The Residences at Alewife Station

195 & 211 Concord Turnpike

Cambridge, MA

Special Permit Application

Volume 1

Criterion Development Partners
1601 Trapelo Road
Waltham, MA 02451
781.890.5600

The Residences at Alewife Station

195 & 211 Concord Turnpike

Cambridge, MA

Special Permit Application

Volume 1

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The McKinnon Co.
Complex Urban Development

January 19, 2017

Mr. Ted Cohen
Chairman
The Cambridge Planning Board

Dear Chairman Cohen and Members of the Board,

On behalf of Criterion Development Partners and our entire development team, I am pleased to submit our Special Permit application for the redevelopment of 211 Concord Turnpike. This is the only property within Special District 4 and 4A which has not yet come before the Planning Board for review. The District consist of the Martignetti properties right on Route 2 as well as Cambridge Discovery Park. Both parts of the District began as acres of asphalt and a failed infrastructure which threatened the Reservation.

This Project, like all of those in Special District 4 and 4A, reduces impervious cover and increases flood storage. It is located close to the Alewife T Station and as a residential project, adds to the City's supply while also increasing affordable housing.

We have had a chance to meet on four occasions with our neighbors from North Cambridge and Fresh Pond. Because of our location, your staff suggested we complete the full and formal Conservation Commission review prior to our application for Special Permits. After our public hearing, the Conservation Commission voted to issue our Order of Conditions on the Project. We value as well the letter from the City Engineer which highlights the Project's attention to future climate expectations.

Finally, most of us love spending time with our families at Lanes and Games. The McKinnon family is no exception. Believe me. The Martigentti brothers have owned it and the Gateway Hotel for many years and have worked both. It is properly their decision to retire and sell the land. We have written our contracts to time the approvals so that the bowling leagues can finish up their season this Spring. We began working with the family two years ago, first to outline basic approach and then go into formal contract. We have waited to do our Conservation reviews first. We have worked with one engineering firm, BSC. I brought them in to help Bulfinch and the Martigenttis with the original zoning and they have since engineered everything in the District. We have great confidence in their understanding of the Alewife Reservation, a central concern in the zoning.

We look forward to coming before you.

Very Truly Yours,

Richard McKinnon
For the Development Team

One Leighton St. Unit 1905, Cambridge, MA.02141 Email: McKinnoncompany@comcast.net Tel: 617.354.4363 Fax: 617.354.6811

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:	195 & 211 Concord Turnpike, Cambridge, MA		
Zoning District:	Special District 4A, Floodplain Overlay District, Parkway District		
Applicant Name:	CPC-T Holdings LLC dba Criterion Development Partners		
Applicant Address:	14160 No. Dallas Parkway, Suite 750, Dallas, TX 75254		
Contact Information:	781-890-5600	jenglert@criteriondp.com	781-890-5553
	Telephone#	Email Address	Fax #

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

1. Section 20.63.7: Divergence from the Parkway Overlay District standards set out in Section 20.60 of the Ordinance; **2.Section 20.70**: Construction in the Flood Plain Overlay District; **3. Section 5.25.42**: Exclude above-ground parking structure from the Project's Floor Area Ratio in Flood Plain Overlay District; **4. Section 6.35**: Reduction of minimum off-street parking requirement; **5. Section 6.43.3(b)**: Maximum Curb Cut Widths **6. Section 17.42.3**: Permit height to exceed 60 feet in Special District 4A; **7. Section 19.20**: Project Review for construction of more than 50,000 square feet of new Gross Floor Area; **8. Section 17.42.2**: Reduce the yard requirements otherwise applicable in Special District 4A; **9. Such other relief** as the Board may deem necessary and proper.

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

Volume 1: Application Forms; Project Narrative

Volume 2: Existing Conditions Map, Site Context Map, Proposed Site Plan, Proposed Floor Plans, Proposed Landscaping Plan, Proposed Elevations, Existing Conditions Photographs, Proposed Perspective Renderings

Volume 3: Notice of Intent, Order or Conditions, Flood Certification & Report, Traffic Study, Tree Study, Shadow Study, LEED Checklist & Narrative

Signature of Applicant: _____

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

Project Address: 195 & 211 Concord Turnpike **Application Date: January 23, 2017**

	Existing*	Allowed or Required (max/min)	Proposed	Permitted
Lot Area (sq ft)	166,468 SF	Min. 5,000 SF	166,468 SF	
Lot Width (ft)	592.73'	Min. 50'	592.73'	
Total Gross Floor Area (sq ft)	n/a	324,612 SF	324,440 SF	
Residential Base	n/a	249,702 SF	249,702 SF	
Non-Residential Base	n/a	n/a	n/a	
Inclusionary Housing Bonus	n/a	74,910 SF	74,738 SF	
Total Floor Area Ratio	n/a	1.95 Max.	1.95	
Residential Base	n/a	1.5	1.5	
Non-Residential Base	n/a	0	0	
Inclusionary Housing Bonus	n/a	.45	.45	
Total Dwelling Units	n/a	361	320	
Base Units	n/a	277	246	
Inclusionary Bonus Units	n/a	84	74	
Base Lot Area / Unit (sq ft)	n/a	600 SF/U	600 SF/U	
Total Lot Area / Unit (sq ft)	n/a	461 SF/U	520SF/U	
Building Height(s) (ft)	n/a	55'/85' & 90'	55'/69' & 69'	
Front Yard Setback (ft)	n/a	25' or (H+L)/4	25'	
Side Yard Setback (ft)	n/a	(H+L)/5	10'	
Side Yard Setback (ft)	n/a	(H+L)/5	10'	
Rear Yard Setback (ft)	n/a	20' or (H+L)/4	21'	
Open Space (% of Lot Area)	n/a	n/a	> 47%	
Private Open Space	n/a	15%	> 15%	
Permeable Open Space	n/a	n/a	> 29%	
Other Open Space (Impervious concrete or unit pavers)	n/a	n/a	> 5%	
Off-Street Parking Spaces		320	243	
Long-Term Bicycle Parking		335	336	
Short-Term Bicycle Parking		32	38	
Loading Bays		n/a	n/a	

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

*Existing improvements will be demolished in connection with the Project.

OWNERSHIP CERTIFICATE

Project Address: 195 & 211 Concord Turnpike **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: CPC-T Holdings LLC dba Criterion Development Parners

at the following address: 14160 No. Dallas Pkwy., Ste. 750 Dallas, TX 75254

to apply for a special permit for: The Residences at Alewife Station

on premises located at: 195 Concord Turnpike, Cambridge MA

for which the record title stands in the name of: CAM 195 Concord Turnpike LLC

whose address is: 195 Concord Turnpike Cambridge, MA 02140

by a deed duly recorded in the:

Registry of Deeds of County: Middlesex South Book:56743 Page: 240 & 250

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

C. Anthony Mc..., MANAGER

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

To be completed by Notary Public:

Commonwealth of Massachusetts, County of Middlesex

The above named C. Anthony Murphy, Manager personally appeared before me,

on the month, day and year _____ and made oath that the above statement is true.

Notary: _____

My Commission expires: 12.21.18

MARK A. MCCUE
Notary Public
Commonwealth of Massachusetts
My Commission Expires
December 21, 2018

OWNERSHIP CERTIFICATE

Project Address: 195 & 211 Concord Turnpike **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: CPC-T Holdings LLC dba Criterion Development Parners

at the following address: 14160 No. Dallas Pkwy., Ste. 750 Dallas, TX 75254

to apply for a special permit for: The Residences at Alewife Station

on premises located at: 195 Concord Turnpike, Cambridge MA

for which the record title stands in the name of: DAM 195 Concord Turnpike LLC

whose address is: 195 Concord Turnpike Cambridge, MA 02140

by a deed duly recorded in the:

Registry of Deeds of County: Middlesex South Book:56743 Page: 240 & 250

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

Manager

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

To be completed by Notary Public:

Commonwealth of Massachusetts, County of Middlesex

The above named Daniel J. Hartnett Manager personally appeared before me,

on the month, day and year _____ and made oath that the above statement is true.

Notary: Mark A. McCue

My Commission expires: 12-21-18

MARK A. MCCUE
Notary Public
Commonwealth of Massachusetts
My Commission Expires
December 21, 2018

OWNERSHIP CERTIFICATE

Project Address: 195 & 211 Concord Turnpike **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: CPC-T Holdings LLC dba Criterion Development Parners

at the following address: 14160 No. Dallas Pkwy., Ste. 750 Dallas, TX 75254

to apply for a special permit for: The Residences at Alewife Station

on premises located at: 211 Concord Turnpike, Cambridge MA

for which the record title stands in the name of: CAM Cambridge Ventures II, LLC

whose address is: 73 Brayton Point Rd. Westport, MA 02790

by a deed duly recorded in the:

Registry of Deeds of County: Middlesex South Book:56743 Page: 79 & 83

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

C [illegible] N [illegible], MANAGER

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

To be completed by Notary Public:

Commonwealth of Massachusetts, County of Middlesex

The above named C. Anthony Muchnicki, Mayor personally appeared before me,

on the month, day and year _____ and made oath that the above statement is true.

Notary: [signature]

My Commission expires: 12.21.18

MARK A. MCCUE
Notary Public
Commonwealth of Massachusetts
My Commission Expires
December 21, 2018

OWNERSHIP CERTIFICATE

Project Address: 195 & 211 Concord Turnpike **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: CPC-T Holdings LLC dba Criterion Development Parners

at the following address: 14160 No. Dallas Pkwy., Ste. 750 Dallas, TX 75254

to apply for a special permit for: The Residences at Alewife Station

on premises located at: 211 Concord Turnpike, Cambridge, MA

for which the record title stands in the name of: DAM Cambridge Ventures II, LLC

whose address is: 47 Swan Rd. Winchester, MA 01890

by a deed duly recorded in the:

Registry of Deeds of County: Middlesex South Book:56743 Page: 79 & 83

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

Manager

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

To be completed by Notary Public:

Commonwealth of Massachusetts, County of Middlesex

The above named Daniel A. Hachquet Manager personally appeared before me,

on the month, day and year _____ and made oath that the above statement is true.

Notary: _____

My Commission expires: 12.21.18

MARK A. MCCUE
Notary Public
Commonwealth of Massachusetts
My Commission Expires
December 21, 2018

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

FEE SCHEDULE

Project Address: 195 & 211 Concord Turnpike **Application Date: January 20, 2017**

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}:	324,440 x $0.10 =	$32,440
Flood Plain Special Permit	Enter $1,000.00 if applicable:	$1,000
Other Special Permit	Enter $150.00 if no other fee is applicable:	
TOTAL SPECIAL PERMIT FEE	**Enter Larger of the Above Amounts:**	**$32,440**

2. Project Narrative

CPC-T Holdings, LLC, doing business as Criterion Development Partners ("CDP"), proposes to demolish two existing buildings and associated parking and construct the Residences at Alewife Station, a vibrant, transit-oriented, multifamily development to be located at 195 & 211 Concord Turnpike (Route 2) (the "Site"). The Site is less than 1/2 mile from the Alewife MBTA Station, an intermodal transit hub.

2.1. Existing Conditions

The Site consists of three parcels of land totaling approximately 3.8 acres and is located at 195 & 211 Concord Turnpike (Route 2). The Site is bounded by Concord Turnpike (Route 2) to the north, Discovery Park Garage B to the east, Discovery Park and wetlands to the south and Vox on Two, a multifamily apartment building, to the west. The Site is currently improved with a two-story building operating as the Lanes & Games bowling alley, and a two-story building operating as the Cambridge Gateway Inn (collectively, the "Existing Buildings"). Aside from the building footprints, the Site is almost completely paved and there are approximately 273 on-site parking spaces. The grades on the Site generally slope downward from north to south with a grade change of approximately three feet across the Site. The Site is located within a FEMA 100-year Floodplain and a small area at the southwesterly corner of the Site is located within a 100-foot wetland buffer.

Existing Conditions *(clockwise from top left: Lanes and Games, Gateway Inn, Vox on Two, Discovery Park Garage)*

2.2. Site Context

The Site is located in North Cambridge on the south side of Concord Turnpike (Route 2) near the intersection of the municipal boundaries of Cambridge, Belmont and Arlington. An approximately 3,100 square foot triangular sliver at the northeastern corner of the Site is located in the Town of Arlington. Land use in the vicinity of the Site includes residential, office, laboratory and hotel. The site is proximate to regional and local roadways and bike paths, pedestrian routes, Alewife Brook Reservation and public transportation including the Alewife MBTA Station and numerous MBTA bus and shuttle routes.

Site Context

2.3. Proposed Project

The proposed Residences at Alewife Station (the "Project") will create a vibrant new, transit- oriented community of first-class multifamily housing in two separate 6-story buildings with:

- **320 apartments with a variety of unit types**--approximately 68% (218) will be studios and one-bedroom units and 32% (102) will be two and three-bedroom units. The Project will provide affordable housing as required under the Zoning Ordinance.
- **Parking at a ratio of approximately 0.76 spaces per dwelling unit**. 200 spaces are provided in structured garages below the residential units and 43 spaces are provided at grade.
- **Pedestrian and Bike-friendly design** – the site's proximity to Alewife T Station will encourage residents to walk or bicycle (complimentary bike rentals will be provided) and utilize public transportation to commute and to visit nearby retail opportunities. The site will provide 336 long-term bike spaces in dedicated bike storage rooms and 38 short-term bike spaces in exterior bike racks clustered around the building's lobbies.

Enhancing the sense of place, site improvements include pedestrian pathways, wet ponds, rain gardens, and extensive landscaping. A range of accessory residential amenities will contribute to livability and include elevated landscaped resident courtyards and recreational amenities (accessorty residential bowling alleys, fitness center with yoga studio, outdoor pool and outdoor play areas); community clubhouse with teaching kitchen, gathering areas and multi-purpose media room; bicycle storage and repair areas with complimentary bike rentals; electric vehicle charging stations; and shared car service.

Vehicular access to and egress from the Project will be provided from Concord Turnpike (Route 2) eastbound by a right-turn-only entrance driveway and a right-turn-only exit driveway. The driveway design has been reviewed by MassDOT District 6 staff. A street-like system on the site allows cars to drop-off or short-term park near building entries, or circulate directly into garages below each building. Loading is hidden from view, located between the back of Building 1 and the existing garage behind the site. The street system provides a "loop" so that if a resident or visitor needs to circle around to a lobby or garage, they are able to circulate on the site, rather than exit onto the oneway eastbound Corcord Turnpike.

A pedestrian-focused streetscape is at the heart of the development, designed to:

- **Establish a strong, clear pedestrian and bicycle circulation system throughout the site to connect to the surrounding area** -- broad sidewalks link the Route 2 public sidewalk through the site to the Cambridge Discovery Park campus to the south and the "Vox on Two" apartments to the west. Front and rear building lobbies tie into this circulation system. In the southwestern corner of the site, a 12' wide multi-use path and pedestrian footbridge over a wet pond basin ties into the Vox on Two development to the west, continuing to link Cambridge Discovery Park, Alewife Greenway and the Fitchburg Cut Off Bike Path /Belmont Community Path to the south. Subject to finalization of an easement with the Discovery Park abutter, the sidewalk along Building 2 will extend into Discovery Park and create a new pedestrian link to the south. On the outer sides of the buildings, 12'-wide multi-use paths double as emergency access routes, and a 5-foot wide walkway serves the stair egress along the eastern side of Building 1.
- **Create a central urban neighborhood-scale streetscape at the core of the site** -- with site furnishings, grated street trees, pedestrian-scaled lighting, exterior bike-racks and small plaza areas with both fixed and movable outdoor seating. Street widths are an urban 22' (2 lanes of 11' each) with 8' wide parallel parking spaces on either side; sidewalks range in width from 6' to 10'. Plazas provide areas for informal gatherings. Internal pedestrian crossings will be constructed of stamped or scored concrete walkways.

- **Provide multiple opportunities for small-scale outdoor gathering spaces sheltered from Route 2 and ranging from gardenesque to naturalistic to plaza-like**-- Additional small-scale outdoor spaces include a rain garden with low seatwalls in the northern corner of the site, a footbridge over a constructed wet pond in the southwest corner of the site, and a small play space at the southwestern corner of Building 2.

Play Space Furniture

- **Provide a full range of residential amenities at three elevated roof deck terraces--** In addition to the publicly accessible ground-level landscape improvements, residents will have access to a full complement of outdoor amenities on the second floor level roof deck terraces. These features include a pool deck, outdoor grilling patios, fitness and wellness areas, garden courtyards and a viewing terrace at Building 1 that overlooks the Alewife Brook Reservation to the south.

Roof Deck Amenity Space

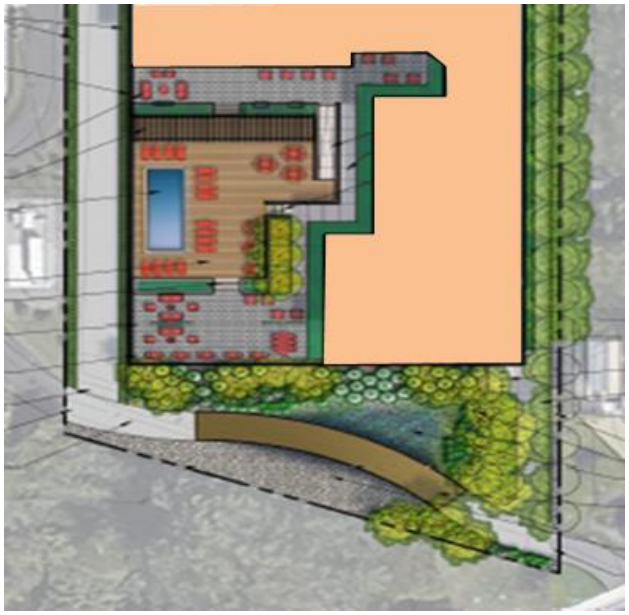
Programmable Activity Space

Movable Seating

Outdoor Residential Spaces

Architecturally, the buildings are arrayed to provide new, inviting façade to the Route 2 frontage:

- Building 1 wraps around the existing Cambridge Discovery Park Garage, with a single loaded corridor obscuring residential view directly into the garage. The interstitial space between the garage and Building 1's front wing is developed as a streetscape where deliveries and move-ins can take place out of public view. A deep courtyard formed between the wings of Building 1 provides a place for residents and visitors to slow down and pull onto the site from the Concord Turnpike, with a visual orientation to the two separate building lobbies and their respective garages. The courtyard will provide short term parking for potential residents or guests. Additionally, two roof decks are formed between building wings above the parking podium – the most southerly roof deck is open to views of the richly landscaped Alewife Brook Reservation and Minuteman Bikeway to the south.



Plan View of Proposed Wet Pond and Elevated Pool Deck Overlooking Wetlands

- Building 2 is delineated in a "U" shaped plan – with a roof deck open to the site, and again engaging a single loaded corridor against the parking garage located to the east of the site.

Along the northern, Route 2 edge, both buildings combine deep setbacks in the massing with recesses in the façade to contribute to a sense of a multi-building district with a smaller scale. Both northern building façadesare delineated with a "checkerboard" of projecting bays, adding changing visual interest for drivers along Route 2. The bays are staggered against strong, horizontal banding between floors, as if musical notes on a score. A strong base, clad in a wood-look material, engages large windows with direct views into lobby and management areas in Building 1, and directly into the bowling alleys of Building 2 that recall the former popular recreational use of the site. Broad canopies reach out to invite entry along each building base. A deep recess along the top floor combined with a

projecting cornice provides a strong shadow line to the horizon. Architectural details will activate the façades at the corners and building entrances, including balconies with woven metal railings.

Building 1, Connecting Bridge and Visitor Parking

Bridge-like elements carry across the driveways that extend below the buildings. A playful patterning of windows and colored panels invite circulation below these connections. The drive below Building 1 is scaled at two stories, to accommodate large truck or firetruck circulation through the Site. The façades that line these single loaded corridors engage a, staccato rhythm of windows between the horizontal bands that will interact with the movement of residents.

Southern elevations engage secondary building entries, important to encourage walking and biking to transit and landscape areas to the south and east. Commuters returning home in the evenings will be able to enter the residences from the walkways on this side of the property. The southern wing of Building 1 incorporates the walkway extending from Vox on 2, and Building 2's south façade is designed with a broad landscaped area to extend visually the Cambridge Discovery Park landscaped open space along Discovery Drive.

Building 1 Southern Lobby

Site lighting

Site lighting will be comprised of pedestrian scaled pole top and bollard light fixtures selected in accordance with the City's latest outdoor lighting ordinance. The lighting design will seek to eliminate light trespass, minimize light pollution and promote energy conservation while treating the fixtures as an integral part of the Site furnishing family.

Planting Design

Plant materials will be comprised of native or adapted species that can tolerate dry conditions once established, although it is expected that there will be an efficient permanent irrigation system installed to keep the plantings in optimal health and to maintain aesthetics. Many of the species will be pollinator plants. Areas of interest include the following:

- **Route 2 frontage comprised of a series of staggered planting drifts**-- in raised plant beds to help protect root zones from road salts and reduce the degree of saturation from flood waters. The planting drifts in conjunction with a wood screen fence will help to screen the surface parking lot and mechanical equipment along the frontage.

Typical Planting Materials

- **Wet pond basin to promote reduced-velocity discharge of stormwater into adjacent wetland resource areas.** The proposed species in the wet pond basin are those that can survive in saturated hydric soils which experience consistent seasonal groundwater inundation -- lower elevations will be "Obligate Wetland Species" (OBL) or those that occur almost always in wetlands under natural conditions; basin upper elevations will be "Facultative Wetland Species" (FAWC) or those that usually occur in wetlands and are often found at the edges of wetlands.

- **Northern Rain Garden to manage stormwater roof run-off from a portion of Building 1.** It will experience less frequent inundation than the wet pond and will completely dry out between storm events. The proposed species are native herbaceous and woody shrub species that can tolerate the range of soil conditions typically associated with a rain garden, namely drought tolerant once established but able to survive periodic inundation.

3. Zoning

The Site is located in three zoning districts established by the Cambridge Zoning Ordinance (the "Zoning Ordinance") - Special District 4A, the Parkway Overlay District and the Flood Plain Overlay District. The Project requires several Special Permits that can be granted by the Planning Board subject to specific criteria described in the Zoning Ordinance.

3.1. Applicable Zoning Districts

Special District 4A (and adjacent Special District 4)

The intent of Special Districts 4A is to permit an appropriate level of residential and nonresidential development in the District consistent with the public interest in protecting regulated wetlands where they occur; maintaining flood storage capacity consistent with federal, state and local regulations; restoring areas currently developed to their natural state in order to eliminate harmful impacts on sensitive wetlands environments; limiting the extent of the land covered by impervious surfaces; and minimizing the amount of additional traffic passing though congested intersections on arterial and neighborhood streets. Further enhancement of the parkway character of Concord Turnpike is also intended.

Restored Areas of Special District 4

Parkway Overlay District

The purpose of the Parkway Overlay District is to create unified identifiable images of designated areas, to enhance public safety by reducing visual confusion and haphazard development, and to encourage development that protects and enhances the use and enjoyment of public open space resources.

Flood Plain Overlay District

The purpose of the Flood Plain Overlay District is to protect the health, safety, and general welfare, to protect human life and property from the hazards of periodic flooding, to preserve the natural flood control characteristics and the flood storage capacity of the flood plain, to preserve and maintain the ground water recharge areas within the flood plain, and to provide a mechanism for a comprehensive review of development in the Flood Plain Overlay District and the design and location of flood water retention systems and their relationship to other surrounding development.

The Project's proposed multifamily use allowed in the underlying Special District 4A, although CDP is seeking several Special Permits from the Cambridge Planning Board. Upon the issuance of these Special Permits, the Project will conform to the applicable zoning requirements per theDimensional Form.

3.2. Special Permits Requested

CDP respectfully requests that the Planning Board grant the following relief under the Zoning Ordinance in connection with the Project (collectively, the "Special Permits"):

1. Special Permit under Section 20.63.7 of the Ordinance for divergence from the Parkway Overlay District standards set out in Section 20.60 of the Ordinance.
2. Special Permit under Section 20.70 of the Zoning Ordinance for construction in the Flood Plain Overlay District.
3. Special Permit under Section 5.25.42 of the Zoning Ordinance related to the Flood Plain Overlay District to exclude the above-ground parking structure from the Project's Floor Area Ratio.
4. Special Permit under Section 6.35 of the Zoning Ordinance to reduce the minimum off-street parking requirement applicable to the project.
5. Special Permit under Section 6.43.5 of the Zoning Ordinance to modify the applicable maximum curb cut widths.
6. Special Permit under Section 17.42.3 of the Zoning Ordinance to permit height to exceed 60 feet in Special District 4A.

7. Project Review Special Permit pursuant to Section 19.20 of the Zoning Ordinance for construction of more than 50,000 square feet of new Gross Floor Area.
8. Special Permit under Section 17.42.2 of the Zoning Ordinance to reduce the yard requirements otherwise applicable in Special District 4A.
9. Such other relief as the Board may deem necessary and proper.

The Project meets the general and specific criteria for issuance of these Special Permits as described in the following sections.

3.3. General Criteria for Approval of a Special Permit

The Project satisfies the criteria for issuance of the requested Special Permits, as addressed in italics below.

Pursuant to Section 10.43 of the Zoning Ordinance, Special Permits will normally be granted where specific provisions of the Zoning 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 because:

1) It appears that requirements of this Zoning Ordinance cannot or will not be met.

   The Project satisfies the conditions for the grant of the requested Special Permits. With the requested Special Permits, the Project will meet all requirements of the Zoning Ordinance.

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

   *Vanasse and Associates, Inc. completed a comprehensive Transportation Impact Study (the "**TIS**"), a copy of which is provided with this Application (see Special Permit Application Volume 3), analyzing the traffic impacts associated with the Project. The TIS includes an analysis of the existing and future vehicular traffic and bicycle volumes, defines site access requirements and identifies specific improvements intended to reduce vehicle dependency at the Site.*

   *The TIS was prepared in accordance with the City's guidelines for TIS, complies with the scoping determination dated September 16, 2016, and was certified by the Cambridge Traffic, Parking and Transportation Department ("**TPTD**") on January 13, 2017.*

The TIS indicates that, of 145 indicators of traffic impact, the Project has satisfied 130, with the remaining 15 indicators exceeded due to the Project's location adjacent to Route 2 and by conditions that exist with or without the Project. The Project impact alone does not exceed any of the City's traffic indicators.

Vehicular access to the Site will be provided by separate entering and exiting driveways on Route 2, with pedestrian and bicycle connections to the abutting Cambridge Discovery Park. With implementation of the identified mitigation measures (including extensive bicycle parking and maintenance areas, 20 bicycles for tenant use at no charge, and subsidized MBTA passes), vehicle trips originating from the Project will be reduced. Based on the TIS, the Project is expected to have minimal impact on traffic and will not cause congestion, hazard, or substantial change to the established neighborhood character. In fact, increased pedestrian and bicycle use will add activity to Special District 4, especially during weekend times along the Alewife Brook Reservation.

Existing Traffic Volumes - Route 2 in the vicinity of the Site was observed to carry approximately 76,600 vehicles per day (vpd) with 5,026 vehicles per hour (vph) observed during the weekday morning peak hour and 5,452 vph during the weekday evening peak hour.

Existing Public Transit – The Project is within ½ mile of the MBTA Alewife Station which accommodates several MBTA and private transit (area Transportation Management Association) bus routes and the Red Line rapid rail transit line.

Crash Data – Crash data were reviewed at one multi-intersection junction, seven intersections and the existing site driveways with Route 2 for the most recent three-year period. The series of four intersections at comprising the Route 2/Route 16 – Alewife Brook Parkway junction had the highest crash rate in the review with 17.7 crashes per year. The majority of these (80 percent) involved property damage only. No crashes were recorded at the driveway intersections with Route 2.

Site-Generated Traffic Volumes – The Project represents a redevelopment of existing operating businesses; therefore, the net traffic impact is less than if the Site was vacant or undeveloped land. The Project represents an increase of 41 vehicle trips during the weekday morning peak hour and 4 vehicle trips during the weekday evening peak hour.

3) 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.

The Project will not adversely affect the continued operation or future development of adjacent uses. The Site fronts on the Concord Turnpike and is bounded generally by Vox on Two, a multifamily development, to the west; the Cambridge Discovery Park office and laboratory buildings and parking facility to the southeast; and the Alewife Brook Reservation to the southwest.

The Project will replace two aging structures with a first-class multifamily development, substantially enhancing an underutilized site, delivering much-needed market-rate and affordable housing to the Route 2 corridor (long-time City goals), and encouraging the further revitalization of the area. A contextually appropriate development, the Project will complement adjacent uses by providing convenient residential housing for employees of the office buildings and Cambridge Discovery Park.

Likewise, the planned multifamily residential project will not adversely impact the Alewife Brook Reservation. The Project has been intentionally designed outside the wetlands resource areas and all adjacent buffer zones. Currently, approximately 73% of the 100- foot buffer to Bordering Vegetated Wetlands within the Site consists of impervious areas, asphalt pavement, and groundcover with minimal drainage structures. As a result, untreated stormwater runs directly into the adjacent wetland resource area. The Project will significantly reduce impervious surfaces within the buffer zone and provide Stormwater treatment through the use of deep sump drainage structures and a wet pond. Upon completion of the Project, only 37% of the buffer zones within the Site will have impervious cover in the form of building roof (a significant improvement from the existing asphalt pavement for vehicular use). Overall, the Project will replace approximately one acre of impervious surfaces with pervious areas, a substantial improvement over the existing Site conditions. The creation of residential housing adjacent to the Alewife Brook Reservation will also encourage the use and preservation of the Reservation by residents and add to the general security of the area.

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

The Project will not create any nuisance or hazard to the detriment of the health, safety and/or welfare of the occupants of the Project or the citizens of the City.

The Project will replace an unappealing bowling alley and motel with desirable residential and related uses, enlivening an underutilized site and generating many other appreciable community benefits. All of the Project's uses are allowed by right in the Special District 4A and are consistent with uses prevailing in the Site's immediate vicinity. Further, the proposed design and scale of the buildings complement those of existing buildings in the neighborhood, with appropriate landscaping, lighting, directional and wayfinding signage, and other safety and security elements provided to adequately mitigate any potentially adverse effects on adjoining properties.

The Project is in harmony with the general purpose and intent of the Zoning Ordinance and furthers the City's broader health, safety and welfare goals as set forth in Section 19.30 (Citywide Urban Design Objective) of the Zoning Ordinance to foster development which is responsive to the existing or anticipated pattern of development, is designed for pedestrian and bicycle access, mitigates adverse environmental impacts upon its neighbors, and provides open space amenities.

5) 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 the Zoning Ordinance.

The Project will not impair the integrity of any of the districts in which it is located or the adjoining Special District 4. The Project will not derogate from the intent and purpose of the Zoning Ordinance. The demolition of the Existing Buildings and the construction of the Project will enhance and further the purposes of the districts in which the Project is located and the adjacent Special District 4 (which are described in Section 3.1 above). When completed, the Project will replace the existing unsightly parking lots and dilapidated commercial buildings with thoughtfully designed and landscaped first-class residential buildings that further the purposes and intents of Special District 4A, the Parkway Overlay District, and the Flood Plain Overlay District.

<u>Special District 4A and the adjacent Special District 4</u> –

The Project furthers the purpose and intent of Special Districts 4 and 4A. In particular, it will provide much-needed residential housing, complementing the existing non-residential build-out, including the AC Hotel Boston Cambridge and Cambridge Discovery Park, home to Forrester Research and Nuclea Biotechnologies. The Project provides a prime opportunity to achieve the mixed-used objectives of Special Districts 4 and 4A. As outlined below in more detail, the Project also furthers the Districts' intent of protecting wetlands and maintaining flood storage capacity.

The Project will also restore areas that are currently paved and stagnant to active and more appropriate urban uses and enhance the parkway character of Concord Turnpike by replacing the Existing Buildings and their expansive parking lots with a residential redevelopment conforming to best practices for mitigation of impacts and preservation of the natural environment. As detailed above, the Project will adopt the traffic mitigation measures identified in the TIS, thereby minimizing the amount of additional traffic passing though nearby arterial and neighborhood streets.

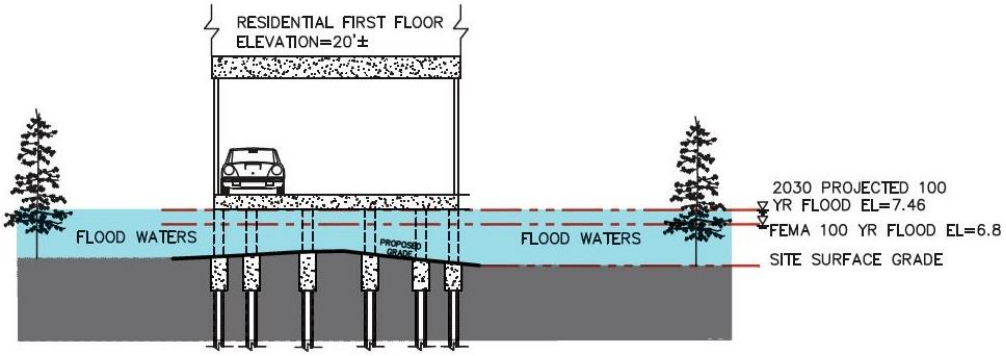
<u>Parkway Overlay District</u> –

The Project will conform to the intent and purpose of the Parkway Overlay District. The Project will immediately create a new positive image by demolishing the Existing Buildings and constructing a first-class residential development that is consistent with and enhances the natural resources in the area. The Project will reduce visual confusion through urban design, lighting and landscaping measures. Further, as described throughout this narrative, the Project protects and encourages the use and enjoyment of existing open space resources by residents of the Project, occupants of adjacent properties, and the public in general.

<u>Flood Plain Overlay District</u> –

The Project is located within the 100-year floodplain of the Little River and within the limits of the Floodway. The Project will conform to the intent and purpose of the Flood Plain Overlay District. In accordance with the Massachusetts Wetland Protection Act, the Project will provide more flood storage volume on the Site than under the current

Site conditions. In addition, the Project is designed to provide this increased flood storage based upon the City of Cambridge's Vulnerability Assessment and associated climate change modeling. The Project also includes building adaptation strategies for the projected 2070 flood conditions. For example, ground-floor spaces (including lobbies and amenity areas) and the parking garage entries will utilize flood gates at openings during forecasted 100-year storm events and other major storms in project 2070 situations. The design of the Project, in particular its potential impact of the floodplain and Floodway, has been reviewed by the Department of Public Works staff and the Cambridge Conservation Commission which issued an Order of Conditions approving the Project on November 23, 2016 (see Special Permit Application Volume 3). More detail regarding the Project's conformance with the intent of the Flood Plain Overlay District is provided in Section 3.4 below.



Flood Storage Illustration

6) The new use or building construction is consistent with the Urban Design Objectives set forth in Section 19.30.

As described in Section 3.4.7. below, the Project is consistent with the Urban Design Objectives set forth in Section 19.30.

3.4. Compliance with Criteria Specific to Special Permits

The Project satisfies the criteria for issuance of each of the requested Special Permits, as addressed in italics below.

1. Section 20. 63 Criteria for Parkway Overlay District Special Permit

Pursuant to Section 20.63.7 of the Ordinance, the Planning Board may allow divergence from the Parkway Overlay District development standards specified in Section 20.60, by issuance of a Special Permit from the Planning Board as specified in Subsection

10.45 upon a determination that the development proposed will better serve the objectives of Section 20.60 than if the standards were followed and that the criteria specified in Section 10.43 will be satisfied. Those objectives include creating unified identifiable images of designated areas, enhancing public safety by reducing visual confusion and haphazard development and encouraging development which will protect and enhance the use and enjoyment of public open space resources. In reviewing applications for any special permit in the Parkway Overlay District, the Planning Board is to consider compliance with the requirements specified in Section 20.60, the recommendations made in the Cambridge Community Development Department's 1979 report entitled *Alewife Revitalization* and the criteria specified in Section 10.43.

CPD requests a Special Permit under Section 20.63.7 of the Ordinance for the Project's divergence from the Parkway Overlay District standards including the following, and any other divergence from the Parkway Overlay District standards required in connection with the Project.

Section 20.64.1 Front Yards. Front yards should be of sufficient size and appropriately landscaped so as to increase public safety and to positively contribute to the visual and environmental quality of the district. Required front yards shall consist entirely of Green Area Open Space as defined in Article 2.000 with the exception of paving necessary for vehicular access. Such paved access area shall be limited to one 24-foot driveway for each one hundred (100) feet of lot frontage or fraction thereof.

Due to site constraints, an Eversource transformer and a switchgear electrical infrastructure and a Comcast communications hub utility infrastructure servicing the easterly building (Building 2) is proposed to be located within the setback area at the northeast corner of the Site. The design team reviewed several options for locating this equipment including in the internal courtyard, along the easterly and southerly sides of the building and within the parking garage structure and determined these locations to be infeasible. The primary consideration in locating the exterior ground-mounted utility infrastructure on this Project is ensuring that the location is at an elevation that is protected through projected 2030 flood conditions. This consideration limits the Project to selecting locations that are at higher elevations such as the areas along Concord Turnpike (Route 2). If the utility infrastructure were elevated and located internal to the Site and adjacent to Building 2, it would be immediately adjacent to internal pedestrian walkways or outdoor amenity space, which would greatly detract from the design aesthetic. The mechanical equipment cannot be located along the easterly or southerly sides of Building 2 as these areas must be kept clear for emergency vehicle access and would be in the most sensitive portion of the floodplain on the Site. Locating the equipment in the Building 2 parking garage is not allowed below the proposed wood-frame building.

After detailed review it was determined that locating the mechanical equipment in the front yard setback would have the least impact on the design character of the Site and safety. The mechanical equipment will be screened by a fence and by vegetation as required by Section 20.67.

Section 20.65 Fences. In order to maintain a feeling of openness, to facilitate pedestrian enjoyment and use, and to maximize scenic views, fences along the front and side lot lines shall comply with the following standards: 1. No fence along a front or side lot line and within twenty-five (25) feet of a public right of way shall be more than four (4) feet in height from the curb level of the street or more than thirty (30) percent opaque. 2. Chain-link and wire fences are prohibited.

The mechanical equipment servicing Building 2 and located within 25 feet of Concord Turnpike (Route 2) is proposed to be screened with a minimum 6-foot high decorative wood fence that is 100 percent opaque. The allowed 4-foot high fence with 30% opacity is not adequate to fully screen the mechanical equipment from the street or sidewalk.

Decorative Wood Fence

Section 20.66.2 Siting of Parking Areas. Parking areas, whether accessory or non-accessory, shall not be located in the front yard required for any lot in the district. Enclosed parking facilities are encouraged. On grade, open area parking areas shall be located behind the building or buildings served or arranged in such a way as to minimize their visibility from public ways

We are proposing a 9-space surface parking area, primarily for visitors, adjacent to Concord Turnpike (Route 2). The parking lot is not within the front yard and visibility from the roadway is minimized through the use of a combination of raised planting beds and a low wood fence with an integral arbor feature.

Section 20.67 Mechanical Equipment and Refuse Storage Areas. 1. No refuse storage areas nor mechanical equipment areas shall be located in a front yard within the district. Such areas shall be screened from view from street and parking areas, residential districts, open space areas, and designated parkways by a six (6) foot high

durable nonliving barrier (or earth berm) planted with at least one shrub or vine for each ten (10) feet of barrier towards the abutting property. 2. Mechanical equipment on the roof of any building shall be permanently screened from view from the ground or other buildings in the area.

As described above, certain pad-mounted mechanical equipment serving Building 2 will be located in a front yard. However, it will be screened by fencing and a six (6) foot high durable nonliving barrier (or earth berm) planted with at least one shrub or vine for each ten (10) feet of barrier.

2. Section 20.70 Criteria for Flood Plain Overlay District Special Permit

Pursuant to Section 20.70 of the Zoning Ordinance, the Planning Board shall grant a Special Permit for development in the Flood Plain Overlay District if the Board finds that such development has met the following criteria in addition to other criteria specified in Section 10.40:

1) No filling or other encroachment shall be allowed in Zone A areas or in the floodway which would impair the ability of these special flood hazard areas to carry and discharge flood waters, except where such activity is fully offset by stream improvements such as, but not limited to, flood water retention systems as allowed by applicable law.

   According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Number 25017C0419E dated June 4, 2010, the Project is located almost entirely in Flood Zone AE, with a small portion at the northeast corner of the Site located in Flood Zone X.

   To minimize the volume of ground-level structures placed within the limits of floodplain and floodway, the bottom of the garage floor slab has been designed at elevation 7.5 (NAVD 88), higher than both the present FEMA 100-year flood elevation and the City of Cambridge's Vulnerability Assessment's projected 2030 100-year flood elevation, placing the first floor lobbies of the building at approximately elevation 8.5 (NAVD 88). The residential units will be constructed at approximately elevation 21.0 (NAVD 88). This design will allow water to flow, unrestricted, beneath and around the building without reaching the entrance to the garage or the lobby areas for the present FEMA 100-year storm event or the anticipated 2030 100-year storm event.

   Further, CDP filed for and received an Order of Conditions (DEP File Number 123-266) dated November 23, 2016 and recorded on December 6, 2016 at Book 68534 Page 230, approving the Project. The Order of Conditions confirms that the Project will not impair the ability of the applicable flood hazard areas to carry and discharge flood waters.

2) Displacement of water retention capacity at one location shall be replaced in equal volume at another location on the same lot, on an abutting lot in the same ownership, on a noncontiguous lot in the same ownership, or in accordance with the following requirements.

The existing and proposed conditions of the Project Site were analyzed on a foot-by-foot incremental elevation basis, in accordance with the MA DEP performance standards for work within a Bordering Land Subject to Flooding (BLSF). The analysis in included in the Stormwater Report for the Project, prepared by BSC Group, and submitted with the approved Notice of Intent. As addressed in the report, the proposed flood water retention system provides compensatory flood storage on a foot-by-foot incremental elevation basis allowing flood waters to flow and recede to the Little River unrestricted per the Wetlands Protection Act subject to the present FEMA 100-year flood elevation. The proposed flood water retention system also provides compensatory flood storage on a foot-by-foot incremental elevation basis per the City of Cambridge Department of Public Works subject to the City of Cambridge Vulnerability Assessment's projected 2030 flood elevation..

3) All flood water retention systems shall be suitably designed and located so as not to cause any nuisance, hazard, or detriment to the occupants of the site or abutters. The Planning Board may require screening, or landscaping of flood water retention systems to create a safe, healthful, and pleasing environment.

The Site has been designed such that flood water will be allowed to flow unrestricted under the proposed building garages. The surface of this flood retention space will be covered with a thin concrete mud slab and will be surrounded by a building screen that is a minimum of 50% open on a foot-by-foot incremental basis to provide a secured space that does not pose any nuisance, hazard or detriment to occupants of the Site or abutters. This flood retention design is consistent with other projects constructed in this Flood Plain District, including the adjacent Vox on Two development.

4) The proposed use shall comply in all respects with the provisions of the underlying zoning district, provisions of the State Building Code, Wetlands Protection Act, and any other applicable laws.

As described in this narrative, the Project will comply with all applicable provisions of the Special District 4A upon issuance of the Special Permits. As evidenced by the Order of Conditions, the Project will comply with the Wetlands Protection Act. The Project also will comply with the State Building Code and any other applicable laws.

5) Applicants for development in the Alewife area shall be familiar with area-specific and general city-wide land use plans and policy objectives (e.g. *Concord-Alewife Plan*, *A Report of the Concord Alewife Planning Study*, November 2005; *Toward a Sustainable Future, Cambridge Growth Policy*, 1993, *Update*, 2007; Section 19.30 – Urban Design Objectives of this Zoning Ordinance) and shall demonstrate how their plan meets the spirit and intent of such documents in conjunction with the requirements of this Section 20.70 – Flood Plain Overlay District and Section 20.90 – Alewife Overlay Districts 1-6.

The Site, located at 195-211 Concord Turnpike, is not included in the Concord-Alewife Planning Study *map or the Concord-Alewife Plan, A Report of the Concord Alewife Planning Study, November 2005. Nonetheless, the Project is consistent with the broader aims of said Study and the relevant policy statements of Toward a Sustainable Future.*

As set forth in Toward a Sustainable Future: List of Policy Statements and the Concord-Alewife Design Areawide Guidelines, the Project will encourage non-automobile mobility by creating a pleasant and safe pedestrian and bicycle environment and strengthening bicycle and pedestrian links to adjacent areas. The Project will also seek to utilize Low Impact Development (LID) principles in building and site design in addition to meeting the City, State, and Federal stormwater requirements. Some of the LID techniques used include reduction of impervious surfaces; use of pervious pavements, native landscape plantings, a wet pond and a rain garden. The Project will offer numerous open space amenities, including elevated resident courtyards and ground level site amenities, thereby providing more open space and outdoor recreational facilities to citizens of Cambridge.

6) The requirement of Section 20.74(3) has been met.

Compensatory flood storage has been designed to ensure the Site's capacity to provide storage for floodwaters has not been decreased in accordance with the Massachusetts Wetlands Protection Act. This analysis has been performed for all flooding up to and including a 100-year flood event. This has been provided in the certified Drainage Report prepared by The BSC Group and submitted as part of the Conservation Commission Notice of Intent and referenced in the Cambridge Conservation Commission Order of Conditions (see Special Permit Application Volume 3).

3. Section 5.25.42 Criteria for Approval of Special Permit Regarding FAR

Pursuant to Section 5.25.42 of the Zoning Ordinance, a special permit may be granted to a project in the Flood Plain Overlay District which excludes the floor area of an above ground parking facility from Floor Area Ratio (FAR), provided that only the minimum number of parking spaces required for the uses on the site is provided. In granting such a special permit, the Planning Board shall make the following applicable findings:

1) The construction of a parking facility underground is (a) not technically feasible due to the requirements of the Massachusetts Wetlands Protection Act (M.G.L. ch. 131, s.40,) (b) would require construction that would violate requirements or limitations of the Massachusetts Wetlands Protection Act, (c) would, in the view of the Cambridge Conservation Commission, seriously compromise the wetlands protection objectives of the Massachusetts Wetlands Protection Act), and (d) would result in costs of construction that are significantly greater than would otherwise be typical for the location were it not in a flood hazard area; and

2) The above ground facility is designed so as to reduce its actual or perceived bulk through, among other possible techniques, limiting the number of parking spaces it contains, placement of portions of the facility below grade where feasible, or its location relative to actively occupied portions of the construction. Construction above grade is discouraged that would increase the amount of impervious area on the lot.

As described above, because the Project is located within the flood plain, an underground parking facility is not technically feasible, given the existing Site topography. Construction of an underground parking facility would result in a loss of available flood storage within the floodplain. Given the site constraints (i.e. within the floodplain and relatively flat topography), there is no available location to provide the required compensatory storage and therefore construction of an underground parking facility would violate the performance standards outlined in the Massachusetts Wetlands Protection Act for work within a floodplain.

The Cambridge Conservation Commission approved the Project, including the above ground parking facility, in the Order of Conditions (DEP File Number 123-266) dated November 23, 2016 and recorded on December 6, 2016 at Book 68534 Page 230, implicitly recognizing that construction of an underground parking facility would seriously compromise the wetlands protection objectives of the Massachusetts Wetlands Protection Act by reducing the Site's capacity to provide required flood storage.

Further, the parking garage is designed to accommodate approximately 200 spaces, fewer than the minimum number of parking spaces required by the Zoning Ordinance, and to comply otherwise with the minimum design criteria for parking facilities. In

addition to minimizing the actual bulk of the facility, the parking will be completely enclosed, and vehicles will not be visible from the street or the Alewife Brook Reservation. Active ground floor areas including the main entry/lobby, management offices, clubhouse fitness center and bicycle storage/repair facilities will screen parking at key locations from public view. Building the proposed above ground parking facility has also allowed CDP to avoid constructing any surface parking in the resource area buffer zones on the Site and to decrease the amount of impervious area on the Site.

4. Section 6.35 Reduction of Required Parking

Any minimum required amount of parking may be reduced only upon issuance of a special permit from the Board of Zoning Appeal.[1] A special permit shall be granted only if the Board determines and cites evidence in its decision that the lesser amount of parking will not cause excessive congestion, endanger public safety, substantially reduce parking availability for other uses or otherwise adversely impact the neighborhood, or that such lesser amount of parking will provide positive environmental or other benefits to the users of the lot and the neighborhood, including specifically, among other benefits, assisting in the provision of affordable housing units.

The Project will include approximately 243 parking spaces (200 garage spaces and 43 surface spaces) supporting the approximately 320 dwelling units, yielding a parking ratio of approximately 0.76 spaces per unit. The proposed parking program will not cause excessive congestion, endanger public safety, substantially reduce parking availability for other uses, or otherwise adversely impact the neighborhood. Rather, the proposed parking program will deliver numerous benefits to the users of the Site and the neighborhood by providing sufficient parking for the proposed residences while allowing CDP to minimize the scale of the proposed buildings and maximize the Site's green space, all without requiring an underground parking facility (which is not technically feasible given the existing Site topography and the applicable Flood Plain Overlay District requirements). Moreover, the Project will create approximately 320 new units of rental housing, while creating only 243 parking spaces (including onsite car-sharing spaces), made possible by the availability of numerous transit modes in the Site's immediate vicinity (including the Alewife MBTA Station, a half-mile away), as well as by the plentiful on-site bicycle parking spaces (336 long-term and 38 short-term spaces), and complimentary bike rentals. The Project will also introduce additional residential living, convenient for employees of the surrounding commercial buildings, thereby facilitating walking, biking and transit use and reducing the growth of auto trips and minimizing negative impacts on surrounding neighborhoods.

[1] Per Section 10.45 of the Ordinance, any "application requiring a special permit from the Planning Board that contains elements requiring a special permit from the Board of Zoning Appeal may be allowed by the Planning Board within the scope of the Planning Board special permit and shall not require a separate application to the Board of Zoning Appeal."

In making such a determination the Board shall also consider whether or not less off street parking is reasonable in light of the following:

1) The availability of surplus off street parking in the vicinity of the use being served and/or the proximity of an MBTA transit station.

   The Site is located about a half-mile from the Alewife MBTA Station.

2) The availability of public or commercial parking facilities in the vicinity of the use being served provided the requirements of Section 6.23 are satisfied.

   As addressed above and in the enclosed TIS, the proposed parking program will adequately serve the proposed residences. Accordingly, the Project's parking program does not depend on the availability of public or commercial parking facilities in the Site's vicinity.

3) Shared use of off street parking spaces serving other uses having peak user demands at different times, provided that no more than seventy-five (75) percent of the lesser minimum parking requirements for each use shall be satisfied with such shared spaces and that the requirements of Subsection 6.23 are satisfied.

   N/A to the Project.

4) Age or other occupancy restrictions which are likely to result in a lower level of auto usage.

   The Project's residents will be separately charged for parking rights, further encouraging the use of public transportation.

5) Impact of the parking requirement on the physical environment of the affected lot or the adjacent lots including reduction in green space, destruction of significant existing trees and other vegetation, destruction of existing dwelling units, significant negative impact on the historic resources on the lot, impairment of the urban design objectives of the city as set forth in Section 19.30 of the Zoning Ordinance, or loss of pedestrian amenities along public ways.

   The proposed parking program allows the Project to provide adequate parking for residents while minimizing the proposed buildings' scale and maximizing the Site's green space, all without the use of an underground parking facility (which is not technically feasible given the existing Site topography and the applicable Flood Plain Overlay District requirements). As discussed elsewhere in this Application, the Project is consistent with the City's urban design objectives as set forth in Section 19.30 of the Zoning Ordinance.

6) The provision of required parking for developments containing affordable housing units, and especially for developments employing the increased FAR and Dwelling unit density provisions of Section 11.200, will increase the cost of the development,

will require variance relief from other zoning requirements applicable to the development because of limitations of space on the lot, or will significantly diminish the environmental quality for all residents of the development.

The proposed buildings will provide affordable housing as required under the Zoning Ordinance, and will employ the increased FAR and dwelling unit density provisions of Section 11.200 of the Zoning Ordinance. The proposed reduction in parking will decrease the costs associated with the Project's parking requirements, thereby facilitating the provision of affordable housing. Further, the provision of required parking would require additional height relief and would encourage automotive use, thereby diminishing the environmental quality for all residents of the development.

7) For a project seeking a reduction in required off-street parking for residential uses, a Parking Analysis shall be required as part of the Special Permit Application as set forth in Section 6.35.3.

A Parking Analysis was included in the TIS.

5. 6.43.5 Curb Cut Width

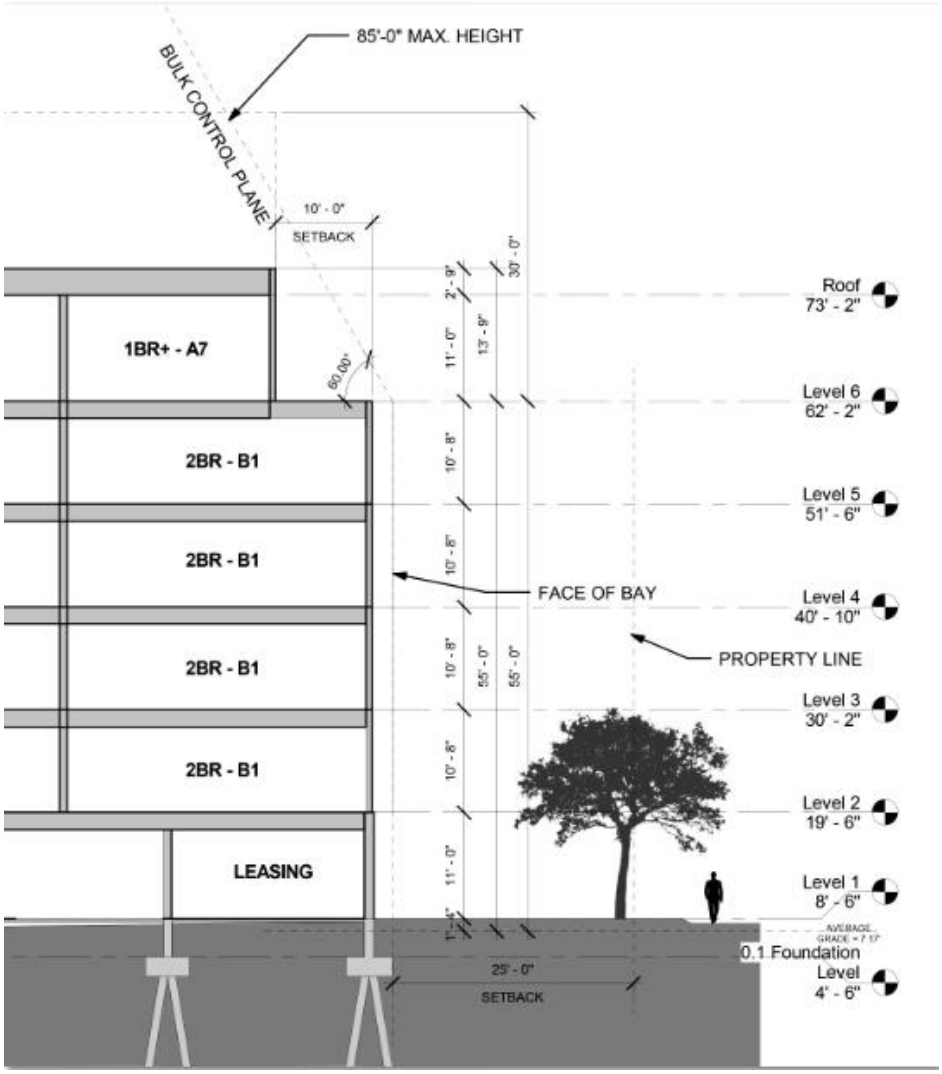
Pursuant to Section 6.43.3(b) of the Zoning Ordinance, in Office districts (and, per Section 17.41, within Special District 4A), the maximum width of a curb cut shall be thirty (30) feet. Pursuant to Section 6.45.5 of the Zoning Ordinance, the Board of Zoning Appeal may grant a special permit modifying the maximum curb cut width specified in Section 6.43.3(b) if the Board determines that an increased curb cut width would facilitate traffic and safety.

The Project's current driveway design provides for two curb cuts onto Route 2 (a roadway under MassDOT jurisdiction), each with a width slightly greater than 30 feet. The driveway design has been reviewed by MassDOT District 6 staff, but the final design of the Project's curb cuts (and their specific width) will be subject to MassDOT approval. Such MassDOT review and approval will ensure that the increased curb cut width facilitates traffic and safety.

6. 17.42.3 Height

Pursuant to Section 17.42.3 of the Zoning Ordinance, the Planning Board shall grant the requested Special Permit for height if the applicant demonstrates to the satisfaction of the Planning Board that the additional height will better serve the objectives of Section 17.40 to increase the amount of open space in the district and to limit the extent to which building and other hard surfaces cover the ground.

The proposed buildings will rise to approximately 69 feet in height (limited to 55 feet within the first ten feet of the building fronting on Route 2, per the applicable Parkway Overlay District requirements). The Zoning Ordinance permits height of up to 60 feet in Special District 4A by right and up to 90 feet for residential uses with a special permit. As described above, the parking for the Project cannot be constructed underground because of the existence of flood plain on the Site. The requested relief for a relatively minor increase in height is required because of the additional approximately nine feet of height added to the buildings by having the parking facility above ground. The alternative would be to construct surface parking areas in the buffer zones on Site. The additional 14 feet of height will not have an adverse impact on any abutter, users of the Alewife Brook Reservation or anyone driving by on Route 2. Therefore, the additional height will better serve the objectives of Section 17.40 to increase the amount of open space in the District and to limit the extent to which building and other hard surfaces cover the ground.



Building Section

7. 19.20 Project Review Special Permit

In granting a Project Review Special Permit under Section 19.20 of the Zoning Ordinance, the Planning Board is required to make the following findings:

1) The Project will have no substantial adverse impact on city traffic within the study area as analyzed in the required traffic study.

As described in the TIS, of the 145 total data entries for the Planning Board Criteria Performance Summary, none were directly exceeded by the Project. A total of 15 criteria were exceeded by virtue of the Site's location, existing lack of handicap accessible routes for pedestrians and bicyclists, or by current conditions that exist with or without the Project. Since the Project is a redevelopment of existing operating businesses, the net traffic increase due to the Project is minimal. Overall, the Project is expected to result in increases to area road volumes of two percent or less, which has a negligible effect on traffic operations. As described above, TPTD has certified the TIS for the Project.

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

As described below, the Project conforms to the Citywide Urban Design Objectives set forth in Section 19.30 of the Zoning Ordinance.

A. 19.30 Citywide Urban Design Objectives

1) Pursuant to Section 19.31 of the Zoning 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.

The Project abuts Vox on Two, a, 227-unit residential development that rises to a height of approximately 65 feet. The heights and setbacks of the Project provide an appropriate transition from Route 2 to the abutting Cambridge Discovery Park commercial uses and to the neighboring Vox on Two development. The Project complies with the bulk control plane requirements for the Parkway Overlay District.

(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 setbacks and heights in relationship to public streets.

The Project is oriented on the Site so as to be consistent with—in fact, to improve—the existing streetscape of Concord Turnpike (Route 2). In accordance with Section 20.64.1 of the Zoning Ordinance, the Project will be oriented toward Concord Turnpike and will provide a minimum of twenty-five (25) feet of front yard area. This setback is consistent with the abutting Vox on Two development. In compliance with the Zoning Ordinance, the parking for the Project will be concealed from view and Green Area Open Space will be created in the required front yard.

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

The Project is not a mixed-use project. Nonetheless, the orientation of the Project balances the needs of residents with the visual and safety concerns of passersby. The Project is thoughtfully located to present an animated Concord Turnpike elevation that includes both the lobby and leasing offices as well as clubhouse fitness facilities, along with lush landscaping and visitor parking to activate the entry courtyard and provide an improved streetscape. Three raised courtyards—two facing Vox on Two, another facing the interior of the development—provide attractive recreational areas for building residents.

Building 2 Lobby Area and Elevated Courtyard

(d) 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 neighboring historic buildings or buildings that are preferably preserved on or adjacent to the Site.

2) Pursuant to Section 19.32 of the Zoning Ordinance, development should be pedestrian and bicycle-friendly, with a positive relationship to its surroundings. 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 service businesses and restaurants where they are allowed, or general office, educational or residential uses and building lobbies. Windows and doors that normally serve such inhabited spaces are encouraged to be a prominent aspect of the relevant building façades. Where a mix of activities is accommodated in a building, the more active uses are encouraged facing public streets, parks and pathways.

The ground floor of the proposed buildings will include the more active elements of the residential development, including entry lobbies, leasing offices, the recreational bowling alleys, and bicycle storage/repair facilities, screening the ground-level parking facility from view. The southern elevations will be highlighted with secondary entry lobbies.

View of Activated Street-Level Space along Concord Turnpike

In commercial districts, such active space consists of retail and consumer service stores and building lobbies that are oriented toward the street and encourage pedestrian activity on the sidewalk. However, in all cases such ground floor spaces should be occupied by uses (a) permitted in the zoning district within which the building is located, (b) consistent with the general character of the environment within which the structure is located, and (c) compatible with the principal use for which the building is designed.

The ground floor of the Project will be occupied by uses that are permitted in Special District 4A, that are consistent with the neighboring environment, and are compatible with the principal use of the building, including entry lobbies, leasing offices, recreational bowling alleys, and bicycle storage/repair facilities.

(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.

The Project is designed with an enclosed parking facility because the nature of the Site and its location within the Flood Plain Overlay District makes underground accessory parking impracticable. The accessory parking facility is designed to minimize the visibility of the parking area from Concord Turnpike and the Alewife Brook Reservation. The entry courtyard off of Route 2 provides 13 outdoor parking spaces to accommodate visitors to the Site and short term parking near lobbies. These spaces will be screened from Route 2 views with landscaping and fencing.

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

The architectural treatment of the ground floor facing Concord Turnpike is approximately 40% glass. The sides and back of the Project will be screened by landscaping. Naturally, the most glass and transparency is called for along the Concord Turnpike to activate the streetscape and reinforce a pedestrian-friendly façade. In contrast, the sides of the Site and especially the rear elevation facing the wetlands call for a more naturalistic approach to transparency.

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

reinforce expected pedestrian pathways over the lot and through the district is also encouraged.

The main building entries are located off of an entry courtyard and connected to the sidewalk circulation through the Site. Secondary entries are located on the south sides of the buildings off of sidewalks that connect to a path connecting to Discovery Drive. CDP anticipates that the majority of pedestrian activity will occur at these southern building entries.

(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 [p]aid to providing safe access to the facilities from the outside.

Pedestrians and bicyclists will be able to access the Project safely and conveniently. The Project provides enclosed, secure, on-site parking for 336 bicycles. Four separate bicycle storage facilities are located near different building entries around the parking garage to provide convenient bicycle access for all residents and encourage non-automotive transportation. The bicycle storage facilities are separate from the automobile parking area and have safe, direct access to the outside. Bicycle pump and repair facilities will also be provided for resident use. Additionally, outdoor racks located at the building entries provide 38 short-term bicycle spaces to encourage the use of bicycles for multiple trips throughout the day. The Project will also provide 20 bicycles to Project residents free of charge. These bikes, equipped with a master lock that can be unlocked by all residents that enroll in the program, will be available for both recreational and commuting purposes. Initially, some of the bikes will be left at the Alewife Train Station so that enrolled residents can have the opportunity to spontaneously take one and return to the complex.

(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.

The project complies with the policy objective 19.32.

3) Pursuant to Section 19.33 of the Zoning Ordinance, the building and site design should mitigate adverse environmental impacts of a 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 visual impacts, and enhance the overall appearance of the equipment should be taken into account. More specifically:

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

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

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

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

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

The Project is designed to minimize negative visual impacts on its surroundings and enhance the overall appearance of the existing streetscape and skyline. First and foremost, the Project significantly improves the appearance of the Site by demolishing the Existing Buildings. Minimal common area mechanical equipment will be located on the roof and will be located out of sight line. All unit HVAC is provided by mechanical equipment located within the units with the exception of the low-profile rooftop air-conditioning units which are located in the center of the building wings, out of view from the street and nearby open spaces. Several pieces of mechanical equipment are located in enclosed, out of sight, at-grade rooms and wall-mounted gas meters are appropriately located on the west and east sides of the building, away from the publicly accessible areas of the Site on the north side (Concord Turnpike) and south side (Alewife Brook Reservation).

(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.

The trash/recycling storage and handling for the Project is contained within the building to avoid noise, odor, and visual impacts on the neighbors and building residents. Centralized trash and recycling rooms are provided on each floor of the building and a main trash/recycling room is provided at the parking level to offer convenience for the residents and to minimize impacts on the neighboring properties. In compliance with the Zoning Ordinance, no refuse storage areas are located in the front yard or anywhere on-grade outside of the building.

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

The Project is 100% residential and does not require a loading facility; however, the service drive provided behind Building 1 and a truck pull-off space adjacent to Building 2 allow a protected area for residents to move in and move out of the complex. These areas are hidden from view of Route 2 and building entries.

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

The Project implements stormwater best management practices and other measures to minimize stormwater runoff and improve water quality prior to discharge to adjacent wetlands, including wet pond, rain garden, catch basins (deep 6-ft sump with hoods), and water-quality treatment units (i.e., Stormceptor or equivalent). The Project is defined as a redevelopment project under the DEP Stormwater Management Handbook provisions of the Wetlands Protection Act and as such, has been designed to meet the applicable provisions of the Stormwater Management Standards to the maximum extent practicable. The project has incorporated Low Impact Development (LID) design features into the overall Stormwater Management design of the Site, including a significant reduction in impervious surfaces, hydrodynamic separator stormwater units (Stormceptor or equivalent) and deep sump/hooded drainage structures for stormwater treatment and two bio-retention areas (a wet pond adjacent to wetland resource areas and a rain garden for increased groundwater recharge of roof runoff). The stormwater management system provides attenuation of the peak runoff rates from the 2, 10, 25 and 100-year, 24-hour storm events and increased TSS removal for the proposed redevelopment.

As described above, the stormwater management design for the Project has been approved by the Cambridge Conservation Commission pursuant to the Order of Conditions (see Special Permit Application Volume 3).

(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 stormwater runoff compared to pre-development conditions.

The Project has incorporated Low Impact Development (LID) design features into the overall Stormwater Management design of the Site, including a significant reduction in impervious surfaces, hydrodynamic separator stormwater units (Stormceptor or equivalent) and deep sump/hooded drainage structures for stormwater treatment and two bio-retention areas (a wet pond adjacent to wetland resource areas and a rain garden for increased groundwater recharge of roof runoff). As described above, the stormwater management design for the Project has been approved by the Cambridge Conservation Commission pursuant to the Order of Conditions.

(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 Energy System as defined in Section 22.60 of the Zoning Ordinance.

The siting of the project close to the Concord Turnpike creates open space on the south side of the Site thereby minimizing shadows to the adjacent properties including the Alewife Brook Reservation and wetland resource areas.

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

Changes in grade across the lot are minimized. There are no retaining walls close to property lines. Only a landscape retaining wall of less than four (4) feet is proposed adjacent to the rear façade of the adjacent Cambridge Discovery Park parking structure to allow ADA/AAB compliant accessible sidewalk access to the pedestrian/bicycle path at the southern perimeter of the Site.

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

The Project's scale is alleviated through a series of bays, balconies, and detailed architectural features to create a more intimate residential scale highly complementary of Vox on Two, the only residential development in the vicinity of the Site.

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

Architectural lighting will be designed to minimize light pollution. The glass entrance at the Concord Turnpike will provide a soft "glow" to the entry courtyard, accenting the safety and pedestrian lighting around the Project. Architectural lighting will be used to illuminate key features of the buildings' rooflines. Pedestrian lighting along the paths will provide safe lighting without negatively impacting the Alewife Brook Reservation.

(j) 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.

The Project is a redevelopment of an existing site that is currently almost entirely impervious (93%), covered with the Existing Buildings, surface parking, and other paved surfaces. A Tree Protection Plan was submitted to the City of Cambridge Arborist on November 1, 2016.

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

(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.

As described above, the Project's stormwater management system has been designed to incorporate best management practices and has been approved by the Cambridge Conservation Commission. Water-conserving plumbing fixtures will be installed in each residence, and water is sub-metered so that residents are aware of their own usage.

(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.

Sanitary Sewer Service Infrastructure
Based on the current design, there are a total of 434bedrooms (66 studio, 152 one bedrooms, 90 two bedrooms and 10 three bedrooms) resulting in 47,860 gallons per day (gpd) of sewer flows based on Massachusetts Title 5 of the State Environmental Code (Title 5) regulations, 310 CMR 15 calculations.

In addition to the typical sanitary sewer connection, the City of Cambridge requires developments in this area to provide an on-site sewerage storage tank for each building for use during significant rainfall storm events. The proposed storage tank for Building 1 will be located north of the building under surface parking area and will be a 13,600-gallon tank. The proposed storage tank for Building 2 will be located west of the building under site drive aisle and will be a 10,200-gallon tank. This system will be connected to the City's

remote monitoring system that will activate when the CSO pump activates at the pumping station. When the peak subsides, the wastewater will be released by the City. In the event of an unusually long storm event, the system is also equipped with an overflow, should the on-site capacity be exceeded.

The Cambridge Department of Public Works has indicated that the existing sanitary system, with the known proposed and on-going system upgrades, has the capacity to handle the Project's sewerage discharges. These systems will be connected to the City's remote monitoring system that will activate when the CSO pump activates at the pumping station. When the peak subsides, the wastewater will be released by the City.

Additional sewer improvement requirements imposed by DEP and the City to the existing system will be required. Inflow and Infiltration (I/I) mitigation will be required at a removal rate of 4:1 at locations to be determined by the City Engineer. Based upon deduction of the existing flows from the proposed sanitary sewer flows, the total additional flows are approximately 16,605 gpd. The anticipated I/I removal is 66,420 gpd for the project. The Project will work with DPW on eliminating existing site I/I and meeting the required I/I removal.
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Water Service Infrastructure
The Project will require approximately a total of 52,646 gallons per day for its domestic water demands, based on the sanitary flow calculations per 310 CMR 15.203. The project proposes to install a new City water main west of proposed Building 1 to replace the existing six (6) inch water main in the City Easement, which is in poor condition at this time according to the Cambridge Water Department. All domestic water services and fire services required for the Project will be connected to the existing water infrastructure constructed by neighboring projects along the Concord Turnpike (Route 2) project frontage. All water service connections and water main layouts will fully coordinate with the City Water Department and its requirements.

The capacity and condition of the existing water supply infrastructure is currently under investigation. Hydrant flow tests will be performed to determine the capacity area. Should it be determined that there is inadequate pressure to provide the required flows for the potable water, a booster pump will be added to the project to handle the deficiency. All connections will be fully coordinated with the City Water Department.
The fire protection system design will be coordinated with the City Fire Chief along with the relocation of an existing fire hydrant on the Concord Turnpike (Route 2) project frontage.

(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 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 be LEED Silver certifiable. An overview of the Project's LEED compliance is provided in Volume 3 of this Application.

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

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

N/A 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.

N/A 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.

N/A to the Project.

(d) Historic structures and environments are preserved.

N/A to the Project.

(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.

N/A to the Project.

6) Pursuant to Section 19.36 of the Zoning 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.

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

The Project is 100% residential, and will add 320 additional residential dwelling units to the housing inventory of the City. A range of unit types are provided, of which 32% (102 units) will be 2- and 3-bedroom units. The Project will include affordable units in compliance with the Zoning Ordinance.

7) Pursuant to Section 19.37 of the Zoning 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 developments, publicly beneficial open space is provided.

(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.

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

The Project enhances and expands open space amenities in the City. The outdoor courtyard spaces will provide outdoor recreation areas for the residents, and on-grade landscaping (including rain gardens) is consistent with and enhances the adjacent Alewife Brook Reservation.

The proposed wet pond will be constructed to allow for inundation from groundwater (anticipated to elevation 2.0), as well as stormwater runoff flows. The proposed species in the wet pond basin are those that can thrive in saturated hydric soils which experience consistent seasonal groundwater inundation. The species proposed for the lower elevations of the wet pond basin will be "Obligate Wetland Species" (OBL) or those that occur almost always in wetlands under natural conditions. The species proposed for the upper elevations of the basin will be "Facultative Wetland Species" (FACW) or those that usually occur in wetlands and are often found at the edges of wetlands. The wet pond will overflow naturally through a rip rap reinforced level spreader/clay-lined berm element into the adjacent wetlands. The level spreader/clay-lined berm element helps to reduce the overflow velocities

during storm events to less than 2.0 fps and avoid the potential for adjacent erosion of grassed and wetland areas.

The proposed rain garden located in the northwest corner of the Site will experience less frequent stormwater inundation and will completely dry out between storm events. The proposed species here are native herbaceous and woody shrub species that can tolerate the range of soil conditions associated a rain garden, namely drought tolerant once established but able to survive periodic inundation. Many of the species are also good pollinator plants. This vegetation will provide some natural stormwater pre-treatment prior to discharge ultimately to the adjacent wetlands.

4. Infrastructure

4.1. Water

The Project will require approximately a total of 52,646 gallons per day for its domestic water demands, based on the sanitary flow calculations per 310 CMR 15.203. The project proposes to install a new City water main west of proposed Building 1 to replace the existing six (6) inch water main in the City Easement, which is in poor condition at this time according to the Cambridge Water Department. All domestic water services and fire services required for the Project will be connected to the existing water infrastructure constructed by neighboring projects along the Concord Turnpike (Route 2) project frontage. All water service connections and water main layouts will fully coordinate with the City Water Department and its requirements.

The capacity and condition of the existing water supply infrastructure is currently under investigation. Hydrant flow tests will be performed to determine the capacity area. Should it be determined that there is inadequate pressure to provide the required flows for the potable water, a booster pump will be added to the project to handle the deficiency. All connections will be fully coordinated with the City Water Department.

The fire protection system design will be coordinated with the City Fire Chief along with the relocation of an existing fire hydrant on the Concord Turnpike (Route 2) project frontage.

4.2. Sewer

The existing site is currently comprised of a bowling alley, a hotel and associated parking lots.

A breakdown of the site's existing sanitary sewer flow rates are as follows:

Existing Sanitary Sewer Flows*

Use	GPD/Unit	Unit	GPD
Hotel	110/ bedroom	78 hotel room	8,580
Hotel Roof Drain**	--	--	17,355***
Bowling Alley	100/alley	54 alleys	5,400
Total			31,335

* Per 310 CMR 15.203
** The hotel roof drain is currently connected to the combined sewer main in the City Utility Easement
*** Estimated flow rates for 6-hour storm event based on DEP guidance

This project proposes to construct two (2) residential buildings with a total of 320 rental apartment units (434 bedrooms). The sanitary sewage from the two proposed residential buildings will be collected and discharged into the existing 12-inch sanitary sewer main that runs through the property in a City Easement that travels south through neighboring Cambridge Discovery Park to the City-owned sewer pump station south of Acorn Park Drive. The proposed Building 1 will contain 182 rental apartment units (248 bedrooms) with a sanitary sewer service going out the north wing of the building. This sewer service will connect via a proposed sewer manhole to the existing 12" PVC sewer main that runs through the project frontage along Concord Turnpike (Route 2). The proposed Building 2 will contain 138 rental apartment units (186 bedrooms) with a sanitary sewer service going out the western side of the building. This sewer service will connect via a proposed sewer manhole to the existing 12" PVC sewer main that runs through Site in the City Easement.

A breakdown of the project's sewer design flow rates are as follows:

Proposed Sanitary Sewer Flows*

Use	GPD/Unit	Unit	GPD
Hotel	110/ bedroom	434 bedrooms	47,740
Parking Garage	1 gallon/space	200 spaces	200
Total			47,940

* Per 310 CMR 15.203

In addition to the typical sanitary sewer connection, the City of Cambridge requires developments in this area to provide an on-site sewerage storage tanks for use during significant rainfall storm events. The Building 1 storage tank, located in the northern parking area of proposed Building 1, and provides approximately 8-hour storage with a factor of safety, which equates to an approximately 13,600-gallon tank. The Building 2 storage tank, located west of proposed Building 2, and provides approximately 8-hour storage with a factor of safety, which equates to an approximately 10,200-gallon tank. These systems will be connected to the City's remote monitoring system that will activate when the CSO pump activates at the pumping station. When the peak subsides, the wastewater will be released, by the City.

Additional sewer improvement requirements imposed by DEP and the City to the existing system will be required. Inflow and Infiltration (I/I) mitigation will be required at a removal rate of 4:1 at locations to be determined by the City Engineer. Based upon deduction of the existing flows from the proposed sanitary sewer flows, the total additional flows are approximately 16,525 gpd. The anticipated I/I removal is 66,100 gpd for the project. The Project will work with DPW on eliminating existing site I/I and meeting the required I/I removal.

4.3. Stormwater/Drainage

The proposed drainage system is designed in compliance with DEP's Stormwater Management Standards, as well as the City of Cambridge's Concord-Alewife Area Stormwater Management Guidelines, including the recent incorporation of "NOAA Atlas 14, Volume 10, Version 2 Point Precipitation Frequency Estimates" in stormwater modeling, and the City of Cambridge Climate Change Vulnerability Assessment initial recommendations for flood elevations associated with the 100-year storm event for the Year 2030.

Stormwater runoff associated with the majority of the roof of proposed Building 1, located at 211 Concord Turnpike western portion of the Site, will discharge from the building's southern façade into three (3) grit drainage manholes (with sumps for pre-treatment) prior to flowing into the proposed wet pond. This proposed wet pond will be constructed to allow for inundation from groundwater (anticipated to elevation 2.0), as well as stormwater runoff flows. The proposed species in the wet pond basin are those that can thrive in saturated hydric soils which experience consistent seasonal groundwater inundation. The species proposed for the lower elevations of the wet pond basin will be "Obligate Wetland Species" (OBL) or those that occur almost always in wetlands under natural conditions. The species proposed for the upper elevations of the basin will be "Facultative Wetland Species" (FACW) or those that usually occur in wetlands and are often found at the edges of

wetlands. The wet pond will overflow naturally through a rip rap reinforced level spreader/clay-lined berm element into the adjacent wetlands. The level spreader/clay-lined berm element helps to reduce the overflow velocities during storm events to less than 2.0 fps and avoid the potential for adjacent erosion of grassed and wetland areas.

A portion of the stormwater runoff from the Building 1 roof over the proposed Lobby Area will be directed to a proposed rain garden located in the northwest corner of the Site. The Rain garden will experience less frequent inundation and will completely dry out between storm events. The proposed species here are native herbaceous and woody shrub species that can tolerate the range of soil conditions associated a rain garden, namely drought tolerant once established but able to survive periodic inundation. Many of the species are also good pollinator plants. This vegetation will provide some natural stormwater pre-treatment prior to discharge into the proposed Site storm drainage pipe system described below.

Stormwater runoff from the Site's exposed vehicular impervious surfaces, including up to thirty (30) proposed surface parking spaces and site access drive aisle, are collected in a series of deep sump hooded catch basins, trench drain and other elements prior to treatment in a structural water quality unit (Stormceptor or approved equal). This treated stormwater joins overflow from the rain garden and outlets in to the existing MassDOT 24" RCP drain pipe via the existing DMH–North shown on attached plans. Existing DMH-North also receives proposed treated stormwater flows from the landscape area in the northeastern portion of the Site adjacent to Building 2 and the project exit drive to Route 2/Concord Turnpike. A water quality unit is proposed adjacent to Building 2 prior to this stormwater connection into the existing 24" pipe.

Stormwater runoff associated with the roof of proposed Building 2, located at 195 Concord Turnpike eastern portion of the Site, will discharge from the building's southern façade into a grit drainage manhole (with sump for pre-treatment). The proposed grit manhole will outlet to existing DMH-South, which is also part of the existing 24" MassDOT drain pipe infrastructure (see applicable plans in Special Permit Application Volume 2). This existing 24" drain pipe ultimately outlets into the neighboring Cambridge Discovery Park site, where it receives additional water quality treatment through an existing Vortechnics water quality unit prior to discharge into a constructed stormwater wet detention basin. This existing constructed stormwater wet detention basin overflows into the adjacent wetlands.

The stormwater infrastructure associated with the neighboring Cambridge Discovery Park site was sized in 2004 for the existing flows from the 24" MassDOT drain pipe, including stormwater runoff contributions from the Site at 195 & 211 Concord Turnpike. A portion of the documentation previously submitted to the City of Cambridge and MA DEP in 2004 is included in this report in Section 7.3 for reference. This proposed project at 195 & 211 Concord Turnpike is designed to reduce both the stormwater flow rates and volumes for each design storm that discharges into the existing 24" MassDOT pipe and ultimately to the

Cambridge Discovery Park wet detention basin and to provide additional capacity in the drainage system in anticipation of the effects of climate change in this area.

The City of Cambridge Department of Public Works has also indicated to this project that it will be subject to local review under the newly endorsed Massachusetts Small MS4 General Permit, which does not go in effect state wide until July 1, 2017. As an early adopter of this state stormwater permit, the City of Cambridge is requiring all projects (regardless of stormwater discharge location) to provide 65% total phosphorous removal based upon existing site use baseline standards from the current version of MS4 permit document. Based upon the project's initial discussions with DPW staff, it is anticipated that this requirement will be reviewed during the local Land Disturbance permitting process. Project elements that are being considered to meet this requirement include, but are not limited to, in-line stormwater filtration units, enhanced landscape/pervious area improvements, green roof elements within project courtyard areas and other treatment elements.

Water Runoff Rates

The proposed redevelopment project provides attenuation required to reduce offsite peak runoff rates that are less than the pre-development conditions. Attenuation is achieved through the reduction of impervious area on the property.

The reduction in impervious area on site reduces peak flows from the Site during the 2, 10, 25 and 100-year storms per the Stormwater Management Handbook as follows:

Summary of Peak Rate of Runoff (cfs*)

Storm Event	Existing	Proposed	Decrease
2-year	12.2	7.4	4.8
10-year	18.5	15.1	3.4
100-year	27.2	22.9	4.3

* cfs = cubic feet per second

The City of Cambridge Department of Public Works (DPW) has also requested that the project evaluate the impact of using NOAA Atlas 14, Volume 10, Version 2 Point Precipitation Frequency Estimates (http://hdsc.nws.noaa.gov/hdsc/pfds/) on offsite peak runoff rates.

The reduction in impervious area on site reduces peak flows from the Site during the 2, 10, 25 and 100-year storms based upon NOAA Atlas 14, Volume 10, Version 2 Point Precipitation Frequency Estimates are as follows:

Summary of Peak Rate of Runoff * (cfs)**

Storm Event	Existing	Proposed	Decrease
2-year	12.7	8.6	2.7
10-year	21.0	17.2	3.8
100-year	33.9	29.0	4.9

* Based on NOAA Atlas 14, Volume 10, Version 2 Point Precipitation Frequency Estimates
** cfs= cubic feet per second

Water Quality

The proposed drainage system has been designed to exceed the recommended 80% TSS removal goal with the implementation of the following:

- Deep Sump (6-foot) and Hooded Catch Basins and manholes (per City of Cambridge standard)
- Stormceptor Water Quality Units (or approved equal)

Groundwater Recharge

Groundwater recharge is provided with the reduction of impervious surface on site.

Conclusions

The project has been designed to meet, and in some cases exceed, the applicable provisions of the Stormwater Management Standards, as well as the City of Cambridge's Concord-Alewife Area Stormwater Management Guidelines and the City of Cambridge Climate Change Vulnerability Assessment initial recommendations.

5. Community Outreach

5.1. North Cambridge Stabilization Committee

The North Cambridge Stabilization Committee ("NCSC") hosted CDP at two meetings at the Daniel F. Burns Apartments at which the project team presented details of the Project. The first meeting was held on August 24, 2016. The purpose of this meeting was to review the Site's existing wetland and floodplain resources and the proposed conditions with development of the Project. CDP discussed the resource-area analysis conducted as part of the Project Notice of Intent and the finding that the Project would have a positive impact on these areas. Primary concerns raised by attendees of the meeting included: the loss of Lanes and Games as a community amenity; the feasibility and safety impacts of building in a floodplain; and the need for additional affordable housing. CDP acknowledged that while Lanes and Games has long served as a community resource, its owners are no longer interested in operating the facility. They also stated their commitment to increase the number of affordable units to the maximum extent possible.

The second meeting with NCSC occurred on January 11, 2017. The focus of this meeting was site and building design. Attendees discussed Project landscaping, building materials and site circulation.

5.2. Fresh Pond Residents Alliance

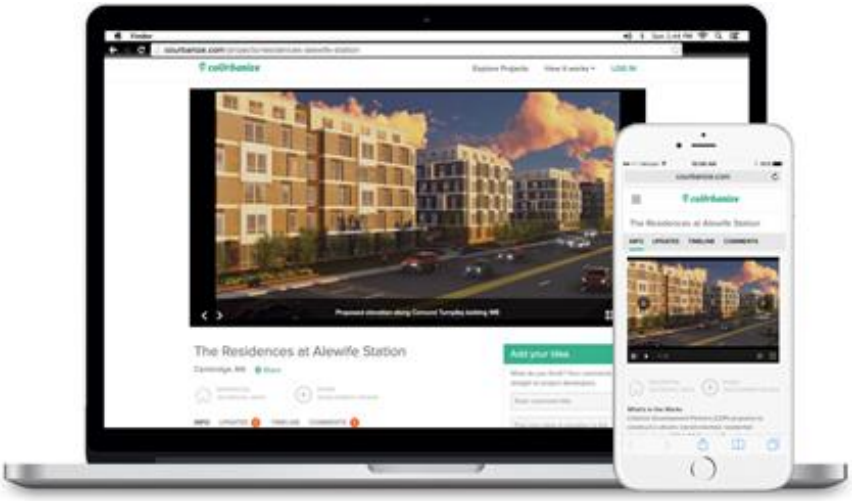
The Fresh Pond Residents Alliance ("FPRA") hosted CDP at a meeting on September 21, 2016 at the Tobin School. CDP presented the findings of the wetland and floodplain resource area analysis and preliminary building elevations.

5.3. Community Meeting

CDP held a community meeting on November 10, 2016 at the Peabody School. The presentation included a review of Project site design, architecture, wetland and floodplain resource areas, and traffic. Many attendees of the meeting spoke about traffic conditions in the Alewife area and the need for improved bicycle and pedestrian facilities.

5.4. CoUrbanize Website

To facilitate community input and sharing of Project-related information CDP created a project page on the coUrbanize website. Community members can access the project page at http://courb.co/ras and post comments, ask questions, view a project timeline and access project documents. They can also "follow" the project to be notified of updates. Approximately 25 people are following the Project and 16 comments/questions have been posted. CDP has responded to all questions.



coUrbanize Project Page