



RESIDENCES AT FRESH POND

SPECIAL PERMIT SUBMISSION


VOLUME ONE

JANUARY 28, 2011

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RESIDENTIAL DEVELOPMENT
70 FAWCETT STREET
CAMBRIDGE, MASSACHUSETTS

Project Team Page 3

Introduction Page 4

Ownership Certificate Page 5

Special Permit Application Form Page 6 - 7

Appendix | Dimensional Form Page 9

Supporting Statement Page 10

Zoning Compliance Description Page 11 - 19

Sewer Service Infrastructure Narrative Page 20 - 21

Water Service Infrastructure Narrative Page 22

Noise Service Infrastructure Narrative Page 23

LEED Narrative Page 25 - 33

LEED Checklist Page 34 - 35

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Introduction

This is an application by Cabot, Cabot & Forbes for a Special Permit to allow for the construction of two multifamily residential buildings (the Project) on Fawcett Street in the recently created Alewife Overlay District. The Planning Board approved a Special Permit for a portion of this site in October 2008 (PB Case No.227) for a proposed 260 unit residential building.

At the time of that application, the permittee contemplated constructing a second residential building containing approximately 200 additional units in the future. In this application, the permittee seeks approval for a full build out of the site with two buildings containing a total of 429 units.

The two proposed buildings include many of the design elements that were contained in the prior project. As a result, many of the Planning Board's findings in PB Case No. 227 concerning compliance with the Urban Design Objectives of Section 19.30 are equally applicable to the project. Similarities include entries for ground floor units located along Fawcett Street and the construction of a future cross street that will provide access to Wheeler Street in accordance with the planning goals of the Concord-Alewife Plan.

A notable difference between the two projects is the height of the buildings. The prior project utilized the Transfer of Development Rights provisions of Section 21.40 which resulted in a building height of 105 feet. By contrast, the height of the two buildings in this application is seventy-four feet.

A Transportation Impact Study (TIS) certified by the Traffic, Parking and Transportation Department has been submitted as part of this application.

OWNERSHIP CERTIFICATE – PLANNING BOARD SPECIAL PERMIT

This form is to be completed by the OWNER, signed, and returned to the Office of the Planning Board.

I hereby authorized: Cabot, Cabot & Forbes
(Petitioner)

Address: 125 Summer Street
Boston, MA 02110-1656

to apply for a special permit for: Multi-Family
(type of development)

on premises located at: 70 Fawcett Street

RAPPAPORT, JEROME L. & JANET F. ASERKOFF ,
for which the record title stands in the name of: TRS. THE 70 FAWCETT NOMINEE TRUST
C/O NEW BOSTON MNGT SERVICES

whose address is: 60 STATE STREET STE#1500
BOSTON , MA 02109

by a deed duly recorded in the: Middlesex South County Registry of Deeds in Book 41782

Page 344 ; or Registry District of the Land Court, Certificate No.:

Book: Page:

Janet F. Aserkoff trustee

Signature of Land Owner
(If authorized Trustee, Officer or Agent, so identify)
Janet F. Aserkoff, not in her individual
capacity but as trustee under Declaration
of Trust dated January 13, 2004

Commonwealth of Massachusetts, County of *Suffolk*

The above named *Janet F. Aserkoff* personally appeared before me, *Nina H. Siegel*.

This *13th* of *January*, 20*04* and made oath that the above statement is true.

Notary: *Nina H. Siegel*

My Commission expires:



a. SPECIAL PERMIT APPLICATION – COVER SHEET

To the Planning Board of the City of Cambridge:

The undersigned hereby petitions the Planning Board for one or more Special Permits in accordance with the requirements of the following Sections of the Zoning Ordinance:

- 1. Article 19.20 (Project Review)
- 2. Article 20.95.11 (Additional FAR for Public Improvement)
- 3. Article 20.95.34 (Yard Requirements)
- 4. Article 20.95.4 (Dwelling Unit Density)
- 5. Article 20.97.3 (Waiver of Gross Floor Area Provisions for Parking Facilities)
- 6. Article 6.36 (Schedule of Parking and Loading Requirements)
- 7. Article 20.96.2 Pooled Open Space and Shared Permeable

Applicant: Cabot, Cabot & Forbes

Address: 125 Summer Street
Boston, MA 02110-1656

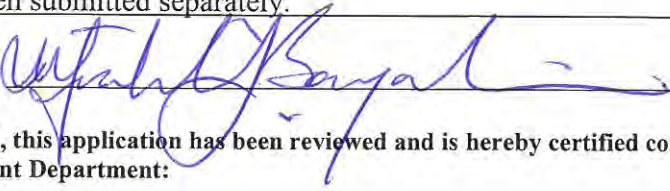
Telephone: (617) 603-4000 FAX: _____

Location of Premises: 70 Fawcett Street

Zoning District: Office 1/Alewife Overlay District 4

Submitted Materials: Survey; Proposed Site Plan; Floor Plans; Elevations; Landscape Plan; Photographs; Ownership Certificate; and Project Narrative.

Traffic Study has been submitted separately.

Signature of Applicant: 

For the Planning Board, this application has been reviewed and is hereby certified complete by the Community Development Department:

Date Signature of CDD Staff

b. SPECIAL PERMIT APPLICATION – SUMMARY OF APPLICATION

Project Name: Address of Site: Applicant: Planning Board Project Number: (CDD)

Hearing Timeline (CDD)

Application Date: _____

Planning Board 1st Hearing Date: _____ *

(PUD Development Proposal, other special permit)

Planning Board Preliminary Determination: _____ *

(PUD Development Proposal)

Second Submission Date: _____ *

(PUD Final Development Plan)

Planning Board 2nd Hearing Date: _____ *

(PUD Final Development Plan)

Final Planning Board Action Date: _____ *

(PUD Final Development Plan, other special permit)

Deadline for Filing Decision: _____ *

**Subject to extension by mutual agreement of the Applicant and the Planning Board*

Requested Relief:

- Project Review Special Permit; Article 20.95.11; Additional FAR for Public Improvement; Article 6.36; Reduction in Required Number of Parking Space.

Project Description

Brief Narrative:

Applicant seeks to construct two five story multi-family buildings containing 429 dwelling units.

Project Size:

- Total GFA: 466,632 SF
- Non-residential uses GFA: N/A
- Site Area (acres and SF): 4.53 Acres 197,173 SF
- # of Parking Spaces: 402 Spaces

Proposed Uses:

- # of Dwelling Units: 429
- Other Uses N/A
- Open Space (% of the site and SF) 22.8% 44,939 SF

Proposed Dimensions:

- Height: 74 Feet
- FAR: 2.37

Appendix I – Dimensional Form

Special Permit #

Address: 70 Fawcett Street

	Allowed/Required	Existing	Proposed	Granted
Total FAR	2.79		2.37	
Residential	2.0	-	1.81	
Non-Residential	Not Applicable	0.80	Not Applicable	
Inclusionary Bonus	0.6	-	0.54	
Infrastructure Bonus	0.13	-	0.02	
Total GFA in Sq. Ft.	537,845 SF	171,214 SF	466,362 SF	
Residential	394,346 SF	-	356,566 SF	
Non-Residential	Not Applicable	171,214 SF	Not Applicable	
Inclusionary Bonus	118,303 SF	-	106,535 SF	
Infrastructure Bonus	25,196 SF	-	3,261 SF	
Max. Height				
Range of Heights	Residential Use 85 Feet	Varies; Approximately 25 Feet – 30 Feet	Residential Use 74 Feet	
Lot Size	5,000 SF	213,093 SF	197,173 SF	
Lot Area/DU (Base Units)	600 SF	-	601 SF	
Total Dwelling Units	451	-	429	
Base Units	328	-	328	
Inclusionary Units	98	-	98	
Infrastructure Units	25	-	3	
Min. Lot Width	50 Feet	62 Feet	191 Feet	
Min. Yard Setbacks				
Front	15 Feet	6 Feet	15 Feet	
Side, Left	(H+L) / 5	25 Feet	25 Feet	
Side, Right	(H+L) / 5	75 Feet	15 Feet	
Rear	(H+L) / 4	9 Feet	15 Feet	
Total % Open Space	25%	10.4%	22.8%	
Usable	15%	10.4%	41.7%	
Permeable	25%	10.4%	22.8%	
Off Street Parking				
Min #	1 Space / DU	116 Spaces	402 Spaces (0.94 / DU)	
Max #	Not Applicable	-	Not Applicable	
Handicapped	13 Spaces	-	13 Spaces	
Bicycle Spaces	1 Space / 2 DU	-	220 Spaces (0.51 / DU)	
Loading Bays	Not Required	2	Not Required	

SUPPORTING STATEMENT

Section 10.43: General Special Permit Criteria.

Special permits will normally be granted where specific 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 interest.

(1) The requirements of the Zoning Ordinance can or will be met.

With the relief being granted by this Special Permit the requirements of the Zoning Ordinance will have been met.

(2) Traffic generated or pattern of access or egress would not cause congestion hazard, or substantial change in established neighborhood character for the following reasons.

In was the conclusion of the Traffic Study that no congestion or hazard will be created. The project offers the possibility in the future that the pattern of development and movement of vehicles, pedestrians, and bicyclists in the future will be enhanced with significant improvement to pathway infrastructure.

(3) The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed uses for the following reasons.

Adjacent uses will not be adversely affected. They will be positively affected by the physical changes proposed to be made to the Fawcett Street frontage and the improvements to infrastructure proposed.

(4) Nuisance of hazard would not be created to the detriment of the health, safety and/or welfare of the occupants of the proposed use or the citizens of the City.

No general nuisance or hazard will be created. In general there will be a significant upgrading of the environment on the lot and in its vicinity, consistent with the long term objectives of the Concord-Alewife Plan.

(5) For other reasons, the proposed use would not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this Ordinance for the following reasons:

The project is fully in compliance with the provisions of the newly enacted Concord Alewife Overlay Districts and advances several of the high priority improvements outlined in the Plan.

CONFORMANCE WITH ZONING ORDINANCE

I. Special Permit Criteria

20.93.2 ALEWIFE OVERLAY DISTRICT

In issuing a special permit for any relief within the Alewife Overlay Districts, the special permit granting authority is to be guided by the purposes of the Overlay Districts (Section 20.92), the objectives and design guidelines for development contained in the *Concord Alewife Plan*, November 2005, and the general standards for issuance of a special permit (Section 10.43). The project is located within the Quadrangle Southeast, site of the new building, and Quadrangle Southwest, site from which FAR is transferred to the main development parcel at 70 Fawcett Street.

a. Purposes of the Alewife Overlay Districts

(1) Encourage forms of development, mix of uses, and range of improvements that will facilitate and encourage walking, biking and transit use;

The project will introduce a significant component of residential use. Smaller scaled residential developments have been constructed in the past (at Wheeler Street most recently); this project will help consolidate the residential gains achieved by those earlier projects and assure the viability of housing in what is still an industrial and commercial environment. The frontage along Fawcett Street will be dramatically improved for pedestrians with a new sidewalk and a landscaped front yard adjacent to it. The first segment of a future cross street will be established, dimensioned and landscaped like a typical city street, which promises future connections between Fawcett Street and Wheeler Street and better access to the retail cluster at Alewife Brook Parkway.

(2) Preserve and enhance the capacity to store floodwater, recharge ground water and manage the collection and disposal of stormwater in ways that add to the quality and visual appeal of the built environment;

The development will meet all of the new, enhanced requirements for stormwater management on the site (including on-site stormwater detention) and will convert much formerly impermeable surface to permeable and will preserve the sites' ability to store flood water.

(3) Minimize the negative impact of new development on the adjacent Cambridge Highlands residential neighborhood;

The site on which the housing will be built is well removed from the Highlands neighborhood.

(4) Integrate the entire area through the creation of new pedestrian paths, roadways, green spaces and bridges that will facilitate movement within the several Districts.

The first link in a new road connecting Fawcett Street to Wheeler Street will be constructed.

(5) Introduce a significant component of residential living and support retail services to enhance the area's appeal for all persons who come to work, shop as well as live within the Districts;

Four hundred and twenty-nine dwelling units will be built on the site.

(6) Create an identity and sense of place for the Alewife Districts that parallels the development of the historic urban centers that characterize much of Cambridge.

Replacing the light industrial building on this site with buildings containing a significant number of dwelling units will further advance the creation of a mixed use district. This change is consistent with the pattern of development that has occurred throughout other light industrial districts in the City over the past few decades. Infrastructure improvements, such as, the creation of a new urban intersection and roadway will also serve to create a new identity and sense of place consistent with other neighborhoods in Cambridge.

b. Consistency with the Goals for the Quadrangle in the Concord – Alewife Plan

The future project is consistent with the goals of the Plan for the Quadrangle: improving circulation by all modes through improved existing roads and the creation of new links; introduction of more permeable surface to allow for greater water table recharge and better management of stormwater runoff; and introduction of housing as a use in the area.

II. 19.30 Urban Design Objectives

(1) Section 19.31: New projects should be responsive to the existing or anticipated pattern of development. Indicators include:

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

The neighborhood surrounding the Project generally consists of commercial office buildings and light industrial uses; there are no residential uses directly abutting the site. The nearest residential use is a recently constructed condominium containing approximately 72 units at 37 Wheeler Street.

At 74 feet the height of the proposed buildings is 11 feet below the permitted height in the Alewife Overlay District and 31 feet below the height of the multi-family building approved at this site in PB Case No. 227.

The building setback along the Fawcett Street is a minimum of 15' in accordance with Section 20.95.31.

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

The new buildings aligned towards Fawcett Street and the newly created connection road will establish an active and friendly streetscape. The project will contain residential units with entry stoops along Fawcett Street. The entry lobby of the second building will be located on the corner of Fawcett Street and the proposed future cross street to further animate the streetscape and activate the district.

The residential uses fronting onto Fawcett Street and the proposed cross street will be designed to complement the streetscape with residential stoops, landscaping and terraces. Parking will be located below the residences and will be accessed from the proposed future cross street to minimize the impact on Fawcett Street.

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

There are no historic structures on the Site or immediately abutting the Site.

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

(1) Ground floor, particularly where they face public streets, public parks, and publicly accessible pathways, consist of spaces that are actively inhabited by people.

The proposed design will compliment the City's planning for the Concord-Alewife neighborhood. The project will create up to 429 residential units in an area that has been targeted for further residential development in the 2006 *Concord-Alewife Planning Study*. Active community uses such as: leasing, management and amenity spaces will address Fawcett Street further activating the ground floor at the public street.

The Project will also be an improvement to the existing warehouse structures which front onto Fawcett Street. As proposed, the Project will create residential units with stoops, landscaping and terraces along Fawcett Street and the proposed future cross street. The parking garage entries are located off the side street to minimize the impact to Fawcett Street. The Project will also provide bicycle parking spaces within the garage and on the first floor to foster alternative transportation.

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

The parking, approximately 402 spaces, will be located below grade. Entry to the garages will be provided from the future cross street to minimize the impact to Fawcett Street.

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

Ground floor uses will be primarily residential but will be designed to enhance the streetscape. The building lobby is designed to be largely transparent with public oriented functions – seating and reception areas – fronting onto the street. The lobby, leasing and amenity spaces will create an active, 24-hour presence along the street.

- (4) *Entries to building are located so as to ensure safe pedestrian movement across streets, encourage walking as a preferred mode of travel within the city and to encourage the use of public transit for employment and other trips.*

The site plan has been designed to encourage pedestrian access along Fawcett Street. Crosswalks will be provided at the new cross street and across all vehicular entry points. The proposed future cross street will be designed to facilitate pedestrian and bicycle traffic. A five-foot wide sidewalk will be provided on each side of the street and there will be a five-foot wide mow strip along the north curb of the street. A five-foot wide bicycle lane will be provided on each side of the vehicular travel lane enhancing access to the nearby retail amenities, open spaces and various mass transit alternatives.

- (5) *Pedestrians and bicyclists are able to access the site safely and conveniently; bicyclists should have secure storage facilities conveniently located on-site and out of the weather.*

Pedestrians and bicyclists will have safe access to and from the Site. The sidewalks and street crossings will be designed to encourage pedestrian traffic. Bicycle lanes are planned for each side of the future cross street to encourage bicycle traffic to and around the Site. Secure and covered bicycle parking for residents will be provided in the garage and on the ground floor. Additional covered parking will be available at the building entry for visitors and future residents.

Section 19.33: The building and site design should mitigate adverse environmental impacts of a development upon its neighbors

- (1) *Mechanical equipment that is carefully designed well organized or visually screened from its surroundings and is acoustically buffered from neighbors.*

Rooftop mechanical equipment will be installed away from public view. The equipment will be set back from the building edge to eliminate views from street level. It is also anticipated that miscellaneous rooftop equipment such as plumbing stack penetrations and other necessary mechanical equipment will be, to the extent feasible, minimized, and located away from public view. Individual unit condensers are small, quiet and will generate far less noise and impact less than centralized mechanical system penthouses.

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

Trash and recycling access will be provided for residents on each floor and directed to central building compactors within the sub-grade garage. These facilities will not be visible or impact neighbors.

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

N/A

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

The drainage design and stormwater management plan address both the quantity and quality of stormwater runoff from the site and conforms to the standards outlined by the Massachusetts Department of Environmental Protection Stormwater Management Policy and the City of Cambridge Department of Public Works Concord – Alewife Stormwater Management Guidelines. The site incorporates Best Management Practices (BMP's) such as street sweeping, deep sump, hooded catch basins, a water quality structure, subsurface detentions systems, a rain garden, and outlet control structures.

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

The site's pervious area will be increased in the post-development condition which will result in a decrease in both the peak rates and total volume of runoff from the site. The annual recharge from the post-development site will be significantly more than the annual recharge from the existing site conditions.

(6) The structure is designed and sited to minimize shadow impacts on neighboring lots, especially shadows that would have a significant impact on the use and enjoyment of adjacent open space.

The site is surrounded by an open parking structure on the south, railroad tracks to the north, and surface parking across Fawcett Street to the west. On the east side, the

majority of the site is surface parking serving the Abt office building. The current proposed development will be five stories in height, half of the currently approved development on the parcel. Shadow modeling has illustrated that shadows from the Project will not impact the uses of the abutting properties during peak outdoor seasons (June to September). There will be partial shadows that fall into the Abt building courtyard during the late fall and early spring months (March to early April) of the year. It is not anticipated that these shadows will decrease the use of that space during those times, since it will generally be too cold for passive outdoor activities.

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

The Site is generally flat: few retaining walls will be required at miscellaneous walls associated with the front entry terraces, stoops and handicapped accessible ramping.

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

As noted above, there are no residential uses on adjacent lots. The building elevations are designed to provide scale and texture for the facades, particularly along Fawcett Street and the proposed future cross street and to create an active urban streetscape. The proposed project is also significantly shorter than the currently approved project on site.

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

Design of the outdoor lighting is anticipated to be street lighting along Fawcett Street and the future cross street. There will also be feature lighting around the building lobby and residential units which will enhance the nighttime streetscape. Additional building mounted security lighting will likely be provided along the non-public sides of the building.

The lighting will be designed to minimize glare or spill-over to the adjacent properties while providing adequate light levels for security.

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

A Tree Inventory is included with this Application which illustrates the existing Site is primarily occupied by structure and pavement with a few trees that were planted as part of the Site's previous development. These trees include three Lindens, eight White Pines, and one Hawthorn. The Hawthorn is in very poor condition and four of the White Pines are significantly damaged. There are twenty-four 'volunteer' or weed trees (*Ailanthus Altissima*) growing out from the foundation of the existing building and in the parking lot. These are invasive trees which should be removed under any circumstance.

The proposed Site Plan greatly enhances the landscaping of this parcel of land. The Project will provide street trees on Fawcett Street in front of the proposed building. Landscaping at stoops and terraces will be created along Fawcett Street to improve the streetscape and provide a sense of arrival for the residential units.

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

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

The proposed development will provide onsite detention for the difference between the 2-year 24-hour pre-construction runoff hydrograph and the post construction 25-year 24-hour runoff hydrograph via two subsurface detention systems and a rain garden. Based upon the drainage design and stormwater management plan the volume of stormwater leaving the site via the stormwater management system for the 25-year 24-hour storm event is less than the existing 2-year 24-hour storm event hence the detention provided onsite will alleviate the existing public drainage system from surcharging and backups during larger events.

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

The City's water main in Fawcett Street in the vicinity of the site is in poor condition and is scheduled for full replacement by City Engineering. Recent Flow Tests on site indicate sufficient system supply for the project without needs for alternative supply enhancement measures. Water pressure tests taken after the reconstruction of water mains in Concord Avenue indicate slightly less pressure than what would be required for fire protection and domestic services. As such a fire pump system and a domestic water booster pump system will be installed to supplement buildings systems.

The City's sewer system discharges into the MWRA Alewife Brook Conduit. The MWRA interceptor system in this area is a Combined Sewer Overflow (CSO) system that collects flow from the City of Cambridge and the City of Somerville combined sewer systems, as well as those separated systems in Belmont and Arlington. This system discharges combined sewer overflows to the Alewife Brook during significant storm events.

Each proposed residential building associated with the project will provide a Sewer Holdback Tank as well as associated manholes and connecting pipes that direct sanitary flows into the existing 12" sewer line located within Fawcett Street. The Sewer Holdback Tanks are designed for onsite storage of the increased sanitary sewer volume equal to an 8 hour flow multiplied by a safety factor of 1.5 and will help to hold back flow during peak times thus improving the capacity of the municipal system.

(3) Buildings are designed to use natural resources and energy resources efficiently in construction, maintenance, and long-term operation of the building, including supporting mechanical systems that reduce the need for mechanical equipment generally and its location on the roof of a building specifically. The buildings are sited on the lot to allow construction on adjacent lots to do the same. Compliance with Leadership in Energy and Environmental Design (LEED) certification standards and other evolving environmental efficiency standards is encouraged.

The project will comply with the Green Building Affidavit of Section 22.20. A copy of the draft LEED Checklist and LEED Accredited Professional are included in this application.

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

The Project will provide residential activities along the public streetscapes and will locate building access both in the middle of Building One and at the prominent corner location of Building Two. These uses will contribute to the overall character of the neighborhood and will foster activity throughout the day.

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

When completed, the Project will provide up to 429 new residential units, including 50 affordable housing units, in an area of Cambridge that the City has targeted for future residential development.

As described further above, the units will be located and designed to improve the Fawcett Street streetscape and will improve the relationship to the adjoining properties.

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

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

As part of this Project, a portion of future cross street will be provided in accordance with the City's 2006 *Concord-Alewife Planning Study*. The future cross street will create landscaped improvements with street trees and landscaping. These landscaping improvements along both Fawcett Street and the future cross street will provide a measurable public benefit for the neighborhood.

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

The Project will allow a future east-west roadway connection through the Site in accordance with the City's planning objectives. The future roadway is planned to include pedestrian friendly sidewalks to encourage movement through the neighborhood.

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

When completed, the Project will form the framework for a new open space network that facilitates pedestrian and bicycle traffic throughout the neighborhood. The future cross street is part of the City's plans to improve the neighborhood. The Project's residential uses will help anchor the neighborhood by creating 24 hour activity. In addition, the Project will improve the Fawcett Street streetscape and will help to foster pedestrian activity along the existing streets.

Residences at Fresh Pond

70 Fawcett Street

Sewer Service Infrastructure Narrative

The existing vacant office building's wastewater system is conveyed to the City's municipal sewer system in Fawcett Street. There is a variable width City of Cambridge Sewer and Water Easement located along the northern site boundary. A new 18" PVC Sewer line is proposed by the City of Cambridge within said easement and will replace the existing line per the Cambridge park Drive Area Drainage Improvements Contract No. 12 Plan Set dated May 10, 2010 as part of the Alewife Basin Project. It is anticipated that this work will be completed by 2011.

As referenced in documents pertaining to the existing permits for development on site, as well as in recent meetings with Cambridge Engineering, public infrastructure improvements and mitigation required by the Department of Public Works include a Sewer Holdback Tank for each building which will be remotely controlled by the City Sewer Department in the event of significant storms in order to mitigate combined sewer overflow conditions currently effecting the system.

Each proposed residential building associated with the project will provide a Sewer Holdback Tank as well as associated manholes and connecting pipes that direct sanitary flows into the existing 12" sewer line located within Fawcett Street. In addition, each building will provide a sanitary sewer service that collects flows from the underground garage floor drains. All flows will be directed through an oil/water separator and into a pump station where said flows will be conveyed via a force main into the existing sewer service located within Fawcett Street.

There is a drainage collection system currently existing on site. This system consists of a series of catch basins and associated connecting pipes. The system directs the flow of storm water to the City's municipal drainage system in Fawcett Street as well as the existing box culvert within the variable width City of Cambridge Sewer and Water Easement which is located along the northern site boundary. A new eight (8) foot by four (4) foot Cooper E-80 Loaded Box Culvert is proposed by the City of Cambridge within said easement and will replace the existing 42" by 54" Box Culvert per the Cambridge park Drive Area Drainage Improvements Contract No. 12 Plan Set dated May 10, 2010 as part of the Alewife Basin Project. It is anticipated that this work will be completed by 2011 but completion of this work is not required for the project's connection into the City system.

The project will provide a substantial improvement in storm water management conditions on site dramatically increasing permeable areas as well as improving the quality and quantity of storm water introduced in the City systems. The project's storm water systems will also be reviewed with the City Conservation Commission via a Notice of Intent process, as a small portion of the project is within their jurisdiction.

The proposed storm water management system will conform to the City of Cambridge Department of Public Works Proposed Concord – Alewife Storm water Management Guidelines and Massachusetts Department of Environmental Protection (DEP) Storm water Standards. Per the Concord-Alewife Area Storm water Management Guidelines, the Cambridge Department of Public Works (DPW) requires

development/redevelopment projects to provide on-site detention storage for the difference between the 2-year 24-hour pre-construction runoff hydrograph and the post construction 25-year 24-hour runoff hydrograph. The proposed storm water management system will incorporate deep-sump hooded catch basins within the “Future Cross Street” stub road, two subsurface detention/retention systems, a small detention/retention basin and a water quality structure. This system will address the rate, quantity, and quality of storm water runoff from the study area.

Residences at Fresh Pond

70 Fawcett Street

Water Service Infrastructure Narrative

Water service for both domestic and fire protection is supplied by the Cambridge Water Department. The existing vacant office building service is connected to an 8" water main located in Fawcett Street. There are three (3) fire hydrants located along Fawcett Street adjacent to the western site boundary.

Per recent meetings with the Water Department, the installation of a new 10" water main in Fawcett Street from the Concord Avenue and Fawcett Street intersection to approximately 200 linear feet north of the property will be completed by the City of Cambridge. It is anticipated that this work will begin in early 2012 but completion of this work is not required for the project's connection into the City system.

Public infrastructure improvements and mitigation requested by the Water Department in conjunction with this project includes the installation of a new 10" water main within the "Future Cross Street" stub road.

Each proposed residential building associated with the project will tap into the existing water main located within Fawcett Street. Recent Flow tests on site indicate sufficient system supply for the project without needs for alternative supply enhancement measures. Water pressure tests taken after the reconstruction of water mains in Concord Avenue indicate slightly less pressure than what would be required for fire protection and domestic services. As such a fire pump system and a domestic water booster pump system will be installed to supplement the buildings systems.

Residences at Fresh Pond

70 Fawcett Street

Noise Mitigation Narrative

The Residences at Fresh Pond will comply with the City of Cambridge Noise Control Ordinance as described in Title 8, Chapter 8.16 of the Code of Ordinances.

The project's design will offer a substantial improvement in noise conditions from the existing commercial product in that new, smaller and quieter HVAC equipment will replace aging industrial grade equipment currently on site. Further, the newer systems will be entirely located on the rooftop of the new structure at a substantially higher elevation, further reducing the noise transmission properties of the systems to surrounding areas.

The project is generally abutted by higher noise contributing uses or uses less sensitive to noise including commercial/industrial operations, a parking structure and regional railways. Existing loading docks that previously facilitated truck traffic from the site will be eliminated in the proposed plan, and the site will generate fewer automobile trips than the current building's capability. The Residences at Fresh Pond will provide a net improvement of the property's impact on the neighborhood.

The project will also take efforts to mitigate sounds from the surrounding district back into the residences including the use of sound attenuating windows that will be directed at areas of concern including the adjacent MBTA railways. The project will be constructed of high quality materials and, heavily insulated exterior walls which will be effective in mitigating noise transmission into residences. New rooftop equipment will be placed on sound and vibration reducing materials to minimize disturbance to top floor apartments, and will also be primarily located over common areas rather than over actual residences wherever possible.

Construction activity is not expected to include any non-standard, high noise generating activity such as pile driving or complicated demolition. Demolition will prioritize interior work in order to leave existing exterior walls standing as long as possible to reduce noise and other impacts on the surrounding commercial zone. A contact will be established with the General Contractor once selected by ownership to field and respond to any noise complaints from the surrounding neighborhood. All governmental regulations will be adhered to during demolition and construction.

Memorandum

DATE: JANUARY 28, 2011

Project: The Residences at Fresh Pond – 70 Fawcett Street - Cambridge, MA

To: Michael Boujoulian
Cabot, Cabot & Forbes of New England, Inc.
125 Summer Street, Suite 1800
Boston, MA 02110

From: Chris Poles
Project Coordinator
CUBE 3 Studio, LLC

Mr. Boujoulian:

This Memo is intended to be a summary of the approach to LEED for the project team for the Residences at Fresh Pond project, using the LEED for Homes Multifamily Mid-rise rating system.

Background

LEED for homes is an initiative designed to promote the transformation of the mainstream homebuilding industry toward more sustainable practices. By recognizing sustainable design and construction in homes nationwide, LEED for Homes helps home builders differentiate their homes as some of the best homes in their markets, using a recognized national brand.

The LEED for Homes Rating System was originally designed for single family and low rise multi-family residential development. As the program has grown, residential projects in the 4 to 6-story category have shown an interest in using the LEED for Homes criteria. In order to address this market sector, USGBC developed LEED for Homes Multifamily Midrise Guidance, to better address this project type.

Rating System

The LEED for Homes Rating System measures the overall performance of a home in eight categories:

1. **Innovation & Design Process.** Special design methods, unique regional credits, measures not currently addressed in the Rating System and exemplary performance levels.
2. **Location and Linkages.** The placement of homes in socially and environmentally responsible ways in relation to the larger community.
3. **Sustainable Sites.** The use of the entire property so as to minimize the project's impact on the site.
4. **Water Efficiency.** Water-efficient practices, both indoor and outdoor.

5. **Energy and Atmosphere.** Energy efficiency, particularly in the building envelope and heating and cooling system.
6. **Materials and Resources.** Efficient utilization of materials, selection of environmentally preferable materials, and minimization of waste during construction.
7. **Indoor Environmental Quality.** Improvement of indoor air quality by reducing the creation of and exposure to pollutants.
8. **Awareness and Education.** The education of a homeowner, tenant, and/or building manager about the operation and maintenance of the green features of a LEED home.

The checklist for LEED for Homes Mid-rise Projects is much more extensive than in past iterations, taking into account much more of the surrounding site and neighborhood context. This approach makes sense, as a LEED certified project that is an island of green development with no connectivity on a pristine, undeveloped site is not very green.

Categories of compliance for LEED for Homes Mid-rise (Note that these numbers have been adjusted to account for the average unit size of the project; the smaller the average Unit SF, the fewer points are needed to achieve each level of certification. The Residences at Fresh Pond achieved a home size adjustment of -6 points, meaning that all categories below have been reduced by six points from the base certification number).

- **Certified** – 39.5 Points
- **Silver** – 54.5 Points
- **Gold** – 63.5 Points
- **Platinum** – 84.5 Points

Initial Assessment by Category

Note: The assessment below of each potential *Required* or *Yes* Points is our preliminary assessment of each point. As the project is presently in the Conceptual Design Phase, we believe that there will be some evolution of the points as the design moves into the Schematic and Design Development Phases. Some points may eventually prove to be impractical, but if that is the case, other LEED points will take their place. We will work with Cabot, Cabot & Forbes, the entire design team, and the City of Cambridge to track each point as the project progresses and make sure that the Silver rating is ultimately achieved.

1. Innovation & Design Process (ID)

- **ID 1.1 - Preliminary Rating:** The LEED target for the Residences at Fresh Pond is Silver. The initial review of LEED for Homes MID-RISE has taken place and each point has been assigned to the appropriate consultant responsible for each point.
- **ID 1.2 – Energy Expertise for MID-RISE:** Each team must include an individual familiar with mid-rise energy systems and components, including mechanical equipment, envelope upgrades, energy modeling per ASHRAE Standard 90.1, Appendix G. The Residences at Fresh Pond team has extensive experience with mid-rise design and construction, most recently having completed a project very similar in scale to the proposed project in Medford.
- **ID 1.4 – Design Charrette:** The Design Team for the Residences at Fresh Pond intends to hold a one-day Design Charrette early in Schematic Design to develop an integrated and cost-effective approach to green design and construction.

Representatives from Civil, Landscape, Architecture, Planning, Construction, MEP/FP, and construction testing and services professions will participate in the charrette.

- **ID 2.1 – Durability Planning:** Prior to Construction, the project team will:
 - Complete the Durability Risk Form.
 - Develop specific measures to respond to these issues.
 - Identify and incorporate all applicable moisture control measures listed in Tab. 1.
 - Incorporate measures from above into the project specifications.
 - List all durability measures and their location in the project specifications via a durability checklist.
- **ID 2.2 – Durability Management:** During Construction, the Construction Manager will have a Quality Management process in place to ensure proper installation of all durability measures from the Checklist.
- **ID 2.3 – Third Party Durability Management Verification:** A key member of the project team during both design and construction will be the owner's construction representative, who will often be present on-site to provide quality control and will oversee all Third-Party reviews, including the Durability issues.

2. Location and Linkages (LL)

- **LL 3.2 - Infill:** The Residences at Fresh Pond qualifies for Credit 3.2 Infill with at least 75% of the perimeter immediately bordering previously developed land.
- **LL 4 - Existing Infrastructure:** To achieve this point, the project needs to be located within a 1/2 mile of existing water service and sewer lines, both of which are closely present on the proposed site. The project will further extend and improve the existing municipal service lines, including constructing a looped water main and replacing existing aged sewer services, to improve and extend service to the area making future investment in the area feasible.
- **LL 5.3 - Outstanding Community Resources for MID-RISE:**

The Residences at Fresh Pond project meets the overall intent of this credit because the project creates a multi-use pathway to connect its residents with the diverse transit and community resources located near both Concord Avenue and the Alewife MBTA Station. The project is located within a 1/2 mile distance of the Fresh Pond area, residents have access to numerous banking, retail and restaurant uses, as well as a full-service transportation center. The Alewife MBTA station hosts the MBTA Red Line stop at Alewife, numerous MBTA bus lines and private transportation operations for local residents.

Since the project is being designed and will be marketed as a pedestrian friendly facility and environment that does not require residents to own a vehicle, given its location and pathway linkage. The Project intends to apply for these credits should full certification be sought.

LL 6 – Access to Open Space: The requirements of Credit LL 6 are to “select a location within ½ mile of a publicly accessible or community-based open space that is at least ¾ acre in size. The open space requirement can be met by either one large

open space or two smaller spaces totaling ¾ acre". The Residences at Fresh Pond residents will have access to the Fresh Pond Reservation which is located along Concord Avenue.

3. Sustainable Sites (SS)

- **SS 1.1 - Erosion Controls During Construction:** The Residences at Fresh Pond qualifies for Credit SS 1.1 as the design plans include a full Erosion and Sediment Control Plan. Erosion and Sediment Control Plans will be included in the Notice of Intent (NOI) filing with the City of Cambridge Conservation Commission. The plans will outline erosion control measures such as tree protection, stabilized construction exit, fiber roll, linear sediment trench, catch basin inlet protection, stockpile management, temporary stabilization measures including seeding and mulch and concrete wash out areas. The Erosion and Sediment Control, as well as the Operation and Maintenance Plan to be submitted with the NOI, fulfill the pre-requisite for Credit SS 1.1.
- **SS 1.2 - Minimize Disturbed Area of Site for MID-RISE:** The project housing density that is equal to or greater than 40 units per acre. The 429 units divided by the lot size in acres (197,173 SF = 4.53 acres) = 94.7 Units/Acre.
- **SS 2.1 - No Invasive Plants (prerequisite):** The project will specify primarily native materials but also drought tolerant adapted species which are non invasive.
- **SS 2.2 – Basic Landscape Design:**
 - **a. Any turf must be drought tolerant:** The project will specify a turf grass seed mix which can survive without the aid of irrigation. We assume you will want irrigation in many areas however, given aesthetic concerns.
 - **b. Do not use turf in densely shaded areas:** The project will not propose turf in areas of dense shade and will install in areas that receive at least 3 hours of sun light. These areas will be determined with a shade study.
 - **c. Do not use turf in areas with a slope of 25:** The project will not install turf in areas where the slope exceeds 25%.
 - **d. Add mulch or soil amendments as appropriate:** Mulch and soil amendments will be added to the planting mix as required based on soil testing results. The finished planting soil after amendment will be classified as a "sandy loam" for tree, shrub, groundcover plantings or a "loamy sand" for turf areas per USDA soil classification system.
 - **e. All compacted soil must be tilled to at least 6 inches:** Compacted subgrade soils will be mechanically loosened down to a maximum depth of 36 minimum and tested for percolation prior to the placement of planting soils.
- **SS 2.4 – Drought Tolerant plants for Mid-rise:** The project will install drought tolerant shrub and tree species.
- **SS 2.5 – Reduce Overall Irrigation Demand by at least 20%:** The project should reasonably be able to achieve up to a 40% reduction (thus achieving 3 points) based on similar project types that have been successful in doing so. However, the

calculations necessary to design and determine this reduction require that an irrigation engineer, who is not currently on the project team, develop the irrigation system design.

- **SS 3.2 - Reduce Roof Heat Island Effects for MID-RISE:** The project intends to install a high-albedo roof at the building roof over the units and vegetated roof over the parking garage/courtyards that, in combination, meet the required LEED criteria.
- **SS 4.3 - Stormwater Quality Control for MID-RISE:** The Residences at Fresh Pond qualifies for Credit SS 4.3 Stormwater Quality control by complying with DEP's Stormwater Management Handbook. Impervious cover is reduced and stormwater runoff is captured and treated. The project stormwater management design includes street sweeping, deep sump hooded catch basins, a water quality unit, subsurface detentions systems, a rain garden and outlet control structures.
- **SS 5 - Pest Control Alternatives:** The project team intends to comply with this point by utilizing the following approaches:
 - 1) Keep all wood (i.e., siding, trim, structure) at least 12 inches above soil (code typically requires 8 inches). Since the project is a wood frame structure sitting on top of a concrete podium approximately 4 feet above grade, we do not expect much, if any wood structure or finished product to be within 12 inches of grade. What little of the proposed building hits the ground will be primarily metal, glass, concrete or fiber-cement board finishes.
 - 2.) Sealing all external cracks, joints, penetrations, edges, and entry points with caulking.
 - 3.) Install landscaping such that all parts of mature plants will be at least 24 inches from the building. Again here, the building design is helping this issue because there are no housing units at the ground floor - only parking and entry/building services.
- **SS 6.3 - Very High Density for MID-RISE:** The project will comply with the 80 or more dwelling units per acre of buildable land requirement. The entire property is 197,173 SF or 4.53 acres; the buildable land divided by 429 Units = 94.7 Units per Buildable acre.
- **SS 7.1 - Public Transit for MID-RISE:** The project is located within 1/2 mile of Alewife Red Line Station, which offers well above the required 60 transit rides per day. The MBTA Red Line operates approximately 100 trains per day (every 9 minutes in rush hours, every 13 minutes midday, every 12 minutes evening and late night).
- **SS 7.2 - Bicycle Storage for MID-RISE:** Due primarily to Cambridge's very progressive bicycle requirements of 1 bicycle space per 2 units, the project is providing a total of 220 covered bicycle spaces, far above the LEED requirement for a bicycle space for 15% of the building occupants. The proposed project assumes a total of 586 persons based on 1 person per bedroom for 1-BR and 2-BR and 2 persons/Studio. 15% of 586 persons = 88 bicycle spaces. Note that the project is providing additional outdoor (uncovered) bicycle spaces at the two major building entries along Fawcett Street.
- **SS 7.3 - Parking Capacity/Low-Emitting Vehicles for MID-RISE:** The project will provide preferred parking for low-emitting and fuel-efficient vehicles for 5% of the 402 car total vehicle parking capacity of the site, or 21 spaces. In addition, the project

does not exceed the minimum Cambridge zoning requirements and we will investigate the potential for car-share services such as Zipcar, ride boards, and shuttle services to mass transit.

4. Water Efficiency (WE)

- **WE 3.1 - High Efficiency Fixtures and Fittings:** The project will specify dual flush toilets (will meet ASME A112.19.14 or the US EPA WaterSense specification and be labeled accordingly) and low-water use shower heads (2 gpm max) in all units and public spaces.
- **WE 3.2 - Very High Efficient Fixtures and Fittings:** The project will specify lavatory faucets at 1.5gpm max.
- **WE 3.3 - Water Efficient Appliance for MID-RISE:** The project will specify ENERGY STAR labeled dishwashers that use 6.0 gallons or less per cycle.

5. Energy and Atmosphere (EA)

- **EA 1.1 - Minimize Energy Performance for MID-RISE:** The project will demonstrate a 15% improvement building performance rating compared to ASHRAE Standard 90.1-2007 using a computer simulation model for the whole building project. The architecture and MEP/FP design teams will work together to develop the simulation model to include all aspects of the project from equipment and lighting, exterior skin, glazing, HVAC systems, appliances, and any other energy-related system in the project.
- **EA 1.2 - Testing and Verification for MID-RISE:** The project will meet all of the EPA Multifamily High-rise Program Testing and Verification Protocols requirements.
- **EA 1.3 - Optimize energy Performance for MID-RISE:** This point builds on EA 1.1, in that it requires an increased building performance rating compared to ASHRAE Standard 90.1-2007 using a computer simulation model for the whole building project. The higher the performance, the greater the number of LEED points awarded.
- **EA 7.2 - Pipe Insulation:** The project will investigate specifying and installing all domestic hot water piping with R-4 insulation, including on all piping elbows to adequately insulate the 90-degree bend.
- **EA 11.1 - Refrigerant Charge Test:** The Construction Manager will provide proof of proper refrigerant charge of the air-conditioning system used in the project.
- **EA 11.2 - Appropriate HVAC Refrigerants:** The project will specify and install a non-HCFC refrigerant or a refrigerant that complies with LEED standards set forth in EA 11.2.

6. Materials and Resources (MR)

- **MR 1.1 - Framing Order Waste Factor Limit:** The project will be designed to limit the overall estimated waste factor to 10% or less.

- **MR 1.2 - Detailed Framing Documents:** Prior to construction, the project will documents will create detailed framing plans or scopes of work and accompanying architectural details for use on the job site, indicating the specific locations, spacing, and sizes of all framing members in the floors, walls, roof, and ceiling.
- **MR 1.3 - Detailed Cut List and Lumber Order:** Prior to construction, in addition to MR 1.2, the project will create a detailed cut list and lumber order that corresponds directly to the framing plans and/or scopes of work.
- **MR 1.4 - Framing Efficiencies:** Project will implement Framing Efficiencies from Table 23. , including precut framing packages, open-web floor trusses, and roof rafter spacing greater than 16" o.c., sizing headers for actual loads, and 2-stud corners (Note: these will be confirmed during design phase by the project structural engineer).

(Project will comply with MR 1.2, 1.3 & 1.4 OR MR 1.5 below, not both)

- **MR 1.5 - Off-Site Fabrication:** The project will utilize off-site fabrication, utilizing panelized construction. We anticipate that wall, roof and floor components will be delivered to the site preframed. The floors and roofs will be prefabricated wood trusses and the exterior walls will be panelized wood framed components.
- **MR 2.1 - Certified Tropical Wood:** The project will provide all wood product suppliers with a notice to:
 - only purchase FSC-certified wood products;
 - a request for the country of manufacture of each wood product supplied;
 - request a list of FSC-certified tropical wood products the vendor can supply.Also, if tropical wood is used, only FSC-certified tropical wood products.
- **MR 2.2 - Environmentally Preferable Products:** The project anticipates using environmentally preferable products from Table 24, including Flooring (mostly carpet), foundation concrete, recycled decking material, counters. The exact point composition of this category will be determined early in the schematic design process.
- **MR 3.1 - Construction Waste Management Planning:** The project Construction Manager will investigate and document local options for recycling and reuse of cardboard packaging, beverage containers and other recyclable items on-site, and document the diversion rate for construction waste.

7. Indoor Environmental Quality (EQ)

- **EQ 2 – Basic Combustion Venting Measures:** The Residences at Fresh Pond will comply with this point's requirements by: providing no unvented combustion appliances, installing a Carbon Monoxide (CO) monitor at each unit. If there is a fireplace, it will be vented and have a door. Water heating equipment will be gas-fired with sealed ducting and power vented to the exterior.
- **EQ 4.1 – Basic Outdoor Ventilation for MID-RISE:** The Residences at Fresh Pond project anticipates utilizing an HVAC system that is provided directly from the outdoors. All units have a system that serve only that unit and are compliant with the ASHRAE standards listed in the credit description. No make-up air will be provided via the corridors or any other non-unit space, and air inlets will be located at least 10 feet from stacks, vents, or any exhaust vents,

- **E 5.1 – Basic Local Exhaust:** The design of the Residences at Fresh Pond will provide a local exhaust system at each unit kitchen and bathrooms, which will be Energy-Star Rated.
- **E 7.1 – Good Filters:** The project will be designed and built using good air filters with a minimum efficiency reporting value (MERV) greater than or equal to 8.
- **E 9.1 – Radon Resistant Construction in High-Risk Areas:** The Residences at Fresh Pond will be designed and built with standard radon-resisting construction techniques. These radon-resistant measures will include a vapor-retarder below the slab; sealing and caulking all openings, cracks, and crevices in the concrete foundation floor (including the slab perimeter crack) and walls with polyurethane caulk to prevent radon and other soil gases from entering the home; a layer of gravel below the slab to allow movement of radon (the detailed foundation design for the project has not begun yet), and a vent pipe. The vast majority of the project is sitting above a level of parking, minimizing the radon leakage potential into the project spaces.
- **E 10.1 – No HVAC in Garage for MID-RISE:** The intent of this point is to reduce occupant exposure to indoor pollutants originating from an adjacent garage by placing all air-handling equipment and ductwork outside the fire-rated envelope of the garage.
- **E 10.2 – Minimize Pollutants from Garage for MID-RISE:** The boundaries of the parking garage that abut occupied spaces will be architecturally treated to provide a seal between the two, utilizing full-height partitions that have sealed penetrations, weather-stripped, self-closing doors, and carbon monoxide detectors in adjacent rooms.
- **E 11 – Environmental Tobacco Smoke Reduction for MID-RISE:** The Residences at Fresh Pond will be a 100% smoke-free building and this will be communicated in the building rental/lease agreements, for both units and common spaces. Exterior designated smoking areas will be located at least 25 feet from all entries, operable windows and outdoor air intakes.
- **E 12.1 – Compartmentalization of Units:** The project team intends to ensure that each unit is compartmentalized to minimize leakage between units by sealing any wall or ceiling penetrations in the unit and at adjacent chases. While the intent of this point is to minimize indoor air pollutants, we also do this to minimize noise between units. A blower door test will be utilized to demonstrate the compartmentalization of units, using .30 cfm50 per square foot of enclosure (all surfaces of the unit).

8. Awareness and Education (AE)

- **AE 1.1 - Basic Operations Training:** The project owner will provide all new owners at the Residences at Fresh Pond with a binder with the following: a completed LEED checklist, the Accountability Form, Durability inspection checklist, product manufacturers' manuals for equipment, fixtures and appliances, general information on efficient use of energy, water and natural resources, O&M guidance for any LEED-related equipment, guidance on the occupant choices, educational information on "green power" and a 1-hour walk-through with users to identify, instruct, operate and maintain the equipment.

- **AE 1.3 – Public Awareness:** To promote general awareness about LEED For Homes the project owners will do three of the following:
 - Hold an advertised, attended public open house that lasts at least four hours per day on at least four weekends, or participate in a green building exhibition or tour. The Residences at Fresh Pond will display at least four informational signs about the LEED for Homes features. Or the project will offer guided tours that highlight at least four LEED for Homes features.
 - The owner will publish a website with at least two pages that provides detailed information about the features and benefits of LEED homes.
 - The owner will generate a newspaper article on the Residences at Fresh Pond LEED for Homes project.
 - The project will display LEED for Homes signage, measuring six square feet or more, on the exterior of the Residences at Fresh Pond.
- **AE 2 – Education of Building Manager:** The project owner will provide the building manager of the Residences at Fresh Pond with a binder with the following: a completed LEED checklist, the Accountability Form, Durability inspection checklist, product manufacturers' manuals for equipment, fixtures and appliances, general information on efficient use of energy, water and natural resources, O&M guidance for any LEED-related equipment, guidance on the occupant choices, educational information on "green power" and a 1-hour walk-through to identify, instruct, operate and maintain the equipment (this is the same list as each resident will receive).

The required goal for Cambridge is **Silver Certified**, or 54.5 points total. The initial checklist review positions the project as being able to achieve a Silver rating. We are early in the design process and our understanding of exactly which points are achievable will become clearer as the design process moves beyond master planning and conceptual into Design Development.

We look forward to working with all project stakeholders to achieve the Silver Rating and make this project as environmentally responsible as possible.

Regards,

Chris Poles

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Direct: 978.379.8729

cc: LEED for Homes Mid-Rise Draft Checklist



for Homes

LEED for Homes Mid-rise Pilot Simplified Project Checklist

Builder Name:
Project Team Leader (if different):
Home Address (Street/City/State):

Project Description:

Building type: **Mid-rise multi-family** # of stories: **5**
 # of units: **261** Avg. Home Size Adjustment: **-5.5**

Adjusted Certification Thresholds

Certified: **39.5** Gold: **69.5**
 Silver: **54.5** Platinum: **84.5**

Project Point Total		Final Credit Category Total Points			
Prelim: 55.5 + 17 maybe pts	Final: 4	ID: 0	SS: 4	EA: 0	EQ: 0
Certification Level		LL: 0	WE: 0	MR: 0	AE: 0
Prelim: Not Certified	Final: Not Certified	Min. Point Thresholds Not Met for Prelim. OR Final Rating			

date last updated :
 last updated by :

			Max Pts	Project Points		
				Preliminary	Final	
Innovation and Design Process (ID)		(No Minimum Points Required)	OR	Y/Pts	Maybe	No
1. Integrated Project Planning	1.1 Preliminary Rating		Prereq			
	1.2 Energy Expertise for MID-RISE		Prereq			
	1.3 Professional Credentialed with Respect to LEED for Homes		1	0	0	0
	1.4 Design Charrette		1	1	0	0
	1.5 Building Orientation for Solar Design		1	0	0	0
	1.6 Trades Training for MID-RISE		1	0	1	0
2. Durability Management Process	2.1 Durability Planning		Prereq			
	2.2 Durability Management		Prereq			
	2.3 Third-Party Durability Management Verification		3	3	0	0
3. Innovative or Regional Design	3.1 Innovation #1 _____		1	1	0	0
	3.2 Innovation #2 _____		1	0	0	0
	3.3 Innovation #3 _____		1	0	0	0
	3.4 Innovation #4 _____		1	0	0	0
<i>Sub-Total for ID Category:</i>			11	5	1	0
Location and Linkages (LL)		(No Minimum Points Required)	OR	Y/Pts	Maybe	No
1. LEED ND	1 LEED for Neighborhood Development	LL2-6	10	0	0	0
2. Site Selection	2 Site Selection		2	0	0	0
3. Preferred Locations	3.1 Edge Development		1	0	0	0
	3.2 Infill	LL 3.1	2	2	0	0
	3.3 Brownfield Redevelopment for MID-RISE		1	0	0	0
4. Infrastructure	4 Existing Infrastructure		1	1	0	0
5. Community Resources/ Transit	5.1 Basic Community Resources for MID-RISE		1	0	0	0
	5.2 Extensive Community Resources for MID-RISE	LL 5.1, 5.3	2	0	0	0
	5.3 Outstanding Community Resources for MID-RISE	LL 5.1, 5.2	3	3	0	0
6. Access to Open Space	6 Access to Open Space		1	1	0	0
<i>Sub-Total for LL Category:</i>			10	7	0	0
Sustainable Sites (SS)		(Minimum of 5 SS Points Required)	OR	Y/Pts	Maybe	No
1. Site Stewardship	1.1 Erosion Controls During Construction		Prerequisite			
	1.2 Minimize Disturbed Area of Site for MID-RISE		1	1	0	0
2. Landscaping	2.1 No Invasive Plants		Prerequisite			
	2.2 Basic Landscape Design		1	0	1	0
	2.3 Limit Conventional Turf for MID-RISE	SS 2.4	2	0	1	0
	2.4 Drought Tolerant Plants for MID-RISE	SS 2.4	1	0	1	0
	2.5 Reduce Overall Irrigation Demand by at Least 20% for MID-RISE		3	0	2	0
3. Local Heat Island Effects	3.1 Reduce Site Heat Island Effects for MID-RISE		1	0	1	0
	3.2 Reduce Roof Heat Island Effects for MID-RISE		1	1	0	0
4. Surface Water Management	4.1 Permeable Lot for MID-RISE		2	0	0	0
	4.2 Permanent Erosion Controls		1	0	0	0
	4.3 Stormwater Quality Control for MID-RISE		2	2	0	0
5. Nontoxic Pest Control	5 Pest Control Alternatives		2	2	0	0
6. Compact Development	6.1 Moderate Density for MID-RISE		2	0	0	0
	6.2 High Density for MID-RISE	SS 6.1, 6.3	3	0	0	0
	6.3 Very High Density for MID-RISE	SS 6.1, 6.2	4	4	0	4
7. Alternative Transportation	7.1 Public Transit for MID-RISE		2	2	0	0
	7.2 Bicycle Storage for MID-RISE		1	1	0	0
	7.3 Parking Capacity/Low-Emitting Vehicles for MID-RISE		1	1	0	0
<i>Sub-Total for SS Category:</i>			22	14	4	4

LEED for Homes Mid-rise Pilot Simplified Project Checklist (continued)

				Max Pts	Project Points			
					Preliminary			Final
					Y/Pts	Maybe	No	Y/Pts
Water Efficiency (WE) (Minimum of 3 WE Points Required) OR				Max				
1. Water Reuse	✓	1	Water Reuse for MID-RISE	5	0	0	0	0
2. Irrigation System	✓	2.1	High Efficiency Irrigation System for MID-RISE	2	0	2	0	0
		2.2	Reduce Overall Irrigation Demand by at Least 45% for MID-RISE	2	2	0	0	0
3. Indoor Water Use		3.1	High-Efficiency Fixtures and Fittings	3	1	0	0	0
		3.2	Very High Efficiency Fixtures and Fittings	6	2	0	0	0
		3.3	Water Efficient Appliances for MID-RISE	2	1	0	0	0
<i>Sub-Total for WE Category:</i>				15	6	2	0	0
Energy and Atmosphere (EA) (Minimum of 0 EA Points Required) OR				Max				
1. Optimize Energy Performance		1.1	Minimum Energy Performance for MID-RISE	Prereq				
		1.2	Testing and Verification for MID-RISE	Prereq				
		1.3	Optimize Energy Performance for MID-RISE	34	8	2	0	0
7. Water Heating	✓	7.1	Efficient Hot Water Distribution	2	0	0	0	0
		7.2	Pipe Insulation	1	1	0	0	0
11. Residential Refrigerant Management		11.1	Refrigerant Charge Test	Prereq				
		11.2	Appropriate HVAC Refrigerants	1	1	0	0	0
<i>Sub-Total for EA Category:</i>				38	10	2	0	0
Materials and Resources (MR) (Minimum of 2 MR Points Required) OR				Max				
1. Material-Efficient Framing		1.1	Framing Order Waste Factor Limit	Prereq				
		1.2	Detailed Framing Documents	1	0	0	0	0
		1.3	Detailed Cut List and Lumber Order	1	0	0	0	0
		1.4	Framing Efficiencies	3	0	0	0	0
		1.5	Off-site Fabrication	4	4	0	0	0
2. Environmentally Preferable Products	✓	2.1	FSC Certified Tropical Wood	Prereq				
	✓	2.2	Environmentally Preferable Products	8	3.5	0	0	0
3. Waste Management		3.1	Construction Waste Management Planning	Prereq				
		3.2	Construction Waste Reduction	3	0	0	0	0
<i>Sub-Total for MR Category:</i>				16	7.5	0	0	0
Indoor Environmental Quality (EQ) (Minimum of 6 EQ Points Required) OR				Max				
2. Combustion Venting		2	Basic Combustion Venting Measures	Prereq				
3. Moisture Control		3	Moisture Load Control	1	0	0	0	0
4. Outdoor Air Ventilator	✓	4.1	Basic Outdoor Air Ventilation for MID-RISE	Prereq				
		4.2	Enhanced Outdoor Air Ventilation for MID-RISE	2	0	0	0	0
		4.3	Third-Party Performance Testing for MID-RISE	1	0	1	0	0
5. Local Exhaust	✓	5.1	Basic Local Exhaust	Prerequisite				
		5.2	Enhanced Local Exhaust	1	1	0	0	0
		5.3	Third-Party Performance Testing	1	0	1	0	0
6. Distribution of Space Heating and Cooling	✓	6.1	Room-by-Room Load Calculations	Prereq				
		6.2	Return Air Flow / Room by Room Controls	1	0	1	0	0
		6.3	Third-Party Performance Test / Multiple Zones	2	0	2	0	0
7. Air Filtering		7.1	Good Filters	Prereq				
		7.2	Better Filters	1	0	1	0	0
		7.3	Best Filters	2	0	0	0	0
8. Contaminant Control	✓	8.1	Indoor Contaminant Control during Construction	1	0	0	0	0
		8.2	Indoor Contaminant Control for MID-RISE	2	0	0	0	0
	✓	8.3	Preoccupancy Flush	1	0	0	0	0
9. Radon Protection	✓	9.1	Radon-Resistant Construction in High-Risk Areas	Prereq				
	✓	9.2	Radon-Resistant Construction in Moderate-Risk Areas	1	0	0	0	0
10. Garage Pollutant Protector		10.1	No HVAC in Garage for MID-RISE	Prereq				
		10.2	Minimize Pollutants from Garage for MID-RISE	2	2	0	0	0
		10.3	Detached Garage or No Garage for MID-RISI	3	0	0	0	0
11. ETS Control		11	Environmental Tobacco Smoke Reduction for MID-RISE	1	1	0	0	0
12. Compartmentalization of Units		12.1	Compartmentalization of Units	Prereq				
		12.2	Enhanced Compartmentalization of Units	1	0	1	0	0
<i>Sub-Total for EQ Category:</i>				21	4	7	0	0
Awareness and Education (AE) (Minimum of 0 AE Points Required)				Max				
1. Education of the Homeowner or Tenant	✓	1.1	Basic Operations Training	Prereq				
	✓	1.2	Enhanced Training	1	0	1	0	0
		1.3	Public Awareness	1	1	0	0	0
2. Education of Building Manager	✓	2	Education of Building Manager	1	1	0	0	0
<i>Sub-Total for AE Category:</i>				3	2	1	0	0