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: 600 Massachusetts avenue, (Map 106 Lot 124)

Zoning District: Business B, and Central Square Overlay (20.300)

Applicant Name: Cifrino Mass Ave Realty LLC, C/O Attorney Kevin Crane

Applicant Address: 540 Gallivan Blvd, Dorchester, MA 02134

Contact Information: 617-876-8500 (Telephone #) kevin@cranelawoffice.com (Email Address) 617-864-6357 (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.*

1.Definitions: Gross Floor Area Exclusions for Basement, #16 Special Permit
2.19.20 Project Review Special Permit
3.19.30 Citywide Urban Design Objectives (Findings)
4.20.300 Central Square Overlay District (Findings)
5.20.304.2.2 Building Height Limitation Special Permit
6.20.304.3.4 Special Permit for Additional FAR for Residential Uses
7.20.304.3.5 FAR Exemption for Residential Balconies
8.20.304.4 Waiver of Setback and Open Space Requirements, Special Permit
9.20.304.6 Parking and Loading Requirements
10.10.43 General Criteria for the Granting of a Special Permit (Findings)

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

Application Form	Project Narratives	Project Plans and Illustrations	
·Cover Sheet (signed) ·Dimensional Form ·Ownership Certificate ·Fee Schedule	·Project Overview ·Zoning Compliance Narrative ·LEED Narrative ·LEED Affidavit	·Survey ·Existing Photos ·Existing Plans and Elevations ·Propose Site Plan ·Proposed Floor Plans ·Proposed Elevations	·Proposed Exterior Material ·3D Renderings ·Shadow Studies ·Urban Design Analysis

Signature of Applicant: [signature]

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: 600 Massachusetts Ave **Application Date:** REVD 9/30/20

	Existing	Allowed or Required (max/min)	Proposed	Permitted
Lot Area (sq ft)	21,262-SF	5,000-SF	21,262-SF	
Lot Width (ft)	100.1-ft and 126.3-ft	50-ft	100.1-ft and 126.3-ft	
Total Gross Floor Area (sq ft)	57,915	85,048-SF + Incl Incentive	93,263-GSF/79,203-GSF (fn-1)	
Residential Base			35,990	
Non-Residential Base	57,914	max 50%	46,476	
Inclusionary Housing Bonus			10,797	
Total Floor Area Ratio	2.57	4.0	4.39 incl basment	
Residential Base	NA		1.69	
Non-Residential Base	2.57	max 50%	2.19	
Inclusionary Housing Bonus	NA		0.51	
Total Dwelling Units	0	70	46	
Base Units			37	
Inclusionary Bonus Units			9	
Base Lot Area / Unit (sq ft)		300-SF	591-SF	
Total Lot Area / Unit (sq ft)			462-SF	
Building Height(s) (ft)	48.6-ft	80-ft	70.2-ft	
Front Yard Setback (ft)	0	0-ft COM/23.3-ft & 26.0 RES	0/0	
Side Yard Setback (ft)	0	0-ft COM/42.2-ft RES	0/0	
Side Yard Setback (ft)	0	NA	NA	
Rear Yard Setback (ft)	0	NA	NA	
Open Space (% of Lot Area)	0	0%/10%	3,442-SF 16.2% equivalent	
Private Open Space	0	0%/10%	2,578-SF (balcs) 12.1%	
Permeable Open Space	0	NA	NA	
Other Open Space (Specify)	0	NA	864-SF (Forecourt) 4.1%	
Off-Street Parking Spaces	0	48	0	
Long-Term Bicycle Parking	0	51	60	
Short-Term Bicycle Parking	0	9	0 (fn-2)	
Loading Bays	0	0	0	

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

Please see the all the Calculations and Explanations in Part 2 of the Project's Zoning Compliance Analysis

fn-1 - 93,263-GSF/79,203-GSF = FAR with and without Basement Exemption, respectively
fn-2 - A payment to the city city bike found will be done for short-term bicycle parking spaces

OWNERSHIP CERTIFICATE

Project Address: **Application Date:**

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

I hereby authorize the following Applicant: Cifrino Mass Ave Realty LLC

at the following address: 540 Gallivan Boulevard Dorchester, Ma.02124

to apply for a special permit for: relief as per cover sheet

on premises located at: 600 Massachusetts Avenue Cambridge

for which the record title stands in the name of: Cifrino Mass Ave Realty LLC

whose address is: 540 Gallivan Boulevard Dorchester, Ma 02124

by a deed duly recorded in the:

Registry of Deeds of County: Middlesex S. Book: 42788 Page: 486

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

Cifrino Mass Ave Realty LLC

By: _____
Its: Manager

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

To be completed by Notary Public:

Commonwealth of Massachusetts, County of Berkshire

The above named Janet Garvey as Manager of Cifrino Mass Ave Realty LLC. personally appeared before me,

on the month, day and year July 22, 2020 and made oath that the above statement is true.

Notary: Brenda Young

My Commission expires: 4/20/23

BRENDA YOUNG
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
April 20, 2023

FEE SCHEDULE

Project Address: **Application Date:**

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

New or Substantially Rehabilitated Gross Floor Area (SF): 53,548	× $0.10 =	$5,354.80
Flood Plain Special Permit	Enter $1,000.00 if applicable:	0
Other Special Permit	Enter $150.00 if no other fee is applicable:	0
TOTAL SPECIAL PERMIT FEE	**Enter Larger of the Above Amounts:**	$5,354.80

Green Building Project Checklist

Green Building
Project Location: 600 MASSACHUSETTS AVENUE, CAMBRIDGE, MA 02139

Applicant

Name: CIFRINO MASS AVE REALTY LLC C/O C/O Attorney Kevin Crane
Address: 50 GALLIVAN BLVD, DORCHESTER, MA 02134
Contact Information
Email Address: kevin@cranelawoffice.com TMCIFRINO@SUPREMELIQUORS.NET
Telephone #: 617-876-8500

Project Information (select all that apply):

- ☐ New Construction – GFA: _____
- ☐ Addition – GFA of Addition: _____
- ☑ Rehabilitation of Existing Building – GFA of Rehabilitated Area: 78,990 SF W/ BSMT WAIVER
  - ☐ Existing Use(s) of Rehabilitated Area: EXIST. RETAIL SPACES TO REMAIN ON BSMT AND FIRST FLOORS
  - ☐ Proposed Use(s) of Rehabilitated Area: PROPOSED 46 DWELLING UNITS ON 5 STORIES ABOVE RETAIL LEVEL.
- ☑ Requires Planning Board Special Permit approval
- ☐ Subject to Section 19.50 Building and Site Plan Requirements
- ☐ Site was previously subject to Green Building Requirements

Green Building Rating Program/System:

- ☑ Leadership in Energy and Environmental Design (LEED) – Version: LEED Multifamily Mied-Rise v4
  - ☐ Building Design + Construction (BD+C) – Subcategory: _____
  - ☐ Residential BD+C – Subcategory: _____
  - ☐ Interior Design + Construction (ID+C) – Subcategory: _____
  - ☑ Other: ENERGY STAR MULTI-FAMILY NEW CONSTRUCTION v1.1
- ☐ Passive House – Version: _____
  - ☐ PHIUS+
  - ☐ Passivhaus Institut (PHI)
  - ☐ Other: _____
- ☐ Enterprise Green Communities – Version: _____

Project Phase

☑ **SPECIAL PERMIT**

Before applying for a building permit, submit this documentation to CDD for review and approval.

Required Submissions

All rating programs:

- ☑ Rating system checklist
- ☑ Rating system narrative
- ☑ Net zero narrative (see example template for guidance)
- ☑ Affidavit signed by Green Building Professional with attached credentials – use City form provided (Special Permit)

Affidavit Form for Green Building Professional
Special Permit

Green Building
Project Location: 600 Mass Avenue, Cambridge, MA

Green Building Professional

Name: Jon Jensen

☐ Architect
☐ Engineer

LEED Green Rater
Credential Number: 10354954-GR

Mass. License Number:

Company: MaGrann Associates

Address: 701 East Gate Drive, Mount Laurel, NJ 08054

Contact Information

Email Address: JonJensen@MaGrann.com

Telephone Number: 717.576.1909

I, Jon Jensen , as the Green Building Professional for this Green Building Project, have reviewed all relevant documents for this project and confirm to the best of my knowledge that those documents indicate that the project is being designed to achieve the requirements of Section 22.24 under Article 22.20 of the Cambridge Zoning Ordinance.

8/18/20

(Signature) *(Date)*

Attach either:

☑ Credential from the applicable Green Building Rating Program indicating advanced knowledge and experience in environmentally sustainable development in general as well as the applicable Green Building Rating System for this Green Building Project.

☐ If the Green Building Rating Program does not offer such a credential, evidence of experience as a project architect or engineer, or as a consultant providing third-party review, on at least three (3) projects that have been certified using the applicable Green Building Rating Program.

LEED AP HOMES

10354954-AP-HOMES

CREDENTIAL ID

05 MAR 2009

ISSUED

30 JUL 2021

VALID THROUGH

GREEN BUSINESS CERTIFICATION INC. CERTIFIES THAT

Jon Jensen

HAS ATTAINED THE DESIGNATION OF

LEED AP® Homes

by demonstrating the knowledge and understanding of green building practices and principles needed to support the use of the LEED® green building program.

MAHESH RAMANUJAN
PRESIDENT & CEO, U.S. GREEN BUILDING COUNCIL
PRESIDENT & CEO, GREEN BUSINESS CERTIFICATION INC.

LEED GREEN RATER

10354954-GR

CREDENTIAL ID

03 DEC 2009

ISSUED

30 JUL 2021

VALID THROUGH

GREEN BUSINESS CERTIFICATION INC. CERTIFIES THAT

Jon Jensen

HAS ATTAINED THE DESIGNATION OF

LEED®GREEN RATER™

by demonstrating the knowledge and understanding of green building practices and principles needed to support the use of the LEED green building program.

MAHESH RAMANUJAN

PRESIDENT & CEO, U.S. GREEN BUILDING COUNCIL

PRESIDENT & CEO, GREEN BUSINESS CERTIFICATION INC.

MaGrann ASSOCIATES
Building Science for a Better Environment
701 East Gate Drive • Mount Laurel, NJ 08054 • 1-888-MAGRANN • www.magrann.com
New Jersey • Pennsylvania • Washington, D.C. • New York • Kentucky • Ohio • Hawaii

600 Massachusetts Ave, Cambridge, MA
Sustainability Narrative and Strategies

City of Cambridge
Green Building Narrative
Preliminary Submission
March 30, 2020
Revised: August 26, 2020

Prepared For: Peter Quinn Architects
By: MaGrann Associates and Sustainable Energy Analytics

RESNET Residential Energy Services Network
ENERGY STAR AWARD 2018 PARTNER OF THE YEAR
LEED FOR HOMES
Enterprise green communities
Home Innovation NGBS GREEN VERIFIER

Contents

Executive Summary

This narrative is being submitted for review by the Green Building Department in Cambridge, MA by Superior Realty for the project at 600 Massachusetts Ave. This proposed project is primarily residential with two small retail spaces (14% of the total area) on the basement and first floors. The total lot size is 21,262 square feet. The proposed new building will accommodate 46 residential units, approximately 6,752 gross square feet of street level retail and a total of 87 bicycle parking spaces in a one-level, below-grade basement.

The project will replace single story commercial space to provide needed homes in a high demand, livable community. It will provide a convenient, affordable housing alternative for the neighborhood, serving existing residents and those wishing to return to the City of Cambridge. The site is conveniently located within walking distance of Lafayette Square, a center of extensive local activity, and will be part of the thriving Mass Ave corridor, known for many community resources such as restaurants, theaters, and stores.

Superior Realty is fully committed to the community's green building goals. The current plan will easily meet the minimum green building requirements of the "Gold" level (60 pts) with the team aggressively working to integrate more points. The current checklist shows compliance with 75 points for Gold level compliance, with 19 additional points being evaluated for inclusion as the project moves further with design and construction. The developer is considering whether to obtain official LEED for Homes certification from the USGBC and ENERGY STAR certifications from the EPA. Also under consideration is to make the building "solar ready" so that the option of adding an on-site solar system in the future with minimum investment is preserved. Superior Realty is intending to build a structure that is energy and water efficient, has minimal impact on the environment, and contributes to a healthy community for the surrounding neighbors and the City of Cambridge.

Superior Realty has hired Peter Quinn Architects, a Somerville MA-based Architecture and Planning firm to design the project with Sustainable Energy Analytics (SEA) and MaGrann Associates (MA) as the energy conservation and sustainability consultant team to ensure the project meets its sustainability goals.

The following sections will detail the specific green building strategies the team has selected that will be used in the design and construction of this project. Also included is the preliminary LEED for Homes v4 Workbook. The checklist demonstrates that the project, when complete, will meet the LEED Gold certification level.

Project Description

The Applicant proposes to construct 600 Mass Ave, a multifamily residential development sited on two adjoining parcels totaling 66,767 sf at 600 Massachusetts Ave (the "Site"). The site is currently completely covered by single story commercial building and an existing building which will remain, repurposed as part of phase one of the same development. As listed in the application the project is in the Central Square Overlay District with a base zoning district of Business B.

The Applicant proposes to demolish the existing building and construct forty six (46) residential dwelling units on five (5) levels above two levels of commercial and amenity space. Additionally there will be two small community oriented retail spaces on the first floor. As of the current plan, the Project will provide a variety of unit types: approximately 20% will be studios, 46% will be one bedrooms, 30% will be two bedrooms, and 4% will be three bedrooms.

The site is situated a few blocks from University Park Commons and Clement Morgan Park offering access to open space and public art. Abundant and diverse uses within a half mile will combine with easy access to a high-frequency, well-networked public transit service at Central Square T station to facilitate a car-free lifestyle for residents.

The primary entrance for the residential units will be located at the ground floor on Mass Ave along with a direct secondary entrance from Green Street. The Project will additionally include eighty-seven covered secure bike storage spaces. These areas offer a bike repair area, combined with a fitness center to residents in the basement of the building.

Sustainability Strategies

This Building is being designed to meet and exceed the prevailing environmental and energy efficiency standards in force in the City of Cambridge and will meet the following standards:

- LEED for Homes v4 "Gold" Level Certification
- Massachusetts Stretch Energy Code compliance
- ENERGY STAR Multifamily New Construction v 1.1
- IECC 2015

Superior Realty has hired Sustainable Energy Analytics (SEA), and MaGrann Associates (MA) two partner firms centered on sustainability, durability, and energy efficiency to ensure LEED for Homes, Massachusetts Stretch Energy Code, and Utility Program compliance.

This document summarizes the specific LEED for Homes strategies that are being targeted or investigated during the design phase of the project to meet the City of Cambridge green building requirements for buildings. Also included is the preliminary LEED for Homes Workbook. There is not sufficient information available at this time to determine modeled savings % for the building, but the project team will share the information when it is available.

As required by the City of Cambridge the project team is using the LEED for Homes v4 methodology and checklist to quantify the "level" of green building practices. The city requires that a level of "certified" be attained. Based on the attributes of this project, for a multi-family building, a minimum of 40 points must be documented to be considered "certifiable" as stipulated by Cambridge Green Building Review Guidance (Article. 22.20). Based on the preliminary rating the project team is expecting a point total of between 76 to 93 or 190% to 230% of the target. These targets are preliminary but do reflect the attention the team is giving to building green.

Minimum Green Building Requirements

The green building requirements include a set of practices that are mandatory in order to fulfill the requirements of certification. These requirements earn no points. The verification team from Sustainable Energy Analytics will verify that a plan is in place to meet these requirements by the time construction permits are issued and will verify that these requirements have been met by the project's conclusion (i.e. issuance of certificates of occupancy). There are times when the attainment of these requirements cannot be met by the project conclusion. If this situation arises, the project team will inform the City of Cambridge of the issue and provide a plan for compliance for the city to approve.

Mandatory Requirement	Status
Location & Transportation	
a. Floodplain Avoidance	Complete
Sustainable Sites	
b. Construction Activity Pollution Prevention	Documented on Civil Plans
c. No Invasive Plants	By Project Completion
Water Efficiency	
d. Water Metering	By Project Completion
Energy And Atmosphere	
e. Minimum Energy Performance – Simulation	By Permitting
f. Minimum Energy Performance – Verification	By Project Completion
g. Energy Metering	By Project Completion
h. Education of Tenant and Building Manager	By Project Completion
Materials and Resources	
i. Certified Topical Wood	By Project Completion
j. Durability Management	By Project Completion
Indoor Environment Quality	
k. Ventilation	By Project Completion
l. Combustion Venting	By Project Completion
m. Garage Pollution Prevention	By Project Completion
n. Radon Resistant Construction	By Project Completion
o. Air Filtering	By Project Completion
p. Environmental Tobacco Smoke	By Project Completion
q. Compartmentalization	By Project Completion
Innovation	
r. Preliminary Rating	Complete

Green Measures – Narrative

The following sections detail the specific green measures that will be implemented in this project. All targeted measures will be implemented and verified. Each point would be evaluated on a worst case basis so the final score would reflect the worst case scenario.

Integrative Process (IP)

Sustainable design strategies and measures are constantly evolving and improving. New technologies are continually introduced to the marketplace, and up-to-date scientific research influences building design strategies. Occasionally a strategy that has been implemented results in building performance that greatly exceeds that required by code or changes currently accepted building practices. The strategies in this section are being considered to ensure that the project team leverages the knowledge and experience of the entire team and the kinetic creativity that results from team interaction around complex problems. The project team includes an experienced LEED Green Rater, an experienced HERS Rater, a LEED for Homes Accredited Professional and Construction Project Managers practiced in energy-efficient construction techniques. Regular core-design team meetings will be held through the duration of design and construction to ensure that all opportunities to improve building performance are capitalized on, all LEED credit opportunities are met, and all building durability measures are employed. In this project 1 out of 3 points are expected, with 1 additional point under consideration.

Targeted Point Strategies:

Integrative Project Team: Option 1 will be pursued. A team has been assembled with a diverse array of skills. Regular meetings with members of project team will be held to manage the continuity between design and construction of green building measures. Current and upcoming work will be discussed to ensure the design meets all requirements and to identify additional opportunities to cost effectively implement additional measures.

The team is considering pursuing Option 3, Trades Training by expanding the SEA / MaGrann Associates standard practice of approximately 4 hours of project-specific trades training for a construction team to meet the requirements of this credit by providing 8 total hours of trades training. The standard includes an orientation meeting with the full team of Green Rater, HERS Rater, GC, Framing, Electrical, Insulation, Mechanical, and Plumbing subcontractors to review the project's prerequisites and credits as well as the process for on-site verification of those measures. This offers a forum for subcontractors to provide their insight about the project goals and ensure the details are best aligned with the desired outcomes. This decision will be made with input from the General Contractor.

Option 2 is not under consideration at this time because it does not fit into preferred design process of the current team, whose members prefer more frequent meetings from 1-2 hours than the longer 4-8 hour engagements required to earn the charrette credit.

Location and Transit (LT)

Location and Transit credits address the site-related environmental impacts, in terms of impact to the site itself, the impact of future occupants' travel options and the benefits of avoiding remote sites. The strategies in this category reward optimally situated sites for minimizing the environmental impact of the building, promoting sustainable land-use and lower-carbon transit practices. The project will earn 15 out of a possible 15 points, and meet the Prerequisite Floodplain Avoidance.

Targeted Point Strategies:

Site Selection: Option 1, Path 1, Previously Developed will be pursued, ruling out Path 2. Choosing a previously developed, infill site and developing it within an optimal range of density (40-100 units per acre) reduces pressure on the land that surrounds our urban areas. Compact Development will be pursued at the highest available point threshold of 3 with 93.9 units per acre planned. Additionally, Site Selection, Option 2, Infill Development will be pursued, because it requires far less new infrastructure, public or private, to serve the occupants within a fully developed network of utility services, transit and diverse community resources. Option 4 will be pursued because the street network in Cambridge is dense, offering over 110 intersections per square mile in the circle of land within .25 miles of 600 Mass Ave. This characteristic promotes walkability because walkers are able to take more direct routes as compared to those with longer block lengths characteristic of suburban development. Urban planners have long recognized that the efficiency of densely populated areas is important in many dimensions, but that it is also key to provide opportunities for a biophilic experience. Access to parks of sufficient size means that people are able to reconnect and access the calming rejuvenation of nature without owning a significant piece of it for themselves. Option 3, Open Space will be earned by virtue of the site's proximity to University Park Commons. Option 5, Bicycle Network is not currently included because it does not have the capability to add to the LEED score. The project will include bike storage, however in a way that makes the most sense for this development and their intended residents.

The project will earn both available points in Community Resources by using a LEED v 4.1 credit substitution which adjusted the maximum point threshold to 16 resources. Access to a diverse array of community resources that provide opportunity to complete errands and find entertainment within a short walk will reduce the carbon footprint of the occupants when they opt for these outlets instead of traveling to similar options at a greater distance. It also provides additional eyes-on-the-street, helping to make the community safer and more resilient.

The project will earn both available points in Access to Transit, also by using a LEED v 4.1 credit substitution. Public transit is by far the most efficient means of moving individuals about a city. Residents only choose it en-masse when service is frequent, safe, affordable and does not take significantly longer than other available means of transportation. With 202 weekday trips and

154 weekend trips available from within a half mile walk, the project earns two points in this credit.

LEED for Neighborhood Development was not considered because of the scope of control is limited to this two-phase project.

Sustainable Sites (SS)

Thoughtful site design and landscaping decisions can lead to low maintenance landscaping that protects native plant and animal species and contributes to the health of local and regional habitats.

The ways in which a building is, or is not, integrated into the site can have various effects: Rain that falls on a site can be either a detriment, causing soil erosion and runoff of chemicals and pesticides, or a benefit, offering an opportunity to offset potable water demand and recharge underground aquifers. The project is targeting 4 of the available 7 points in SS, with 2 more under consideration.

Targeted Point Strategies:

Construction Activity Pollution Prevention: The builder will follow DPW guidelines to prevent erosion, control runoff, and protect watersheds from silt and sediment damage. Erosion control fences will be installed as necessary to either side of the building site to protect the abutting properties from any unusual drainage caused by temporary or unanticipated runoff. New rainwater control systems will be installed and, during construction, protected by filter fabric to insure that they remained clean.

No Invasive Plants: All newly installed plants will be native to avoid the downside risk of invasive plants escaping into and damaging the local ecosystem, while taking advantage of the selected species capacity to thrive in the local microclimate.

Heat Island Reduction: Over 75% of the total hardscapes on the site will be roofing. High albedo materials, defined as having an SRI of 78 or higher, will be used to reduce heat absorption and mitigate the local urban heat island effect, earning 2 points under Option 2.

Nontoxic Pest Control: Traditional pest control methods often include pesticides detrimental to human health and the natural environment. This building will use a combination of pest control methods that reduce the need for these harmful chemicals. Strategies used will include a solid concrete foundation wall system, a 6-inch visible area of wall space above grade to allow for inspection for evidence of pest activity, diligent sealing of pest entry points in the exterior wall assembly, and pest-proof mesh screens on all openings greater than a ¼ inch (where permitted by code).

Strategies Under Consideration:

Rainwater Management: The project team is evaluating the feasibility of meeting the LEED targets for site permeability and rainwater management. This site is constrained by its available area for rainwater management but consideration is being given to how the area available can be utilized to reduce the impact on the municipal storm water system through increased onsite

infiltration. Given the relatively high cost of rainwater management systems with other strategies that may yield more benefits that will be experienced by the occupants or the ownership group, this credit is only likely to be pursued if it is aligned with local requirements for NPDES projects.

Water Efficiency (WE)

Historically, green building has focused mostly on energy efficiency, but sound water conservation measures are becoming an increasing more important focus of the green community. Water efficiency measures can easily reduce water usage by 30% or more. In a typical home, savings of 30,000 gallons of water a year can be achieved very cost-effectively. This results in average annual water utility savings of about $100 per year. On this project the focus is on installing measures that have the highest savings to investment ratio. Of the total 12 available points, the project is targeting 8 points. Local utility connections are required to have meters, meeting the prerequisite with a whole building water meter.

Targeted Point Strategies:

Indoor Water Use: All units at 600 Mass Ave will benefit from high efficiency faucets and fixtures. All fixtures will be WaterSense labeled to ensure not just their water efficiency but also their quality as verified by a government backed, third-party verified label. The lavatory faucets will have an average flow rate of 1 gallon per minute, the showerheads will average 1.75 gallons per minute. The clothes washer will also be ENERGY STAR certified to ensure it is both water and energy efficient. This suite of measures earns 4 points under the Prescriptive Path, Case 2. Toilets with flush rates of 1.1 Gallon per flush will also be considered for an added point.

Also under the prescriptive path, 600 Mass Ave will use native plants for 100% of its landscaped area, earning 4 points in Outdoor Water Use. This practice improves the integrity of the local ecosystem while also ensuring that the plants are hearty enough to survive in the local climate without additional watering needs. This practice reduces water consumption significantly as compared to the use of turf which is highly water intensive. This project has no turf on site.

Energy and Atmosphere (EA)

When building green homes, the most important aspect is to minimize the energy use and the associated environmental impacts. For this reason, the EA category has the most available points (37.) For the 600 Mass Ave project the performance path was chosen. The project is targeting an energy efficiency performance 25% better than ASHRAE 90.1-2010 which translates to 27 points toward certification. These points achieved also reflect the smaller size of the units on this project relative to an average size unit, as detailed in the "Multifamily HSA" sheet within the LEED Workbook. This lower square footage per bedroom is a proxy for higher density and correlates with reduced consumption per capita. This approach acknowledges that sheltering people has inherent value, and that metrics for homes must take into account people accommodated as well as consumption versus square footage.

Targeted Point Strategies:

Minimum Energy Performance: The energy targets modelled for 600 Mass Ave will be verified on site using the ENERGY STAR Multifamily New Construction Testing and Verification Protocols (T&V). This quality assurance process is critical to ensuring that the modelled and designed targets are implemented diligently onsite so that the efficiency outcomes are achieved once the building is occupied. The ENERGY STAR T&V Protocols include visual verification of 100% of units by a certified Home Energy Rater or Rating Field Inspector. Final testing and verification is completed according to RESNET protocols. Final testing includes envelope leakage and duct leakage tests to validate the air sealing of the units, ducts and ventilation systems.

Understanding that projects in Cambridge are required to pursue the Enhanced Commissioning Credit, even when that credit is not available within the rating system used, the project team for 600 Mass Ave presents the following comparison of Enhanced Commissioning credit from LEED NC with the requirements of LEED Multifamily Midrise.

Enhanced Commissioning requires that the Commissioning Authority (CxA) be experienced in similar projects, have that experience extend into the operational phase of those projects and be at least a disinterested subcontractor of the design team. The T&V requires that the modeling be overseen by an Energy Star Licensed Professional and that on-site verification and testing be carried out by a HERS Rater, trained in rough and final stage inspection and testing of the building envelope as well as HVAC systems intended for 600 Mass Ave.

Both Option 1 Enhanced Systems Commissioning, Path 1 Enhanced Commissioning AND Option 2 Envelope Commissioning requirements will be met by the requirements of the prerequisite of Multifamily Midrise T&V Protocols. Prescriptive requirements of the T&V that will influence how the Commissioning plan is developed and executed include blower door testing at the unit level and duct leakage testing of heat pump air handling systems in units. The T&V also requires

duct leakage testing on central ventilation systems, which is crucial and too rare in projects that are not pursuing the Energy Star label. One practice will be added to ensure full compliance with Enhanced Commissioning options above which is the review of building operations after 10 months of operation.

Annual Energy Use: 600 Mass Ave will be modelled using a whole building energy simulation to predict its annual energy consumption. This project is targeting a 25% reduction in energy consumption compared to ASHRAE 90.1-2010. This will earn the project 17 points in EA Annual Energy Use. The relatively smaller size of apartments earns the project an additional 10 points through LEED's Home Size Adjustment calculation, see HSA. A total of 27 out of 30 potential points are there for awarded in this critical energy efficiency category.

Strategies Under Consideration:

Efficient Hot Water Distribution: This project is considering the location of the hot water source and usage points when laying out the units. Centralized distribution systems offer some meaningful benefits, but do introduce complexity and add to ongoing maintenance and retro commissioning scope to avoid significant energy waste. Therefore the team is currently planning to specify individual water heaters for each unit which will reduce the total volume of hot water stored in piping throughout the building, as well as pump energy. As the design progresses, the plumbing engineers will be directed to layout the hot water distribution with a focus on keeping runs short and pipe diameters as small as possible. This is made more feasible by the using low flow fixtures. These measures are very likely to enable the project to take Option 2, Performance test. This credit is not yet in the confirmed column however, because the final results are not available until after construction, and the overall score does not require the points at this time.

Option 3 Pipe Insulation will be further investigated but is not intended at this time. If the LEED credit is a marginal increase in cost compared to the code requirement, it may be implemented. This credit is given lower priority because it is known to have a larger real-world impact on buildings in warmer climates.

Advanced Utility Tracking is not being pursued, primarily for cost reasons relative to the expected benefit to the occupants. The multifamily specialists on the project team have not found a user-friendly, cost-effective solution for an in-unit energy-consumption dashboard on the market.

Materials and Resources (MR)

Good design decisions on the selection, sourcing and installation of materials can significantly reduce demand for materials, as well as their associated waste, embedded energy, and eventual need for replacement. This project focused their efforts on durability and reducing construction waste. The primary culprit of building damage is water intrusion followed by interior moisture sources, like showers. Proper material selection and detailing can reduce the damage caused by water and the need for costly repairs. Out of the maximum 9 points, 4.5 points were earned in this category.

Targeted Point Strategies:

Durability Management & Verification: The ENERGY STAR for Homes program provides a checklist of durability measures that have been provided to the builder on this project to improve their quality assurance onsite. Additionally a third party verifier will confirm the items on the checklist and that the drywall installed in wet areas meets ASTM D 3273 standards for durability, water-resistant flooring is used in rooms that may regularly get wet, and proper drainage and exhaust is provided for the water heater, clothes washer and clothes dryer.

Certified Tropical Wood: All wood on this project is either non-tropical, reused, reclaimed or certified by the Forest Stewardship Council. This ensures that any forestry practices in tropical areas that are supported by this project are sustainable.

Environmentally Preferable Products: For this project, 100% of the aggregate in concrete will be sourced from a local facility less than 100 miles from the project site. Environmentally Preferable Products, Low Emission and Local Products will be used throughout this project wherever cost effective. The project team is anticipated gaining 3.5 credits in this category, but will periodically search for cost effective opportunities to achieve more. The following are considered possible avenues to increase points in credit: Insulation with recycled content – fiberglass is readily available with high recycled content, but the project is likely to use mineral wool which performs better thermally, Steel Studs and drywall with recycled content. The strategy for these items is to require the contractor to report on the origin and recycled content of their proposed products during the submittal phase, sending the signal to the market that these characteristics are important. This approach is selected because if mandated, requiring specific recycled content levels in certain products can cause delays or cost increases that could be detrimental to the project overall.

Omitting floor covering, flooring, sheathing, concrete, roofing and siding were all omitted because they are not considered feasible in the team's local multifamily construction experience.

Construction Waste Management: Construction Waste Management Planning includes finding local options for diversion and requirement for contractor to provide documentation of actual diversion rate of construction waste. The diversion rate for construction waste will be documented with 2 points anticipated for this credit, based on achieving at least 75%.

Indoor Environmental Quality (EQ)

Over the past 20 years, research and experience have improved our understanding of what is involved in attaining high indoor environmental quality and revealed manufacturing and construction best practices that can prevent future problems. Preventing indoor air quality problems is generally much less expensive than identifying and solving them after they occur. Generally, there are three types of strategies used to improve air quality: removal, source control, and dilution. Since the 1987 release of EPA reports that designated indoor air pollution as a top environmental risk to public health, assessing and managing indoor pollutants have become the focus of integrated governmental and private efforts.
The Indoor Environmental Quality category encourages builders to prevent air pollution and improve air quality and comfort in the homes they build. Of the 18 points available the team is targeting 9.5 points with 3.5 additional points under consideration.

Targeted Point Strategies:

Ventilation: The bathroom and kitchen exhaust fans and ducts on this project are designed to ASHRAE Standard 62.2-2010. Exhaust and supply will be balanced to provide pollution removal (local exhaust) with the same system as the whole house ventilation (fresh air supplied to units and common areas.) Commercial bath exhaust fans will be designed in accordance with ASHRAE Standard 62.1-2007 for the commercial spaces by the tenant.

Combustion Venting: There will be no unvented combustion appliances, a hard-wired, battery backed-up carbon monoxide monitor will be installed in each unit, there will be no fireplace or wood stove, and no combustion based space and water heating equipment will be installed.

Radon-Resistant Construction: This project is in Radon zone 1, a high risk area as defined by EPA. In response, the design will include all required features of EPA's radon resistant new construction: a gas permeable layer covered by a control layer of polyethylene, penetrated by air tight PVC piping. These runs will be routed up and through the roof, where an electrical junction box will be located to facilitate the installation of an inline fan should one be needed in the future.

Air Filtering: This project will install air filters with a MERV rating of 8 for recirculating space conditioning systems and a MERV rating of 6 for mechanically supplied outdoor air systems with 10 or more feet of supply ductwork.

Environmental Tobacco Smoke: Smoking is prohibited throughout this building and within 25 feet of entries. Signage will be provided to communicate this policy. This approach meets the prerequisite and the requirements of the credit for 1 point.

Compartmentalization: Multifamily buildings with good air control layers surrounding each unit are more comfortable, efficient and their occupants report greater satisfaction with the space. Compartmentalized units are less likely to share respiratory droplets, odors, pollutants and sound between units and other units, corridors or outside. The strategies to achieve this are varied and complex, which is part of why this team was assembled to create and execute a compartmentalization plan.

Enhanced Ventilation: Option 1 will be earned because a continuous flow rate makes the most sense when using an ERV to ventilate bathrooms. This qualifies as an enhanced strategy because it will manage any potential humidity build up in bathrooms regardless of occupant utilization. Option 2 is not selected because the second requirement stipulating that flow rates must be between 100-110% of the ASHRAE 62.2-2010 minimum is and aggressively tight threshold for small units, where outside air requirements are often in the 20-30 CFM range. Expecting a whole building system to deliver between 20-22 CFM at a given register is not realistic given the technology and variables in play. It is listed as a maybe as a reminder to check the final commissioning results and award the point in the unlikely event that it is met. All ventilation flow rates will be verified as meeting or exceeding the ASHRAE 62.2 minimum.

The Contaminant Control credit reminds us about several strategies for minimizing the presence of contaminants inside homes, some of which are applicable to this building type, while others are not. Walk-off mats are an often specified approach to automatically cleaning the soles of entrants' footwear as they walk into the building. The team plans to install a walk off mat at each entry point to the building. However the credit is not taken because the credit requires the mat be 10 feet in the direction of travel. That would not be possible without reconfiguring the lobby, which may happen, pending other entryway concerns. Shoe removal and storage is generally more reasonable in larger homes, and not considered an optimal use of space for smaller homes like those planned for 600 Mass Ave. Also in the maybe column is a pre-occupancy flush of the building to reduce VOCs and particulates that are inevitably present post construction. Research shows that the value of this practice is particularly short lived, so it will be encouraged, but not required that the builder conduct this flush to earn this half point. Option 4 Air Testing is unpredictable and relatively expensive and will not be pursued.

Balancing of Heating and Cooling Distribution Systems: Case 1, Option 1 Multiple Zones is awarded based on the size of the units, even though the intention is to install single zone heating and cooling systems. Smaller homes can deliver comfort similar to larger homes with multiple zones. Option 3, pressure balancing will be pursued because it increases the comfort level of occupants when the supply air needed to maintain the thermostat's set point is delivered regardless of an open or closed bedroom door. Option 2 Supply Air-Flow Testing will not be pursued. The project plans to offer balancing control at the face of each register, giving each occupant the opportunity to adjust the flow of air in each room. By providing this benefit, the design also practically negates the value of professionally balancing every unit's system, if

the occupant is encouraged to make adjustments to match their comfort preferences in each room once they move in.

Enhanced compartmentalization will not be pursued. This could be reconsidered if the general contractor selected has extensive experience and confidence with constructing multifamily units that have passed their blower door tests by significant margins across the board. Generally this credit is avoided by all but the most experienced Energy Star and LEED Multifamily builders due to the uncertainty it introduces to the envelope commissioning process.

Enhanced Garage Pollutant Protection: This project does not have a garage which eliminates the risk of pollutants from cars and other toxic materials often stored in garages from entering the home. Combustion Venting similarly rewards the project with 2 points for omitting a fireplace.

Low-Emitting Products: This project is significantly improving indoor air quality by using low-emitting products for its paints, flooring, insulation, adhesives, sealants and composite wood products. These will all be required to meet LEED v4.1 requirements via accepted credit substitution, aligning with the applicable South Coast Air Quality Management District rules.

Innovation (IN)

Green building is a dynamic landscape of new ideas. Concurrent design and construction of thousands of projects with data shared through green building rating systems has accelerated the transition to greener building practices, by allowing project teams a common language to share their successes, many of which have become standard practice, as well as their failures and other ideas they would be unlikely to repeat in the same manner. Of the total 5 available points, the project is targeting 3 points, with strategies to achieve the other two under consideration.

The Innovation category also offers teams the opportunity to take up to two credits for Exemplary Performance achieved elsewhere in the rating system.

Targeted Point Strategies:

Cambridge is an inherently green community based on the existing urban fabric. It is unsurprising then, that 600 Mass Ave achieved Exemplary Performance for doubling the highest available thresholds in both Community Resources and Access to Transit. An additional point is available for the intended HVAC Start up procedure that is aligned with Energy Star Multifamily New Construction and the City of Cambridge's commissioning requirements.

Up to two more points could be achieved and are under investigation. Housing Types and Affordability and Design for Accessibility may be met by the design as it evolves. If they aren't met, but could be with a modest adjustment to the plans, they may also be pursued.

Regional Priority (RP)

Every location has its own unique environmental challenges. While there are common themes of what can be done to mitigate environmental impact, the issue of how much emphasis to place on each is strongly impacted by the project's location on the Earth. To acknowledge this reality, USGBC created Regional Priority Credits for each location. If this credit is earned at the appropriate threshold, the project may claim an additional point, up to 4 in Regional Priority.

At 600 Mass Ave they are: Compact Development at 2 points which is met, Community Resources at 2 points which is met, Outdoor water use at 3 points which is met, and Annual Energy Use at 15 points which is also met. If the project had not filled all 4 of its available RP slots already, Rainwater management at 3 points or balancing of Heating and Cooling Systems at 3 points might offer points. As it stands, they do offer the team perspective on the priorities of the local USGBC volunteers who selected these credits as regional priorities.

Appendix A: LEED For Homes Scorecard

LEED BD+C: Multifamily Midrise v4 - LEED v4

600 Mass Ave Scorecard

Location: **600 Massachusetts Ave, Cambridge, MA 02139, USA**

Note: The information on this tab is READ-ONLY. To edit this information, see the Credit Category tabs.

Integrative Process		**Preliminary**	Y	1 of 2	M	*1*	**Verified**	1
IPc	**Integrative Process**			1 of 2		*1*		1
Location and Transportation		**Preliminary**	Y	15 of 15	M	*1*	**Verified**	15
LTp	Floodplain Avoidance			Required				Verified
Performance Path								
LTc	LEED for Neighborhood Development			0 of 15		*0*		
Prescriptive Path								
LTc	Site Selection			8 of 8		*1*		8
LTc	Compact Development			3 of 3		*0*		3
LTc	Community Resources			2 of 2		*0*		2
LTc	Access to Transit			2 of 2		*0*		2
Sustainable Sites		**Preliminary**	Y	4 of 7	M	*2*	**Verified**	4
SSp	Construction Activity Pollution Prevention			Required				Verified
SSp	No Invasive Plants			Required				Verified
SSc	Heat Island Reduction			2 of 2		*0*		2
SSc	Rainwater Management			0 of 3		*2*		
SSc	Nontoxic Pest Control			2 of 2		*0*		2
Water Efficiency		**Preliminary**	Y	8 of 12	M	*1*	**Verified**	8
WEp	Water Metering			Required				Verified
Performance Path								
WEc	Total Water Use			0 of 12		*0*		
Prescriptive Path								
WEc	Indoor Water Use			4 of 6		*1*		4
WEc	Outdoor Water Use			4 of 4		*0*		4
Energy and Atmosphere		**Preliminary**	Y	27 of 37	M	*5*	**Verified**	27
EAp	Minimum Energy Performance			Required				Not Verified
EAp	Energy Metering			Required				Verified
EAp	Education of the Homeowner, Tenant or Building Manager			Required				Verified
EAc	Annual Energy Use			27 of 30		*0*		27
EAc	Efficient Hot Water Distribution System			0 of 5		*5*		
EAc	Advanced Utility Tracking			0 of 2		*0*		

Materials and Resources		Preliminary	Y	3.5 of 9	M	*3.5*	Verified	3.5
MRp	Certified Tropical Wood			Required				Verified
MRp	Durability Management			Required				Verified
MRc	Durability Management Verification			1 of 1		*0*		1
MRc	Environmentally Preferable Products			0.5 of 5		*3.5*		0.5
MRc	Construction Waste Management			2 of 3		*0*		2

Indoor Environmental Quality		Preliminary	Y	9.5 of 18	M	*3.5*	Verified	9.5
EQp	Ventilation			Required				Verified
EQp	Combustion Venting			Required				Verified
EQp	Garage Pollutant Protection			Required				Not Verified
EQp	Radon-Resistant Construction			Required				Verified
EQp	Air Filtering			Required				Verified
EQp	Environmental Tobacco Smoke			Required				Verified
EQp	Compartmentalization			Required				Verified
EQc	Enhanced Ventilation			1 of 3		*2*		1
EQc	Contaminant Control			0 of 2		*1*		
EQc	Balancing of Heating and Cooling Distribution Systems			2 of 3		*0*		2
EQc	Enhanced Compartmentalization			0 of 3		*0*		
EQc	Combustion Venting			2 of 2		*0*		2
EQc	Enhanced Garage Pollutant Protection			1 of 1		*0*		1
EQc	Low-Emitting Products			2.5 of 3		*0.5*		2.5
EQc	No Environmental Tobacco Smoke			1 of 1		*0*		1

Innovation		Preliminary	Y	3 of 6	M	*2*	Verified	3
INp	Preliminary Rating			Required				Verified
INc	Innovation			3 of 5		*2*		3
INc	LEED Accredited Professional			0 of 1		*0*		

Regional Priority		Preliminary	Y	4 of 4	M	*0*	Verified	4
RPc	Regional Priority			4 of 4		*0*		4

Point Floors

The project earned at least 8 points total in Location and Transportation and Energy and Atmosphere	Yes
The project earned at least 3 points in Water Efficiency	Yes
The project earned at least 3 points in Indoor Environmental Quality	Yes

Total		Preliminary	Y	75 of 110	M	19	Verified	75

Certification Thresholds Certified: 40-49, Silver: 50-59, Gold: 60-79, Platinum: 80-110

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Net Zero Narrative for 600 Massachusetts Avenue, Cambridge, MA
Submitted by Peter Quinn Architects, Sustainable Energy Analytics & MaGrann Associates
August 21, 2020

Project Profile

Development Characteristics

Lot Area SF:	21,262
Existing Land Use(s) and Gross Floor Area SF, by Use:	Retail: 54,719
Proposed Land Use(s) and Gross Floor Area SF, by Use:	Retail: 33,355 with waiver; 46,053 without Residential: 47,884 with waiver; 45,918 without
Proposed Building Height(s) (ft. and stories):	70.2'; 6 stories
Proposed Dwelling Units:	46
Proposed Open Space SF:	3,319
Proposed Parking Spaces:	0
Proposed Bicycle Parking Spaces (Long-Term and Short-Term):	87

Green Building Rating System

Version:	LEED Multifamily Midrise v4
Level:	Gold
Seeking Certification?	TBD
Points:	75 Yes (over 60 required for Gold)

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Proposed Project Design Characteristics

Building Envelope

Descriptions:

Roof:	High Albedo (reflective, white) roof membrane, Polyisocyanurate insulation sufficient to create a drainage taper, roof sheathing supported by open web trusses, where the cavity is completely filled with fiberglass insulation, in contact with drywall below to prevent convective loops.
Foundation:	Existing foundation wall to remain, new concrete walls adjacent to existing foundation
Exterior Walls	Metal siding over 2" continuous insulation (type TBD – R-8.4-10) Gypsum wall sheathing on light gauge metal studs with 5.5" Mineral wool batt insulation providing an R-23 in the cavity, encapsulated by 5/8" gypsum wall board at the interior
Windows:	Fiberglass frame picture and casement windows
Window to wall ratio:	22%
Other components:	None

Envelope Performance:

	Proposed		Baseline	
	Area in sf	U-value	Area in sf	U-value
Window fixed/operable	6006	0.27	6006	0.38/0.45
Wall	21520	0.045	21520	0.052
Roof	8148	0.22 (or lower)	8148	0.035

Envelope Commissioning Process:

In accordance with Energy Star Multifamily New Construction requirements, a certified HERS Rater or Rating Field Inspector will verify that the insulation and air sealing have been installed according to the designed specifications, prior to covering with drywall. Air leakage will be verified as the building approaches completion by individual unit blower door testing. This provides assurance that both the exterior air barrier and the compartmentalization air barrier are properly sealed. All units must demonstrate no more than 0.30 CFM50 per square foot of enclosure area.

Net Zero Narrative for 600 Massachusetts Avenue, Cambridge, MA
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Building Mechanical Systems

Descriptions:

Space Heating	Mini-split heat pump in each unit
Space cooling	Mini-split heat pump in each unit
Heat Rejection	N/A
Pumps	Water Booster pump to be NEMA premium efficiency
Ventilation	Local exhaust for bathrooms provided by continuous, outgoing air stream of two rooftop ERV units. Supply air stream of ERVs provides balanced whole house ventilation air directly to units per ASHRAE 62.2 and common areas per ASHRAE 62.1. Other local exhausts are intermittent from Kitchen and laundry and go directly outside the envelope.
Service Hot Water	Electric water heaters in each apartment
Interior lighting	100% LED fixtures, both semi-recessed and surface mounted
Exterior lighting	100% LED
Other systems	N/A

Commissioning Process:
The project will comply with Enhanced Commissioning requirements as laid out in LEED NC v4 by following the Energy Star Multifamily New Construction v1.1 requirements with the addition of a review of building performance and operation by the HERS Rater 10 months after occupancy. Several key components of that process include: duct leakage testing on central ventilation systems and heating and cooling systems, verification that all ventilation flow rates comply with applicable ASHRAE standards, as well as notification of the owner if tested values are out of alignment with the design intent.

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Anticipated Energy Loads and Greenhouse Gas Emissions

Assumptions

The initial energy study for 600 Mass Ave was conducted for the residential and residential-associated portions of the building only because it comprises the vast majority of the project. It is also important to consider those choices carefully because they will repeat their impact many times over though the building. ASHRAE 90.1 based energy modeling, using eQUEST software will begin once the project begins the Design Development phase.

The envelope and mechanical systems were reviewed and compared with both MaGrann Associates and Sustainable Energy Analytics' portfolio of high performance multifamily buildings with a priority on long term environmental performance. The first consideration was elimination of any gas combustion, a once unthinkable step in the area that is now achievable. This permits the building to become greener over time as the fuel mix of the grid lowers in carbon impact. It will create a building that has higher greenhouse gas emissions upon completion however, when compared to the presumed lower distribution losses of natural gas.

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Annual Projected Energy Consumption and Greenhouse Gas (GHG) Emissions

Projected consumption results by end use will be provided in the next iteration of the Net Zero Narrative, once energy modeling has begun. At this stage we have set a target for EUI based on the building type, fuel sources and location.

	Baseline	Proposed	Future
Total projected energy use kWh/yr	5,718,546	4,084,676	4,046,452
Site EUI in kBtu/SF*yr	35	25	25
Source EUI in kBtu/SF*yr	0	70	0
On-site Renewable Energy Generation in kWh/yr	0	0	38,224
Off-site Renewable Energy Generation in kWh/yr	0	0	4,046,452
GHG Emissions total in tons CO2/yr	128	92	0
GHG Emissions total in lbs CO2/yr	256,538	183,241	0

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Building Energy Performance Measures

Overview

Land Uses	Mixed use building reserves street frontage for community supporting retail. Location within existing amenity rich community promotes walking and biking. No vehicle parking provided while significant bicycle parking is provided.
Building Orientation and Massing	Proposed building is locked between existing buildings and the street, glazing located efficiently where it can be included. Windows deployed in a responsible 22% window to wall ratio.
Envelope Systems	Walls and roof to have continuous exterior insulation in addition to cavity insulation limiting thermal bridging. High performance glazing included for dual benefit of Energy Efficiency and occupant comfort
Mechanical Systems	Mini-split heat pumps are the current top-tier system for efficiency in residential construction. They also offer individual control and superior dehumidification when compared to traditional heat pumps.
Renewable Energy Systems	None planned at this time, but 1,353 square feet of roof area has been identified as solar ready and appropriate conduit, roof configuration and electrical room space will be allocated to allow for future installation of on-site solar generation.
District Energy Systems	Not considered
Other Systems	High Efficiency plumbing systems save both water and energy used to pump and heat water.

Integrative Design Process

Architects manage regular meetings with the design team as the project progresses. Each meeting will include a reminder to revisit the strategies under consideration generated as part of the initial LEED preliminary rating. Each item needing further data collection or research is assigned to the appropriate team member to investigate and report back to the team at the next meeting.

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Solar-Ready Roof Assessment

Total Roof are in SF	8,148
Unshaded Roof Area in AF	1,353
Structural Support	All roof areas suitable for solar installation will be structurally designed to support PV panels when structural design commences.
Electrical Infrastructure	The electrical room layouts will include a future scenario showing the location of any inverters, disconnects and other equipment needed to install a grid connected solar system on the roof of the building at 600 Mass Ave.
Other Large Roof Appurtenances	Two large ERV units and approximately 44 condensing units, plumbing vent stacks have been optimized to increase the solar ready area, to some positive effect.
Solar Ready Roof Area	1,353 SF of roof area
Capacity of Solar Array	If we assume ultra-high efficiency panels at 22%, we can fit an approximately 29kW system with an annual generation capacity of 38,224 kWh/ year. Solar hot water was not considered because of the intention to use individual DHW systems per unit.
Financial Incentives	Financial incentive estimates will be investigated by the Solar specialist who will be engaged to diagram the layout of the system as the roof plan moves forward.
Cost feasibility	The solar specialist will also provide an estimate for the additional up-front cost to install the designed system at current rates, which will allow cost feasibility to be calculated prior to construction. At that point the decision of when to install the system will be made.

Green Building Incentive Program Assistance

The Project intends to pursue incentives through the Mass Save program with the assistance of SEA.

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Net Zero Scenario Transition

	Net-Zero Condition	Transition Process
Building Envelope	Similar to proposed	None required
HVAC Systems	Similar to proposed	At the end of each piece of equipment's life-cycle, replace with a more efficient modern (future) compatible system
Service Hot Water	Similar to proposed	At the end of the water heater lifecycle, consider if heat pump water heaters are available that will work well in apartments.
Lighting	Similar to proposed	At the end of each equipment's life cycle, replace with the most efficient option currently available.
Renewable Energy Systems	Installation of PV array described in the Solar Ready section	Installation will be relatively straightforward with design and all behind the walls infrastructure included in the original design
Other Strategies	None	None

By building within the urban fabric and excluding the use of fossil fuels on site at the outset the building is well positioned to make the transition to net zero emissions status as the grid becomes cleaner over time.

NREL
NATIONAL RENEWABLE ENERGY LABORATORY

Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at https://sam.nrel.gov) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NREL report: The Error Report.

The energy output range is based on analysis of 30 years of historical weather data for nearby , and is intended to provide an indication of the possible interannual variability in generation for a Fixed (open rack) PV system at this location.

RESULTS

38,223 kWh/Year*

System output may range from 36,686 to 39,614 kWh per year near this location.

Month	Solar Radiation (kWh / m^2 / day)	AC Energy (kWh)	Value ($)
January	3.10	2,315	345
February	3.96	2,624	391
March	4.71	3,361	501
April	5.51	3,698	551
May	5.61	3,834	572
June	6.09	3,964	591
July	6.50	4,322	644
August	5.96	3,972	592
September	5.27	3,452	515
October	3.89	2,722	406
November	2.94	2,050	306
December	2.60	1,910	285
Annual	4.68	38,224	$ 5,699

Location and Station Identification

Requested Location	600 Massachusetts ave Cambridge MA 02139
Weather Data Source	Lat, Lon: 42.37, -71.1 0.4 mi
Latitude	42.37° N
Longitude	71.1° W

PV System Specifications *(Residential)*

DC System Size	29 kW
Module Type	Premium
Array Type	Fixed (open rack)
Array Tilt	20°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	96%
DC to AC Size Ratio	1.2

Economics

Average Retail Electricity Rate	0.149 $/kWh

Performance Metrics

Capacity Factor	15.0%

Green Building Project Checklist

Green Building
Project Location: 600 MASSACHUSETTS AVENUE, CAMBRIDGE, MA 02139

Applicant

Name: CIFRINO MASS AVE REALTY LLC C/O C/O Attorney Kevin Crane
Address: 50 GALLIVAN BLVD, DORCHESTER, MA 02134
Contact Information
Email Address: kevin@cranelawoffice.com TMCIFRINO@SUPREMELIQUORS.NET
Telephone #: 617-876-8500

Project Information (select all that apply):

- ☐ New Construction – GFA: _____
- ☐ Addition – GFA of Addition: _____
- ☑ Rehabilitation of Existing Building – GFA of Rehabilitated Area: 78,990 SF W/ BSMT WAIVER
  - ☐ Existing Use(s) of Rehabilitated Area: EXIST. RETAIL SPACES TO REMAIN ON BSMT AND FIRST FLOORS
  - ☐ Proposed Use(s) of Rehabilitated Area: PROPOSED 46 DWELLING UNITS ON 5 STORIES ABOVE RETAIL LEVEL.
- ☑ Requires Planning Board Special Permit approval
- ☐ Subject to Section 19.50 Building and Site Plan Requirements
- ☐ Site was previously subject to Green Building Requirements

Green Building Rating Program/System:

- ☑ Leadership in Energy and Environmental Design (LEED) – Version: LEED Multifamily Mied-Rise v4
  - ☐ Building Design + Construction (BD+C) – Subcategory: _____
  - ☐ Residential BD+C – Subcategory: _____
  - ☐ Interior Design + Construction (ID+C) – Subcategory: _____
  - ☑ Other: ENERGY STAR MULTI-FAMILY NEW CONSTRUCTION v1.1
- ☐ Passive House – Version: _____
  - ☐ PHIUS+
  - ☐ Passivhaus Institut (PHI)
  - ☐ Other: _____
- ☐ Enterprise Green Communities – Version: _____

Project Phase

☑ **SPECIAL PERMIT**

Before applying for a building permit, submit this documentation to CDD for review and approval.

Required Submissions

All rating programs:

- ☑ Rating system checklist
- ☑ Rating system narrative
- ☑ Net zero narrative (see example template for guidance)
- ☑ Affidavit signed by Green Building Professional with attached credentials – use City form provided (Special Permit)

Affidavit Form for Green Building Professional
Special Permit

Green Building
Project Location: 600 Mass Avenue, Cambridge, MA

Green Building Professional

Name: Jon Jensen

☐ Architect
☐ Engineer

LEED Green Rater
Credential Number: 10354954-GR

Mass. License Number:

Company: MaGrann Associates

Address: 701 East Gate Drive, Mount Laurel, NJ 08054

Contact Information

Email Address: JonJensen@MaGrann.com

Telephone Number: 717.576.1909

I, Jon Jensen , as the Green Building Professional for this Green Building Project, have reviewed all relevant documents for this project and confirm to the best of my knowledge that those documents indicate that the project is being designed to achieve the requirements of Section 22.24 under Article 22.20 of the Cambridge Zoning Ordinance.

8/18/20

(Signature) *(Date)*

Attach either:

☑ Credential from the applicable Green Building Rating Program indicating advanced knowledge and experience in environmentally sustainable development in general as well as the applicable Green Building Rating System for this Green Building Project.

☐ If the Green Building Rating Program does not offer such a credential, evidence of experience as a project architect or engineer, or as a consultant providing third-party review, on at least three (3) projects that have been certified using the applicable Green Building Rating Program.

LEED AP HOMES

10354954-AP-HOMES

CREDENTIAL ID

05 MAR 2009

ISSUED

30 JUL 2021

VALID THROUGH

GREEN BUSINESS CERTIFICATION INC. CERTIFIES THAT

Jon Jensen

HAS ATTAINED THE DESIGNATION OF

LEED AP® Homes

by demonstrating the knowledge and understanding of green building practices and principles needed to support the use of the LEED® green building program.

MAHESH RAMANUJAN
PRESIDENT & CEO, U.S. GREEN BUILDING COUNCIL
PRESIDENT & CEO, GREEN BUSINESS CERTIFICATION INC.

LEED GREEN RATER

10354954-GR

CREDENTIAL ID

03 DEC 2009

ISSUED

30 JUL 2021

VALID THROUGH

GREEN BUSINESS CERTIFICATION INC. CERTIFIES THAT

Jon Jensen

HAS ATTAINED THE DESIGNATION OF

LEED®GREEN RATER™

by demonstrating the knowledge and understanding of green building practices and principles needed to support the use of the LEED green building program.

MAHESH RAMANUJAN

PRESIDENT & CEO, U.S. GREEN BUILDING COUNCIL

PRESIDENT & CEO, GREEN BUSINESS CERTIFICATION INC.

MaGrann ASSOCIATES
Building Science for a Better Environment
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New Jersey • Pennsylvania • Washington, D.C. • New York • Kentucky • Ohio • Hawaii

600 Massachusetts Ave, Cambridge, MA
Sustainability Narrative and Strategies

City of Cambridge
Green Building Narrative
Preliminary Submission
March 30, 2020
Revised: August 26, 2020

Prepared For: Peter Quinn Architects
By: MaGrann Associates and Sustainable Energy Analytics

RESNET Residential Energy Services Network
ENERGY STAR AWARD 2018 PARTNER OF THE YEAR
LEED FOR HOMES
Enterprise green communities
Home Innovation NGBS GREEN VERIFIER

Contents

Executive Summary

This narrative is being submitted for review by the Green Building Department in Cambridge, MA by Superior Realty for the project at 600 Massachusetts Ave. This proposed project is primarily residential with two small retail spaces (14% of the total area) on the basement and first floors. The total lot size is 21,262 square feet. The proposed new building will accommodate 46 residential units, approximately 6,752 gross square feet of street level retail and a total of 87 bicycle parking spaces in a one-level, below-grade basement.

The project will replace single story commercial space to provide needed homes in a high demand, livable community. It will provide a convenient, affordable housing alternative for the neighborhood, serving existing residents and those wishing to return to the City of Cambridge. The site is conveniently located within walking distance of Lafayette Square, a center of extensive local activity, and will be part of the thriving Mass Ave corridor, known for many community resources such as restaurants, theaters, and stores.

Superior Realty is fully committed to the community's green building goals. The current plan will easily meet the minimum green building requirements of the "Gold" level (60 pts) with the team aggressively working to integrate more points. The current checklist shows compliance with 75 points for Gold level compliance, with 19 additional points being evaluated for inclusion as the project moves further with design and construction. The developer is considering whether to obtain official LEED for Homes certification from the USGBC and ENERGY STAR certifications from the EPA. Also under consideration is to make the building "solar ready" so that the option of adding an on-site solar system in the future with minimum investment is preserved. Superior Realty is intending to build a structure that is energy and water efficient, has minimal impact on the environment, and contributes to a healthy community for the surrounding neighbors and the City of Cambridge.

Superior Realty has hired Peter Quinn Architects, a Somerville MA-based Architecture and Planning firm to design the project with Sustainable Energy Analytics (SEA) and MaGrann Associates (MA) as the energy conservation and sustainability consultant team to ensure the project meets its sustainability goals.

The following sections will detail the specific green building strategies the team has selected that will be used in the design and construction of this project. Also included is the preliminary LEED for Homes v4 Workbook. The checklist demonstrates that the project, when complete, will meet the LEED Gold certification level.

Project Description

The Applicant proposes to construct 600 Mass Ave, a multifamily residential development sited on two adjoining parcels totaling 66,767 sf at 600 Massachusetts Ave (the "Site"). The site is currently completely covered by single story commercial building and an existing building which will remain, repurposed as part of phase one of the same development. As listed in the application the project is in the Central Square Overlay District with a base zoning district of Business B.

The Applicant proposes to demolish the existing building and construct forty six (46) residential dwelling units on five (5) levels above two levels of commercial and amenity space. Additionally there will be two small community oriented retail spaces on the first floor. As of the current plan, the Project will provide a variety of unit types: approximately 20% will be studios, 46% will be one bedrooms, 30% will be two bedrooms, and 4% will be three bedrooms.

The site is situated a few blocks from University Park Commons and Clement Morgan Park offering access to open space and public art. Abundant and diverse uses within a half mile will combine with easy access to a high-frequency, well-networked public transit service at Central Square T station to facilitate a car-free lifestyle for residents.

The primary entrance for the residential units will be located at the ground floor on Mass Ave along with a direct secondary entrance from Green Street. The Project will additionally include eighty-seven covered secure bike storage spaces. These areas offer a bike repair area, combined with a fitness center to residents in the basement of the building.

Sustainability Strategies

This Building is being designed to meet and exceed the prevailing environmental and energy efficiency standards in force in the City of Cambridge and will meet the following standards:

- LEED for Homes v4 "Gold" Level Certification
- Massachusetts Stretch Energy Code compliance
- ENERGY STAR Multifamily New Construction v 1.1
- IECC 2015

Superior Realty has hired Sustainable Energy Analytics (SEA), and MaGrann Associates (MA) two partner firms centered on sustainability, durability, and energy efficiency to ensure LEED for Homes, Massachusetts Stretch Energy Code, and Utility Program compliance.

This document summarizes the specific LEED for Homes strategies that are being targeted or investigated during the design phase of the project to meet the City of Cambridge green building requirements for buildings. Also included is the preliminary LEED for Homes Workbook. There is not sufficient information available at this time to determine modeled savings % for the building, but the project team will share the information when it is available.

As required by the City of Cambridge the project team is using the LEED for Homes v4 methodology and checklist to quantify the "level" of green building practices. The city requires that a level of "certified" be attained. Based on the attributes of this project, for a multi-family building, a minimum of 40 points must be documented to be considered "certifiable" as stipulated by Cambridge Green Building Review Guidance (Article. 22.20). Based on the preliminary rating the project team is expecting a point total of between 76 to 93 or 190% to 230% of the target. These targets are preliminary but do reflect the attention the team is giving to building green.

Minimum Green Building Requirements

The green building requirements include a set of practices that are mandatory in order to fulfill the requirements of certification. These requirements earn no points. The verification team from Sustainable Energy Analytics will verify that a plan is in place to meet these requirements by the time construction permits are issued and will verify that these requirements have been met by the project's conclusion (i.e. issuance of certificates of occupancy). There are times when the attainment of these requirements cannot be met by the project conclusion. If this situation arises, the project team will inform the City of Cambridge of the issue and provide a plan for compliance for the city to approve.

Mandatory Requirement	Status
Location & Transportation	
a. Floodplain Avoidance	Complete
Sustainable Sites	
b. Construction Activity Pollution Prevention	Documented on Civil Plans
c. No Invasive Plants	By Project Completion
Water Efficiency	
d. Water Metering	By Project Completion
Energy And Atmosphere	
e. Minimum Energy Performance – Simulation	By Permitting
f. Minimum Energy Performance – Verification	By Project Completion
g. Energy Metering	By Project Completion
h. Education of Tenant and Building Manager	By Project Completion
Materials and Resources	
i. Certified Topical Wood	By Project Completion
j. Durability Management	By Project Completion
Indoor Environment Quality	
k. Ventilation	By Project Completion
l. Combustion Venting	By Project Completion
m. Garage Pollution Prevention	By Project Completion
n. Radon Resistant Construction	By Project Completion
o. Air Filtering	By Project Completion
p. Environmental Tobacco Smoke	By Project Completion
q. Compartmentalization	By Project Completion
Innovation	
r. Preliminary Rating	Complete

Green Measures – Narrative

The following sections detail the specific green measures that will be implemented in this project. All targeted measures will be implemented and verified. Each point would be evaluated on a worst case basis so the final score would reflect the worst case scenario.

Integrative Process (IP)

Sustainable design strategies and measures are constantly evolving and improving. New technologies are continually introduced to the marketplace, and up-to-date scientific research influences building design strategies. Occasionally a strategy that has been implemented results in building performance that greatly exceeds that required by code or changes currently accepted building practices. The strategies in this section are being considered to ensure that the project team leverages the knowledge and experience of the entire team and the kinetic creativity that results from team interaction around complex problems. The project team includes an experienced LEED Green Rater, an experienced HERS Rater, a LEED for Homes Accredited Professional and Construction Project Managers practiced in energy-efficient construction techniques. Regular core-design team meetings will be held through the duration of design and construction to ensure that all opportunities to improve building performance are capitalized on, all LEED credit opportunities are met, and all building durability measures are employed. In this project 1 out of 3 points are expected, with 1 additional point under consideration.

Targeted Point Strategies:

Integrative Project Team: Option 1 will be pursued. A team has been assembled with a diverse array of skills. Regular meetings with members of project team will be held to manage the continuity between design and construction of green building measures. Current and upcoming work will be discussed to ensure the design meets all requirements and to identify additional opportunities to cost effectively implement additional measures.

The team is considering pursuing Option 3, Trades Training by expanding the SEA / MaGrann Associates standard practice of approximately 4 hours of project-specific trades training for a construction team to meet the requirements of this credit by providing 8 total hours of trades training. The standard includes an orientation meeting with the full team of Green Rater, HERS Rater, GC, Framing, Electrical, Insulation, Mechanical, and Plumbing subcontractors to review the project's prerequisites and credits as well as the process for on-site verification of those measures. This offers a forum for subcontractors to provide their insight about the project goals and ensure the details are best aligned with the desired outcomes. This decision will be made with input from the General Contractor.

Option 2 is not under consideration at this time because it does not fit into preferred design process of the current team, whose members prefer more frequent meetings from 1-2 hours than the longer 4-8 hour engagements required to earn the charrette credit.

Location and Transit (LT)

Location and Transit credits address the site-related environmental impacts, in terms of impact to the site itself, the impact of future occupants' travel options and the benefits of avoiding remote sites. The strategies in this category reward optimally situated sites for minimizing the environmental impact of the building, promoting sustainable land-use and lower-carbon transit practices. The project will earn 15 out of a possible 15 points, and meet the Prerequisite Floodplain Avoidance.

Targeted Point Strategies:

Site Selection: Option 1, Path 1, Previously Developed will be pursued, ruling out Path 2. Choosing a previously developed, infill site and developing it within an optimal range of density (40-100 units per acre) reduces pressure on the land that surrounds our urban areas. Compact Development will be pursued at the highest available point threshold of 3 with 93.9 units per acre planned. Additionally, Site Selection, Option 2, Infill Development will be pursued, because it requires far less new infrastructure, public or private, to serve the occupants within a fully developed network of utility services, transit and diverse community resources. Option 4 will be pursued because the street network in Cambridge is dense, offering over 110 intersections per square mile in the circle of land within .25 miles of 600 Mass Ave. This characteristic promotes walkability because walkers are able to take more direct routes as compared to those with longer block lengths characteristic of suburban development. Urban planners have long recognized that the efficiency of densely populated areas is important in many dimensions, but that it is also key to provide opportunities for a biophilic experience. Access to parks of sufficient size means that people are able to reconnect and access the calming rejuvenation of nature without owning a significant piece of it for themselves. Option 3, Open Space will be earned by virtue of the site's proximity to University Park Commons. Option 5, Bicycle Network is not currently included because it does not have the capability to add to the LEED score. The project will include bike storage, however in a way that makes the most sense for this development and their intended residents.

The project will earn both available points in Community Resources by using a LEED v 4.1 credit substitution which adjusted the maximum point threshold to 16 resources. Access to a diverse array of community resources that provide opportunity to complete errands and find entertainment within a short walk will reduce the carbon footprint of the occupants when they opt for these outlets instead of traveling to similar options at a greater distance. It also provides additional eyes-on-the-street, helping to make the community safer and more resilient.

The project will earn both available points in Access to Transit, also by using a LEED v 4.1 credit substitution. Public transit is by far the most efficient means of moving individuals about a city. Residents only choose it en-masse when service is frequent, safe, affordable and does not take significantly longer than other available means of transportation. With 202 weekday trips and

154 weekend trips available from within a half mile walk, the project earns two points in this credit.

LEED for Neighborhood Development was not considered because of the scope of control is limited to this two-phase project.

Sustainable Sites (SS)

Thoughtful site design and landscaping decisions can lead to low maintenance landscaping that protects native plant and animal species and contributes to the health of local and regional habitats.

The ways in which a building is, or is not, integrated into the site can have various effects: Rain that falls on a site can be either a detriment, causing soil erosion and runoff of chemicals and pesticides, or a benefit, offering an opportunity to offset potable water demand and recharge underground aquifers. The project is targeting 4 of the available 7 points in SS, with 2 more under consideration.

Targeted Point Strategies:

Construction Activity Pollution Prevention: The builder will follow DPW guidelines to prevent erosion, control runoff, and protect watersheds from silt and sediment damage. Erosion control fences will be installed as necessary to either side of the building site to protect the abutting properties from any unusual drainage caused by temporary or unanticipated runoff. New rainwater control systems will be installed and, during construction, protected by filter fabric to insure that they remained clean.

No Invasive Plants: All newly installed plants will be native to avoid the downside risk of invasive plants escaping into and damaging the local ecosystem, while taking advantage of the selected species capacity to thrive in the local microclimate.

Heat Island Reduction: Over 75% of the total hardscapes on the site will be roofing. High albedo materials, defined as having an SRI of 78 or higher, will be used to reduce heat absorption and mitigate the local urban heat island effect, earning 2 points under Option 2.

Nontoxic Pest Control: Traditional pest control methods often include pesticides detrimental to human health and the natural environment. This building will use a combination of pest control methods that reduce the need for these harmful chemicals. Strategies used will include a solid concrete foundation wall system, a 6-inch visible area of wall space above grade to allow for inspection for evidence of pest activity, diligent sealing of pest entry points in the exterior wall assembly, and pest-proof mesh screens on all openings greater than a ¼ inch (where permitted by code).

Strategies Under Consideration:

Rainwater Management: The project team is evaluating the feasibility of meeting the LEED targets for site permeability and rainwater management. This site is constrained by its available area for rainwater management but consideration is being given to how the area available can be utilized to reduce the impact on the municipal storm water system through increased onsite

infiltration. Given the relatively high cost of rainwater management systems with other strategies that may yield more benefits that will be experienced by the occupants or the ownership group, this credit is only likely to be pursued if it is aligned with local requirements for NPDES projects.

Water Efficiency (WE)

Historically, green building has focused mostly on energy efficiency, but sound water conservation measures are becoming an increasing more important focus of the green community. Water efficiency measures can easily reduce water usage by 30% or more. In a typical home, savings of 30,000 gallons of water a year can be achieved very cost-effectively. This results in average annual water utility savings of about $100 per year. On this project the focus is on installing measures that have the highest savings to investment ratio. Of the total 12 available points, the project is targeting 8 points. Local utility connections are required to have meters, meeting the prerequisite with a whole building water meter.

Targeted Point Strategies:

Indoor Water Use: All units at 600 Mass Ave will benefit from high efficiency faucets and fixtures. All fixtures will be WaterSense labeled to ensure not just their water efficiency but also their quality as verified by a government backed, third-party verified label. The lavatory faucets will have an average flow rate of 1 gallon per minute, the showerheads will average 1.75 gallons per minute. The clothes washer will also be ENERGY STAR certified to ensure it is both water and energy efficient. This suite of measures earns 4 points under the Prescriptive Path, Case 2. Toilets with flush rates of 1.1 Gallon per flush will also be considered for an added point.

Also under the prescriptive path, 600 Mass Ave will use native plants for 100% of its landscaped area, earning 4 points in Outdoor Water Use. This practice improves the integrity of the local ecosystem while also ensuring that the plants are hearty enough to survive in the local climate without additional watering needs. This practice reduces water consumption significantly as compared to the use of turf which is highly water intensive. This project has no turf on site.

Energy and Atmosphere (EA)

When building green homes, the most important aspect is to minimize the energy use and the associated environmental impacts. For this reason, the EA category has the most available points (37.) For the 600 Mass Ave project the performance path was chosen. The project is targeting an energy efficiency performance 25% better than ASHRAE 90.1-2010 which translates to 27 points toward certification. These points achieved also reflect the smaller size of the units on this project relative to an average size unit, as detailed in the "Multifamily HSA" sheet within the LEED Workbook. This lower square footage per bedroom is a proxy for higher density and correlates with reduced consumption per capita. This approach acknowledges that sheltering people has inherent value, and that metrics for homes must take into account people accommodated as well as consumption versus square footage.

Targeted Point Strategies:

Minimum Energy Performance: The energy targets modelled for 600 Mass Ave will be verified on site using the ENERGY STAR Multifamily New Construction Testing and Verification Protocols (T&V). This quality assurance process is critical to ensuring that the modelled and designed targets are implemented diligently onsite so that the efficiency outcomes are achieved once the building is occupied. The ENERGY STAR T&V Protocols include visual verification of 100% of units by a certified Home Energy Rater or Rating Field Inspector. Final testing and verification is completed according to RESNET protocols. Final testing includes envelope leakage and duct leakage tests to validate the air sealing of the units, ducts and ventilation systems.

Understanding that projects in Cambridge are required to pursue the Enhanced Commissioning Credit, even when that credit is not available within the rating system used, the project team for 600 Mass Ave presents the following comparison of Enhanced Commissioning credit from LEED NC with the requirements of LEED Multifamily Midrise.

Enhanced Commissioning requires that the Commissioning Authority (CxA) be experienced in similar projects, have that experience extend into the operational phase of those projects and be at least a disinterested subcontractor of the design team. The T&V requires that the modeling be overseen by an Energy Star Licensed Professional and that on-site verification and testing be carried out by a HERS Rater, trained in rough and final stage inspection and testing of the building envelope as well as HVAC systems intended for 600 Mass Ave.

Both Option 1 Enhanced Systems Commissioning, Path 1 Enhanced Commissioning AND Option 2 Envelope Commissioning requirements will be met by the requirements of the prerequisite of Multifamily Midrise T&V Protocols. Prescriptive requirements of the T&V that will influence how the Commissioning plan is developed and executed include blower door testing at the unit level and duct leakage testing of heat pump air handling systems in units. The T&V also requires

duct leakage testing on central ventilation systems, which is crucial and too rare in projects that are not pursuing the Energy Star label. One practice will be added to ensure full compliance with Enhanced Commissioning options above which is the review of building operations after 10 months of operation.

Annual Energy Use: 600 Mass Ave will be modelled using a whole building energy simulation to predict its annual energy consumption. This project is targeting a 25% reduction in energy consumption compared to ASHRAE 90.1-2010. This will earn the project 17 points in EA Annual Energy Use. The relatively smaller size of apartments earns the project an additional 10 points through LEED's Home Size Adjustment calculation, see HSA. A total of 27 out of 30 potential points are there for awarded in this critical energy efficiency category.

Strategies Under Consideration:

Efficient Hot Water Distribution: This project is considering the location of the hot water source and usage points when laying out the units. Centralized distribution systems offer some meaningful benefits, but do introduce complexity and add to ongoing maintenance and retro commissioning scope to avoid significant energy waste. Therefore the team is currently planning to specify individual water heaters for each unit which will reduce the total volume of hot water stored in piping throughout the building, as well as pump energy. As the design progresses, the plumbing engineers will be directed to layout the hot water distribution with a focus on keeping runs short and pipe diameters as small as possible. This is made more feasible by the using low flow fixtures. These measures are very likely to enable the project to take Option 2, Performance test. This credit is not yet in the confirmed column however, because the final results are not available until after construction, and the overall score does not require the points at this time.

Option 3 Pipe Insulation will be further investigated but is not intended at this time. If the LEED credit is a marginal increase in cost compared to the code requirement, it may be implemented. This credit is given lower priority because it is known to have a larger real-world impact on buildings in warmer climates.

Advanced Utility Tracking is not being pursued, primarily for cost reasons relative to the expected benefit to the occupants. The multifamily specialists on the project team have not found a user-friendly, cost-effective solution for an in-unit energy-consumption dashboard on the market.

Materials and Resources (MR)

Good design decisions on the selection, sourcing and installation of materials can significantly reduce demand for materials, as well as their associated waste, embedded energy, and eventual need for replacement. This project focused their efforts on durability and reducing construction waste. The primary culprit of building damage is water intrusion followed by interior moisture sources, like showers. Proper material selection and detailing can reduce the damage caused by water and the need for costly repairs. Out of the maximum 9 points, 4.5 points were earned in this category.

Targeted Point Strategies:

Durability Management & Verification: The ENERGY STAR for Homes program provides a checklist of durability measures that have been provided to the builder on this project to improve their quality assurance onsite. Additionally a third party verifier will confirm the items on the checklist and that the drywall installed in wet areas meets ASTM D 3273 standards for durability, water-resistant flooring is used in rooms that may regularly get wet, and proper drainage and exhaust is provided for the water heater, clothes washer and clothes dryer.

Certified Tropical Wood: All wood on this project is either non-tropical, reused, reclaimed or certified by the Forest Stewardship Council. This ensures that any forestry practices in tropical areas that are supported by this project are sustainable.

Environmentally Preferable Products: For this project, 100% of the aggregate in concrete will be sourced from a local facility less than 100 miles from the project site. Environmentally Preferable Products, Low Emission and Local Products will be used throughout this project wherever cost effective. The project team is anticipated gaining 3.5 credits in this category, but will periodically search for cost effective opportunities to achieve more. The following are considered possible avenues to increase points in credit: Insulation with recycled content – fiberglass is readily available with high recycled content, but the project is likely to use mineral wool which performs better thermally, Steel Studs and drywall with recycled content. The strategy for these items is to require the contractor to report on the origin and recycled content of their proposed products during the submittal phase, sending the signal to the market that these characteristics are important. This approach is selected because if mandated, requiring specific recycled content levels in certain products can cause delays or cost increases that could be detrimental to the project overall.

Omitting floor covering, flooring, sheathing, concrete, roofing and siding were all omitted because they are not considered feasible in the team's local multifamily construction experience.

Construction Waste Management: Construction Waste Management Planning includes finding local options for diversion and requirement for contractor to provide documentation of actual diversion rate of construction waste. The diversion rate for construction waste will be documented with 2 points anticipated for this credit, based on achieving at least 75%.

Indoor Environmental Quality (EQ)

Over the past 20 years, research and experience have improved our understanding of what is involved in attaining high indoor environmental quality and revealed manufacturing and construction best practices that can prevent future problems. Preventing indoor air quality problems is generally much less expensive than identifying and solving them after they occur. Generally, there are three types of strategies used to improve air quality: removal, source control, and dilution. Since the 1987 release of EPA reports that designated indoor air pollution as a top environmental risk to public health, assessing and managing indoor pollutants have become the focus of integrated governmental and private efforts.
The Indoor Environmental Quality category encourages builders to prevent air pollution and improve air quality and comfort in the homes they build. Of the 18 points available the team is targeting 9.5 points with 3.5 additional points under consideration.

Targeted Point Strategies:

Ventilation: The bathroom and kitchen exhaust fans and ducts on this project are designed to ASHRAE Standard 62.2-2010. Exhaust and supply will be balanced to provide pollution removal (local exhaust) with the same system as the whole house ventilation (fresh air supplied to units and common areas.) Commercial bath exhaust fans will be designed in accordance with ASHRAE Standard 62.1-2007 for the commercial spaces by the tenant.

Combustion Venting: There will be no unvented combustion appliances, a hard-wired, battery backed-up carbon monoxide monitor will be installed in each unit, there will be no fireplace or wood stove, and no combustion based space and water heating equipment will be installed.

Radon-Resistant Construction: This project is in Radon zone 1, a high risk area as defined by EPA. In response, the design will include all required features of EPA's radon resistant new construction: a gas permeable layer covered by a control layer of polyethylene, penetrated by air tight PVC piping. These runs will be routed up and through the roof, where an electrical junction box will be located to facilitate the installation of an inline fan should one be needed in the future.

Air Filtering: This project will install air filters with a MERV rating of 8 for recirculating space conditioning systems and a MERV rating of 6 for mechanically supplied outdoor air systems with 10 or more feet of supply ductwork.

Environmental Tobacco Smoke: Smoking is prohibited throughout this building and within 25 feet of entries. Signage will be provided to communicate this policy. This approach meets the prerequisite and the requirements of the credit for 1 point.

Compartmentalization: Multifamily buildings with good air control layers surrounding each unit are more comfortable, efficient and their occupants report greater satisfaction with the space. Compartmentalized units are less likely to share respiratory droplets, odors, pollutants and sound between units and other units, corridors or outside. The strategies to achieve this are varied and complex, which is part of why this team was assembled to create and execute a compartmentalization plan.

Enhanced Ventilation: Option 1 will be earned because a continuous flow rate makes the most sense when using an ERV to ventilate bathrooms. This qualifies as an enhanced strategy because it will manage any potential humidity build up in bathrooms regardless of occupant utilization. Option 2 is not selected because the second requirement stipulating that flow rates must be between 100-110% of the ASHRAE 62.2-2010 minimum is and aggressively tight threshold for small units, where outside air requirements are often in the 20-30 CFM range. Expecting a whole building system to deliver between 20-22 CFM at a given register is not realistic given the technology and variables in play. It is listed as a maybe as a reminder to check the final commissioning results and award the point in the unlikely event that it is met. All ventilation flow rates will be verified as meeting or exceeding the ASHRAE 62.2 minimum.

The Contaminant Control credit reminds us about several strategies for minimizing the presence of contaminants inside homes, some of which are applicable to this building type, while others are not. Walk-off mats are an often specified approach to automatically cleaning the soles of entrants' footwear as they walk into the building. The team plans to install a walk off mat at each entry point to the building. However the credit is not taken because the credit requires the mat be 10 feet in the direction of travel. That would not be possible without reconfiguring the lobby, which may happen, pending other entryway concerns. Shoe removal and storage is generally more reasonable in larger homes, and not considered an optimal use of space for smaller homes like those planned for 600 Mass Ave. Also in the maybe column is a pre-occupancy flush of the building to reduce VOCs and particulates that are inevitably present post construction. Research shows that the value of this practice is particularly short lived, so it will be encouraged, but not required that the builder conduct this flush to earn this half point. Option 4 Air Testing is unpredictable and relatively expensive and will not be pursued.

Balancing of Heating and Cooling Distribution Systems: Case 1, Option 1 Multiple Zones is awarded based on the size of the units, even though the intention is to install single zone heating and cooling systems. Smaller homes can deliver comfort similar to larger homes with multiple zones. Option 3, pressure balancing will be pursued because it increases the comfort level of occupants when the supply air needed to maintain the thermostat's set point is delivered regardless of an open or closed bedroom door. Option 2 Supply Air-Flow Testing will not be pursued. The project plans to offer balancing control at the face of each register, giving each occupant the opportunity to adjust the flow of air in each room. By providing this benefit, the design also practically negates the value of professionally balancing every unit's system, if

the occupant is encouraged to make adjustments to match their comfort preferences in each room once they move in.

Enhanced compartmentalization will not be pursued. This could be reconsidered if the general contractor selected has extensive experience and confidence with constructing multifamily units that have passed their blower door tests by significant margins across the board. Generally this credit is avoided by all but the most experienced Energy Star and LEED Multifamily builders due to the uncertainty it introduces to the envelope commissioning process.

Enhanced Garage Pollutant Protection: This project does not have a garage which eliminates the risk of pollutants from cars and other toxic materials often stored in garages from entering the home. Combustion Venting similarly rewards the project with 2 points for omitting a fireplace.

Low-Emitting Products: This project is significantly improving indoor air quality by using low-emitting products for its paints, flooring, insulation, adhesives, sealants and composite wood products. These will all be required to meet LEED v4.1 requirements via accepted credit substitution, aligning with the applicable South Coast Air Quality Management District rules.

Innovation (IN)

Green building is a dynamic landscape of new ideas. Concurrent design and construction of thousands of projects with data shared through green building rating systems has accelerated the transition to greener building practices, by allowing project teams a common language to share their successes, many of which have become standard practice, as well as their failures and other ideas they would be unlikely to repeat in the same manner. Of the total 5 available points, the project is targeting 3 points, with strategies to achieve the other two under consideration.

The Innovation category also offers teams the opportunity to take up to two credits for Exemplary Performance achieved elsewhere in the rating system.

Targeted Point Strategies:

Cambridge is an inherently green community based on the existing urban fabric. It is unsurprising then, that 600 Mass Ave achieved Exemplary Performance for doubling the highest available thresholds in both Community Resources and Access to Transit. An additional point is available for the intended HVAC Start up procedure that is aligned with Energy Star Multifamily New Construction and the City of Cambridge's commissioning requirements.

Up to two more points could be achieved and are under investigation. Housing Types and Affordability and Design for Accessibility may be met by the design as it evolves. If they aren't met, but could be with a modest adjustment to the plans, they may also be pursued.

Regional Priority (RP)

Every location has its own unique environmental challenges. While there are common themes of what can be done to mitigate environmental impact, the issue of how much emphasis to place on each is strongly impacted by the project's location on the Earth. To acknowledge this reality, USGBC created Regional Priority Credits for each location. If this credit is earned at the appropriate threshold, the project may claim an additional point, up to 4 in Regional Priority.

At 600 Mass Ave they are: Compact Development at 2 points which is met, Community Resources at 2 points which is met, Outdoor water use at 3 points which is met, and Annual Energy Use at 15 points which is also met. If the project had not filled all 4 of its available RP slots already, Rainwater management at 3 points or balancing of Heating and Cooling Systems at 3 points might offer points. As it stands, they do offer the team perspective on the priorities of the local USGBC volunteers who selected these credits as regional priorities.

Appendix A: LEED For Homes Scorecard

LEED BD+C: Multifamily Midrise v4 - LEED v4

600 Mass Ave Scorecard

Location: **600 Massachusetts Ave, Cambridge, MA 02139, USA**

Note: The information on this tab is READ-ONLY. To edit this information, see the Credit Category tabs.

Integrative Process		**Preliminary**	Y	1 of 2	M	*1*	**Verified**	1
IPc	**Integrative Process**			1 of 2		*1*		1
Location and Transportation		**Preliminary**	Y	15 of 15	M	*1*	**Verified**	15
LTp	Floodplain Avoidance			Required				Verified
Performance Path								
LTc	LEED for Neighborhood Development			0 of 15		*0*		
Prescriptive Path								
LTc	Site Selection			8 of 8		*1*		8
LTc	Compact Development			3 of 3		*0*		3
LTc	Community Resources			2 of 2		*0*		2
LTc	Access to Transit			2 of 2		*0*		2
Sustainable Sites		**Preliminary**	Y	4 of 7	M	*2*	**Verified**	4
SSp	Construction Activity Pollution Prevention			Required				Verified
SSp	No Invasive Plants			Required				Verified
SSc	Heat Island Reduction			2 of 2		*0*		2
SSc	Rainwater Management			0 of 3		*2*		
SSc	Nontoxic Pest Control			2 of 2		*0*		2
Water Efficiency		**Preliminary**	Y	8 of 12	M	*1*	**Verified**	8
WEp	Water Metering			Required				Verified
Performance Path								
WEc	Total Water Use			0 of 12		*0*		
Prescriptive Path								
WEc	Indoor Water Use			4 of 6		*1*		4
WEc	Outdoor Water Use			4 of 4		*0*		4
Energy and Atmosphere		**Preliminary**	Y	27 of 37	M	*5*	**Verified**	27
EAp	Minimum Energy Performance			Required				Not Verified
EAp	Energy Metering			Required				Verified
EAp	Education of the Homeowner, Tenant or Building Manager			Required				Verified
EAc	Annual Energy Use			27 of 30		*0*		27
EAc	Efficient Hot Water Distribution System			0 of 5		*5*		
EAc	Advanced Utility Tracking			0 of 2		*0*		

Materials and Resources		Preliminary	Y	3.5 of 9	M	*3.5*	Verified	3.5
MRp	Certified Tropical Wood			Required				Verified
MRp	Durability Management			Required				Verified
MRc	Durability Management Verification			1 of 1		*0*		1
MRc	Environmentally Preferable Products			0.5 of 5		*3.5*		0.5
MRc	Construction Waste Management			2 of 3		*0*		2

Indoor Environmental Quality		Preliminary	Y	9.5 of 18	M	*3.5*	Verified	9.5
EQp	Ventilation			Required				Verified
EQp	Combustion Venting			Required				Verified
EQp	Garage Pollutant Protection			Required				Not Verified
EQp	Radon-Resistant Construction			Required				Verified
EQp	Air Filtering			Required				Verified
EQp	Environmental Tobacco Smoke			Required				Verified
EQp	Compartmentalization			Required				Verified
EQc	Enhanced Ventilation			1 of 3		*2*		1
EQc	Contaminant Control			0 of 2		*1*		
EQc	Balancing of Heating and Cooling Distribution Systems			2 of 3		*0*		2
EQc	Enhanced Compartmentalization			0 of 3		*0*		
EQc	Combustion Venting			2 of 2		*0*		2
EQc	Enhanced Garage Pollutant Protection			1 of 1		*0*		1
EQc	Low-Emitting Products			2.5 of 3		*0.5*		2.5
EQc	No Environmental Tobacco Smoke			1 of 1		*0*		1

Innovation		Preliminary	Y	3 of 6	M	*2*	Verified	3
INp	Preliminary Rating			Required				Verified
INc	Innovation			3 of 5		*2*		3
INc	LEED Accredited Professional			0 of 1		*0*		

Regional Priority		Preliminary	Y	4 of 4	M	*0*	Verified	4
RPc	Regional Priority			4 of 4		*0*		4

Point Floors

The project earned at least 8 points total in Location and Transportation and Energy and Atmosphere	Yes
The project earned at least 3 points in Water Efficiency	Yes
The project earned at least 3 points in Indoor Environmental Quality	Yes

Total		Preliminary	Y	75 of 110	M	19	Verified	75

Certification Thresholds Certified: 40-49, Silver: 50-59, Gold: 60-79, Platinum: 80-110

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Net Zero Narrative for 600 Massachusetts Avenue, Cambridge, MA
Submitted by Peter Quinn Architects, Sustainable Energy Analytics & MaGrann Associates
August 21, 2020

Project Profile

Development Characteristics

Lot Area SF:	21,262
Existing Land Use(s) and Gross Floor Area SF, by Use:	Retail: 54,719
Proposed Land Use(s) and Gross Floor Area SF, by Use:	Retail: 33,355 with waiver; 46,053 without Residential: 47,884 with waiver; 45,918 without
Proposed Building Height(s) (ft. and stories):	70.2'; 6 stories
Proposed Dwelling Units:	46
Proposed Open Space SF:	3,319
Proposed Parking Spaces:	0
Proposed Bicycle Parking Spaces (Long-Term and Short-Term):	87

Green Building Rating System

Version:	LEED Multifamily Midrise v4
Level:	Gold
Seeking Certification?	TBD
Points:	75 Yes (over 60 required for Gold)

Net Zero Narrative for 600 Massachusetts Avenue, Cambridge, MA
Submitted by Peter Quinn Architects, Sustainable Energy Analytics & MaGrann Associates
August 21, 2020

Proposed Project Design Characteristics

Building Envelope

Descriptions:

Roof:	High Albedo (reflective, white) roof membrane, Polyisocyanurate insulation sufficient to create a drainage taper, roof sheathing supported by open web trusses, where the cavity is completely filled with fiberglass insulation, in contact with drywall below to prevent convective loops.
Foundation:	Existing foundation wall to remain, new concrete walls adjacent to existing foundation
Exterior Walls	Metal siding over 2" continuous insulation (type TBD – R-8.4-10) Gypsum wall sheathing on light gauge metal studs with 5.5" Mineral wool batt insulation providing an R-23 in the cavity, encapsulated by 5/8" gypsum wall board at the interior
Windows:	Fiberglass frame picture and casement windows
Window to wall ratio:	22%
Other components:	None

Envelope Performance:

	Proposed		Baseline	
	Area in sf	U-value	Area in sf	U-value
Window fixed/operable	6006	0.27	6006	0.38/0.45
Wall	21520	0.045	21520	0.052
Roof	8148	0.22 (or lower)	8148	0.035

Envelope Commissioning Process:

In accordance with Energy Star Multifamily New Construction requirements, a certified HERS Rater or Rating Field Inspector will verify that the insulation and air sealing have been installed according to the designed specifications, prior to covering with drywall. Air leakage will be verified as the building approaches completion by individual unit blower door testing. This provides assurance that both the exterior air barrier and the compartmentalization air barrier are properly sealed. All units must demonstrate no more than 0.30 CFM50 per square foot of enclosure area.

Net Zero Narrative for 600 Massachusetts Avenue, Cambridge, MA
Submitted by Peter Quinn Architects, Sustainable Energy Analytics & MaGrann Associates
August 21, 2020

Building Mechanical Systems

Descriptions:

Space Heating	Mini-split heat pump in each unit
Space cooling	Mini-split heat pump in each unit
Heat Rejection	N/A
Pumps	Water Booster pump to be NEMA premium efficiency
Ventilation	Local exhaust for bathrooms provided by continuous, outgoing air stream of two rooftop ERV units. Supply air stream of ERVs provides balanced whole house ventilation air directly to units per ASHRAE 62.2 and common areas per ASHRAE 62.1. Other local exhausts are intermittent from Kitchen and laundry and go directly outside the envelope.
Service Hot Water	Electric water heaters in each apartment
Interior lighting	100% LED fixtures, both semi-recessed and surface mounted
Exterior lighting	100% LED
Other systems	N/A

Commissioning Process:
The project will comply with Enhanced Commissioning requirements as laid out in LEED NC v4 by following the Energy Star Multifamily New Construction v1.1 requirements with the addition of a review of building performance and operation by the HERS Rater 10 months after occupancy. Several key components of that process include: duct leakage testing on central ventilation systems and heating and cooling systems, verification that all ventilation flow rates comply with applicable ASHRAE standards, as well as notification of the owner if tested values are out of alignment with the design intent.

Net Zero Narrative for 600 Massachusetts Avenue, Cambridge, MA
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August 21, 2020

Anticipated Energy Loads and Greenhouse Gas Emissions

Assumptions

The initial energy study for 600 Mass Ave was conducted for the residential and residential-associated portions of the building only because it comprises the vast majority of the project. It is also important to consider those choices carefully because they will repeat their impact many times over though the building. ASHRAE 90.1 based energy modeling, using eQUEST software will begin once the project begins the Design Development phase.

The envelope and mechanical systems were reviewed and compared with both MaGrann Associates and Sustainable Energy Analytics' portfolio of high performance multifamily buildings with a priority on long term environmental performance. The first consideration was elimination of any gas combustion, a once unthinkable step in the area that is now achievable. This permits the building to become greener over time as the fuel mix of the grid lowers in carbon impact. It will create a building that has higher greenhouse gas emissions upon completion however, when compared to the presumed lower distribution losses of natural gas.

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Annual Projected Energy Consumption and Greenhouse Gas (GHG) Emissions

Projected consumption results by end use will be provided in the next iteration of the Net Zero Narrative, once energy modeling has begun. At this stage we have set a target for EUI based on the building type, fuel sources and location.

	Baseline	Proposed	Future
Total projected energy use kWh/yr	5,718,546	4,084,676	4,046,452
Site EUI in kBtu/SF*yr	35	25	25
Source EUI in kBtu/SF*yr	0	70	0
On-site Renewable Energy Generation in kWh/yr	0	0	38,224
Off-site Renewable Energy Generation in kWh/yr	0	0	4,046,452
GHG Emissions total in tons CO2/yr	128	92	0
GHG Emissions total in lbs CO2/yr	256,538	183,241	0

Net Zero Narrative for 600 Massachusetts Avenue, Cambridge, MA
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August 21, 2020

Building Energy Performance Measures

Overview

Land Uses	Mixed use building reserves street frontage for community supporting retail. Location within existing amenity rich community promotes walking and biking. No vehicle parking provided while significant bicycle parking is provided.
Building Orientation and Massing	Proposed building is locked between existing buildings and the street, glazing located efficiently where it can be included. Windows deployed in a responsible 22% window to wall ratio.
Envelope Systems	Walls and roof to have continuous exterior insulation in addition to cavity insulation limiting thermal bridging. High performance glazing included for dual benefit of Energy Efficiency and occupant comfort
Mechanical Systems	Mini-split heat pumps are the current top-tier system for efficiency in residential construction. They also offer individual control and superior dehumidification when compared to traditional heat pumps.
Renewable Energy Systems	None planned at this time, but 1,353 square feet of roof area has been identified as solar ready and appropriate conduit, roof configuration and electrical room space will be allocated to allow for future installation of on-site solar generation.
District Energy Systems	Not considered
Other Systems	High Efficiency plumbing systems save both water and energy used to pump and heat water.

Integrative Design Process

Architects manage regular meetings with the design team as the project progresses. Each meeting will include a reminder to revisit the strategies under consideration generated as part of the initial LEED preliminary rating. Each item needing further data collection or research is assigned to the appropriate team member to investigate and report back to the team at the next meeting.

Net Zero Narrative for 600 Massachusetts Avenue, Cambridge, MA
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August 21, 2020

Solar-Ready Roof Assessment

Total Roof are in SF	8,148
Unshaded Roof Area in AF	1,353
Structural Support	All roof areas suitable for solar installation will be structurally designed to support PV panels when structural design commences.
Electrical Infrastructure	The electrical room layouts will include a future scenario showing the location of any inverters, disconnects and other equipment needed to install a grid connected solar system on the roof of the building at 600 Mass Ave.
Other Large Roof Appurtenances	Two large ERV units and approximately 44 condensing units, plumbing vent stacks have been optimized to increase the solar ready area, to some positive effect.
Solar Ready Roof Area	1,353 SF of roof area
Capacity of Solar Array	If we assume ultra-high efficiency panels at 22%, we can fit an approximately 29kW system with an annual generation capacity of 38,224 kWh/ year. Solar hot water was not considered because of the intention to use individual DHW systems per unit.
Financial Incentives	Financial incentive estimates will be investigated by the Solar specialist who will be engaged to diagram the layout of the system as the roof plan moves forward.
Cost feasibility	The solar specialist will also provide an estimate for the additional up-front cost to install the designed system at current rates, which will allow cost feasibility to be calculated prior to construction. At that point the decision of when to install the system will be made.

Green Building Incentive Program Assistance

The Project intends to pursue incentives through the Mass Save program with the assistance of SEA.

Net Zero Narrative for 600 Massachusetts Avenue, Cambridge, MA
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August 21, 2020

Net Zero Scenario Transition

	Net-Zero Condition	Transition Process
Building Envelope	Similar to proposed	None required
HVAC Systems	Similar to proposed	At the end of each piece of equipment's life-cycle, replace with a more efficient modern (future) compatible system
Service Hot Water	Similar to proposed	At the end of the water heater lifecycle, consider if heat pump water heaters are available that will work well in apartments.
Lighting	Similar to proposed	At the end of each equipment's life cycle, replace with the most efficient option currently available.
Renewable Energy Systems	Installation of PV array described in the Solar Ready section	Installation will be relatively straightforward with design and all behind the walls infrastructure included in the original design
Other Strategies	None	None

By building within the urban fabric and excluding the use of fossil fuels on site at the outset the building is well positioned to make the transition to net zero emissions status as the grid becomes cleaner over time.

NREL
NATIONAL RENEWABLE ENERGY LABORATORY

Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at https://sam.nrel.gov) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NREL report: The Error Report.

The energy output range is based on analysis of 30 years of historical weather data for nearby , and is intended to provide an indication of the possible interannual variability in generation for a Fixed (open rack) PV system at this location.

RESULTS

38,223 kWh/Year*

System output may range from 36,686 to 39,614 kWh per year near this location.

Month	Solar Radiation (kWh / m^2 / day)	AC Energy (kWh)	Value ($)
January	3.10	2,315	345
February	3.96	2,624	391
March	4.71	3,361	501
April	5.51	3,698	551
May	5.61	3,834	572
June	6.09	3,964	591
July	6.50	4,322	644
August	5.96	3,972	592
September	5.27	3,452	515
October	3.89	2,722	406
November	2.94	2,050	306
December	2.60	1,910	285
Annual	4.68	38,224	$ 5,699

Location and Station Identification

Requested Location	600 Massachusetts ave Cambridge MA 02139
Weather Data Source	Lat, Lon: 42.37, -71.1 0.4 mi
Latitude	42.37° N
Longitude	71.1° W

PV System Specifications *(Residential)*

DC System Size	29 kW
Module Type	Premium
Array Type	Fixed (open rack)
Array Tilt	20°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	96%
DC to AC Size Ratio	1.2

Economics

Average Retail Electricity Rate	0.149 $/kWh

Performance Metrics

Capacity Factor	15.0%

Special Permit Application
600 Massachusetts Ave in Central Square, Cambridge
A Mixed-Use Development

Project Narrative

Prepared by Peter Quinn Architects LLC, Law Offices of Kevin Crane,
and Design Consultants Engineering Co.
Revised 30 September 2020

Table of Contents to the Project Narrative

PART 1 – GENERAL

A. General Description of Site

The Applicant proposes to construct a mixed-use development at the heart of Central Square. The footprint of the proposed building is limited to portion of a 21,262-SF parcel all of which is currently covered by buildings of one to four stories. The remainder of the site is occupied by on-going retail operations and the four-story brick commercial structure that is currently undergoing a by-right renovation for office use.

The lot has two frontages, one is along Massachusetts Avenue (100.1-ft) and the other on Green Street (126.3-ft).

As listed in the Application, the project is within the Central Square Overlay District with a base zoning district of Business B. Other district dimensional criteria are controlled by the Res-C-3 District regulations for the residential component of the building.

The existing occupants include the Supreme Liquor Store, a Chipotle restaurant, and on Green Street a Tae Kwon Do martial arts facility. There is also vacant retail space on Massachusetts Avenue which was previously occupied by a Sleepy's Mattress store. It is anticipated during the

construction process that the Tae Kwon Do use will be relocated to the renovated Bakery Building and when the building is completed, the Tae Kwon Do operation will move to the new basement space, which will be outfitted for their use.

B. Project and Building Description

The Applicant proposes to demolish a portion of the existing building from Mass Ave through to Green St and to construct forty-six (46) residential dwelling units on five stories (floors two through six) within that space. Below the residential levels on the first floor and basement are related residential amenities, building entries and retail/commercial spaces. The existing retail/commercial spaces that is not otherwise demolished will remain largely unchanged. The total square footage of the finished building, both new and existing, will be approx. 93,263-GSF without a Basement GFA Waiver and approx. 79,203-GSF with a Basement GFA Waiver.

The primary entrance for the residential units will be located at the ground floor along Massachusetts Avenue, where there is immediate access to the Red Line and main bus routes. The secondary residential entry, the retail service entry and the main entrance to the renovated office spaces are located on Green St. Residents and employees will be able to traverse the building from one end to the other by an internal corridor that connects Mass Ave and Green St.

The site's Green St. existing frontage (approx. 126' +/-) will be greatly improved by new floor to ceiling windows at the commercial uses and a private courtyard which would serve as a building forecourt linking the new proposed development, the renovated commercial brick building, and the ground floor commercial uses. The addition of glazing, entries and the forecourt will certainly improve the streetscape on Green St.

The residential portion of the project is approx. 46,787-GSF, including basement residential areas. It will include a range of unit types and sizes including studio, 1-, 2-, and 3-bedroom units. Below is the current estimated unit mix however, the unit sizes and mix will be subject to change based on final internal layout.

Unit Type	Number	Percentage	Size range (Net square feet)
Studios	13	28%	486-619
1 Bedroom	17	38%	532-925
2 Bedroom	14	30%	754-1,143
3 Bedroom	2	4%	1,180-1,423
Total	46	100%	

Of the proposed 46 units, approximately nine (9) would be provided as inclusionary units per the Zoning By-law regulations (the criteria are based on a formula that will be addressed at the appropriate time).

The Applicant requests a parking requirement Waiver and a parking fee Waiver which is allowed by Special Permit subject to criteria detailed in Article 20. A discussion of this request follows in the next section of this Narrative.

The residents and commercial users will be provided a total of 60 long term bicycle parking spaces, located in a basement storeroom and accessible via an elevator. This meets the required number of spaces. The storage room includes a bike repair area as well as the required storage for tandem and cargo bikes. For short term bicycle parking, the Applicant proposes to provide a payment-in-lieu for the required short-term bicycle parking spaces that are not able to be provided on the site.

The residential amenities include a living room type lobby area at grade, fitness room in the basement, and residential storage area in basement. The bike storage room includes a work and repair area. Of the 46 units, 26 have private balconies or roof terraces.

The exterior of the building at Mass Ave is designed to be a fitting image for a major Avenue building, providing both generous storefront glazing and properly scaled residential windows above the street line. The sixth-floor steps back to reduce the massing at the street line, thereby approximating the height of the nearby Barron Building.

The Green St façade presents a reconstructed one-story brick façade and cornice with a strong contemporary building behind it. The new building window pattern and scaling presents a dialog with the adjoining restored brick building, linked by the forecourt entry area.

The exterior materials are described in detail in the drawings.

The new construction will be designed to meet the LEED GOLD requirements per the By-Law. A narrative and required certifications are included with this Application.

PART 2 - SUMMARY OF SPECIAL PERMIT AND WAIVER REQUESTS and RESPONSES FOR THE PROJECT

As listed in the Application, the Applicant is requesting the following relief under the Ordinance in connection with the project. Please note that a detailed Zoning Analysis is provided in the Application for further clarification on zoning compliance.

Below are the project specific Special Permit and Waiver requests with a brief response in *italics*. Listed in order.

1. Definitions: Gross Floor Area Exclusions for Basement, #16 Special Permit

From Article 2 Definitions
…Gross Floor Area shall not include: …
(16) Any basement or cellar living space in any other type of structure with the issuance of a special permit. In granting such a special permit, the permit granting authority may approved the exemption of any portion of Gross Floor Area (GFA) located in a basement

or cellar from the calculation of GFA, provided the permit granting authority finds that the uses occupying such exempted GFA support the character of the neighborhood or district in which the applicable lot is located.

Response – Special relief is requested to exempt floor area for basement uses, pursuant to Section 2.000-Definitions Subparagraph 16. Under this provision of the Ordinance, a Special Permit exempting basement gross floor area is permitted provided the uses occupying the basement support the character of the neighborhood or district in which the lot is located. It is anticipated that the Tae Kwon Do operation presently occupying the first floor of the premises towards Green Street will relocate to the basement area of the new structure. Accordingly, by maintaining this popular use at the site, the character of the neighborhood will be supported and maintained. A portion of the basement space will also be used for a resident's fitness room complementing the residential use of the building in support of the expanding residential character of the neighborhood. The liquor store has back-of-house operations and retail storage as well. Both of these uses would continue approx. as they are now. Other proposed basement use will consist of mechanical, electrical, and storage which are all uses consistent with the character of the neighborhood and district and will have no negative impacts upon the neighborhood.

2. 19.20 Project Review Special Permit

As noted in Article 20.300, The Central Square Overlay District shall be considered an area of special planning concern.

Development proposals listed in Subsection 19.42 and 19.43, shall be subject to the Development Consultation Procedures specified in Article 19.000 except that any Large Project Review (new buildings of two thousand (2,000) square feet or more shall be conducted by the Central Square Advisory Committee using procedures as specified in Subsection 20.304.1 of this Section 20.300.

Response – The proposed new construction and proposed Gross Floor Area is over 50,000-GSF thereby requiring an Article 19.20 Project Review Special Permit pursuant to Section 19.23. Special Permit pursuant to Ordinance section 10.43, generally applicable Special Permit criteria. <u>These general criteria for Special Permits are discussed in the Part 4, below.</u>

3. 19.30 Citywide Urban Design Objectives

Response – The project is required to address the City's Urban Design Objectives. <u>These objectives are discussed in Part 5, below</u>.

4. 20.300 Central Square Overlay District

Criteria for Development Consultation Review and Review of Applications for Special Permits and Variances.

In reviewing applications for variances, special permits or development consultation reviews the permit or special permit granting authority or the Central Square Advisory Committee shall be guided by the objectives and criteria contained in the publication *"Central Square Action Plan",* City of Cambridge, November 1987, and *"Central Square Development Guidelines"*, July 1989, in addition to the requirements of 20-62 Section 10.30 - Variances, 10.40 - Special Permits, and Subsection 20.305 of this Section 20.300. These guidelines are also intended to assist in shaping any contemplated physical change within the Central Square Overlay District.

Response – The project is required to address the Central Square Overlay District Objectives. These objectives are discussed in Part 3, below.

5. 20.304.2.2 Building Height Limitation Special Permit

Special Permit for Additional Height. Additional height may be permitted as follows:

(a) The maximum allowable height in the Central Square Overlay District may be increased up to eighty (80) feet upon issuance of a Special Permit by the Planning Board provided that those portions in excess of sixty (60) feet are set back from the street line at least ten (10) feet and that those portions are also set back from one or more forty-five degree (45°) bulk control planes beginning sixty (60) feet above any streetline in the district and rising over one or more lots at a forty-five degree (45°) angle.

Response – The project plans show that the building meets the above requirements and conditions, including 80-ft height, 10-ft setback (above 60-ft), and bulk control planes as described above. The building height will be set at approximately 70.2-ft from average grade to the highest point of the roofing material. This height is consistent with other buildings in the immediate vicinity and is needed to achieve the mixed-use goals of the project, including providing a significant number of inclusionary units.

6. 20.304.3.4 Special Permit for Additional FAR for Residential Uses [in the Central Sq Overlay]

Additional FAR for Residential Uses. Upon issuance of a special permit, the Planning Board may increase the allowed FAR on any lot or portion of a lot located within the Business B (BB) portion of the Central Square Overlay District to a total FAR of 4.00 for all non-residential and residential uses combined, notwithstanding the Rules for Calculation of Permitted Gross Floor Area on a Lot as set forth in Section 5.30.12, provided that the maximum FAR permitted for non-residential uses on a lot shall not exceed the limitation on non-residential FAR applicable in the base zoning district and that the proposed FAR of all non-residential uses on the lot shall not exceed the proposed FAR of all residential uses on the lot.

Response - Refer to Part 2, Section c).2.a and b in the attached Zoning Analysis. Summary: [excerpt from the Zoning Narrative follows]

a. Does the Project meet the requirement that the non-residential area does not exceed what is allowed in the base zoning district?

Calculation – *refer to Table 2.C.1 above and Sheet Z-3 for supporting graphics and summaries*:

- The allowable non-residential GFA in BB per ZBL Table 5.1 is FAR 2.75 X Lot Area of 21,262-SF = 58,471-GSF
- Non-residential GFA without Basement Area Waiver = 46,476-GSF
- Non-residential GFA with Basement Area Waiver = 33,320-GSF

Conclusion – yes, in both cases, the standard is met.

b. Does the Project meet the requirement in Article 20.304.3.4 to allow a FAR of 4.0 provided that at least 50% of the project is Residential?

Calculation – *refer to Sheet Z-3 for supporting graphics and table.* :

- Without the Basement Exemption, the ratio is 49.8% commercial and 50.2% Residential. (46,476 Comm / 93,263Tot) + (46,787 Res / 93,263 Tot) = 100%. In this case the GFA is 4.39.
- With the Basement Waiver granted, the Ratio of Commercial Use to Residential Use is 42% commercial and 58% Residential with the Inclusionary Incentives applied. (33,320 Comm / 79,203 Tot) + (45,883 Res / 79,203Tot) = 100%. In this case the GFA is 3.73.

Conclusion - yes, both with or without the Basement Waiver, compliance is shown below.

7. 20.304.3.5 FAR Exemption for Residential Balconies [and Terraces]

FAR exemption for Residential Balconies. In the Business B district only, notwithstanding any other provision of this Zoning Ordinance, the Gross Floor Area of balconies, porches, stoops, or mezzanines on any floor of a structure that are accessory to residential uses and not exceeding six (6) feet in depth measured back from the adjacent wall plane of a building shall be exempted from the calculation of Gross Floor Area permitted on the applicable lot. Also, terraces that are created by stepping back the upper floors of a building, provided that they are open to the sky and a minimum of eight (8) feet in depth measured from the façade of the story beneath, shall be exempted from the calculation of Gross Floor Area permitted on the lot.

Response – The project plans show that the project does qualify for this Exemption. The building's balconies do not exceed 6-ft in depth and the terraces a minimum of 8-ft in depth.

8. 20.304.4 Waiver of Setback and Open Space Requirements, Special Permit

20.304.4.1 Waiver of Setback, Special Permit

Yard Setbacks. Upon issuance of a special permit from the Planning Board, the yard requirements of a base zoning district may be waived except where such yard abuts a lot, but not a public way, outside the Overlay District. However, in waiving or reducing a front yard setback, the Planning Board shall take into account the width of the adjacent public sidewalk and may limit the reduction of the setback in order to provide additional sidewalk width within the front yard setback where appropriate, taking into account applicable City standards and expected pedestrian traffic on the street.

Response – The applicable front yard setback for residential use at Mass Ave is 23.3-ft and 26.0-ft at Green St. The East side yard setback of 43.2-ft. Given that the existing building has no front yard setback nor do all adjacent and neighboring buildings, any front yard setback would be inconsistent with urban design goal of maintaining façade alignments. Any side yard setback requirement would also be inconsistent with such goals, creating very substantial interruptions to the streetscape.

20.304.4.2 Waiver of Open Space Requirements, Special Permit
Private Open Space. Open Space shall be provided as required in the Base Zoning District, however the Planning Board may allow, by Special Permit, the reduction of required Open Space, and permit such Open Space to be located at levels other than at grade if the applicant can demonstrate that the urban design objectives as set forth in the Central Square Overlay District can be met.

Response – The commercial use of the new structure does not impose any Private Open Space requirement. It should be noted that the existing building does not provide any Open Space.

The residential portion requires ten percent Private Open Space. The Project provides balconies, roof decks and shared Open Space at the Green Street forecourt with a total area of approximately 3,442-sf or 16.2% of the lot area.

As a matter of formal definition, not all of the proposed Open Space qualifies as Private Open Space. The POS requires dimensional minimums that are not universally met with the Open Space provided. Therefore, the Applicant requests that the Open Space requirement be waived as defined and allow the Open Space as provided to be allowed.

9. 20.304.6 Parking and Loading Requirements

20.304.6.3 Waiver of Parking and Loading Requirements, Special Permit
Waiver of Parking and Loading Requirements. Uses in the Central Square Overlay District which meet the following requirements shall be exempt from the parking and loading requirements as specified in Section 6.36 - Schedule of Parking and Loading Requirements and the minimum requirements set forth in Paragraph 2 above.

(a) The use is contained within a structure or portion of a structure in existence on or before June 1, 1940 or if constructed later is identified as a National Register or contributing building; or

Response – The parts of the structure that are not otherwise demolished were constructed prior to 1940.

(b) The use is contained in a new structure or new addition to a structure identified in (1.) above, after the issuance of a special permit by the Planning Board provided:

(i) The total development authorized on the site is reduced to ninety (90) percent of the maximum permitted on the lot; or a cash contribution is made to the Central Square Improvement Fund to be established by the City of Cambridge in an amount equal to fifty (50) percent of the cost of construction of the parking spaces not provided, said contribution to be used by the City of Cambridge for one or more of the following improvements in the Central Square Overlay District:

Response – The proposed development qualifies for the Waiver. A project is required to have no more than 90% of the maximum permitted on the lot. In this case, the maximum permitted on the lot is calculated to be approx. 4.99 FAR with Incl Incentives and granting of Special Permits and Waiver equivalent to this Application. This simulation is demonstrated in the Zoning Narrative Part 2, Section C.3.b, including a diagrammatic graphic.

With a Basement GFA Waiver, the proposed Project's FAR is 3.73, which is 75% of the maximum permitted on the lot. Without a Basement GFA Waiver, the Project's FAR is 4.39, likewise is less than the maximum permitted at the lot at 88%.

(1) Provision of public parking, preferably for short term users;

(2) Programming, events, and infrastructure that contribute to the Cultural District established in Central Square;

(3) Improvements to public parks, or restoration of historic structures, monuments and other features owned by the City of Cambridge or other public agency or a nonprofit organization;

(4) Improvements to public pedestrian and bicycle facilities such as sidewalks, crosswalks, dedicated cycling paths and bicycle parking.

The Central Square Advisory Committee shall receive and make comments on any proposal for the expenditure of such cash contributions. The funds shall not be used for ordinary maintenance activities normally undertaken by the City of Cambridge. The value of the cash contribution shall be determined by the Community Development Department assuming equivalent structured parking spaces and using generally accepted cost estimation methods customarily used by architects and engineers or using actual construction costs for comparable contemporary parking construction in Cambridge.

Response – (1) through (4) are not applicable.

Please note: City officials, particularly the Traffic Dept., has requested the petitioner to evaluate a possible future relocation of the Central Square subway station stairway within the confines of this project. The petitioner is willing to discuss with all stake holders such a vision. However it is noted that a very large concrete storm water storage tank will be located in the project's basement which is a required element for the storm water system. There is no other suitable location for this utility connection as it is immediately adjacent out to storm water drainage connection below Massachusetts Avenue and the

other end of the building is occupied with electrical rooms. Such a relocation of the MBTA entrance would also adversely affect the primary retail location within the new building.

(ii) The subject lot is sufficiently small in size as to contribute to a development pattern of diverse, small scale, new structures and the retention of existing structures (for lots exceeding 10,000 square feet a specific finding shall be made that this objective has been met).

Response – The subject lot's area is 21,262-sf; however, the footprint of the proposed new structure is 10,049-sf. The lot is covered entirely by existing structures. There is no available land for off-street parking and the new structure, combined with the existing structures, will again totally cover the lot.

(iii) The Planning Board shall specifically find that an exemption from parking and loading requirements will result in a building design that is more appropriate to its location and the fabric of its neighborhood and that it is in conformance with the objectives and criteria contained in Central Square Development Guidelines.

Response – The project's design is consistent with the placement and fabric of similar buildings in the neighborhood. Providing parking with its associated ramp would substantially affect the ground floor neighborhood characteristics including (applicable to both facades):

- *Uninterrupted façade line*
- *Ground floor retail with >50% glazed openings*
- *Zero lot-line building placement*
- *Uninterrupted curb and sidewalk line*
- *Little or no on-site parking*
- *No designated loading dock*

The current project design will allow for the development to preserve the existing historic structure without modifications, and for construction of a modern addition consistent with urban design principles. A requirement for onsite parking or loading facilities would render this project unfeasible, due to the existing structure and the requirement to construct the foundation to the new addition. It should also be noted that demand for onsite parking will be minimal given that the Central Square T Station is right in front of the building, a substantial municipal parking garage is behind the building, and the traffic analysis submitted by VHB Consultants also performed included a parking analysis which concluded that there are sufficient available parking spaces in the area during both peak traffic hours as well as throughout the day to serve all residents, employees and patrons that are expected to need parking in close proximity to the project.

<u>Regarding a Parking Analysis</u>: Under Article 6.35.31 of the Ordinance, a parking analysis shall be submitted where it is specifically required by any provision of this Zoning Ordinance. A special permit granting authority may also request that elements of a parking analysis be provided when considering a project that proposes a deviation from parking requirements specified in the Zoning Ordinance or an increase in development density above the maximum allowed as of right under base zoning regulations. There is no specific provision in the Zoning Ordinance requiring submission of a parking analysis relative to this project. Although the special permit granting authority (i.e. the Planning Board) has not specifically

requested a parking analysis, the traffic impact statement by VHB Consultants does address parking demand for the project.

The approved TIS scoping letter from the Traffic, Parking and Transportation Department (TTT) dated May 20, 2019 specifically requested that the TIS include a parking analysis. Under the TIS, on-street parking within a quarter mile of the project site was inventoried. See Page 18 and Figure 1.C.1 on page 83 of the TIS. The inventory noted that most of the on-street parking surrounding the study area was resident permit parking with areas of metered parking along Massachusetts Avenue, Bishop Allen Drive, and various other nearby locations. The report also references the various transit service areas within the study area including the MBTA Redline and numerous bus routes.

Once the parking inventory numbers were available, a curbside parking utilization study was performed by VHB within the TIS. See Pages 27 and 28 of the TIS. Based on this study, the parking analysis concluded that the on-street parking availability was sufficient within the study area during both peak traffic hours as well as throughout the day to serve all residents, employees, and patrons that are expected to need parking in close proximity to the project. This analysis considered both active vehicle uses during typical commutes as well as residential vehicle owners whose vehicles will need parking availability in the neighborhood. See Pages 43 and 44 of the TIS.

Responses to the Central Square Development Guidelines are provided in Part 3, below.

(iv) No National Register or contributing building is demolished or so altered as to terminate or preclude its designation as a National Register or contributing building; and "

Response – The historic aspects of the existing buildings are being preserved. The Cambridge Historical Commission has issued an approval of the submitted design.

(v) No National Register or contributing building has been demolished or altered so as to terminate or preclude its designation within the five (5) years preceding the application.

Response – There has been no building demolished or altered as described herein.

10. 10.43 General Criteria for the Granting of a Special Permit

As may be applicable to the Application, these criteria are addressed under Part 4 hereof.

PART 3 – CENTRAL SQUARE DESIGN OBJECTIVES and RESPONSE

Article 20.305 describes the Objectives pertinent to approval of projects in Central Square.

Standards for Issuance of Special Permits. In addition to the general standards for the issuance of a special permit found in Section 10.40 of the Zoning Ordinance, the special permit granting authority shall in addition make the following findings:

1. The proposed development is consistent with the goals and objectives of the Central Square Action Plan:

   a) • Encourage responsible and orderly development;

Response – The proposed development is part of a two-phase redevelopment of the site. Phase 1 is underway already and is a by-right renovation and restoration of the four-story brick warehouse on Green St. With the necessary approvals for the new six-story building, the development will be able to proceed in a responsible and orderly way.

b) • Strengthen the retail base to more completely serve the needs of the neighborhoods;

Response – The proposed development will add retail and/or commercial space on Green St and substantial area of the new basement will be added to the neighborhood available commercial base.

c) • Preserve the Square's cultural diversity;

Response – The proposed development will provide needed rental housing which will serve to anchor a resident population in the heart of the Square.

d) • Create active people-oriented spaces;

Response – The proposed development by its design will encourage the mixing of residents, commercial and retail users in common spaces. It is hoped that the retail tenants selected for the new areas contribute to this.

e) • Improve the physical, and visual environment;

Response – The Applicant proposes to provide a well-conceived building fully integrated with the rest of the lot's structures and with the neighborhood. Additionally, the project will enhance the Green St streetscape with a new commercial façade and a landscaped forecourt.

f) • Provide retail establishments that serve people of diverse economic and social groups who live in the surrounding neighborhoods;

Response – The Applicant expects that the commercial and residential tenants in the building will continue to serve the local community.

g) • Encourage the development of new mixed income housing; and

Response – The proposed development provides a variety of housing, both affordable and market-rate.

h) • Promote compatible retail adjacent to residential uses.

Response – The proposed development directly provides retail uses adjacent to the proposed residential uses. Furthermore, the mix of commercial spaces will offer live-work opportunities for tenants within the same site.

2. The building and site designs are consistent with "Urban Design Plan for Central Square" as outlined in the "Central Square Action Plan" and the "Central Square Development Guidelines";

Response – The proposed development does meet those Guidelines and Plans as applicable to the project.

3. The building and site designs adequately screen the parking provided and are sensitive to the contributing buildings in the vicinity;

Response – Not applicable as no parking is provided

4. No National Register or contributing building is demolished or so altered as to terminate or preclude its designation as a National Register or contributing building; and

   Response – There has been no building demolished or altered as described herein.

5. No National Register or contributing building has been demolished or altered so as to terminate or preclude its designation within the five (5) years preceding the application.

   Response – There has been no building demolished or altered as described herein.

PART 4 - GENERAL SPECIAL PERMIT CRITERIA and RESPONSE

The provisions of the Ordinance set forth below apply to the requested Special Permits for the project in general. Response to each provision as it related to the Project follows the provision.

A. Generally Applicable Criteria for Approval of a Special Permit

Pursuant to section 10.43 of the Ordinance, Special Permits will normally be granted where provisions of this Ordinance are met, except when particulars of the location or use, not generally true of the district or of the uses permitted in it, would cause granting of such permit to be to the detriment of the public good because:

a) It appears that requirements of this Ordinance cannot or will not be met

   Response – With the requested Special Permits and Waivers and Exceptions, the Project will meet all requirements of the Ordinance.

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

   Response – An extensive Traffic Study was provided, reviewed and Certified by the City Traffic and Parking Department. The TID and Certification Letter is attached to this Narrative.

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.

   Response – The Project will not adversely affect continued operation or future development of adjacent uses and will further the mixed-use character of the neighborhood. The design is mindful to not disturb the many business proximate to the site. The uses proposed are consistent with the neighborhood and include the continuation of the current commercial uses.

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 or

Response – The Project will not create any nuisance or hazard to the detriment of the health, safety and or welfare of the occupants of the Project nor the citizens of the City. The manner in which the building is to be used and occupied is consistent with similar mixed-use buildings in the neighborhood.

This Project is consistent with Cambridge's goals of health, safety and welfare as set forth in Section 19.30 (Citywide Urban Design Objectives) of the Ordinance as addressed in Part 5 of this Narrative.

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 and

Response – The Project will not impair the integrity of the district in which it is located or any adjoining district. The Project will not derogate from the intent and purpose of the Ordinance as the proposed residential use is allowed in this district and the project requires no additional relief beside the requested Special Permits, Waivers and Exceptions. When complete, the Project will add diverse housing and expanded commercial area to the district consistent with Central Sq Overlay Guidelines and its stated goals (see Part 3 of this Narrative).

The project will encourage public mobility by providing ample bike storage and easy transit and pedestrian access.

The exterior façade uses a variety of colors and materials, substantially adding to an architecturally diverse neighborhood.

Part 5 - 19.30 CITYWIDE URBAN DESIGN CRITERIA and RESPONSES

The Project is consistent with the urban design objectives of the city as set forth in Section 19.30 of the Ordinance.

1. Pursuant to Section 19.31 of the Ordinance, new projects should be responsive to the existing or anticipated pattern of development. Indicators include:

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

   Response – No residential zoning district abuts the project site with the exception of lots across Green St, which have the zoning designation of RES-C3. This is the same default district as residential projects in the subject site's BB designation. The proposed building height is designed in accordance with the Central Square Overlay section 20.304.2 and the required upper level step backs are shown in the project Drawings.

b) 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 and heights in relationship to public streets.

Response – The building is consistent with the streetscape continuing the commercial character at the ground floor, and the residential character at the upper floors. The neighboring properties are retail, office spaces and residential multifamily uses. The proposed development will promote a diversity of usage of the property. The Applicant has provided an Urban Design Study which substantiates this.

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

Response – The project proposes two new retail spaces located at the ground floor both with ample street frontage and over 50% of the ground level façade is glazed. Additionally, the project is directly across Green St is the 237 Franklin St tower which provides elderly housing. There are multiple examples of nearby mid- and low-rise mixed-use (commercial and residential) buildings.

d) Where relevant, historical context are respected e.g. special consideration should be given to buildings or buildings that are preferably preserved on adjacent to the Site.

Response – As indicated in the Urban Design Study provided, the facades are designed to be well integrated in the historical context of Central Square, with particular attention paid to alignment, window proportion and sizing,

The Cambridge Historical Commission gave approval for demolishing part of the existing Mass Ave Façade in order to allow the new façade to reach the sidewalk. The existing brick work located at Green St façade will be rebuilt as part of the project once major construction has been completed.

2. Pursuant to Section 19.32 of the Ordinance, development should be pedestrian and bicycle-friendly, with a positive relationship to its surrounding. Indicators include
   (a) 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 services 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 prominent aspect of the relevant building facades. Where a mix of activities are accommodated in the building, the more active uses are encouraged facing public street, parks and pathways.

   In commercial districts, such active space consists of retail and consumer service stores and building lobbies that are oriented towards 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 structure is located, and (c) compatible with the principal use for which the building is designed.

Response – The ground floor will contain uses associated with a mixed-use project including retail, commercial and residential multifamily spaces. For residents this includes a lobby, amenities, elevator access to units and to bicycle parking. Additionally, residents will have access to storage spaces and a fitness area both located at the basement of the project.

The commercial spaces are designed to be flexible in order to attract a variety of business and to attract pedestrian activity on both Mass Ave and Green St sides. Entries face Mass Ave or, in the case of Green Street, are accessed via an open forecourt.

All proposed uses are expected to be permitted in the BB district and are expected to be compatible and consistent with the existing uses.

(b) 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.

Response – A Special Permit has been requested such that no parking is to be provided per article 20.304.6.

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

Response – As indicated in the Project Drawings, the architectural treatment of the ground floor is consistent with these goals on both Mass Ave and Green St.

(d) Entries to buildings are located so as to ensure safe pedestrian movement across street, encourage walking as 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 stop 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.

Response – Retail and residential entrances directly lead to Mass Ave sidewalks which in turn lead to two cross walks, and Public transit access. The office space entrance has a private lobby and entry leading directly to Green Street. For residents, both Mass Ave and Green St can be reached from the residential lobby.

(e) 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.

Response – Pedestrians and bicyclists can access the site safely on ADA-compliant paths and sidewalks along the streets and within the site. Secured, covered bicycle parking is provided in the basement of the property, accessed via an oversized elevator. Ramps to bicycle parking are sloped gently to allow safe, easy access.

(f) 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.

Response – The Project complies with the policy objective 19.32 without alternative means.

3) Pursuant to Section 19.33 of the Ordinance, the building and site design should mitigate adverse environmental impacts of the development upon its neighbors. Indicators include:

a) 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 impacts and enhance the overall appearance of the equipment should be taken into account.

Response – The required mechanical equipment will be screened from the public view or otherwise set back from the roof edge in compliance with the cut-off requirement indicated in the Overlay. This will serve to provide acoustic buffering and visual screening.

b) 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.

Response – The trash/recycling storage and handling for the Project is contained within the building to avoid noise, odor and visual impacts to the extent possible. Trash and recycling chutes are provided at each level for building users. The chutes lead to a basement compactor room with adequate storage. Retail tenants will continue to store their own trash on premises or otherwise use the common facilities. Trash and recycling will be brought to the scheduled loading via a freight lift connecting basement to the forecourt and then directly to Green Street.

c) Loading Docks that are located and designed to minimize impacts (visual and operational) on neighbors.

Response – There are no loading dock(s) for the building.

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

Response – *Stormwater Management Description provided by Design Consultants Inc.*
This project will be required to submit a Stormwater Management Permit to the Cambridge Department of Public Works Engineering Department for review. As part of this process the project is required to reduce impact to the City's drainage infrastructure. The proposed drainage system will be required to provide up to a 40% reduction of the rate in which the stormwater flow leaves the property and into the City's drainage system. As such the project will reduce the demand on the drainage system in Massachusetts Avenue and the downstream drainage system. The stormwater runoff directed to the city drain is from roof area only which the Massachusetts Department of Environmental Protection considers to be clean not requiring any water quality treatment. With that we do not have any water quality issues with this project.

A technical description of the Stormwater Management System provided by Design Consultants. Inc follows.

The project will conform to the Cambridge Stormwater Control Permit requirements. As such the design will collect stormwater from the new roof where additional stories are added to the structure. The total new roof area associated with the project is 9,083 Square Feet. The remaining 11,915 square feet of roof area not impacted from the construction is not proposed to be included due to location of existing roof leaders in these areas ability to be re-routed to the stormwater control tank. This project presents a unique problem with no available space for subsurface tank outside the building requiring a tank to located in the building basement. The tank will need to be a custom-made tank assembled in the basement set on the basement floor. The tank will most likely be constructed of steel, fiberglass, or plastic material. We recommend connecting the outlet from the tank into the Massachusetts Avenue 24" drain directly in front of the building. If in good condition, the existing 8" drain service connection located along the front wall of the foundation will be reused for the connection to the 24" drain. This existing drainage service will be video inspected to confirm condition and connection location is the 24" drain located under the sidewalk in Massachusetts Avenue. The total impacted roof area of 9,083 square feet will require a 980 cubic foot tank (20'L x 7'W x 7'H) to control the 25-year storm event. The tank is sized to reduce the 25-year storm event runoff rate from 1.2 cubic feet per second down to the 2-year storm event rate of 0.62 cubic feet per second. We have provided a conceptual design sketch for the proposed stormwater tank to be located in the basement area.

e) Landscaped areas and required Green Area Open Space, in addition to serving as visual amenities, are employed to reduce the rate and volume of storm water runoff compared pre-development conditions.

Response – Not applicable as no Green Area Open Space is provided.

f) 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 System as defined in Section 22.60 of the Ordinance.

Response – A Shadow Study is included in the Drawing Set. The shadows are primarily cast over Mass Ave and have minimal impact on nearby buildings or any open space. No known Registered Solar Sys is affected by the proposed building. See provided Shadow Study.

g) Changes to the grade across the lot are designed in ways to minimize the need for structural retaining walls close to the property line.

Response – not applicable to the site

h) Building Scale and wall treatment, including the provision of windows, are sensitive to existing residential uses on adjacent lots.

Response – The Project presents a residential scale in the residential parts of the building. Window sizing and types and façade materials are scaled to a typical large multifamily project. Many examples of similar treatment can be found in the neighborhood. This is substantiated in the Urban Design Study provided in the drawing set.

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

Response – Exterior architectural lighting will be designed to shield lamps from view and will be Dark-Sky compliant.

j) The creation of 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.

Response – Not applicable. The site is covered with existing structures and paved surfaces containing no trees within the property boundaries.

4) Pursuant to Section 19.34 of the Ordinance, projects should not overburden the City infrastructure services, including roads, city water supply system and sewer system.

a) 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.

Response – As described above, the Project's stormwater management system has been designed to incorporate best management practices and has been reviewed by the Department of Public Works. Water-conserving plumbing fixtures will be used in keeping with industry standards, and as required to meet LEED standards where applicable.

b) 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.

Response - Sanitary Sewer Service Infrastructure *Description provided by Design Consultants Inc. The total new sewer flow based upon 310 CMR 315 flow of 110 -gpd per bedroom will be 7,040 gallons per day with a total of 64 new bedrooms. This flow is at least double that of what is the actual sewer demand to the City's sewer system. Currently a portion of the building roof drains are connected to the sanitary sewer system. The project will remove these stormwater connections from flowing into the sanitary sewer system. By removing the stormwater flow from the City sewer infrastructure will more than compensate for the added sewer flow from the proposed residences.*

By way of comparison, by removing just 4,800 square feet of roof area from the sanitary sewer system. The project will be removing 7,000 gallons over a 24-hour period for the more common 1-year storm event. This removed flow is about double the new flow generated by the project.

Response – Water Service – Domestic and Fire Description provided by Design Consultants Inc.
The water services will be upgraded with a new 8" cement lined ductile iron for fire suppression and 4" cement lined ductile iron for potable water. The project proposed 46 new residential units with a total of 64 bedrooms. Based upon 310 CMR 15 flows for residential use of 110 gallons per day per bedroom the calculated new flow is 7,040 gallon per day. The actual water demand is about half of this with an expected added water use of 3,410 gallons per day. Some of this new flow will be offset by providing new low flow plumbing fixtures on the renovations taking place on the ground level. There is an extensive network of water mains surrounding the property. The building will be connected to a 20-inch water main. This 20-inch main provided ample water flow and can easily handle the new water demand without compromising any of the surrounding buildings.

Design and installation will follow the City of Cambridge standard specifications, details and procedures.

c) 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 of adjacent lot to do the same. Compliance with the Leadership Energy and Environmental Design (LEED) certification standards and other evolving environmental efficiency standards are encouraged.

Response – The proposed new building will meet the standard for LEED-GOLD NC. A narrative, certification and preliminary assessment is attached to this Application.

5) Pursuant to Section 19.35 of the Ordinance, new construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically. Indicators include

a) New Educational institutional construction that is focused with the existing campuses.

Response – Not applicable to the Project.

b) 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.

Response – Not applicable to the Project.

c) 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.

Response - The proposed Project expands the existing retail and commercial offerings associated with the site, including opportunities for a diverse number of commercial and retail users. It is expected the site will remain active throughout the day and into the evening on a regular basis.

d) Historic structures and environments are preserved.

Response – The Applicant received Demolition Approval to remove part of the front façade of the existing building. The one-story portion of the Green St Façade will be rebuilt in part of its length within the overall scope of construction. It is not possible to build the site out without removal of this façade. Note that the four-story brick building has been carefully preserved under an on-going by-right building permit.

e) Preservation or provision of facilities for start-up 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.

Response – Not applicable to the Project.

6) Pursuant to Section 19.36 of the Ordinance, expansion of the inventory of housing in the City is encouraged. Indicators include

a) 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.

Response – The Project site does abut the residential district Res C-3 across Green St. This district has similar densities and building height for residential projects as allowed on the Project site. As mentioned elsewhere in this Narrative, the project is directly across Green St is the 237 Franklin St tower which provides elderly housing.

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

Response – The Project includes adding forty-six (46) residential dwelling units to the housing inventory of the City. A range of unit types are provided including Studios, One-, Two- and Three Bedroom units. The Project will include diverse affordable housing in compliance with the Ordinance.

7) Pursuant to Section 19.37 of the Ordinance, enhancement and expansion of open space amenities in the city should be incorporated into new development in the city. Indicators include:

a) On large-parcel commercial development, publicly beneficial open space is provided.

Response – Not applicable to the Project.

b) 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.

Response – Not applicable to the Project.

c) A wider range of open space activities than presently found abutting area is provided.

Response – Not applicable to the Project.

PART 6 CONCLUSION

As described above, the ***mixed-use 600 Mass Ave*** *Project is appropriate for the site and surroundings providing additional housing (including diverse affordable housing) and expanded retail and commercial spaces. The Project is consistent with the design standards of the Central Square Overlay District and the City's general Special Permit Criteria as well as the Urban Design Objectives. It is compatible with adjacent buildings and the general context. Accordingly, for the reason set forth in this application, the Applicant respectfully requests that the Board find that the Project satisfies all applicable requirements of the Ordinance in connection with the granting of the requested Special Permits.*

PETER QUINN ARCHITECTS

ARCHITECTURE
PLANNING
COMMUNITY DESIGN

Special Permit Application
600 Massachusetts Ave in Central Square, Cambridge
A Mixed-Use Development

Zoning Compliance Analysis

Prepared by Peter Quinn Architects LLC
Revised 30 September 2019

INDEX (Three Parts)

Part 1 – ZONING CRITERIA NARRATIVE

A. Project Description

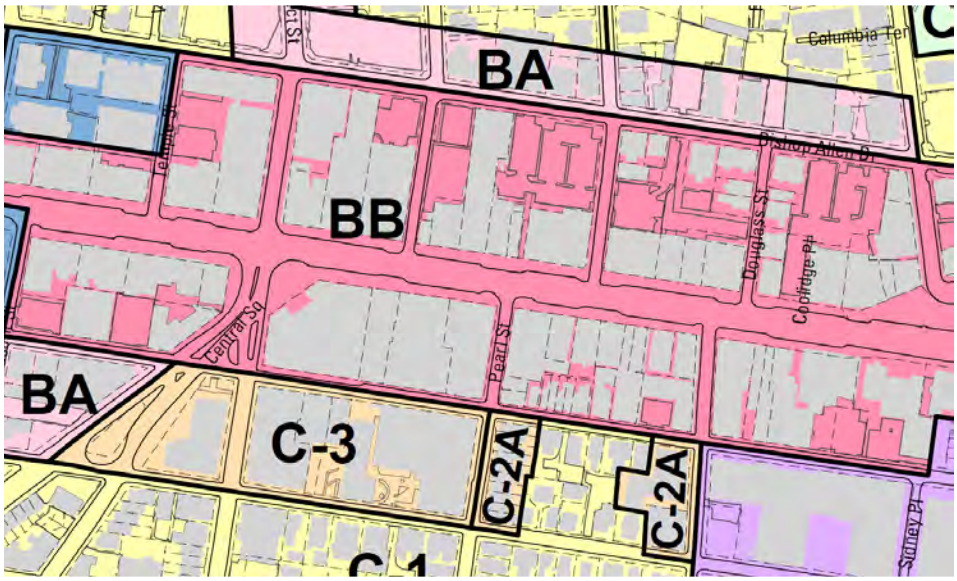
The Applicant proposes to demolish a portion of the existing building from Mass Ave through to Green St and to construct forty-six (46) residential dwelling units on five stories (floors two through six) within that space. Below the residential levels on the first floor and basement are related residential amenities, building entries and retail/commercial spaces. The existing retail/commercial spaces that is not otherwise demolished will remain largely unchanged. The total gross square footage of the finished building, both new and existing, will be approx. 93,263-GSF without a Basement Waiver and approx. 79,203-GSF with a Basement Waiver.

The lot has two frontages, one is along Massachusetts Avenue and the other on Green Street. Both frontages are approx. the same width.

B. Primary Zoning Criteria (Bus-B and Res C-3)

The project is within the Central Square Overlay District with a base zoning district of Business B. Other district dimensional criteria are controlled by the Res C-3 District regulations for the residential component of the building.

1. Base Zoning is Business-B



Excerpt from Cambridge Zoning Map

2. Business-B Zoning Table

- Allows Mixed-Use (Residential Multifamily, Office, Commercial-Retail) per Article 4.30 Table of Use Regulations.
- The basic dimensional criteria for Bus-B are shown in the following table 5.3 below:

Table 5-3 Table of Dimensional Requirements - Business Districts

District	(1) Max. Ratio of Floor Area to Lot Area	(2) Minimum Lot Size in Sq. Ft.	(3) Min. Lot Area for Each D.U. in Sq. Ft.	(4) Minimum Lot Width in Feet	(5) Minimum Yard in Feet: Front	Side	Rear	(6) Maximum Height in Feet	(7) Min. Ratio of Private Op. Sp. to Lot Area
Bus. A	1.0/1.75	none	600	none	none	none	$\frac{H+L^{(a)}}{5}$	35/45 to 65[(b)]	none
Bus. A-1	1.0/0.75	none	1200	none	none	none	$\frac{H+L^{(a)}}{5}$	35	none
Bus. A-2	1.0/1.75	none	600	none	5[(m)]	10[(i)]	20[(j)]	45[(k)]	none
Bus. A-3	0.75[(f)]	5,000	1,500	50	H+L[(h)]/4	H+L/5	H+L[(h)]/4	35	30%
Bus. A-4	1.0[(p)]/1.75	5,000	600	50	H+L/4[(p)]	H+L/5[(p)]	H+L/5[(p)]	35[(p)]	none
Bus. B	2.75/3.0	none	300	none	none	none	none	80	none
Bus. B-1	1.50/3.25	none	300	none	none	none[(e)]	none[(e)]	55/90[(c)]	(d)
Bus. B-2	1.50/3.0	none	300	none	none	none[(e)]	none[(e)]	45	(d)
Bus. C	1.25/2.0	none	500	none	none	none	20[(j)]	55[(g)]	none
Bus. C-1	2.75/3.0[(n)]	none	450[(n)]	none	none	none[(o)]	20[(j)]	50[(g)(l)]	none

Excerpt from Cambridge Zoning By-Law

To be noted:

- FAR of 2.75 is allowed for Commercial Uses and 3.0 for Residential Uses is allowed under Bus-B.
- In Bus-B there are no setback required, no landscape area required, and building height is limited at 80-ft, provided the building is of non-residential uses.

3. RESIDENTIAL-C-3 Regulations Required for Dwellings

- Per Article 5.28.1.c, a dwelling in a Business B district shall be subject to the same dimensional requirements and other restrictions as a dwelling in a Residence C-3 district.
- The basic requirements of Res-C-3 are shown in the following Table 5.1:

Table 5-1. Table of Dimensional Requirements - Residential Districts

District	(1) Max. Ratio of Floor Area to Lot Area	(2) Minimum Lot Size in Sq. Ft.	(3) Min. Lot Area for Each D.U. in Sq. Ft.	(4) Minimum Lot Width in Feet	(5) Minimum Yard in Feet: Front	Side	Rear	(6) Maximum Height in Feet	(7) Min. Ratio of Private Op. Sp. to Lot Area
Res. A-1	0.5	8,000	6,000	80	25	15(sum of 35)	25(c)	35	50%
Res. A-2	0.5	6,000	4,500	65	20	10 (sum of 25)	25(c)	35	50%
Res. B	0.5 (j)	5,000	2,500(j)	50	15	7'6" (sum of 20)	25(c)	35	40%
Res C.(i)	0.6	5,000	1,800	50	H+L(a)/4	H+L/5 (min. 7'6" sum of 20)	H+L(c)/4	35	36%
Res. C-1	0.75	5,000	1,500	50	H+L(a)/4	H+L/5 (n)	H+L(c)/4	35	30%
Res. C-1A	1.25	5,000	1,000	50	10	H+L/7 (l)	H+L/5 (l)	45	15%
Res. C-2	1.75	5,000	600	50	H+L(a)/4	H+L/5	H+L(c)/4	85	15%
Res. C-2B	1.75	5,000	600	50	H+L(a)(k)/4	H+L(k)/5	H+L(c)(k)/4	45	15%
Res. C-2A	2.5	5,000	300	50	H+L(b)(g)/5	H+L(g)/6	H+L(c)/5	60	10%(h)
Res. C-3	3.0	5,000	300	50	H+L(b)/5	H+L/6	H+L(c)/5	120	10%

Excerpt from Cambridge Zoning By-Law

Key points:

- Residential units are allowed at the rate of one per 300-SF of lot area (prior to Inclusionary adjustments); GFA is limited to 3.0 FAR (prior to Inclusionary or Overlay adjustments, if used).
- Buildings height is allowed up to 120-ft.
- There is a landscape requirement of 10% of Lot Area

4. Other Basic Zoning Requirements

- Mixed-use buildings require use of an averaging formula for FAR limits.

- Many of these dimensional requirements of both Bus-B and Res-C3 are superseded by the Central Square Overlay regulations discussed below.
- All Special Permit are required to meet the Special Permit Standards of Article 19.
- Larger projects are required to meet the Urban Design Standards of Article 19.30
- Larger projects may require a Project Review Special Permit approval through the Large Project Review Process. This effectively combines Special Permit approval, Design Review and Site Plan approval in one public process.

C. Criteria for the Central Square Overlay District (CSOD)

Excerpt from Cambridge Zoning Overlay Map with Project Locus

1. Main features of the OVERLAY

- Regulated by Article 20.300 Central Square Overlay District
- Regulations supersede the underlying Business-B and Res-C3 as applicable.
- Considered an "Area of Special Planning Concern" requiring most projects to go through Large Project Review (advisory) and possibly Project Review Special Permit with Planning Board, depending on size and type of use.
- The Central Square Advisory Committee undertakes an advisory design review on all projects in the Overlay District.

2. Dimensional Aspects of the OVERLAY

- In Article 20.304.2.1 the by-right Allowable Height is decreased to 55-ft, but then increased by Special Permit to 80-ft in Article 20.304.2.2.

- Building step-backs are required above 60-Ft

- Through a Special Permit, the conditions described in Article 20.304.3.4 allow for an FAR of 4.0 for an entire mixed-use site, with the primary provision that at least 50% of the building area be designated for Residential Use.

- There are several building elements that in CSOD are exempt from counting as FAR, such as dimensionally compliant balconies and roof rooms as well as small retail spaces per Articles 20.304.3.5 through .7.

- A waiver of setback requirements (if any), may be obtained by Special Permit per Article 20.304.4.

- Non-commercial uses on the ground floor are discouraged per Article 20.304.5

3. Parking Requirements in the OVERLAY

- Parking for Residential use must meet the minimum of 0.50 spaces per unit (Article 20.304.6.2 (a) and may not exceed the maximum without a waiver of 0.75 spaces per unit (Article 20.304.6.1 (a). However, per Article 20.304.6.2.b, 0.75 spaces per unit shall be the required minimum rate required, because the minimum rate in Article 6 is a higher number than the minimum rate in the Overlay.

- New commercial requires 0.5 spaces per 1,000-SF with some exemptions available.

- A waiver of some or all of the parking requirements may be obtained from the Planning Board provided that the listed criteria are met (Article 20.304.6.3.a through v). These requirements along with commentary on the Project's compliance are discussed in the Special Permit Narrative which accompanies this Application, Part 2 Section 9. Calculations showing compliance are illustrated below in Part 2.C.3.

- A waiver of the payment-in-lieu-of parking-spaces may be granted by the Planning Board provided that certain criteria are met. These requirements along with commentary on the Project's compliance are discussed in the Special Permit Narrative which accompanies this Application, Part 2 Section 9. Calculations showing compliance are illustrated below in Part 2.C.3.

D. GOVERNING CRITERIA SUMMARY

The following table summarizes the Bus-B, Res-C-3, and CSOD dimensional and compliance criteria and indicates the Governing Criteria, subject to review and approval by the appropriate City Boards and officials.

ZONING COMPLIANCE MATRIX for GOVERNING CRITERIA
600 Massachusetts Ave – Addition and Renovation
Central Square, Cambridge, MA
Lot Area 21,262 SF

ZONING CRITERIA	ALLOWED/REQ.... Bus-B Base Zoning Table 5-3 Bus Districts	...AS MODIFIED BY The Res-C3 Table for Residential Use	...AS MODIFIED BY The Central Square Overlay District – Article 20.300	GOVERNING CRITERIA
Comment		Article 5.28.1.c requires that Residential Use follow rqmts of Res-C3 District	The lot is a qualifying lot in the district	**In general the CSOD is the prevailing criteria unless not specified.**
Max. FAR / Theoretical maximum GFA before Inclusionary Incentives for residential use	Non Residential Uses. FAR 2.75 / 58,470 GSF Residential Uses. FAR 3.0 / 63,786 GSF See Sections 5.30.11, 5.30.12 for FAR apportionment between uses.	Residential Uses. FAR 3.0 / 63,786 GSF	For Mixed-use 4.0 FAR (85,048 GSF) **prior** to additional area allowed as Inclusionary Incentives per Art 11, Provided min 50% Residential Use. Additional FAR allowed by SP by Planning Board	**4.0 FAR (85,048 GSF) prior to additional area allowed as Inclusionary Incentives per Art 11**
Min Lot Area	None for Non-Res Use	5,000-SF	None	**Per Bus-B and Res-C-3**
Min Lot Area/DU	None for Non-Res Use	1-unit/300-SF LA	1-unit/300-SF LA	**1-unit/300-SF Lot Area**
Min. Lot Width	None for Non-Res Use	50-ft	Per Bus-B and Res-C-3	**Per Bus-B and Res-C-3**
Min. Front Yard	None for Non-Res Use	H+L/5 Res Use + footnote b	Per Bus-B and Res-C-3, may be reduced by SP	**Per Bus-B and Res-C-3, may be reduced by SP**
Min. Side Yard	None for Non-Res Use	H+L/6 Res Use	Per Bus-B and Res-C-3, may be reduced by SP	**Per Bus-B and Res-C-3, may be reduced by SP**
Min. Rear Yard	None for Non-Res Use	H+L/5 Res Use + footnote c	Per Bus-B and Res-C-3, may be reduced by SP	**Per Bus-B and Res-C-3, may be reduced by SP**
Max. Height	80-ft	120-ft	55-ft / up to 80-ft by SP	**55-ft /up to 80-ft by SP**
Min. Private Open Space	None for Non-Res Use	10% of LA	Per Bus-B and Res-C-3, may be reduced by SP	**Per Bus-B and Res-C-3, may be reduced by SP**
Parking	General Office: 1/800 to 400 GSF Min. to Max Retail: 1/1,400 to 700 GSF Min to Max. Multifamily: 1/DU	Same	Allows for reduction to "0" parking and waiver of fee by SP from Planning Board. See Parking discussion in the SP Narrative of this Application and Calculations shown below	**Allows for reduction to "0" parking and waiver of fee by SP from Planning Board. See Parking discussion in the SP Narrative of this Application and Calculations shown below**

Part 2
Zoning Compliance Table and Calculations

ZONING COMPLIANCE TABLE AND CALCULATIONS

A. Zoning Compliance Table

Reference is made to the attached Part 3 – Zoning Graphics, Sheets Z1-Z4 and the Governing Criteria delineated in Part 1 Section D of this Narrative.

ZONING COMPLIANCE TABULATION
600 Massachusetts Ave – Proposed Building

ZONING CRITERIA	ALLOWED/REQ.... Per Governing Criteria (see Table)	PROPOSED	COMPLIANCE	COMMENT
Max. FAR	4.0 FAR (85,048 GSF) plus Incl. Incentives	**4.39 / 3.73 w/Basement GFA Waiver**	**Requires SP**	See Calc -1
Min Lot Area	5,000-SF	**21,262-SF**	**Complies**	
Min Lot Area/DU	1-unit/300-SF LA 21,262 / 300 = 70 units	**44 units 1/483-SF**	**Complies**	See Calc-2
Min. Lot Width	50-ft	**100.1-ft and 126.3-ft**	**Complies**	
Min. Front Yard	0 (Comm) and 23.3-ft [Mass] and 26.0-ft [Green] (Res), may be reduced by SP	**0.0-ft Comm 0.0-ft Res**	**Requires SP**	See Calc-7
Min. Side Yard	0 (Comm) and 43.2-ft (Res), may be reduced by SP	**0.0-ft Com 0.0-ft Res**	**Requires SP**	See Calc-7
Min. Rear Yard	0 (Comm) and H+L/5 (Res), may be reduced by SP	***NA* (two front yds)**	***NA***	
Max. Height	55-ft / 80-ft by SP	**70.2-ft**	**Requires SP**	
Min. Private Open Space	0 (Comm) and 10% of LA (Res), may be reduced by SP	**3,442-SF 16.2%**	**Requires SP**	See Calc-6
Vehicular Parking	48-Spaces	**0 spaces**	**Exempt for existing retail and office; Requires SP for new building**	See Calc-3
Bicycle Parking	51 – Long Term 9 – Short Term	**60 – Long Term 0 – Short Term**	**L-T Complies; Requires Waiver for S-T**	See Calc-4 w/ Footnote
Loading Dock	None Required	**None**	**Complies**	See Calc-5

B. Calculation Footnotes to the Zoning Compliance Table

Calculation-1 FAR

The FAR Calculation is tabulated in Table 2.C.1 below and is shown graphically and by table on Sheet Z-3, with and without Basement Exemption.

Calculation-2 Base Units plus Incentive

46 Units, as proposed, at 20% Inclusionary = 37 units Base + 9 Units Inclusionary.
Maximum base number of units on site = 21,262 Lot Are / 300-SF/Unit = **70 units**
70 Maximum base units X 1.3 Incentive multiplier = 91 units (theoretical maximum)
Inclusionary Units are further calculated on the basis of NSF using a formula and is generally understood to be a minimum of 20% of the units.

Calculation-3 Vehicular Parking Requirement for Proposed Building
Based on CSOD and Article 6

Use	Area/Units	Ratio	Rqd Parking
General Office	3,356-SF	0.9/1000-SF (CSOD)	3.0
Retail	3,388-SF	0.5/1,000-SF (CSOD)	1.7
Comm Recreation (TKD)	5000-SF	See Fn-1	8.3
Residences	46 units	X 0.75/unit	34.5
Total Vehicular Parking for Proposed Building (see Fn-2)			**48 spaces**

Fn-1 – For Commercial Recreation – 1 parking space per six occupants required. MABC defines Business occupancy rate at 1-person per 100-SF. 5000-SF / 100 = 50 people / [1 per 6] = 8.3 Spaces required

Fn-2 – The Zoning By-Law does allow for an exemption of existing businesses from the parking requirement. The new building proposed to restore business and retail space removed by demolition. While this potential reduction in the parking requirement is not indicated here (approx. 11 spaces), the Applicant reserves the right to discuss this with the Planning Board for a determination.

Calculation-4 Bicycle Parking Requirement for Proposed Building

Long-Term Spaces *(sheltered and secure)*

Use	Area/Units	Ratio	Rqd Bike Sp
General Office	3,356-SF	0.1/1000-SF (“N1”)	1
Retail	3,388-SF	0.1/1,000-SF (“N4”)	1
Comm Recreation (TKD)	5000-SF	0.1/1,000-SF (“N4”)	1
Residences	46 units	1.0/unit spaces for 1st 20 units 1.05/unit spaces for 26 units	20 28
Total Long-Term Bike Parking Spaces Required			**51 spaces**

Note – Long-term bike spaces are shown in detail on the Plans on Sheet A1.0a

Calculation-4 (cont.)
Short-Term Spaces

Use	Area/Units	Ratio	Rqd Parking
General Office	3,356-SF	0.22/1000-SF (“N5”)	1

Retail	3,388-SF	0.22/1,000-SF ("N2")	1
Comm Recreation (TKD)	5000-SF	0.3/1,000-SF ("N1")	2
Residences	46 units	0.1/unit spaces per unit	5
Total Long-Term Bike Parking Spaces Required			**9 spaces**

Footnote regarding Short-Term Bike Parking Requirement – In lieu of providing S-T parking spaces, the Applicant intends to apply for waiver with payment.

Calculation-5 Loading Dock

Use	Area/Units	Ratio	Rqd L-D
General Office	3,356-SF	1/ >10,000	0
Retail	3,388-SF	1/ >10,000	0
Comm Recreation (TKD)	5000-SF	1/ >10,000	0
Residences	46 units	N/A	0
Total Loading Dock Requirement			**0**

Calculation-6 Alternative Open Space Provided

On the attached sheet Z.4, alternative Open Space in balconies & roof decks is provided and a common forecourt is provided off Green St

- 2,578-SF private + 864-SF common = 3,442-SF (16.2% total lot area equivalent)

Calculation-7 Front and Side Setbacks for Residential Use

Residential Front Setback at Mass Ave is calculated with the formula per Table 5.1 of the Zoning ByLaw: (H+L)/5. (70.2-ft H + 46.3 L)/5 = 23.3-ft
Residential Front Setback at Green St is calculated with the formula per Table 5.1 of the Zoning ByLaw: (H+L)/5. (70.2-ft H + 59.7 L)/5 = 26.0-ft

Residential Side Setback (East) is calculated with the formula per Table 5.1 of the Zoning By-Law: (H+L)/6. (70.2-ft H + 188.9 L)/6 = 43.2-ft

C. Analysis – FAR and Parking Exemption Compliance

This Section summarizes key elements of the Project Zoning Compliance based on the Governing Criteria indicated above, in particular the FAR at no greater than 4.0 and for Parking Exemption and Waiver of Fee. References are made to the Zoning Compliance Table & Calculations above and the Zoning Graphics "Z-Sheets" which are attached to this Narrative.

1) Combined Proposed + Existing Building Gross Floor Area (GFA) and Floor Area Ration (FAR) Calculations

Use	No GFA Basement Waiver	GFA with Waiver	Comments
All Non-Residential not otherwise exempt	46,476	33,320	-GSF
Residential Use (apartments)			
Prior to Incentive Bonus	35,990	35,295	"Base amount" for calc
Incl. Incentive (@ X 1.3)	10,797	10,588	Incl Incentive to be added
Total Residential	46,787	45,883	
Total	93,263	79,203	
FAR including Incl. Incentive	4.39	3.73	Lot area = 21,262-SF

Table 2.C.1 – GFA and FAR Summary with and without Basement Waiver – See sheet Z-3 for supporting graphics

2) Is the Project eligible for a FAR of 4.0 granted by Special Permit?

> **From Article** 20.304.3 Floor Area Ratio Limitation. The maximum Floor Area Ratio (FAR) limitations established in the applicable base zoning district shall continue to apply to any lot in the Central Square Overlay District unless specifically modified by the following provisions:
> …
> 4. Additional FAR for Residential Uses. Upon issuance of a special permit, the Planning Board may increase the allowed FAR on any lot or portion of a lot located within the Business B (BB) portion of the Central Square Overlay District to a total FAR of 4.00 for all non-residential and residential uses combined, notwithstanding the Rules for Calculation of Permitted Gross Floor Area on a Lot as set forth in Section 5.30.12, provided that the maximum FAR permitted for non-residential uses on a lot shall not exceed the limitation on non-residential FAR applicable in the base zoning district and that the proposed FAR of all non-residential uses on the lot shall not exceed the proposed FAR of all residential uses on the lot.
> *(Applicant's emphasis)*

a. Does the Project meet the requirement that the non-residential area does not exceed what is allowed in the base zoning district?

Calculation – *refer to Table 2.C.1 above and Sheet Z-3 for supporting graphics and summaries*:

- The allowable non-residential GFA in BB per ZBL Table 5.1 is FAR 2.75 X Lot Area of 21,262-SF = 58,471-GSF
- Non-residential GFA without Basement Area Waiver = 46,476-GSF
- Non-residential GFA with Basement Area Waiver = 33,320-GSF

Conclusion – yes, in both cases, the standard is met.

b. Does the Project meet the requirement in Article 20.304.3.4 to allow a FAR of 4.0 provided that at least 50% of the project is Residential?

Calculation – *refer to Sheet Z-3 for supporting graphics and table.* :

- Without the Basement Exemption, the ratio is 49.8% commercial and 50.2% Residential. (46,476 Comm / 93,263Tot) + (46,787 Res / 93,263 Tot) = 100%. In this case the GFA is 4.39.
- With the Basement Waiver granted, the Ratio of Commercial Use to Residential Use is 42% commercial and 58% Residential with the Inclusionary Incentives applied. (33,320 Comm / 79,203 Tot) + (45,883 Res / 79,203Tot) = 100%. In this case the GFA is 3.73.

Conclusion - yes, both with or without the Basement Waiver, compliance is shown below.

3) **Is the Project eligible for a Parking and Parking Fee Exemption by Special Permit?** Does the Project meet the standard of ninety (90) percent of the maximum permitted on the lot in order to qualify for the Parking and Parking Fee Waivers described in Article 20.304.6.3?

> From Article 20.304.6.3:
>
> 3. Waiver of Parking and Loading Requirements. Uses in the Central Square Overlay District which meet the following requirements shall be exempt from the parking and loading requirements as specified in Section 6.36 - Schedule of Parking and Loading Requirements and the minimum requirements set forth in Paragraph 2 above.
>
> (a) The use is contained within a structure or portion of a structure in existence on or before June 1, 1940 or if constructed later is identified as a National Register or contributing building; or
>
> (b) The use is contained in a new structure or new addition to a structure identified in (1.) above, after the issuance of a special permit by the Planning Board provided:
>
> (i) The total development authorized on the site is reduced to ninety (90) percent of the maximum permitted on the lot; or a cash contribution is made to the Central Square Improvement Fund to be established by the City of Cambridge in an amount equal to fifty (50) percent of the cost of construction of the parking spaces not provided …
>
> *(Applicant's emphasis)*

The Applicant is requesting Waivers for both the Parking Requirement and a Waiver of the Cash Contribution on the basis that the project GFA is below the 90% threshold of the "maximum permitted on the lot".

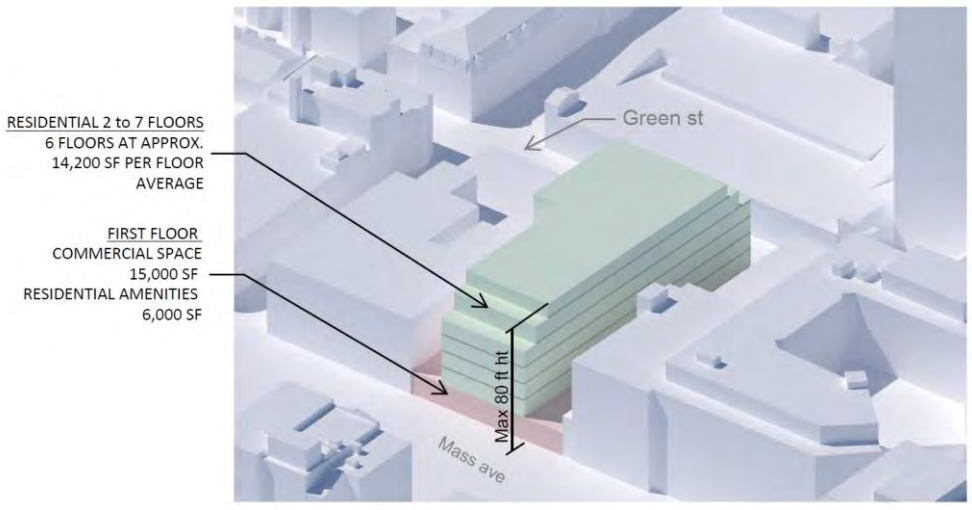
The Article does not indicate exactly how this criterion of "maximum permitted on the lot" is to be calculated. Nevertheless, the Applicant believes that the following description illustrates the Project's compliance:

a. Assumptions
   - The lot is cleared of all buildings (there are no National Registry structures on the Lot and it would be assumed that demolition approval would be granted or the delay period would expire).

- All the equivalent Special Permit and Waivers are granted as requested in this Application, including Basement GFA Waiver, Building Height, Open Space, Setbacks Waiver, FAR to 4.0 Special Permit.
- The lot is rebuilt to approx. 99% of the maximum footprint on the ground floor and 67% of the lot area on residential floors to allow for some setbacks and step-backs.
- Retail and Commercial occupies 15,000-SF of the ground floor in order to address the CSOD goals and other Urban Design Objectives; The remaining 6,000-GSF is assumed to be residential accessory area. All upper floors are residential.
- Building height to 80-ft with seven stories total above grade.

b. Calculation
- The commercial use occupies 15,000-GSF/21,262-Lot Area = 0.70 FAR.
- Remaining FAR for residential use: (4.0 FAR allowed by SP – 0.70 FAR commercial) = 3.3 FAR residential available.
- An FAR of 3.3 residential X 1.3 inclusionary incentive = 4.29 residential FAR resulting in 91,213-GSF of residential area.
- Subtracting for Ground Floor Residential of 6,000-GSF leaves 85,200-GSF residential. This can be accommodated in six residential-only stories of average approx. 14,200-GSF, not to exceed 80-ft building height.
- Total FAR = (0.70 Commercial + 4.29 Residential) = **4.99 Total FAR (Maximum Permitted on the Lot)**
- 4.99 FAR = 106,000-GFA
- The following diagram shows how this is achieved.
-

600 Mass ave- Build-out model to 4.99 FAR

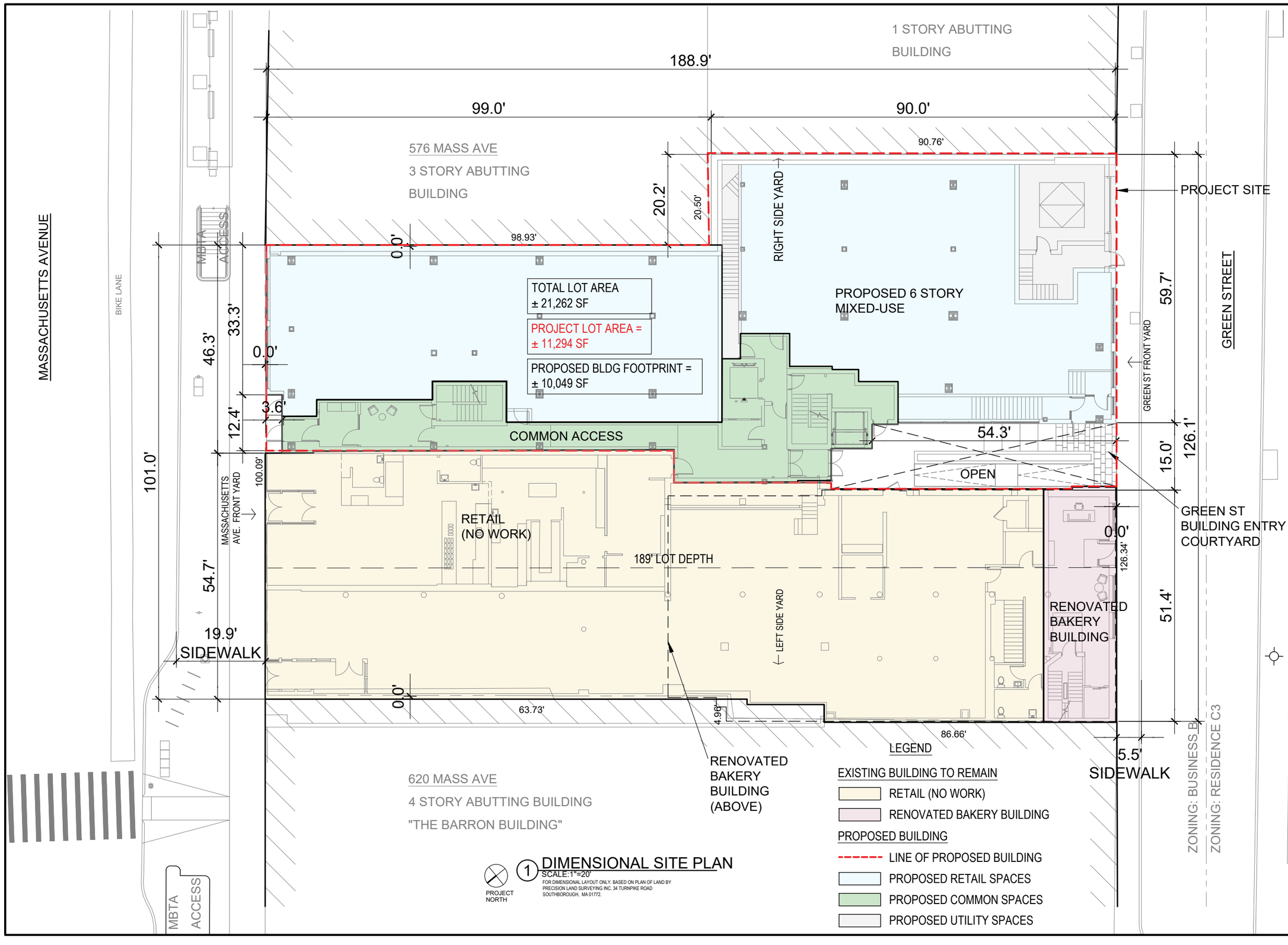


c. Conclusion
In comparison to the FAR of the proposed Project presented in Table 2.C.1, the ratio would be:

- 3.73 FAR (with equivalent Basement GFA Exemption) / 4.99 Maximum Permitted on the Lot = **75% of Maximum Permitted on the Lot.**

Therefore, the Project fully qualifies for both the Parking Requirement and the Cash Contribution as stated in Article 20.304.6.3.(i)

Part 3.
Attachment: Zoning Graphic Sheets Z1 – Z4



1 DIMENSIONAL SITE PLAN
SCALE: 1" =20'
FOR DIMENSIONAL LAYOUT ONLY. BASED ON PLAN OF LAND BY PRECISION LAND SURVEYING INC. 34 TURNPIKE ROAD SOUTHBOROUGH, MA 01772.

PETER QUINN ARCHITECTS
ARCHITECTURE
PLANNING
COMMUNITY DESIGN

PETER QUINN ARCHITECTS LLC
259 ELM STREET, SUITE 301
SOMERVILLE, MA 02144
PH 617-354-3989

SEAL

REGISTERED ARCHITECT
PETER SAMUEL QUINN
No. 7510
CAMBRIDGE
MA
COMMONWEALTH OF MASSACHUSETTS

CONSULTANT

PROJECT

ADDITION TO & RENOVATION OF 600 MASS AVE.

600 MASSACHUSETTS AVE.
CAMBRIDGE, MA 02139

PREPARED FOR

CIFRINO MASS AVE REALTY LLC,
C\O SUPERIOR REALTY

540 GALLIVAN BLVD,
DORCHESTER, MA 02134

DRAWING TITLE

DIMENSIONAL SITE PLAN

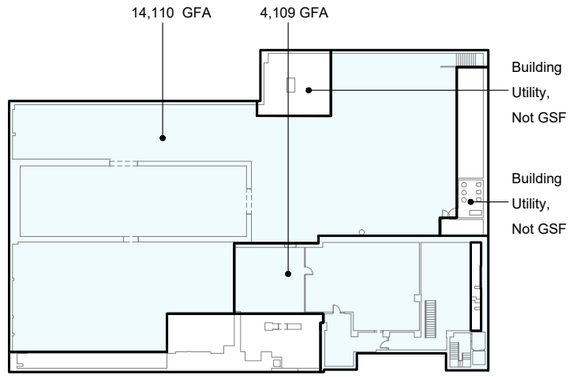
SCALE AS NOTED

REVISION	DATE
S. Permit. Rev 1	30 SEP 2020
SPECIAL PERMIT	15 JULY 2020

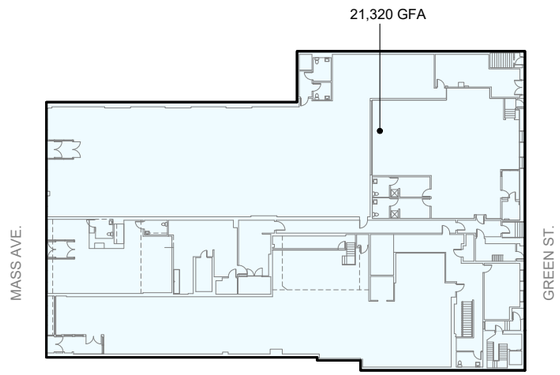
DRAWN BY	REVIEWED BY
EXC	PQ

SHEET

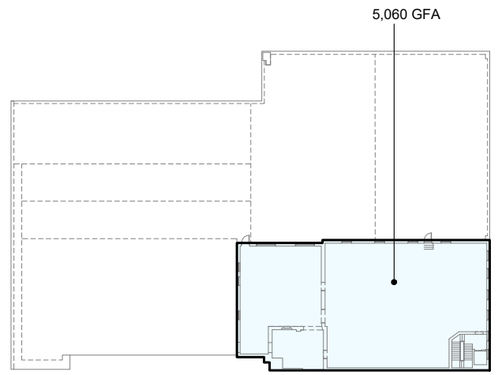
Z.1



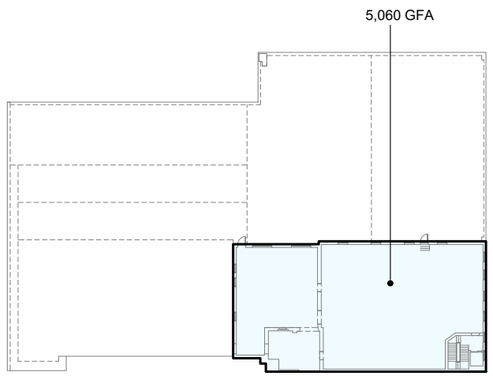
BASEMENT
SCALE: 1" / 60'=1'-0"



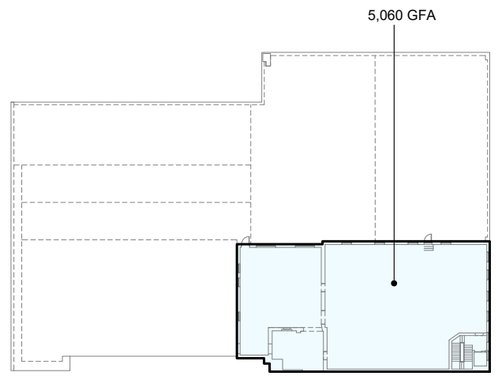
GROUND FLOOR
SCALE: 1" / 60'=1'-0"



SECOND FLOOR
SCALE: 1" / 60'=1'-0"



FOURTH FLOOR
SCALE: 1" / 60'=1'-0"



THIRD FLOOR
SCALE: 1" / 60'=1'-0"

PROJECT NORTH

2 EXISTING CONDITIONS ZONING GRAPHICS

SCALE: 1" = 60'

NOTE:
SITE CONSIDERED AS SINGLE LOT

TOTAL NONRESIDENTIAL GFA	
	EXISTING BUILDING (NO GFA WAIVER)
BASEMENT	18,219
GROUND FLOOR	21,320
SECOND FLOOR	5,060
THIRD FLOOR	5,060
FOURTH FLOOR	5,060
BUILDING TOTALS	54,719

FAR CALCULATION				
GFA		LOT AEA		FAR
54,719	/	21,262 LOT AREA	=	2.57

LEGEND
- NONRESIDENTIAL GFA
- NON GFA

1 EXISTING ZONING GFA SUMMARY TABLE

SCALE: 1" = 60'

PETER QUINN ARCHITECTS
ARCHITECTURE
PLANNING
COMMUNITY DESIGN

PETER QUINN ARCHITECTS LLC
259 ELM STREET, SUITE 301
SOMERVILLE, MA 02144
PH 617-354-3989

SEAL

REGISTERED ARCHITECT
PETER SAMUEL QUINN
No. 7510
CAMBRIDGE MA
COMMONWEALTH OF MASSACHUSETTS

CONSULTANT

PROJECT
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600 MASSACHUSETTS AVE.
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DORCHESTER, MA 02134

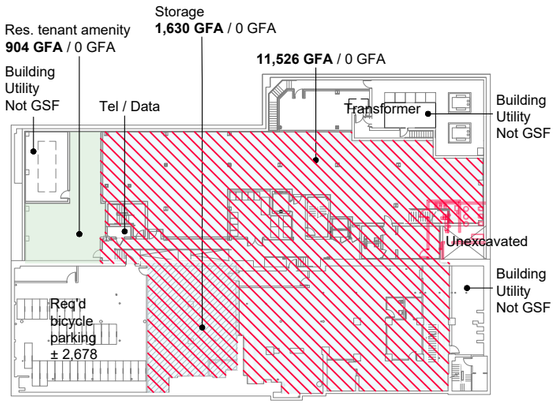
DRAWING TITLE
EXISTING CONDITIONS ZONING

SCALE AS NOTED

REVISION	DATE
S. Permit. Rev 1	30 SEP 2020
SPECIAL PERMIT	15 JULY 2020

DRAWN BY	REVIEWED BY
EXC	PQ

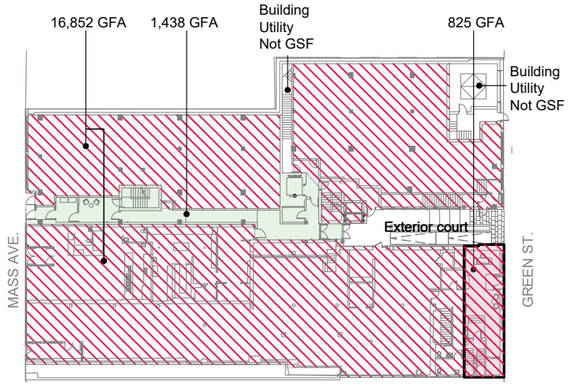
SHEET
Z.2



BASEMENT

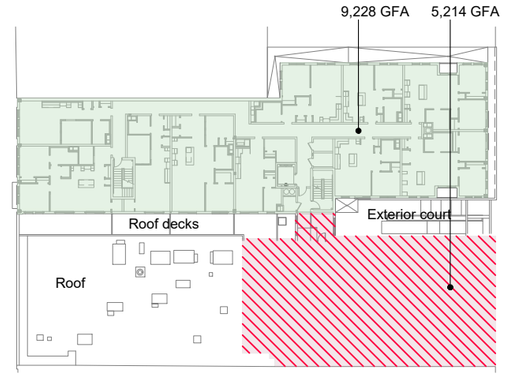
SCALE: 1" / 60'=1'-0"

WITH NO BASEMENT GFA WAIVER /
WITH BASEMENT GFA SP WAIVER



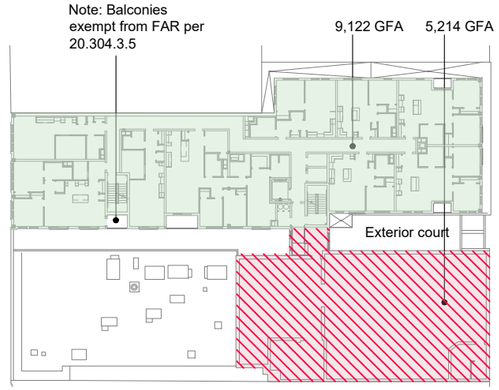
GROUND FLOOR

SCALE: 1" / 60'=1'-0"



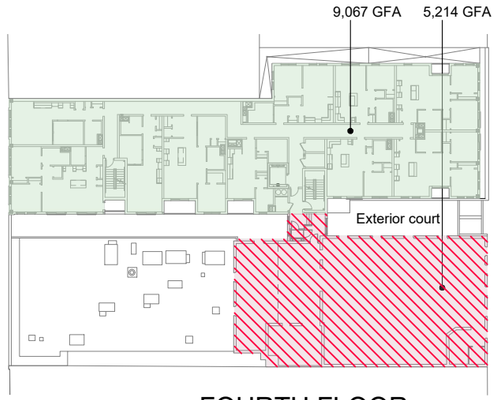
SECOND FLOOR PLAN

SCALE: 1" / 60'=1'-0"



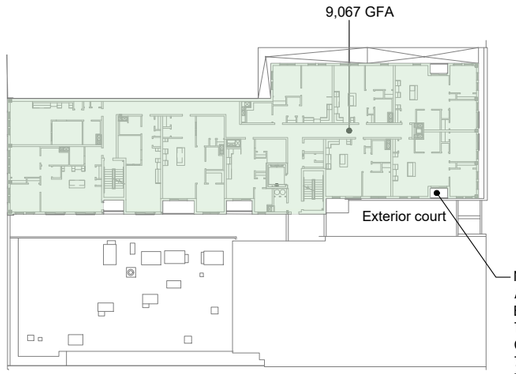
THIRD FLOOR

SCALE: 1" / 60'=1'-0"



FOURTH FLOOR

SCALE: 1" / 60'=1'-0"



FIFTH FLOOR

SCALE: 1" / 60'=1'-0"

SIXTH FLOOR

SCALE: 1" / 60'=1'-0"

PROJECT NORTH

② PROPOSED BUILDING ZONING GRAPHICS

SCALE: 1" = 60'

NOTE:
SITE CONSIDERED AS SINGLE LOT

RESIDENTIAL GFA	PROPOSED BUILDING	
	NO GFA WAIVER	W/ GFA WAIVER
BASEMENT	904	0
GROUND FLOOR	1,438	1,438
SECOND FLOOR	9,228	9,228
THIRD FLOOR	9,122	9,122
FOURTH FLOOR	9,067	9,067
FIFTH FLOOR	9,067	9,067
SIXTH FLOOR	7,961	7,961
BUILDING TOTALS	46,787	45,883

TOTAL NONRESIDENTIAL GFA	PROPOSED BUILDING	
	NO GFA WAIVER	W/ GFA WAIVER
BASEMENT	13,156	0
GROUND FLOOR	17,678	17,678
SECOND FLOOR	5,214	5,214
THIRD FLOOR	5,214	5,214
FOURTH FLOOR	5,214	5,214
FIFTH FLOOR	0	0
SIXTH FLOOR	0	0
BUILDING TOTALS	46,476	33,320

FAR CALCULATION NO GFA WAIVER				
GFA		LOT AEA		FAR
93,263	/	21,262 LOT AREA	=	**4.39**

FAR CALCULATION W/ GFA WAIVER				
GFA		LOT AEA		FAR
79,203	/	21,262 LOT AREA	=	**3.73**

① PROPOSED ZONING GFA SUMMARY TABLES

SCALE: 1" = 60'

RESIDENTIAL UNIT SUMMARY

46 UNITS
- 13 STUDIOS
- 17 ONE-BEDROOM
- 14 TWO BEDROOMS
- 2 THREE-BEDROOMS

60 BIKE PARKING SPACES

LEGEND

- NONRESIDENTIAL GFA
- RESIDENTIAL GFA
- NON GFA

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SEAL

REGISTERED ARCHITECT
PETER SAMUEL QUINN
No. 7510
CAMBRIDGE MA
COMMONWEALTH OF MASSACHUSETTS

CONSULTANT

PROJECT

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CAMBRIDGE, MA 02139

PREPARED FOR

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C\O SUPERIOR REALTY

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DORCHESTER, MA 02134

DRAWING TITLE

PROPOSED BUILDING ZONING GRAPHICS GFA CALCULATION

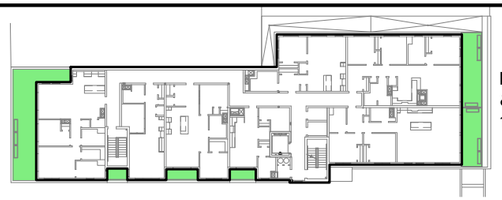
SCALE AS NOTED

REVISION	DATE
S. Permit. Rev 1	30 SEP 2020
SPECIAL PERMIT	15 JULY 2020

DRAWN BY	REVIEWED BY
EXC	PQ

SHEET

Z.3

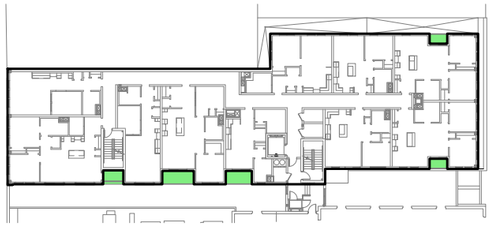


BALCONIES
& TERRACES
1,037 SF

SIXTH FLOOR PLAN
SCALE: 1" / 60'=1'-0"

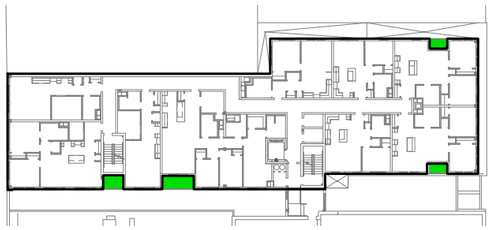
BALCONIES
222 SF

FIFTH FLOOR PLAN
SCALE: 1" / 60'=1'-0"



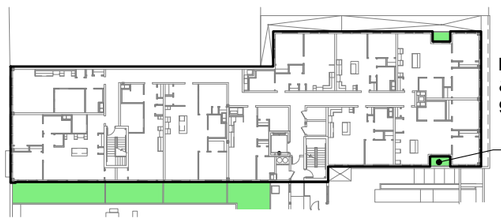
BALCONIES
222 SF

FOURTH FLOOR PLAN
SCALE: 1" / 60'=1'-0"



BALCONIES
166 SF

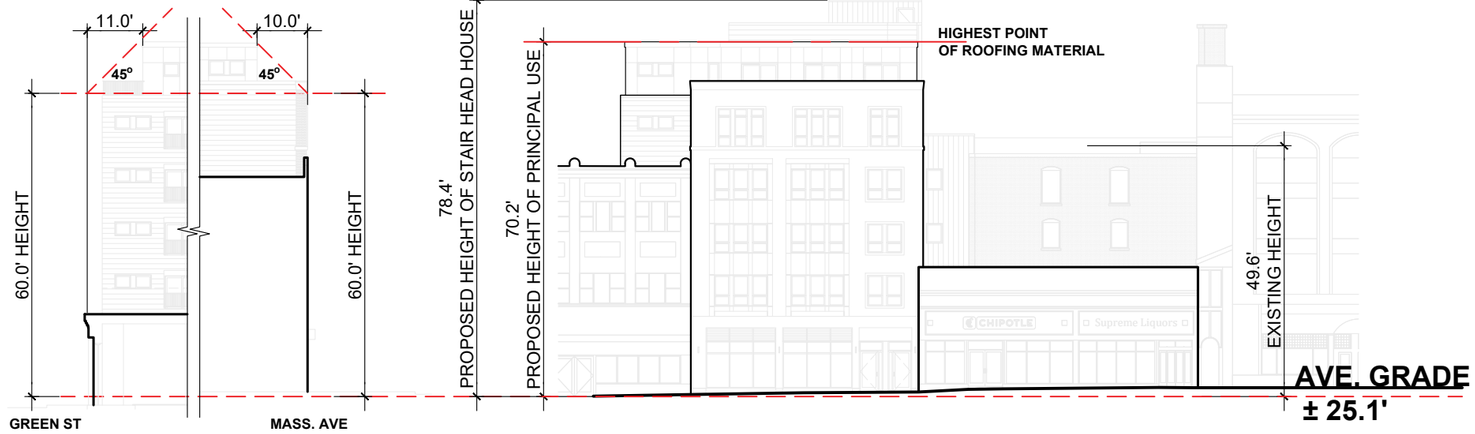
THIRD FLOOR PLAN
SCALE: 1" / 60'=1'-0"



BALCONIES
& TERRACES
931 SF

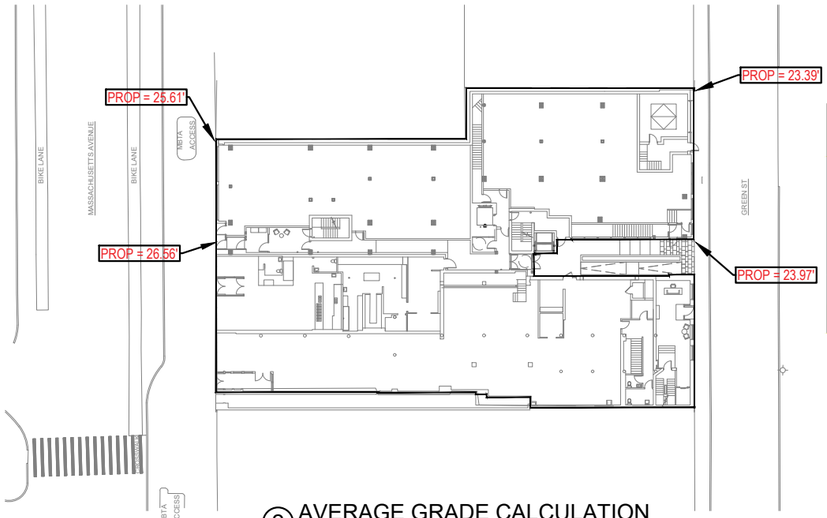
NOTE:
ALL NON-GFA BALCONIES AND TERRACES ARE COMPLIANT W/ "ART. 7.20.304.3.5 FAR Exemption for Residential Balconies

SECOND FLOOR PLAN
SCALE: 1" / 60'=1'-0"



BULK CONTROL PER SEC. 20.304.2.2.a

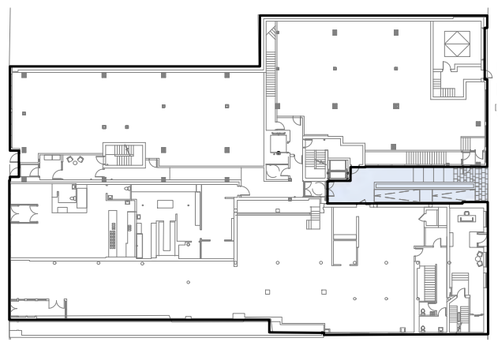
3 BUILDING HEIGHT
SCALE:1"=30'



Average Grade Calculation	
Proposed Finished at Building corner Elevations	24.0
	23.9
	25.8
	26.7
TOTAL	100.3
Average	25.1

BASE ON SPOT ELEVATIONS FROM PLOT PLAN DATED JUNE 08, 2017

2 AVERAGE GRADE CALCULATION
SCALE:1"=60'



REAR ENTRY
FORECOURT
864 SF

GROUND FLOOR PLAN
SCALE: 1" / 60'=1'-0"

LEVEL	PRIVATE OS (SF)	COMMON OS (SF)
1ST	0	864
2ND	931	
3RD	166	
4TH	222	
5TH	222	
6TH	1,037	
SUBTOTAL	**2,578**	864
TOTAL OPEN SPACE	3,442 -SF (16.2 % of total area equivalent)	

PROPOSED RESIDENTIAL PRIVATE OPEN SPACE
NOTE: Not dimensionally compliant with the zoning by-law definition of Private Open Space except for 533-SF of balcony area (25% of 2,126-SF of required Private Open Space per Article 5.22.1)."

COMMON OPEN SPACE

1 PRIVATE OPEN SPACE
SCALE:1"=60'

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ARCHITECTURE
PLANNING
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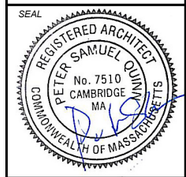
PH 617-354-3989

SEAL



CONSULTANT

PROJECT
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600 MASSACHUSETTS AVE.
CAMBRIDGE, MA 02139

PREPARED FOR
CIFRINO MASS AVE REALTY LLC,
C\O SUPERIOR REALTY

540 GALLIVAN BLVD,
DORCHESTER, MA 02134

DRAWING TITLE
PROPOSED BUILDING ZONING ANALYSIS

SCALE AS NOTED

REVISION	DATE
S. Permit. Rev 1	30 SEP 2020
SPECIAL PERMIT	15 JULY 2020

DRAWN BY	REVIEWED BY
EXC	PQ

SHEET
Z.4

LAW OFFICE OF KEVIN P. CRANE
104 MOUNT AUBURN STREET
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P. O. BOX 381030
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KEVIN@CRANELAWOFFICE.COM
EDWARD@CRANELAWOFFICE.COM

KEVIN P. CRANE, ESQ.
EDWARD CRANE, ESQ.

TELEPHONE
(617) 876-8500
FACSIMILE
(617) 864-6357

July 17, 2020

Cambridge Planning Board
344 Broadway
Cambridge, MA 02139

RE: Location - 600 Massachusetts Avenue, Cambridge, MA
Applicant - Cifrino-Massachusetts Avenue Realty LLC

Dear Sir or Madam:

Relative to the above-captioned applicant, I am their attorney for their special permit application.

I have enclosed the Preapplication Early Community Engagement Summary with attachments. After the Early Community Engagement meetings occurred, significant delay in submission of the special permit application resulted from the requirement of an extensive traffic impact study as well as the Covid-19 activity restrictions.

I look forward to presenting the application to the Board in the near future.

If you have any question regarding the above, please do not hesitate to contact me.

Sincerely,

Kevin P. Crane

KPC/jg
Enclosures

PREAPPLICATION EARLY COMMUNITY ENGAGEMENT SUMMARY

1. On January 17, 2019 the development team (Architect Peter Quinn, Attorney Kevin Crane and owner representative Thomas Cifrino) made a presentation to the Cambridgeport Neighborhood Association at the LBJ Apartments at 150 Erie Street, Cambridge, Massachusetts. This was the regular monthly meeting of this Neighborhood Association. There were approximately 40 to 50 residents in attendance. Our presentation was well received with the affordable housing aspect of the proposal particularly lauded. There were a number of questions regarding what particular retail establishments would eventually occupy the premises. Other than the existing occupancies, the development team noted that market conditions would dictate future occupancies. The development team also heard loud and clear that a bank would not be welcome as a future occupant. Attendees also supported the developer's plan to retain the taekwondo facility as an occupant.

2. In compliance with Cambridge Planning Board rules, on March 27, 2019 the development team (Architect Peter Quinn, Attorney Kevin Crane and owner representative Thomas Cifrino) held a community engagement meeting in the vacated Sleepy's mattress location on the development site. See attached notice. Notice of the hearing was sent to all abutters as per the attached assessor's printout. See also attached form letter dated March 11, 2019 from Attorney Kevin Crane to the list of abutters. The site was also posted three weeks in advance of the meeting as to the scheduled presentation. Attached hereto is the signup sheet from the meeting. The meeting was also advertised by an email from Attorney Crane dated March 13, 2019 to various neighborhood associations. Attorney Crane received a response email from Nels Frye dated April 3, 2019 expressing support for the development proposal. See attached. The presentation was well received by attendees with continuing support for the affordable housing aspect, the taekwondo retention, and an expression that a restaurant might be located in the Green Street commercial space. There was a question raised as to whether there would be windows on the easterly side of the building and such windows have been incorporated into the proposal. The meeting ended at approximately 8:30 p.m.

3. On December 10, 2018 Attorney Crane sent an offer to make a presentation to various neighborhood organizations listed on the Community Development Department website. See attached. These organizations included the Area 4 Neighborhood Coalition, Essex Street neighbors, Margaret Fuller Neighborhood House, and the Cambridgeport Neighborhood Association. See attached list. As a result of this introduction, the Cambridgeport Neighborhood Association meeting of January 17, 2019 occurred. There was no response received from the other recited neighborhood organizations.

4. On November 28, 2018 the development team made a presentation to the Central Square Advisory Committee at the Community Development Department's office. It is anticipated that the Central Square Advisory Committee will submit a formal letter regarding their position on the proposal as a result of this meeting.

NOTICE OF COMMUNITY ENGAGEMENT MEETING

The following Community Engagement Meeting has been scheduled in accordance with the Cambridge Planning Board Rules for Special Permits:

Time and Date: Wednesday, March 27, 2019 7:00 pm

Location: 600 Massachusetts Avenue in vacated Sleepy Mattress premises adjacent to Chipotle

Proposed Project: The Cifrino family proposes to demolish the Sleepy Mattress portion of the premises from Massachusetts Avenue to Green Street and construct a new six-story residential/ commercial building. There will be approximately 50 residential units and commercial/retail space on the first floor on Massachusetts Avenue and Green Street. A renovated Green Street entrance is included and the Tae Kwon Do tenant shall remain on the site at all times and eventually occupy the basement space on Green Street. The proposal also includes renovation of the existing four-story brick tower space (formerly a bakery) located on the Green Street side of the property. Proponent will seek special permits from the Cambridge Planning Board to construct the proposed building.

90-52
3mj Associates Llc
563 Massachusetts Ave
Cambridge, Ma 02139

93-101
Gajos, Krzysztof Z.
215 Green St. Unitb
Cambridge, Ma 02139

90-125
Katis, Harry N, & Victoria Katis, Trustee Of Potamia Realty Trust
720 Mass Ave
Cambridge, Ma 02139

90-133
3mj Mass Ave Llc,
563 Massachusetts Ave.
Cambridge, Ma 02139

90-155
Naggar Realty Llc. C/O 545-565 Mass Ave Llc
585 Massachusetts Ave
Cambridge, Ma 02139

90-169
625 Mass Ave Owner, Llc C/O Lincoln Property
53 State St. 8th Floor
Boston, Ma 02109
DUPLICATE

90-170
625 Mass Ave Owner, Llc, C/O Lincoln Property
53 State Street, 8th Floor
Boston, Ma 02109

90-194
Naggar, Mary & Joseph Naggar., Trs. Of 3mj Realty
C/O Morris M. Naggar
563 Massachusetts Ave.
Cambridge, Ma 02139

90-185
Hill, James D., Trustee The James D. Hill Rev Trust
15831 White Orchid Lane
Ft. Myers, Fl 33908

93-50
Bhuiya, Akram H. & Salina Akram Bhuiya, Trustee Of
42 Pearl Street Realty Trust
15 Pleasant Pl
Cambridge, Ma 02139

93-51
40 Pearl Llc
75 Henry St
Cambridge, Ma 02139

93-52
Lubavitch Of Cambridge, Inc.
38 Pearl St
Cambridge, Ma 02139

93-53
Frye, Eden Naby, Trustee Of Naby-Frye Pearl Realty
15 Tower Hill Rd
Brimfield, Ma 01010

93-54
Senechal-Brown Jonathan
34 Pearl St
Cambridge, Ma 02139

93-55
Dunn, Jeffrey M.
32 Pearl St
Cambridge, Ma 02139

93-56
Second Home, Inc.
30 Pearl St
Cambridge, Ma 02139

93-71
Chan, Ching-Da & Hsou Chun Liu Chan Trustee Of The Green Pearl Realty Trust
223 Green St
Cambridge, Ma 02139

93-72
Ramey, Jean Ann, Trustee Of Crescent C/O Cresent Synapse Energy Economics, Inc Attn: Jeanann Ramey
485 Mass Ave Ste #2
Cambridge, Ma 02139

93-73
Caru Retail Llc.
614 Massachusetts Ave
Cambridge, Ma 02138

93-74
Nosleda Realty Corp Attn: Carol Atlas
5723 Mayfair Manor Dr. #106
Rockville, Md 20852

93-89
Cheshatsang, Dhiki P., & Cheshatsang, Lobsang N.
48 Pierson St
Watertown, Ma 02472

106-103
Rothman, George & Ethel Rothman, C/O First Cambridge Realty
907 Mass Ave
Cambridge, Ma 02139

106-105
Central Square Llc, C/O Hunneman Real Estate Corp.
303 Congress St.
Boston, Ma 02210

106-109
Lonsdale Realty Corporation
P.O. Box 2212, Route 1
Ogunquit, Me 03907

106-117
Greek-American Political Club Of Massachusetts
288 Green Street
Cambridge, Ma 02139

106-122
Cambridge City Of
Parking
Cambridge, Ma 02139

106-123
Caru Cambridge Llc.
620 Massachusetts Ave
Cambridge, Ma 02139
DUPLICATE

106-124
Cifrino-Massachusetts Avenue Realty Llc.
C/O Superior Realty Co., Inc.
540 Gallivan Boulevard
Dorchester, Ma 02124
NO

106-125
Eqr-Church Corner, L.L.C. Eqr-Re Tax Department
P.O Bx 87407
Ledger No.19231
Chicago, Il 60606

93-101
Yozwiak, Nathan L. & Jasmine M. Hanifi
215 Green St., #A
Cambridge, Ma 02139

LAW OFFICE OF KEVIN P. CRANE
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CAMBRIDGE, MA 02238
KEVIN@CRANELAWOFFICE.COM
EDWARD@CRANELAWOFFICE.COM

KEVIN P. CRANE, ESQ.
EDWARD CRANE, ESQ.

TELEPHONE
(617) 876-8500
FACSIMILE
(617) 864-6357

March 11, 2019

3mj Mass Ave, LLC
563 Massachusetts Avenue
Cambridge, MA 02139

Dear Sir or Madam:

Enclosed please find Notice of Community Early Engagement Meeting scheduled for March 27, 2019 at vacant Sleepy Mattress space at 600 Massachusetts Avenue at 7:00 P.M. A presentation of proposed development at 600 Massachusetts Avenue will be made at that time.

If you have any questions, please contact me.

Sincerely,

Kevin P. Crane

Attorney Kevin P. Crane
for owners of 600 Massachusetts Avenue

KPC/jg
Enclosure

SIGN UP SHEET FOR ATTENDEES OF COMMUNITY EARLY ENGAGEMENT MEETING

Name	Address	Email Address
Daniel Chuang	611 Green St. Cambridge, MA	DBCHUANG@GMAIL.COM
Tara Sarathi	223 Concord Turnpike, Cambridge, MA	Tara.Sarathi@gmail.com
Michael Monestime	4 George St. Cambridge, MA.	mmonestime@centralsquarecambridge.com
Ben Deb	580 Mass Ave, Cambridge MA	bdeb@firstcambridgerealty.com
Nathan Yozwiak	215 Green St. Cambridge	nyozwiak@gmail.com
Carolyn Shipley	15 Laurel St. Camb.	Carolyn_Shipley@Yahoo.com
William McAvinney	12 Douglass St. Camb.	bmcavinney@earthlink.net
TORT HYDE	11 WENDELL ST CAMB	TORT.M.HYDE@GMAIL.COM
Walter McDonald	172 Magazine St.	wdemcdonald40@gmail.com
Carol O'Hare	"	cbo1066@gmail.com

600 Massachusetts Avenue

1 message

nels frye <nels@stylites.net> Wed, Apr 3, 2019 at 10:50 AM
To: kevin@cranelawoffice.com

Dear Mr. Krane and others invovled in 600 Mass Ave.,

I am writing to express my strong support for this great addition to Central Square, which would be an aesthetic and economic improvement for Green Street and the Central Square. As we all know, Cambridge and the greater area suffer from a huge dearth of housing and this proposal for 50 housing units nearby mass transit is just what we need. It's too bad that the building is not going to be taller and contain even more housing, since we need all we can get.

My family owns rental units on Pearl st., so this is more competition for our rentals, but we recognize the extreme nature of the housing shortage and the benefits economically and environmentally (greater efficiencies in larger buildings and less need for commuters to drive) to new housing in areas that are mass-transit accessible.

Our only hope is that the city will reduce parking requirements as much as possible.

Please feel free to use my testimonial to as you see fit and I would be happy to add additional points in support of the project.

Regards,

Nels Frye

---------- Forwarded message ---------
From: **Kevin Crane** <kevin@cranelawoffice.com>
Date: Wed, Mar 13, 2019 at 4:35 PM
Subject: 600 Massachusetts Avenue
To: <area4neighborhoodcoalition@gmail.com>, <cummings@cityresearch.com>, Arleen Henry <arleenh@hotmail.com>, <jaking@mit.edu>, Nancy Ryan <nancyryan4@comcast.net>, <calexis@margaretfullerhouse.org>, Catherine Zusy <cathzusy@gmail.com>, <cportneighbors@yahoogroups.com>, <fritzdonov@aol.com>, <MrLJAdkins@msn.com>, <carolyn_shipley@yahoo.com>, <jesse@abettercambridge.org>, <cambridgeneighborhoods@gmail.com>, <mmonestime@centralsquarecambridge.com>, <wjoseph@cambridgema.gov>, Paden, Liza <lpaden@cambridgema.gov>, <sjoseph@cambridgema.gov>, <jroberts@cambridgema.gov>, Tom Cifrino <tmcifrino@supremeliquors.net>, Peter Quinn <pquinn@pqarch.com>, Joshua M. Alper <jmalper@sherin.com>, Jennifer L. Ioli <jlioli@sherin.com>, Tim Russell <rusdesign@att.net>, Lil LeBlanc <lleblanc3@gmail.com>, Janet Garvey <ambojanet@gmail.com>, McGovern, Marc <mmcgovern@cambridgema.gov>

Dear Sir or Madam:

I represent the Cifrino family, the owners of the real estate at 600 Massachusetts Avenue, Cambridge, Massachusetts. My client's family has owned this property for many generations. Presently my client owns and operates the Supreme Liquors store at the location. Other tenants include Chipotle and the Tae Kwon Do organization. The premises also include the presently vacant Sleepy Mattress quarters. The proposed upgrade of the property will include renovation of the existing four-story brick tower space on the Green Street side, approximately 50 new residential units, and an upgrade of the Green Street façade. The Tae Kwon Do tenant shall remain on the site at all times and eventually occupy the basement space on Green Street.

There has been to date no formal filing for a special permit with the Cambridge Planning Board but there eventually will be such a filing. I have attached a Notice of Community Early Engagement Meeting for Wednesday, March 27, 2019 at 7 p.m. at the vacant Sleepy Mattress premises adjacent to Chipotle on Massachusetts Avenue. At that time we will discuss our plans, overall design, and listen to feedback from all. Please attend if you can.

I have also attached proposed plans and zoning summary for the upgrade.

If you have any question regarding the above, please contact me..

Sincerely,
Kevin Crane

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Attorney Kevin Crane
Law Office of Kevin Crane
104 Mount Auburn Street
P.O. Box 381030
Cambridge, MA 02238
617-876-8500
www.cranelawoffice.com

Gmail

Kevin Crane <attorneykevincrane@gmail.com>

600 Massachusetts Avenue Cambridge

1 message

Kevin Crane <kevin@cranelawoffice.com> Mon, Dec 10, 2018 at 3:06 PM
To: cummings@cityresearch.com, arleenh@hotmail.com, jaking@mit.edu, nancyryan4@comcast.net, Tom Cifrino <tmcifrino@supremeliquors.net>, Peter Quinn <pquinn@pqarch.com>

Dear Essex Street Neighbors,

My name is Kevin Crane and I am a local attorney. I represent the Cifrino family who are the owners of the property at 600 Massachusetts Avenue in Central Square. My clients have owned this property for three or four generations. The present manager of the property, Thomas Cifrino, owns and operates the Supreme Liquor Store located within the property. The property includes the Chipotle Restaurant, space recently vacated by Sleepy's Mattress, and the Tai Kwon Do arts studio..

My client and his architect, Peter Quinn, have developed plans to upgrade and develop the property with a mixed use commercial and residential structure. Our team has already discussed the proposal fairly extensively with the Cambridge Community Development Department and made a presentation to the Central Square Advisory Committee as well as other stakeholders.

My client would be interested in making a presentation to the Essex Street Neighbors of their plans and receive comments back. I do not know what your particular procedure is as far as scheduling such a presentation but if you could contact me regarding this matter, I would greatly appreciate it. If possible I would suggest that given the holiday season we aim for a presentation in early January.

Sincerely,
Kevin Crane

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Attorney Kevin Crane
Law Office of Kevin Crane
104 Mount Auburn Street
P.O. Box 381030
Cambridge, MA 02238
617-876-8500
www.cranelawoffice.com

Neighborhood Organizations

East Cambridge - Neighborhood 1	
East Cambridge Planning Team Facebook: East Cambridge Planning Team Google Group: East Cambridge Planning Team	Chuck Hinds, President chuckhinds@msn.com Fabrizio Gentili, Secretary projectfabrizio@gmail.com
East End House Web: http://eastendhouse.org/ 105 Spring Street Cambridge, MA 02141 617/876-4444	Mike Delia, Executive Director Michael@eastendhouse.org
Neighborhood Association of East Cambridge	Michael Hawley info@naeastcambridge.org
Wellington Harrington - Neighborhood 3	
Wellington-Harrington Neighborhood Association	Leadership Team WellingtonHarrington@gmail.com
The Port - Neighborhood 4	
Area Four Neighborhood Coalition	Leadership Committee: Julian Cassa Liz Layton area4neighborhoodcoalition@gmail.com
Essex Street Neighbors	Steering Committee: Jean Cummings, cummings@cityresearch.com Laurie Friedman Arleen Henry, arleenh@hotmail.com Jonathan King, jaking@mit.edu Nancy Ryan, nancyryan4@comcast.net
Margaret Fuller Neighborhood House Web: http://www.margaretfullerhouse.org/ Facebook: Margaret Fuller Neighborhood House 71 Cherry Street Cambridge, MA 02139 617/547-4680	Christina Alexis, Executive Director calexis@margaretfullerhouse.org
Cambridgeport - Neighborhood 5	
Cambridgeport Neighborhood Association Listserv: cportneighbors@yahoogroups.com c/o Cathie Zusy 202 Hamilton Street Cambridge, MA 02139	**CNA Board** Cathie Zusy, President cathzusy@gmail.com Jay Shetterly, Recording Clerk Brian Aull, Corresponding Clerk Julia Halprin, Treasurer Gabe Cira Rebecca Richardson Bowie Carolyn Shipley
Mid-Cambridge - Neighborhood 6	