — that demarcates a slight bend in the façade. This architectural move creates multiple stepbacks in the façade and enables the building to address both “Little” Binney Street and the view corridor down Galileo Galilei Way.

The predominant setback above the ground floor is approximately 38 feet from the curb line at the western portion of the Binney Street façade and then extends to a maximum of 90 feet at the eastern end of this façade, where the Project steps back to allow for a landscaped entrance plaza. The mechanical penthouse at the South has nine foot setbacks on portions of the north, south, east, and west.

The building is set back from the Fulkerson Street property line by between 2 feet and 11 feet from the curb line which allows for a furnishing zone along the back of street curb with street trees at 40 feet on center and a cast-in-place concrete public sidewalk ranging from 6 to 11 feet clear width.

**(3) *In mixed-use projects, uses are to be located carefully to respect the context, e.g. retail should front onto a street, new housing should relate to any adjacent existing residential use, etc.***

The Project is primarily dedicated to technical office use, with the building entrance and lobby located on the ground floor fronting Binney Street. The remaining ground floor space on Binney Street and Fulkerson Street will include an abundance of glass to allow for the much of the ground floor activity to be visible to the street. Access to the bike room is on the ground floor along the western edge of the building, closest to the Grand Junction Multi-Use Path.

**(4) *Where relevant, historical context are respected, e.g. special consideration should be given to buildings on the site or neighboring buildings that are preferably preserved.***

Nearly all of the structures in the immediate vicinity were constructed within the past 10 to 40 years. The exception is One Kendall Square Building 1400, built in the early 1900s.

**19.32 Development should be pedestrian and bicycle-friendly, with a positive relationship to its surroundings. Indicators include:**

***(1) Ground floors, particularly where they face public streets, public parks, and publicly accessible pathways, consist of spaces that are actively inhabited by people, such as retail stores, consumer service businesses and restaurants where they are allowed, or general office, educational or residential uses and building lobbies. Windows and doors that normally serve such inhabited spaces are encouraged to be a prominent aspect of the relevant building facades. Where a mix of activities are accommodated in a building, the more active uses are encouraged facing public streets, parks and pathways. In commercial districts, such active space consists of retail and consumer service stores and building lobbies that are oriented toward the street and encourage pedestrian activity on the sidewalk. However, in all cases such ground floor spaces should be occupied by uses (a) permitted in the zoning district within which the building is located, (b) consistent with the general character of the environment within which the structure is located, and (c) compatible with the principal use for which the building is designed.***

A canopy extends the full length of the Binney Street façade delineating the most public-facing occupation of the Project — namely the main entrance and lobby. These uses, permitted under the existing zoning, occupy much of the ground floor. The canopy steps up to frame the second floor where continued transparency provides a welcoming façade to the public.

The double-height façade turns the corner at Fulkerson Street. The Fulkerson façade is glazed for the full length of the ground floor. Ground floor uses here include the continuation of tenant space and a secondary entrance lobby.

The main building entrance is on Binney Street. There is ample space provided on the adjacent sidewalk and landscaped areas with integrated seating, free-standing furniture and pedestrian-scaled lighting to encourage activity leading to the building entrance. A secondary entrance is provided on Fulkerson Street. This entrance is accentuated by a forecourt that provides a landscaped “outdoor room” for the public, employees, and building visitors to enjoy. This space will also include planting, shade, integrated furniture, and pedestrian-scaled lighting. Street trees will be planted along the west side of Fulkerson Street (on the east side of the building), ensuring an enhanced, welcoming pedestrian streetscape along a stretch that currently has no trees.

A dedicated bicycle parking room for 88 bicycles is provided on the ground floor. The entrance to this bicycle facility, marked by a canopy, is provided along the western elevation of the building.

**(2) Covered parking on the lower floors of a building and on-grade open parking, particularly where located in front of a building, is discouraged where a building faces a public street or public park, and publicly accessible pathways.**

The Project will include approximately 286 parking spaces within a two-story parking facility below the Project. Vehicular access to the garage facility is off Binney Street, at the far western end of the Project. The opening is incorporated into the façade through a continuous canopy that unifies this elevation. The canopy geometry of the ground floor and double-height glazed portion of the façade, including the main pedestrian entrance, all serve to minimize the visual impact of the parking entrance. The proposed garage door will be consistent with the materiality and detailing of the building façade ensuring that when closed, the majority of the time, it does not read like a garage entry.

**(3) Ground floors should be generally 25-50% transparent. The greatest amounts of glass would be expected for retail uses with lesser amounts for office, institutional or residential use.**

Along Binney Street, the façade of the ground floor is glazed for approximately 80% of its length. A canopy extends the full length of this façade delineating the most public-facing elements — namely the entrance, lobby, and tenant space. Where these elements occur, the space becomes double-height and is glazed for the full two-story height. This area is framed by the canopy, signaling openness to the street and the park to the south.

The glazed double-height façade turns the corner at Fulkerson Street. The Fulkerson Street façade is glazed for the full length of the ground floor. Ground floor uses here include the continuation of the active tenant space and a second entrance lobby.

**(4) Entries to buildings are located so as to ensure safe pedestrian movement across streets, encourage walking as a preferred mode of travel within the city and to encourage the use of public transit for employment and other trips. Relating building entries as directly as possible to crosswalks and to pathways that lead to bus stops and transit stations is encouraged; siting buildings on a lot and developing site plans that reinforce expected pedestrian pathways over the lot and through the district is also encouraged.**

The Project is within walking distance of five MBTA bus lines as well as the subway. The Project is 0.5 miles, approximately a 10 minute walk, from the Kendall/MIT Red Line Station and 0.8 miles, approximately a 17 minute walk, from the Lechmere Green Line Station.

The main entrance to the Project is on Binney Street. A crosswalk exists at the intersection of Binney and Fulkerson Streets. An additional mid-block crossing is proposed adjacent to where the future Grand Junction Multi-Use Path will cross Binney Street, ensuring that pedestrians and cyclists crossing desire lines are not interrupted.

The Department of Public Work (“DPW”), Traffic, Parking, & Transportation (“TP&T”), and Community Development Department (“CDD”), are in the process of redesigning Binney Street and Galileo Galilei Way. The streetscape redesign includes changes to the “Little” Binney Street roadway, immediately adjacent to the Project. Currently, there are three travel lanes provided on “Little” Binney Street with sidewalks along the north and south curbs. The proposed condition retains the three travel lanes and sidewalks on both curbs, and adds a dedicated pick-up/drop-off zone along the northern curb.



The Applicant is committed to setting back the building 20 feet (+/-) to allow for this expanded cross section to be accommodated. The dedicated pick-up/drop-off zone in front of the Project and within the Project's property, is expected to serve transportation network companies (TNCs), as well as shuttle buses operated by the Applicant (Alexandria Express Shuttle). For comfort and safety of pedestrians and cyclists, five foot wide cycle tracks are proposed in each direction with a "buffer" between the cyclists and vehicles of three to five feet (three foot southern buffer and five foot northern buffer at dedicated pick-up/drop-off zone). On the north side of the street, the pedestrian area would widen in the vicinity of the entrance and at the corner plaza to allow for more pedestrian circulation space.

**(5) Pedestrians and bicyclists are able to access the site safely and conveniently; bicyclists should have, secure storage facilities conveniently located on-site and out of the weather. If bicycle parking is provided in a garage, special attention must be paid to providing safe access to the facilities from the outside.**

The Project is immediately adjacent to the future Grand Junction Multi-Use Path. The Applicant is funding \$11.25M towards the realization of the portion of the pedestrian/cyclist connection between Binney Street and Cambridge Street to achieve a welcoming, safe, and beautiful alternative separated from vehicles. It is expected that, in the long-term, the Grand Junction Multi-Use Path will provide a continuous off-street pathway from the Charles River to the Somerville border that will serve residents, school children, workers and visitors on foot or bicycle. Ultimately, the Path will connect south/southwest with the proposed West Station, Beacon Yards and Dudley White Bike Path Connection traversing MIT. For people traveling to or from the north, the Path will connect to Cambridge Street and connect either northwest linking to the Community Path (Minuteman Bikeway connection) in Somerville or eastward to North Station and Paul Dudley White Bike Path. This provides a substantial catchment area for anyone accessing the Project by bicycle or on foot.

Cyclists will also enjoy improved buffered, off-street safety as dedicated cycle lanes are introduced to Binney Street.

A bicycle parking storage room for 88 bicycles is provided on the ground floor of the Project. A dedicated entrance to this facility is provided along the western side of the building, having a direct and logical relationship with the Grand Junction Multi-Use Path which runs parallel to this façade. Short-term bicycle parking for visitors to the Project is provided both on Binney Street, near the main entrance, and near the secondary Fulkerson Street entrance, totaling 24 spaces. The long-term and short-term bicycle parking complies with the City of Cambridge's Bicycle Parking Zoning Ordinance requirements.

The Applicant is committed to installing a 19-bike Bluebike Station on the western side of the site, proximate to the Grand Junction Multi-use Path.

**(6) Alternate means of serving this policy objective 19.32 through special building design, siting, or site design can be anticipated where the building form or use is distinctive such as freestanding parking structures, large institutional buildings such as churches and auditoriums, freestanding service buildings, power plants, athletic facilities, manufacturing plants, etc.**

Alternative means of serving these objectives are not necessary.

**19.33 The building and site design should mitigate adverse environmental impacts of a development upon its neighbors. Indicators include:**

**(1) Mechanical equipment that is carefully designed, well organized or visually screened from its surroundings and is acoustically buffered from neighbors. Consideration is given to the size, complexity and appearance of the equipment, its proximity to residential areas, and its impact on the existing streetscape and skyline. The extent to which screening can bring order, lessen negative visual impacts, and enhance the overall appearance of the equipment should be taken into account. More specifically:**

**(a) Reasonable attempts have been made to avoid exposing rooftop mechanical equipment to public view from city streets. Among the techniques that might be considered are the inclusion of screens or a parapet around the roof of the building to shield low ducts and other equipment on the roof from view.**

Most of the building's mechanical and electrical equipment — including air handling units, cooling towers, boilers, life safety and standby power generators — is located inside the enclosed penthouses. There are some additional air handling units located in the basement.

The penthouses are enclosed, which will help provide acoustical buffering to mitigate the noise transmission to adjacent buildings and visual impact to the neighbors. The noise emissions control features are planned to meet the most stringent nighttime noise requirements for full operation.

Primary exhaust fans are located on both penthouse roofs in an architecturally organized manner. Due to the need to have access to free flow of air, the exhaust stacks will be installed above the penthouse roofs. Any additional or supplemental equipment that needs to be provided to meet tenant requirements will be located within the enclosed penthouses, screened from view.

The atrium skylight will be exhausted by two fans located in the southern penthouse. Stacks from these fans will extend above the penthouse roof, similar to the exhaust fans described above.

**(b) Treatment of the mechanical equipment (including design and massing of screening devices as well as exposed mechanical elements) that relates well to the overall design, massing, scale and character of the building.**

The design and cladding materials of the penthouse and screen walls are carefully composed to integrate with the building massing and aesthetics while at times stepping back from the main façade plane to minimize the perception of the penthouse increasing the building height. The maximum enclosed penthouse height on the southern portion of the building is 25 feet and the height on the northern portion of the building is 20 feet.

**(c) Placement of mechanical equipment at locations on the site other than on the rooftop (such as in the basement), which reduces the bulk of elements located on the roof; however, at-grade locations external to the building should not be viewed as desirable alternatives.**

The Project does not include any mechanical equipment placed at-grade external to the building.

**(d) Tall elements, such as chimneys and air exhaust stacks, which are typically carried above screening devices for functioning reasons, are carefully designed as features of the building, thus creating interest on the skyline.**

As described above, there are exhaust air stacks on the two main portions of the Project. For health and safety reasons, these are required to have clearance above the enclosed mechanical penthouse, where they will be visually screened from view from the street and sidewalks below.

**(e) All aspects of the mechanical equipment have been designed with attention to their visual impact on adjacent areas, particularly with regard to residential neighborhoods and views and vistas.**

Please refer to (b) and (d) above.

**(2) Trash that is handled to avoid impacts (noise, odor, and visual quality) on neighbors, e.g. the use of trash compactors or containment of all trash storage and handling within a building is encouraged.**

There is one compactor located within the enclosed loading dock area, servicing office and lab uses.

**(3) Loading docks that are located and designed to minimize impacts (visual and operational) on neighbors.**

The loading and service needs of the Project will be accommodated at-grade within a dedicated, enclosed loading dock with three loading bays, internal to the building and incorporated into the north elevation. A dedicated truck maneuvering area within the site will support the dock access. The loading dock will be accessed via a curb cut off Fulkerson Street. There will be extensive landscape buffering provided in the area between the docks and the residential neighborhood.

Service and delivery trucks will be directed to access the site using only designated truck routes as outlined by the City of Cambridge. Regionally, trucks will use O'Brien Highway (Route 28), Massachusetts Avenue and the Longfellow Bridge while avoiding Memorial Drive (Route 3). Locally, trucks will use Binney Street and Galileo Galilei Way to access the Site with connections from Land Boulevard and Vassar Street. Fulkerson Street has a limited truck restriction that will be observed, similarly to the truck restrictions along Cardinal Medeiros Avenue. The proposed project has an estimated truck generation of approximately 24-30 individual deliveries per day. These truck trip estimates include a breakdown of smaller van and pickup truck deliveries such as food catering, USPS, UPS, and FedEx vs. larger delivery vehicles (SU-30 size and up). Regardless of size, deliveries will be encouraged to use the loading dock area.

When closed, the overhead doors will conceal the loading docks.

**(4) Stormwater Best Management Practices and other measures to minimize runoff and improve water quality are implemented.**

The Massachusetts Stormwater Standards will be reviewed and incorporated into the Project.

The drainage design and stormwater management plan address both the quality and flow rates of stormwater runoff from the site and conforms to the standards outlined by the Massachusetts Department of Environmental Protection Stormwater Management Policy and the City of Cambridge Department of Public Works Stormwater Management Guidelines.

The proposed stormwater management system will consist of roof top detention, infiltration systems, deep sump catch basins and manholes, area and trench drains and piping.

**(5) Landscaped areas and required Green Area Open Space, in addition to serving as visual amenities, are employed to reduce the rate and volume of stormwater runoff compared to predevelopment conditions.**

Site redevelopment will include approximately 56,450 square feet (1.3 acres) of a grassed (pervious) geothermal well field. This represents a 30% reduction of impervious area. Impervious areas will include the roof, driveway, walkways and other hardscaped outdoor areas.

The actual phosphorus removal will be based on the infiltration rate(s) of site soils. Testing scheduled during the upcoming geo/environmental soils investigation by Haley & Aldrich will determine soil infiltration rates throughout the site.

**(6) The structure is designed and sited to minimize shadow impacts on neighboring lots, especially shadows that would have a significant impact on the use and enjoyment of adjacent open space and shadows that might impact the operation of a Registered Solar Energy System as defined in Section 22.60 of this Zoning Ordinance.**

The Project is bordered by a parking garage to the west and lab/office building to the east. Shadows cast to the north will fall on the loading area of the Project. A shadow analysis indicates shadows from the Project will not adversely impact the use and enjoyment of adjacent open spaces.

**(7) Changes in grade across the lot are designed in ways that minimize the need for structural retaining walls close to property lines.**

The Project design minimizes grade changes and the need for structural retaining walls close to lot lines.

**(8) Building scale and wall treatment, including the provision of windows, are sensitive to existing residential uses on adjacent lots.**

The Project is designed with consideration given to the pedestrian scale along Binney Street as well as the architecture of surrounding uses. Window locations and wall treatments were selected with consideration to the existing adjacent office/R&D buildings and the tenants to the east of the Project. Similarly, window and wall treatments are considerate of the residences to the northwest of the Project. To this end, view projections were conducted to ascertain how the Project would impact the views of the residents.

**(9) Outdoor lighting is designed to provide minimum lighting and necessary to ensure adequate safety, night vision, and comfort, while minimizing light pollution.**

Site lighting is comprised of two primary components: City of Cambridge standard pole mounted fixture and pedestrian scale pathway lighting in the corner plaza and Fulkerson courtyard. New City of Cambridge standard pendant pole mounted fixtures shall be placed along the project frontage along Binney and Fulkerson Street. In addition, the primary walkway from Binney Street to the bike storage room along the western façade shall have City of Cambridge standard pedestrian pole mounted fixtures placed along the pathway. The pathway lighting at the corner plaza and Fulkerson courtyard shall be accomplished through the use of LED strip downlights mounted to the underside edge of benches, wall, and tables to create visible walkways through the spaces but to also create a publicly welcoming pedestrian environment between the public sidewalk and building façade. There will be no decorative exterior lighting illuminating the building or the landscape. The lighting levels during the off hours at night are primarily for safety. The interior lighting will be on timers and sensors and will dim and/or turn off when the space is unoccupied.

**(10) The creation of a Tree Protection Plan that identifies important trees on the site, encourages their protection, or provides for adequate replacement of trees lost to development on the site.**

Currently, the site contains a minimal number of Significant Trees (8" or greater DBH) located in the northern most portion of the site. The Significant Trees will be protected during construction and over 60 new shade and ornamental trees will be planted along the western landscape buffer, Fulkerson Street, and in clusters throughout the Project. The Project's Tree Study has been certified by the City Arborist.

**19.34 Projects should not overburden the City infrastructure services, including neighborhood roads, city water supply system, and sewer system. Indicators include:**

**(1) The building and site design are designed to make use of water-conserving plumbing and minimize the amount of stormwater run-off through the use of best management practices for stormwater management.**

Per #4 above, under Section 19.33: the proposed stormwater management system will consist of roof top detention, infiltration systems, deep sump catch basins and manholes, area and trench drains and piping. There will be a 30% reduction of impervious area. Impervious areas will include the roof, driveway, walkways and other hardscaped outdoor areas.

The on-site stormwater system will meet four key requirements:

1. Water Quality — Capture and Infiltrate the first inch of runoff to reduce phosphorus to the Charles River and treat water to remove approximately 80% of total suspended solids.
2. Reduction in Flow — Reduce the discharge rate to the City system equal to the 2-year storm event.
3. Infiltration/Inflow Removal — Infiltrate 1.72 inches of stormwater to meet the State's Infiltration/Inflow requirement (discussed in further detail in the Sanitary Sewer section).
4. State Standards — Comply with Massachusetts' Stormwater Standards.

**(2) The capacity and condition of drinking water and wastewater infrastructure systems are shown to be adequate, or the steps necessary to bring them up to an acceptable level are identified.**

The capacity of the existing water supply was reviewed by Cambridge Water Department and appears adequate. Hydrant flow tests will be performed in the near future to determine the pressure in the main against the water demand of the building. Based on the preliminary program and using Title V flows, the building will demand approximately 35,000 gallons per day of water.

The proposed connection and new lateral valving was shared and discussed with the Water Department. Specific details of the connection, valving and water demand will continue to be coordinated with the Water Department as the design progresses.

Phosphorus removal will be based on the infiltration rate(s) of site soils. Testing scheduled during the upcoming geo/environmental soils investigation by Haley & Aldrich will determine soil infiltration rates throughout the site. Tests performed in sand at approximately 6-8 feet below grade resulted in hydraulic conductivities of 20 inches/hour. Once the infiltration systems are full, water will be routed through a series of pipes and manholes and will discharge to manhole DMH#7 of the City's newly installed 9AB drain system. This new 36" drain ultimately discharges to the Charles River via the Broad Canal.

The Project complies with the requirements of the Massachusetts Department of Environmental Protection. With a net new flow of 32,000 gallons, the Project will be required to remove approximately 128,000 gallons of I/I. The Applicant has implemented an I/I removal strategy on several adjacent projects over the past several years to meet the requirement for the Project.

**(3) Buildings are designed to use natural resources and energy resources efficiently in construction, maintenance, and long-term operation of the building, including supporting mechanical systems that reduce the need for mechanical equipment generally and its location on the roof of a building specifically. The buildings are sited on the lot to allow construction on adjacent lots to do the same.**

The Project will deliver best in class performance, following — and often going beyond — the Applicant's Sustainability Guidelines for Design and Construction. These include minimizing energy, operational and embodied carbon, and water footprint, while providing exceptional value to the tenant by promoting health, well-being and productivity. The building is also designed for resilience and flexibility, anticipating the challenges associated with climate change and the demands of various types of research and high-tech tenants.

The project is pursuing Leadership in Energy and Environmental Design (LEED) and Fitwel certifications, and will meet all the preconditions for WELL certification. A description of the sustainable design approach, and progress made to date, for the Project is included in the Sustainability Narrative and LEED Checklist submitted with this Application.

Flexible mechanical systems will be highly efficient. Large air handlers supply industry standard ventilation and make-up air rates throughout the building. Fan coil units and/or chilled beams will be applied to all zones, largely decoupling the air handlers from the heating and cooling demands, and insulated, minimizing impact on the water, electrical, and gas service. Ground source cooling, geothermal wells, reduces cooling tower demand and thus reduces energy use. The building is designed to be solar-ready.

**19.35 New construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically. Indicators include:**

**(1) *New educational institutional construction that is focused within the existing campuses.***

The Project does not anticipate educational or institutional uses.

**(2) *Where institutional construction occurs in commercial areas, retail, consumer service enterprises, and other uses that are accessible to the general public are provided at the ground (or lower) floors of buildings. Where such uses are not suitable for programmatic reasons, institutional uses that encourage active pedestrian traffic to and from the site.***

Not applicable.

**(3) *In large, multiple-building non-institutional developments, a mix of uses, including publicly accessible retail activity, is provided where such uses are permitted and where the mix of uses extends the period of time the area remains active throughout the day.***

Nearly all of the buildings developed by ARE along Binney Street in the adjoining PUD -4C District contain retail uses. In this location, however, the building is adjacent to the One Kendall Square where a variety of retail uses are already located. Employees and building occupants at 325 Binney Street are expected to provide customer demand and patronage for those establishments. The ground floor along Binney and Fulkerson Streets Street has been designed with a high percentage of transparency to provide an inviting pedestrian experience.

**(4) *Historic structures and environments are preserved.***

Construction of the Project will not result in the demolition of existing structures.

**(5) *Preservation or provision of facilities for startup companies and appropriately scaled manufacturing activities that provide a wide diversity of employment paths for Cambridge residents as a component of the development; however, activities heavily dependent on trucking for supply and distribution are not encouraged.***

The Project will provide additional R&D employment opportunities for existing and future residents and professionals frequenting the district for business and recreational purposes alike. The Project will complement other commercial uses within the District and will not require frequent heavy truck access for supply and distribution purposes.

**19.36 Expansion of the inventory of housing in the city is encouraged.**

**Indicators include:**

**(1) *Housing is a component of any large, multiple building commercial development. Where such development abuts residential zoning districts substantially developed to low-scale residential uses, placement of housing within the development such that it acts as a transition/buffer between uses within and without the development.***

The Project does not include any housing.

**(2) Where housing is constructed, providing affordable units exceeding that mandated by the Ordinance. Targeting larger family-sized middle-income units is encouraged.**

Not applicable.

**19.37 Enhancement and expansion of open space amenities in the city should be incorporated into new development in the city. Indicators include:**

**(1) On large-parcel commercial developments, publicly beneficial open space is provided.**

The northern portion of the site located in the Residence C Zoning District will be developed as Publicly Beneficial Open Space. The space will be comprised of two distinct areas, both of which will be well organized and visually welcoming with a diverse landscape. At the northern end of the site, a path will lead visitors and community members along a meandering walking path through a variety of diverse plantings. Public access into this portion of the site will be accommodated through a pedestrian entry on Fulkerson Street. This area will provide a quiet respite for passive activities during daylight hours. The balance of the space will consist of an urban wild meadow and provide a much needed sense of openness for the adjoining residential neighborhood on the opposite side of the future Grand Junction Pathway. The area will contain perennial grasses and wildflowers, promoting a pollinator habitat with select hardwood shade trees. Given the narrowness and dead end nature of this area, it will not be publicly accessible.

Alexandria provided a Letter of Commitment to the City Council at the time of the adoption of the Grand Junction Pathway Overlay District zoning petition stating its intention to purchase the Eversource site from Eversource at the price they paid to acquire it. As set forth in the Commitment Letter, upon acquiring the property, Alexandria will convey the land to the City.

**(2) Open space facilities are designed to enhance or expand existing facilities or to expand networks of pedestrian and bicycle movement within the vicinity of the development.**

Per 19.32 (5) above — The Project is adjacent to the future Grand Junction Multi-Use Path. The Applicant is making a substantial contribution towards the realization of this route to help achieve a welcoming, safe, and beautiful alternative to cycling on the City's streets. It is expected that, in the long-term, the Grand Junction Multi-Use Path will become a key route connecting Somerville, Cambridge, and Boston for both cyclists and pedestrians. Ultimately, the Path will connect the future West Station, Beacon Yards, and Dudley White Bike Path Connection traversing MIT. For people traveling to, or from, the north, the Path will connect to Cambridge Street and facilitate links to the northwest to the Community Path (Minuteman Bikeway connection) or to North Station and Paul Dudley White Bike Path to the east. This provides a considerable catchment area for anyone accessing the Project by bicycle or on foot. In addition, pedestrians coming to or leaving the building from the south will have the option to cut through Binney Park and then cross Binney Street either at the crosswalk at Fulkerson and Binney Streets or at the proposed mid-block crossing parallel to the rail line — namely, the Grand Junction Multi-Use Path. Cyclists will also enjoy improved bicycle facilities along "Little" Binney Street in the form of cycle tracks.



**(3) A wider range of open space activities than presently found in the abutting area is provided.**

Currently, there are no open space activities provided on the site or adjacent properties. In addition to the large northern parcel of Publicly Beneficial Open Space, which includes walking paths and an urban meadow, the Project includes a landscaped plaza at the corner of Binney and Fulkerson Streets and an open space at the building entrance on Fulkerson Street. These two spaces include free standing and integrated seating; robust and richly textured plantings; and a welcoming sense of scale and safety. These spaces are conceived to create a series of small outdoor rooms which compliment the larger Binney Park to the south, the urban meadow and walking paths to the north, and add to the network of artistic open spaces along Binney Street.

**Consistency with Envision Cambridge and City Planning**

The Project is located within a Transition Area, as identified in Envision Cambridge (Existing District Classification Map, page 43).

The Project will capitalize on the fact that it is well-served by public transit as well as existing and planned bicycle infrastructure. In particular, the Project will support and contribute to the further implementation of the Grand Junction Multi-Use Path, which currently runs from Main Street to Broadway next to Binney Street.

Most importantly, the Applicant has assembled the land and is making a significant financial and land contribution to the realization of this Path, between Binney and Cambridge streets, as a well-landscaped, safe and welcoming bicycle and pedestrian route. The Grand Junction Multi-Use Path will provide a high-quality non-vehicular greenway link. It is a key part of a regional shared-use path network to alleviate cut-through traffic in Cambridge.

The Project fronts and frames the soon-to-be realized Binney Park. The Park is immediately adjacent to the Grand Junction Multi-Use Path, playing a role in the open space network connecting commercial corridors, secondary routes, and neighborhood streets. The landscaped area to the north of the Project will contribute to the green space provision in the district, providing a visual amenity to both the abutting neighborhood and for pedestrians and cyclists using the Grand Junction Multi-Use Path.

The Project context contains a variety of buildings and uses, some of which will likely change over time. More specifically, while the residential neighborhood to the northwest is stable, the industrial uses in low-rise buildings along Binney Street continue to transform to office, technology, and laboratory uses. The Project uses will include technical office space on a site that was previously occupied by an industrial use that generated truck traffic.

The Project effects a transition between the lower-scale residential neighborhood and the larger-scale commercial district. The building massing steps down in height towards the northwest residential area. A buffer will also be created in the form of a landscaped area that lies to the north of the Project, adjacent to the existing residential area.

The prevailing pattern of adjacent districts is respected through the location of the main entrance on Binney Street, building scale and setbacks.

## **Consistency with Eastern Cambridge Rezoning and Eastern Cambridge Design Guidelines**

As noted above in reference to Envision Cambridge, the Project lies within a district identified as a Transition Area. This is reiterated in the context of the Eastern Cambridge Design Guidelines (Eastern Cambridge Planning Study, page 9).

Below are key transportation action items referenced in the Envision document:

### **Climate and Environment Plan**

The document outlines climate and environment action items to reduce the transportation related greenhouse gas emissions. The Applicant is committed to following the City's initiatives to promote a reduction in emissions due to vehicles. The Project will include spaces for electric vehicle parking and promote a shift to electric/clean emissions vehicles and other sustainable forms of transportation.

### **Mobility Plan**

The Mobility Plan chapter of the "Envision Cambridge Plan" outlines key mobility goals to promote safe, reliable, efficient, and sustainable modes of transportation. The Project will be consistent with the Mobility plan by:

- Providing access to sustainable transportation infrastructure including bicycle infrastructure through and around the Site, and wide sidewalks.
- Including a robust TDM plan that will promote the use of transit, walking, and biking by enhancing and expanding safe infrastructure for all users and will discourage single occupancy vehicle trips.
- Preparing the transportation infrastructure (including mechanical and electrical equipment within the buildings) within the site to be resilient to periodic flooding due to the effects associated with climate change.
- Better managing freight and delivery movement within the site in an efficient and safe manner.
- Enhancing public information on how to safely and efficiently move within and around the site by displaying real-time information to promote the use of transit, bike share, and car share services and by implementing a comprehensive wayfinding plan.
- Preparing for the introduction of autonomous vehicles and motorized micro mobility devices.
- Creating space for flexible curb regulations to accommodate loading, bike and scooter parking, shared ride or autonomous vehicle loading in the future.

### **Urban Form Plan**

The document outlines an urban form plan which balances the preservation of the City's urban character and growth to accommodate new residents and activities with an equitable distribution throughout the City. The Project will be consistent with the Urban Form Plan by designing and implementing clear wayfinding within the site, reducing the total amount of parking that needs to be built, and limiting the number of curb cuts along the street corridors.

**The following table extracts the applicable guidelines and describes if and how the Project conforms.**

GUIDELINE	RESPONSE
<b>B. BUILT FORM</b>	
<b>1. Street-level uses and Design</b> <b>a. Mixed-use blocks</b>	
ii. 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.	Conforms: The approximately 400 foot building length along Fulkerson Street is broken by a 105 foot long outdoor forecourt.
iii. 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 stations	Conforms: The major entrance is on Binney Street facing the proposed Binney Park and situated approximately halfway between two crosswalks, both within 150 feet.
iv. Transparent materials and interior lighting should be used to maximize visibility of street level uses. Ground floor facades should be at least 30 to 50 percent transparent surface to permit a clear view	Conforms and exceeds minimums on both Binney and Fulkerson streets.
v. Blank walls should be avoided along all streets and pedestrian walkways	Conforms: The ground floor of the western façade has limited fenestration, however, the space between the building and the Grand Junction Multi-Use Path will be heavily landscaped.
<b>2. Building Height and Orientation</b> <b>a. Major public streets</b> These include a new main street at North Point; Msgr. O'Brien Highway; Cambridge Street; Broadway; Binney Street; Third Street between Broadway and Binney; First Street (including the extension into North Point), and Main Street.	
i. Set back any portion of the building above 65 feet by at least 10 feet from the principal facade.	The design approach to the Binney Street façade addresses the unique geometry of the lot and its important relationship to the Binney Street park. The façade has been modulated through the programmatic introduction of a series of volumes — “jewel boxes” — that provide relief and setbacks at multiple levels to ensure the façade does not appear monolithic.
ii. For retail and office uses, build to the lot line or provide small setbacks (5 to 15 feet) from the right-of-way for café seating, benches, or small open spaces. Setbacks used exclusively for ornamental landscaping are not permitted but may be allowed to accommodate street furniture, street trees, or generous sidewalks. Awnings and canopies are encouraged to provide shelter and enliven the ground floor facade.	Conforms: Setbacks are provided from the right-of-way that integrated seating, planting and free-standing tables and chairs. This is concentrated in a plaza at the southeast corner of the property, leading to the main entrance.
iii. Driveway turnaround and vehicle drop-off facilities are strongly discouraged along public streets.	A vehicle drop-off is proposed on Binney Street within private property to ensure traffic is not impeded by stopping vehicles (e.g. TNC).
iv. Locate loading docks on side streets or service alleys, and away from residential areas.	Conforms: Loading and truck access occurs at the rear of the building off Fulkerson Street, fully enclosed within our property.
v. In use, design, and entry, orient buildings towards corners.	Conforms: The design of building and landscape with the placement of the two-story glass wall and wraparound canopy and a generous setback for landscaping address the Binney/ Fulkerson corner.

<p><b>c. Park Edges</b></p>	
<p>The height of the principal façade of buildings surrounding a park should be no greater than 1/3 the width of the park. For additional height above this limit, buildings should be stepped back by at least ten feet from the principal facade. Greater height without setbacks may, however, be appropriate at corners or in specific locations to create architectural variety. The buildings must conform to overall district height limits in the zoning.</p>	<p>The Project is across the street from the future Binney Park. It is fitting that the Project provides a strong and interesting edge framing the northern extent of the Park. Architectural variety is created through the introduction of a robust canopy and a series of volumes that provide relief and ensure the façade does not appear monolithic.</p>
<p>Locate buildings to minimize shadows on the park, especially in the afternoon.</p>	<p>Conforms.</p>
<p>Surround public parks with uses that create an active environment throughout the day and evening and increase safety for park users.</p>	<p>Conforms: The Project is intended to operate 24/7. The ground floor provides tenant spaces, further providing activation and overlook.</p>
<p><b>3. Scale and Massing</b></p>	
<p>a. For new development sites, the block size should be similar to the existing East Cambridge blocks. An attempt should be made to reduce the distance that pedestrians have to walk to a crosswalk in order to safely cross the street.</p>	<p>Conforms: All adjacent blocks are of a similar, if not larger, dimension. The block is flanked by existing and proposed crosswalks on Binney Street.</p>
<p>b. Buildings should avoid continuous massing longer than 100 feet facing residential streets and 200 feet facing mixed-use and retail streets. If massing extends beyond this length, it should be made permeable and visibly articulated as several smaller masses using different materials or colors, vertical breaks, bays, or other architectural elements</p>	<p>Conforms: The façades do not face residential streets; in the case of Fulkerson Street, the approximately 400 foot building length is broken by a 105 foot long outdoor forecourt.</p>
<p>In addition to the above limits, buildings should reflect a rhythm and variation appropriate to the urban context.</p>	<p>Conforms: There is considerable diversity of form in the urban context – the Project follows suit, providing massing that is contextually consistent and providing undulation along the main façades without compromising the street edge.</p>
<p>Buildings should have a clearly expressed base, middle, and top. This may be achieved through changes in material, fenestration, architectural detailing, or other elements.</p>	<p>Conforms: The robust canopy articulated the limit of the building base, the middle has the greatest amount of fenestration while the top carries the material of the middle through but without the fenestration.</p>
<p>Use variations in height and architectural elements such as parapets, cornices and other details to create interesting and varied rooflines and to clearly express the tops of buildings.</p>	<p>Conforms: Architectural variety is created on the Binney Street façade through the introduction of a robust canopy and a series of volumes that provide relief and ensure the façade does not appear monolithic. The mass of the building is broken down into two major volumes with variations within this articulating entry points and step-downs toward adjacent lower buildings.</p>
<p>Emphasize corners using taller elements such as towers, turrets, and bays</p>	<p>Conforms: Given the building’s axial relationship to the proposed Binney Park the emphasis and special façade articulation is at the central portion of the façade and the main entry point.</p>
<p>Taller buildings should be articulated to avoid a monolithic appearance: Taller buildings should be point towers instead of slabs, and should have smaller floor plates instead of larger floor plates.</p>	<p>Conforms: Architectural variety is created on the Binney Street façade through the introduction of a continuous architecturally integrated canopy and a series of volumes that provide relief and ensure the façade does not appear monolithic.</p>

<b>4. Architectural Character</b>	
<b>b. Commercial</b>	
Create varied architecture and avoid flat facades by using recessed or projected entryways, bays, canopies, awnings, and other architectural elements.	Conforms: Architectural variety is created on the Binney Street façade through the introduction of a robust canopy and a series of volumes that provide relief and ensure the façade does not appear monolithic. The canopy turns the corner onto Fulkerson, where the length of the building mass is broken into three discrete segments, varying in height and the proportion of materials, drawn from a sophisticated palette. A similar approach is adopted along the western façade with the canopy ultimately indicating an entrance (to bike storage).
<b>5. Environmental Guidelines</b>	
Design buildings to use natural resources and energy resources efficiently in construction, maintenance, and long-term operation of the building. Buildings on a lot should be sited to allow construction on adjacent lots to do the same. Compliance with Leadership in Energy and Environmental Design (LEED) certification standards and other evolving environmental efficiency standards is encouraged.	Conforms: With a focus on occupant health, resource conservation, and reduction of environmental impact the project is targeting a variety of certification goals. The Project will achieve a minimum of a LEED Gold and the project team is actively evaluating additional opportunities to pursue a goal of Platinum Certification. In addition, the Project is being designed to meet the preconditions of the WELL Building Standard and is also targeting a Fitwel Certification.
Rooftop mechanical equipment should be sited and shielded to protect neighboring uses from noise impacts.	Conforms: all rooftop equipment will be enclosed, protecting the neighborhood from unsightly views and noise.
<b>6. Parking</b>	
b. Locate vehicular parking entrances on side streets and alleys and provide safe pedestrian access from public streets.	The Parking entrance is discretely situated at the western end of the Binney Street façade. It is integrated with the façade through the garage door's detailing and materiality.
c. All parking garages must provide direct pedestrian access to the street.	Conforms: Pedestrians have access to Binney Street and Fulkerson Street.
d. The primary pedestrian exit/access to all garages serving nonresidential uses should be to the street or a public area.	Conforms: Pedestrians have access to Binney Street and Fulkerson Street.
e. Design and locate lighting fixtures in surface parking lots and garages to enhance safety while minimizing light spillover onto adjacent properties.	Conforms.
<b>C. PUBLIC REALM</b>	
i. The provision of open space of diverse sizes and use is encouraged to enhance the public environment in the study area.	Conforms: There is the provision of landscaped plazas and a contribution to the landscaping of the Grand Junction Multi-Use Path all networked with, and complementing, the proposed Binney Park.
ii. The provision of interconnected series of open spaces is encouraged to provide connections to neighborhoods and to encourage pedestrian movement.	Conforms: There is the provision of landscaped plazas and a contribution to the landscaping of the Grand Junction Multi-Use Path, all networked with, and complementing, the proposed Binney Park.
Area Specific Guidelines Transition Areas and Neighborhoods Locate new open spaces to create linkages and connect to existing parks and open spaces, where possible.	Conforms – per above.

<p><b>2. Streets and sidewalks</b></p>	
<p>a. Character</p>	
<p>i. 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.</p>	<p>Conforms: Streetscape elements will be provided on Binney and Fulkerson Streets that are aligned with the character of the area.</p>
<p>ii. Design streets to encourage pedestrian and cycle activity, and to control vehicle speed in residential areas.</p>	<p>Conforms: Dedicated cycle lanes are proposed on Binney Street.</p>
<p>d. In the design of new streets, pathways, and parks, provide pedestrian-scale lighting to enhance pedestrian safety.</p>	<p>Conforms: Pathways provide pedestrian-scale lighting to enhance pedestrian/cyclist safety.</p>
<p><b>3. Connections</b></p>	
<p>a. Provide safe pedestrian and bicycle connections to future regional pathways (Grand Junction railroad, North Point path).</p>	<p>Conforms: The site is immediately adjacent to the Grand Junction railroad (the Applicant is contributing to its realization of the Path, not the railroad). The Grand Junction Multi-Use Path will provide a continuous off-street pathway for Cambridge residents, school children, workers and visitors, on foot or bicycle. The path will provide an important regional link to the Somerville Community Path, the North Point Path, path connections to Boston, the Green Line Extension, and other key destinations.</p>
<p>Provide safe pedestrian and bicycle connections to existing and new bus stops and to transit stations including Kendall Square, Lechmere, Community College and North Station MBTA stations. In particular, direct access from the residential neighborhood south of Msgr. O'Brien Highway and Cambridge Street to the new T station, if relocated, is desirable.</p>	<p>Conforms: The site is immediately adjacent to the Grand Junction railroad (the Applicant is contributing land and \$11.25M in funding towards its realization); the Grand Junction Multi-Use Path is planned to extend to North Station, Cambridge Street, as well as to points southwest. The Project area is accessible by several MBTA bus lines as well as the subway (both the Red Line and Green Line are in walking distance).</p>
<p>Transition Areas</p> <ul style="list-style-type: none"> <li>▪ Provide safe pedestrian crossings at Binney Street.</li> <li>▪ Design any new park on Fulkerson Street to maximize visual connections between neighborhoods on either side of the Grand Junction rail tracks.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Conforms: There are existing pedestrian crossings at Binney and Galileo Galilei Way; additional pedestrian crossing proposed next to and parallel to Grand Junction Multi-Use Path as it crosses Binney Street</li> <li>▪ A landscaped plaza is proposed at the building entrance at Fulkerson Street; landscaped publicly beneficial area is proposed in the area immediately north of the Project (in the Residence C-1 zone).</li> </ul>
<p><b>4. Transportation</b></p>	
<p>b. Pedestrian</p>	
<p>i. Provide pedestrian crossings/phases at all major intersections</p>	<p>Conforms: There are existing pedestrian crossings at Binney and Galileo Galilei Way; additional pedestrian crossing proposed next to and parallel to Grand Junction Multi-Use Path as it crosses Binney Street.</p>
<p>c. Bicycle/other non-motorized vehicles</p>	<p>Applicant will install a 19-dock Bluebike station on the western edge of the site, proximate to the Grand Junction Multi-use Path.</p>
<p>i. Provide bicycle lanes on major streets.</p>	<p>Conforms: Dedicated off-street, buffered bike lanes are proposed for Binney Street.</p>
<p>ii. Provide sheltered bicycle racks in all new commercial and multi-family residential buildings and in transit stations.</p>	<p>Conforms: A dedicated bike storage room is located on the ground floor of the Project.</p>

An architectural rendering of a city street scene. The central focus is a large, modern building with a white facade and a prominent cyan-colored section on its side. To the left, there's a long, low building with a dark, textured facade. To the right, a curved building with a white facade and a red section is visible. In the foreground, there's a large, white, rectangular structure. The background shows a residential area with smaller houses and a green lawn. A road with a white line runs through the scene. The text "Noise Mitigation Narrative" is overlaid on the central building.

# Noise Mitigation Narrative

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May 21, 2020

Ms. Cathy Bell  
NBBJ  
One Beacon Street, Suite 5200  
Boston, MA 02108

Subject: 325 Binney Street, Lab/Office Core and Shell  
Community Noise Control Narrative  
Acentech Project No. 630261

Dear Cathy:

As you know, we have worked to have the noise emissions from the planned new 325 Binney Street building be consistent with the requirements of the Cambridge Noise Regulation. There is a critical residential neighborhood to the northwest of the site where the requirement is meet a noise goal of 50 dBA for the critical evening and nighttime hours. Other buildings adjacent to the site are commercial properties where the noise requirement is 65 dBA at all times of day. Noise emissions from the core and shell mechanical systems associated with the building are designed to achieve noise levels that are 5 dBA below the overall requirements so that there is room for potential noise from tenant systems that may be added in the future.

The primary sources of noise emission from the facility are the cooling towers, air handling system air intakes, exhaust air systems, standby emergency generators and the garage ventilation system. These noise sources and mitigation planned for each are discussed below.

#### Cooling Towers

The cooling towers are planned to have ultra-low noise fans and the towers are located in a solid-screened well at the roof which will block the sound from the equipment that is propagating toward lower level receiver positions. This is especially relevant for the residential neighbors who will be at very much lower elevations than the towers. The towers are also located at the end of the site that is most distant from the critical residential receivers. The tower noise emissions and noise control features are planned to meet the most stringent nighttime noise requirements for full operation, however at off-peak times, which will particularly include the nighttime hours in the regulation, the noise due to the towers that reaches the neighbors will be even lower because the towers will be operated with VFD control. The noise of the tower fans is a very strong function of speed and at the reduced fan speeds that will occur during the off-peak times, the noise will be very much lower than the requirements, on a statistical basis.

#### AHU Air Intakes

Each of the main air handling units are being provided with a silencer like Vibro-Acoustics 36 RFL-ULV- (middle 'F' number) to control noise emissions to outdoors. The units are in two locations in the penthouses and one location in the lower parking garage level. The parking garage units and the units in the southern penthouse are at the far end of the site relative to the critical residential neighbors. Only one set of units is at the end of the site toward the residential neighbors and the noise from these will be very substantially attenuated so that noise from these units will meet their budgeted noise target compared to the overall facility noise goal. Further, the fans in these units will operate with VFD controls so that when building airflow demand is low, such as at night, the noise emissions will be commensurately lower than for full design conditions, on a statistical basis.

#### Exhaust Air Systems

The exhaust fans are associated with the energy recovery units located in the penthouses. There are two sets of these, one on each end of the building. The fans for these are located in the building so there will be



no noise radiation to the community from the casings and drives associated with the fans. There will be noise emission to the nearby community from the discharge stacks and each of these will be provided with a silencer that is carefully integrated with the fan for efficiency and to control the noise emissions from the stacks.

The exhaust air systems have fresh air bypasses as part of the approach to maintain acceptable dispersion of the exhaust air stream, and this is another source/path that needs to be addressed for noise control. The air for the bypasses, will be drawn from within the roof wells to take advantage of the barrier effect provided by the wells to shield against noise propagating toward the critical neighbors. The bypass pathways will also be provided with silencers to control both fan noise and bypass damper generated noise emissions to outdoors. The noise to the neighbors is not a strong function of the number of fans that operate, but the number of fans that will operate will be staged to match the building airflow requirements and, at off-peak times, fewer than all the fans will likely be operating.

### Generators

The base building includes three standby emergency generators. These units will be located outdoors at the roof level, in roof wells, and they will each be provided with weatherproof/noise reduction enclosures. The screens surrounding on the roof wells will substantially help to control the noise transmission to the key residential neighbors who are very much lower in elevation than the roof wells. The noise reduction enclosures are specified to limit noise to prescribed levels so that, together with the shielding of the roof screens, the noise reaching the critical residential neighbors will be no greater than 60 dBA, which is the daytime noise limit for residential neighbors and to meet the commercial building requirement of 65 dBA. The generators will be tested only during the daytime hours identified in the noise regulation; the generator are only expected to run at night in the very rare event of a true emergency. As an administrative measure for the building, just one generator will be tested at a time to avoid additive noise from multiple units running together.

### Garage Ventilation Systems

The garage ventilation systems will be provided with silencers on the intakes of supply air fans and the discharges of exhaust air fans. Noise from these units will be controlled to meet the noise requirements for the critical neighboring properties and also to not exceed about 60 dBA at nearby public locations where there may be people. The attenuation treatments are designed to control the noise of the system under full ventilation capacity, however, the system is not likely to every run at anywhere near full capacity since it will be controlled with CO sensors so that, in response to a demand for ventilation, the fans will turn on at a small percentage of full speed to try to satisfy the call for ventilation within a short time window. If the call for ventilation is not satisfied within that time window, the fan speeds will ramp up in modest increments, until the demand is satisfied. Experience with this sort of operational scheme is that the fans almost never operate even close to full speed and noise emissions are very low.

### Miscellaneous Other Small Vent Systems

It is anticipated that there will be other smaller miscellaneous equipment noise sources associated with the project that have not yet been identified. These are not likely to have substantial exterior noise emissions, but the project is committed to provide suitable attenuation treatments for them to control exterior noise emissions to meet the overall noise goals identified herein.

\* \* \* \* \*

With the exterior noise control treatments described herein, we fully expect that noise emissions from the project will meet the requirements of the Cambridge Noise Regulation with allowance of margin for potential further tenant equipment that may be added in the future. In fact, with the operation of the equipment that is planned, at off peak times, which will be most of the critical nighttime hours, we expect noise from the building will be substantially lower than the requirement, on a statistical basis.

I trust that this provides the summary you need of noise control measures that are planned for the project to mitigate community noise emissions and meet the city noise requirements. Please let me know if you have further questions.

Sincerely Yours,

ACENTECH INCORPORATED

A handwritten signature in black ink, appearing to read "D. Sturz". The signature is fluid and cursive, with a long horizontal stroke at the end.

Douglas H. Sturz

Community Noise Control Narrative

An architectural rendering of a city block. The central focus is a large, modern building with a white facade and a grid of windows, highlighted in a light cyan color. To its left is a long, low-rise building with a textured facade. To its right is a curved building with a glass facade and a red section. In the foreground, there are several rectangular structures, possibly parking spaces or smaller buildings. The background shows a residential area with smaller houses and a green lawn. The text "Summary of Community Engagement" is overlaid on the central building, underlined.

# Summary of Community Engagement

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# Early Community Engagement Meeting

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Alexandria hosted an Early Community Engagement meeting via Zoom on July 15, 2020. Invitations were sent to abutters and to the East Cambridge Planning Team (ECPT) and the Linden Park Neighborhood Association. Thirty three people participated in the meeting, the vast majority being residents of Linden Park. Participants at the meeting included Michelle Lower, Vice President, Real Estate Development & Community, Joseph Maguire, Senior Vice President, Project Architect Jay Siebenmorgen and Attorney James Rafferty. Michelle Lower began the meeting with a review of the rezoning process and the components of the newly created Overlay District. Jay Siebenmorgen presented the building design and sustainability initiatives.

A question and answer session followed. Issues raised included concerns about noise from rooftop mechanical equipment, light pollution, construction timeline and traffic. Many attendees commented favorably on the design and commended Alexandria for designing a building that was consistent with the recently adopted zoning amendment.

In addition to the Early Community Engagement Meeting, a week earlier, Alexandria appeared at a meeting of the East Cambridge Planning Team (ECPT) on July 8, 2020. Thirty three East Cambridge residents participated in the meeting. The project team, including the project architect, presented the building design and answered questions. Comments were universally favorable with many attendees expressing appreciation to Alexandria for their long standing commitment to the East Cambridge community.

At both meetings, information was provided about the coUrbanize Project website ([www.325BinneyStreet.com](http://www.325BinneyStreet.com)) that has been created to share information on the project and solicit feedback.

An architectural rendering of a city block. The central focus is a large, modern building with a white facade and a grid of windows. To its left is a long, low building with a dark, textured facade. To its right is a curved building with a white facade and a red section. In the foreground, there is a large, open area with several rectangular structures. The background shows a residential area with smaller houses and a green field. The title "Infrastructure and Utilities Narrative" is centered over the main building.

# Infrastructure and Utilities Narrative

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# Infrastructure and Utilities Narrative

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The development parcel is located at the intersection of Binney Street with Fulkerson Street in East Cambridge. The parcel encompasses approximately 4.4 acres and was previously developed with multiple buildings and paved areas. The site was nearly 100% impervious, with the exception of a small gravel area in the northern most portion of the site. The buildings were demolished in 2018 along with a large portion of asphalt. Utilities servicing the buildings, including water, sewer, gas, electric and telephone were cut and capped as part of this work. Catch basins and piping in several portions of the site remain. The location of the site is shown in the Existing Conditions Plan in Volume 2, along with the planned new building footprint.

## **Water**

The existing water mains located in the streets adjacent to the site are shown in Figure 2 (see volume 2) and include:

- Binney Street 20 inch installed in 1969
- Binney Street 12 inch installed in 1912
- Binney Street 8 inch abandoned
- Fulkerson Street 8 inch installed in 1892
- Galileo Galilei Way 16 inch installed in 1969

The fire protection and domestic water services for the new building will need to be connected to the street mains. Redundant domestic water services (primary and secondary) are required for a building of this size. The condition of the water mains and the planned connections have been discussed with the Cambridge Water Department. Based on these discussions, the project is proposing to connect a new 12 inch service lateral to the existing 12 inch main in Binney Street. Given the poor condition of the Fulkerson Street 8 inch main, it was not recommended that this water line be used. To achieve the redundant requirement, multiple valves will be installed on the existing 12 inch main and new lateral.

The proposed connection and new lateral are shown in Figure 3. The new 12 inch lateral will enter the site and extend north. A 6 inch domestic and 8 inch fire protection service will be tapped off of the new lateral and brought through the foundation. A new site hydrant may be added, if needed, to provide coverage for the building sprinkler connection. The proposed hydrant is also shown in Figure 3 although the need and exact location is yet to be determined.

The capacity of the existing water supply has been reviewed by the Water Department and the capacity appears adequate. Hydrant flow tests will be performed in the near future to determine the pressure in the main against the water demand of the building. Based on the preliminary program and using Title V flows, the building will demand approximately 35,000 gallons per day of water. This will be revised once the building's program space has been more fully developed. The demand may be reduced through the use of a rainwater collection system being considered for the building.

The proposed connection and new lateral shown in Figure 3 have been shared and discussed with the Water Department. Specific details of the connection, valving and water demand will continue to be coordinated with the Water Department as the design progresses.

### **Stormwater**

Prior to building demolition, the development site was predominantly buildings, paved parking and paved storage areas. Impervious areas comprised 96% of the site. Stormwater was routed to catch basins located throughout the site. Although no plans exist, it is believed that the catch basins were connected to the 54 inch x 63 inch combined sewer pipe in Fulkerson Street. As was typical for a site developed in the mid-60s stormwater left the site unmitigated and untreated. The 54 inch x 63 inch combined sewer is connected to the 90 inch x 90 inch combined sewer in Binney Street. The existing pipe network in Binney and Fulkerson Streets is shown in Figure 4 and includes:

- Binney Street 36 inch drain installed as part the 9AB project. Discharges to the Broad Canal
- Binney Street 90 inch x 90 inch brick combined sewer discharges to Prison Point, overflows to the Charles River
- Fulkerson Street 54 inch x 63 inch combined sewer connected to the 90 inch x 90 inch in Binney

The proposed stormwater management system will consist of roof top detention, infiltration systems, deep sump catch basins and manholes, area and trench drains and piping. A rainwater collection system is being considered for the project and will likely consist of capturing a portion of water that falls on the roof and storing it in a tank located on the garage level beneath the building.

Site redevelopment will include approximately 56,450 square feet (1.3 acres) of a pervious (likely grass) geothermal well field. This represents a 30% reduction of impervious area. Impervious areas will include the roof, driveway, walkways and other hardscaped outdoor areas.

The on-site stormwater system will meet four key requirements:

1. **Water Quality:** Capture and Infiltrate the first inch of runoff to reduce phosphorus to the Charles River and treat water to remove approximately 80% of total suspended solids.
2. **Reduction in Flow:** Reduce the discharge rate to the City system equal to the 2-year storm event.
3. **Infiltration/Inflow Removal:** Infiltrate 1.72 inches of stormwater to meet the State's Infiltration/Inflow requirement (discussed in further detail in the Sanitary Sewer section).
4. **State Standards:** Comply with Massachusetts' Stormwater Standards.

**Water Quality:** Three separate on-site storage/infiltration systems are proposed for the site. Water from the roof of the new building and the site will be sent to deep sump manholes or catch basins for treatment (80% sediment removal) prior to being routed to the infiltration systems. The infiltration systems will be sized to infiltrate the first inch of runoff.

The first inch of water from the site, or first flush, typically contains the highest concentrations of phosphorus from fertilizers and coliform from pet waste. Phosphorous in the Charles River has been known to be the primary cause of algae blooms during the summer months. By infiltrating the first inch of runoff, according to the EPA BMP Performance Curves, approximately 95% of phosphorous is expected to be removed from site runoff. The actual phosphorus removal will be based on the infiltration rate(s) of site soils. Testing scheduled during the upcoming geo/environmental soils investigation by Haley and Aldrich will determine soil infiltration rates throughout the site. For the preliminary hydraulic analysis, the infiltration rates obtained during the 389 Binney Garage project were used. These prior tests were completed approximately 70 feet to the west from the proposed 325 Binney Street infiltration systems. Tests performed in sand at approximately 6-8 feet below grade resulted in hydraulic conductivities of 20 inches/hour. Once the infiltration systems are full, water will be routed through a series of pipes and manholes and will discharge to manhole DMH#7 of the City's newly installed 9AB drain system. DMH#7 is located just east of the railroad tracks along Binney Street. This new 36 inch drain ultimately discharges to the Charles River via the Broad Canal. The proposed stormwater management system for the site is shown in Figure 5.

**Reduction in Flow:** Reducing the 25-year storm flow to the 2-year flow will be achieved by storing water on specific sections of the building roof and slowly releasing it to the site infiltration systems. The infiltration systems will also provide a significant amount of storage. Preliminary pre- and post-construction hydraulic modeling of the site and building was performed and the results are below:

Condition/Event	2-year (cfs)	10-year (cfs)	25-year (cfs)
Pre-Construction	18.64	31.64	41.13
Post-Construction	7.96	14.10	18.56
Percent Reduction	57%	55%	55%

As discussed with the Cambridge DPW, the 2030 storm events were used in the preliminary analysis. Once the final layout of the building and the site landscaping has been decided, the hydraulic model will be updated and a Stormwater Management Report submitted to DPW for review.

**Infiltration/Inflow:** this is discussed in further detail in the sewer section below.

**State Standards:** The Massachusetts Stormwater Standards will be reviewed and incorporated into the project. The forthcoming 325 Binney Street Stormwater Management Report will detail how the system will meet the ten requirements.

**Sanitary Sewer**

The existing sanitary sewers in the streets adjacent to the development parcel are shown in Figure 4 and includes:

- Binney Street 34 inch x 38 inch sewer
- Binney Street 90 inch x 90 inch combined sewer
- Fulkerson Street 12 inch sewer connected to the 34 inch x 38 inch Binney Street
- Fulkerson Street 54 inch x 63 inch combined sewer connected to the 90 inch x 90 inch Binney Street



Using Title V, the building is expected to generate approximately 35,000 gallons of wastewater per day. The final generation rate will be calculated using the appropriate building uses and areas (office, restaurant, fitness center, etc.). The prior buildings are estimated to have generated approximately 3,000 gallons per day, for a net of 32,000 gallons of new wastewater generation.

Wastewater from the new building will be sent to the 12 inch sewer in Fulkerson Street. The 12 inch sewer flows southerly and is connected to the 34 inch x 38 inch sewer in Binney Street. The Binney Street sewer flows easterly to the Cardinal Medeiros Interceptor. During periods of heavy rainfall, the 34 inch x 38 inch sewer becomes surcharged, backing up flows in the 12 inch Fulkerson pipe. Therefore, prior to wastewater leaving the site, it will be routed through sanitary sewer storage tanks and backwater valves. During periods of dry weather conditions, wastewater will flow through the tanks and the backwater valves to the street sewer. During wet weather and surcharged conditions in the street, the backwater valve will close and cause wastewater to be stored in the tanks. The tanks will be sized to hold approximately 8-hours of building flow. After the surcharge has subsided, the backwater valve will open and flow will resume out to the street, emptying the tank at a controlled rate. The proposed sanitary sewer tanks and valve pits are shown in Figure 6. The sewer connection to the 12 inch pipe will continue to be explored as the service lateral will need to cross over the 54 inch x 63 inch and it is unknown yet if this pipe will be in conflict with the proposed. We will continue to work with DPW to determine if conflicts exist.

The Massachusetts Department of Environmental Protection requires that all new sanitary flows to combined sewers greater than 15,000 gallons per day, must remove four times the new flows from the combined sewer system. This is commonly referred to as Infiltration/Inflow (I/I) removal. In municipalities with combined sewer systems, the MassDEP has provided guidance that I/I removal volumes be calculated using the one-year, six-hour design storm event having a total depth of 1.72 inches of rainfall with an average intensity of 0.29 inches per hour over six hours.

With a net new flow of 32,000 gallons, the project will be required to remove approximately 128,000 gallons of I/I. Alexandria has implanted an I/I removal strategy on several adjacent projects over the past several years to meet the requirement for the 325 Binney Street project:

- 389 Binney Street: removed 54,500 gallons through the installation of an infiltration system beneath the driveway of the garage, completed August 2017.
- 399 Binney Street: removed 49,000 gallons through the installation of an infiltration system beneath the entry plaza, completed March 2019.

Therefore, 103,500 gallons has been established in an I/I "bank" that will be used for the 325 Binney Street project. The remaining 24,500 gallons will be removed via on-site infiltration. Based on the preliminary hydraulic modeling done to-date, approximately 60,000 gallons will be infiltrated during the 1.72 inch storm event. This strategy has been discussed with DPW and they have found it acceptable, pending a review of the Stormwater Management Report and the Infiltration/Inflow Report.

## Resiliency

Using the City FloodViewer v2.1, the 2030 and 2070 predicted flood elevations due to precipitation and storm surge/sea level rise (SS/SLR) were determined:

### Address: 303 Binney St

Ground Elevation Min:	17.20 ft-CCB
Ground Elevation Max:	22.80 ft-CCB
2070- 100 Year- SLR/SS	N/A
2070- 100 Year- Precip	20.8
2070- 10 Year - SLR/SS	N/A
2070- 10 Year - Precip	N/A
2030- 100 Year - Precip	20.5
2030- 10 Year - Precip	N/A
Present Day - 100 Year	20.4
Present Day - 10 Year	N/A
FEMA 500 Year	N/A
FEMA 100 Year	N/A

Selected Map-Lot: 31-20

Selected Address: 303 Binney St

The site is not susceptible to storm surges due to its inland location. The 2070 100-year precipitation elevation is 20.8.

In order to negate the effects of precipitation flooding, all building entrances and openings will be kept at or above 20.8. The finished first floor of the building will be set at elevation 21.4, therefore, all doorways will be approximately 0.6-ft higher than the 2070 100-year flood elevation. Based on preliminary roadway, curb and sidewalk grading, the entrance to the underground garage will slope up from the back of sidewalk to elevation 20.8 before sloping down to enter the garage. Critical building infrastructure will be located on the first floor, above elevation 20.8. This will include the electrical vault, water service room, fire pump room and the MDF room. The loading bays, located on the north side of the building, will be internal to the building with the entrance at elevation 20.8. The loading bays will slope from the entrance elevation of 20.8 to 17.92 inside the building.

***Please refer to Volume 2 for all Figures referenced.***



