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# CITY OF CAMBRIDGE

Community Development Department

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To: Planning Board  
From: Community Development Department (CDD) Staff  
Date: April 27, 2021  
Re: **Broad Canal Subdistrict Zoning Petition**

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## Overview

Petitioner: Beals Associates, Inc. o/b/o RREEF America REIT II Corp, PPP

Petition: To amend Article 13.40 to create a new subdistrict within the existing PUD-3 Overlay District called the "Broad Canal Subdistrict".

Context: The existing PUD-3 district covers an area in Kendall Square roughly bounded by Main Street to the south, First Street to the east, Linskey Way to the north, and Third Street to the west. The proposed subdistrict would occupy an area owned mostly by the Petitioner that consists of Broad Canal, One & 101 Main Street (Map 14, Lots 23 and 36) and Broad Canal Way from Third Street eastward to the mouth of Broad Canal.

Summary: Subject to PUD review and approval procedures, this zoning amendment would enable development within the subdistrict of up to 1.4 million square feet of gross floor area for an eligible development parcel consisting of at least 80,000 square feet of land area. Further, the subdistrict expands the existing allowable maximum height of buildings in the PUD-3 from 230' to 250', with the ability for one building to be built up to 350' subject to Planning Board approval. The subdistrict permits the same uses as the PUD-3 district but also includes Clinic uses and a new use classification called "Canal Uses". Finally, the petition includes new maximum off-street parking requirements and gives the Planning Board the ability to waive minimum off-street parking and/or loading requirements for a Final Development Plan within the subdistrict.

Report: This memo will provide background into the area's planning and development history, summarize key provisions of the Petition in the context of the City's past and ongoing planning efforts, and suggest issues for the Planning Board to consider in its review of this Petition.

## **Planning and Zoning Background**

### *PUD-3 History (1978)*

Historically, the site at One & 101 Main Street was zoned for industry and consisted of multiple smaller parcels that contained an amalgam of heavy industrial uses, such as the Mead-Morrison Manufacturing Company, the John Wells Stone Yard, Marg Hogan Marble Yard, Cambridge Electric Light Coal Yard, and Bay State Fuel Company Coal Yard. The PUD-3 and O-3 zoning districts were created in 1978 as Cambridge area planning envisioned a transition from Kendall Square and East Cambridge’s industrial past to a commercial and mixed-use innovation district.

Many office buildings within the district were developed under the PUD-3 zoning during the 1980s and 1990s, including the conversion of the “Athenaeum Press” building into offices at First Street (1986) and the redevelopment of the Carter Ink Building at 245 First Street (PB-031) in 1983. Much of the district was developed under Planning Board Special Permit #141 (PB-141) granted in 1999 that encompassed a 10-acre area that previously contained a manufactured gas plant. Over the course of approximately 15 years, the site has been developed to include commercial laboratory/office buildings, residences, retail and open space amenities in a series of mid- and high-rise buildings just northwest of the mouth of the Broad Canal. Public improvements associated with this development included the kayak launch at the mouth of the Broad Canal and the open space along the north side of the Broad Canal. The power plant on the north side of Broad Canal is in many ways a link to Cambridge’s industrial past – but continues to serve an important role supplying electricity to the power grid and steam energy to buildings throughout Kendall Square and East Cambridge.

Two sites in the district – the vacant “Parcel C” and a lot along Third Street consisting of an Eversource natural gas transfer station – were recently rezoned as part of the [Canal District Kendall \(PUD-CDK\) zoning petition](#) adopted in late 2020. It is expected that a future special permit application for these sites will include the relocation of the gas transfer station and the development of Parcel C into a mixed-use development that will contain office/lab uses and a performing arts center.

### *Site Context*

The dual office towers at One and 101 Main street, within the proposed Broad Canal Subdistrict, were permitted in two phases – Planning Board Special Permit #001 (PB-001) issued in 1979 and Planning Board Special Permit #044 (PB-044) issued in 1984. PB-001 permitted the taller of the two towers (101 Main St), consisting of ground-floor retail, three floors of structured parking, and a fourteen (14) story office building. The second tower (One Main St) was conceptually approved as part of PB-001, too, for a total gross floor area of 598,000 square feet. PB-044 permitted the development of the second tower with an increase in the total approved gross floor area from 598,000 square feet to 642,000 square feet. The number of planned parking spaces increased from 560 to 644.

### *Eastern Cambridge Planning Study & Citywide Rezoning (2001)*

In 2001, the City released the [Eastern Cambridge Planning Study \(ECaPS\)](#), which focused on an urban mixed-use planning approach to Kendall Square and nearby areas, and identified a series of goals for development near Broad Canal and the riverfront:

- Identified Broad Canal as an “opportunity” to create a cleaner physical and visual connection from the riverfront to East Cambridge and Kendall Square neighborhoods
- Denoted the importance of pedestrian-accessible open space along the northern and southern borders of the Broad Canal
- Encouraging transit-oriented development that supports multimodal transportation options and infrastructure
- Promoting development of new housing as a way of supporting and encouraging further active ground-floor uses and open space activity

As a result of the rezoning following ECaPS, the base zoning was changed from Office-3 to Office-3A (O-3A), and the maximum Floor Area Ratio (FAR) for non-residential uses was reduced in the O-3A / PUD-3 district from 3.0 to 2.0 – the maximum FAR for residential uses remains 3.0.

#### *Cambridge Riverfront Plan (2011)*

In 2010, City staff engaged neighborhood and business groups, property owners, and the Planning Board to complete an area planning effort focused on opportunities to create a coordinated vision for the activation of the Charles River waterfront through new riverfront uses, provide stronger physical design relationships with the water, and better connect Cambridge’s urban fabric with its natural border to the east. The Broad Canal was identified as an “opportunity” to create a clean visual and physical connection from the river to East Cambridge and Kendall Square neighborhoods for existing and future residents of the area. The plan also emphasized the importance of creating an active environment along the waterfront and improving waterfront access for pedestrians and bicyclists through ample physical pathways and active ground-floor uses.

#### *Kendall Square “K2” Study (2013)*

In 2013, the City released the [Kendall Square \(K2\) study](#), which addressed future growth in Kendall Square based on the central theme of nurturing Kendall’s Innovation Culture, and supported by three additional themes:

1. Create Great Places
  - Support open space and recreation needs of a growing neighborhood.
  - Create lively, walkable streets.
  - Expand opportunities for Kendall’s diverse community to interact.
  - Development and public place improvements must happen in tandem.
2. Promote Environmental Sustainability
  - Expand convenient, affordable transportation and access choices.
  - Enhance streets as public places.
  - Create a healthier natural environment.



- Reduce resource consumption, waste and emissions.
  - Leverage the environmental and economic benefits of compact development.
3. Mix Living, Working, Learning & Playing
- Leverage community and innovation benefits of a mixed-use environment.
  - Focus intensity around transit.
  - Minimize development pressures on traditional neighborhoods.
  - Continue to support city and state economic development.

To further these goals, K2 recommended area-wide zoning changes as well as specific zoning changes for districts within the area. Areawide zoning recommendations include:

- Requiring ground floor retail along Main Street (and exempting it from GFA calculations).
- Permitting taller building heights near the core of Kendall Square, to a maximum of 250' for commercial buildings and taller heights for residential buildings with step-backs and smaller floorplates for higher floors of tall buildings.
- Flexible parking minimums and defined maximum parking ratios for various uses, with allowances for shared parking among different uses.  
Requiring enhanced environmental standards, including minimum LEED Gold standards for new buildings (which is now a citywide standard), cool roofs, stormwater retention/detention requirements, low-impact development strategies, analysis of steam feasibility, and allowing on-site district energy systems (such as co-generation).
- Require middle income housing units (in addition to affordable units required through inclusionary zoning) in residential buildings greater than 250' in height
- Establishing a Kendall Square fund for additional open space, transit improvements and workforce readiness at \$10/sf for buildings of greater GFA/height than what is permitted in base zoning.
- Require 5% of all non-residential GFA be devoted to “innovation space” for small businesses and start-ups on flexible lease terms.

The Petition covers an area included in the K2 study. Within this district, additional zoning recommendations include incentivizing residential development (through additional height and FAR) within 400' of Third Street, and permitting modest increases in GFA for existing non-residential buildings in exchange for recommended improvements, including improved connections between Main Street and the Broad Canal.

Several zoning changes occurred following the K2 study.

- The City Council adopted new PUD zoning for land owned by MIT along Main Street (PUD-5), including the One Broadway site, for which a mixed commercial, residential, and institutional use development plan was approved by the Planning Board and construction is underway.
- The zoning for the MXD District was amended in 2015, and resulted in the completion of one new commercial building and one under construction thus far.

- The City Council adopted [new zoning](#) for the 14-acre Volpe site in October 2017 as a culmination of several years of planning and community outreach – a development plan by MIT is currently under review.
- In 2020, the proposed [Canal District Kendall Overlay](#) was adopted (as discussed above), and a development proposal is expected to be reviewed by the Planning Board later this year.
- Earlier this year, the City Council adopted amendments to the [Kendall Center Mixed-Use Development District](#) which enables the Cambridge Redevelopment Authority and Boston Properties to locate a planned Eversource electrical substation on the site of the current Blue Garage in Kendall Square, and build up to 800,000 square feet of new commercial development on the site. A development proposal will also be submitted to the Board later this year, but based on presentations by the CRA and Boston Properties, the planned substation is expected to be built below-grade and underneath an open space that will connect through the Volpe site to the westward extension of Broad Canal Way.

*Eastern Cambridge/Kendall Square Open Space Study (2015)*

The K2 planning process led to the [Eastern Cambridge/Kendall Square Open Space \(ECKOS\)](#) study, in which teams of landscape designers and planners offered visions for connecting and activating public space within Kendall Square, to create a more integrated open space system and to better serve the surrounding neighborhoods. This planning effort established a series of recommendations focused on connecting Broad Canal to the larger open space network in Kendall Square and East Cambridge. Specific recommendations included:

- Extend Broad Canal to Third Street to increase its visibility closer to the heart of Kendall Square.
- Make a visual connection through the Volpe site to the Broad Canal.
- Create new routes to and through the Broad Canal that are pedestrian and cyclist friendly and help to explain the natural benefits of low-impact stormwater management.
- Establish three design “sections” of an expanded Broad Canal:
  - Section “A” to the west of Third Street – Broad Channel: A “through” marketplace that traces the historic footprint of Broad Canal with visual cues of stormwater draining eastward to the river
  - Section “B” at the northwest corner of Broadway and Third Street – Broad Square: A large open space that contains a water feature and represents a visual and acoustical celebration of water’s presence in Kendall Square
  - Section “C” at existing Broad Canal – Reconstructed Broad Canal: A restored section of Broad Canal which would include an expanded section of the existing canal, improved recreational access, and the inclusion of a ramped, sunken bridge that would bring people into closer contact with the Canal and Charles River.



**Summary of Zoning Petition**

*Overall Zoning Approach*

The premise of the Petition is to enable the construction of a new, 23-story commercial office/lab building on the current site of the Riverfront Office Park at One & 101 Main Street. As part of the Petitioner’s submission, the plan illustrates the construction of a new building on top of the existing parking podium that connects the two existing office buildings. To enable this change, the Petition proposes creating a new subdistrict within the existing PUD-3 that would authorize a Final Development Plan consisting of up to 1.4 million square feet of gross floor area. The Petition states that 818,000 square feet are existing and 582,000 square feet would be new – however, as noted, past PUD special permits authorized up to 642,000 square feet.

*Summary of Proposed Zoning Changes*

Much of the existing PUD-3 zoning would remain intact, but a new Section 13.41.1 would be created that establishes a Broad Canal Subdistrict (“BCS”) within the PUD-3. The following table provides an overview of the proposed dimensional changes in the subdistrict when compared to the PUD-3 and base O-3A districts:

Zoning Standard	Office 3A	PUD-3	Proposed BCS
<b>Permitted Uses</b>	Residential, Institutional, Office/Lab	Same as O-3A but also includes some retail/consumer service uses and performing arts uses	Same as PUD-3 but also includes clinic uses per 4.33(d) in all of PUD-3 and “Canal Uses” within the PUD-BCS (new definition)
<b>Max. GFA/FAR</b>	2.0/3.0	2.0/3.0	1,400,000 square feet of GFA
<b>Min. Lot Area Per Dwelling Unit</b>	300 sq/ft	300 sq/ft	300 sq/ft
<b>Max. Building Height</b>	90’/120’	230’ subject to PB Approval	350’ subject to PB Approval
<b>Min. Open Space</b>	10%	15% with reductions available subject to PB Approval	15% with reductions available subject to PB Approval

<b>Parking/Loading</b>	Article 6.000	Minimum Ratios: Residential: 1 space/DU; Public Assembly: 1 space/15 seats; Institutional: 1 space/1800 sf; Retail/Office: 1 space/900 sf ground floor, 1 space/1800 sf elsewhere	Same as PUD-3, with PB ability to waive parking/loading minimums, and added maximum ratios: Office: 0.9 spaces/1,000 sf Lab Uses: 0.8 spaces/1,000 sf Residential: 0.75 spaces/DU Retail: 0.5 spaces/1,000 sf Hotel: 1 space/4 rooms
<b>Building Sustainability</b>	None specified (subject to 22.20)	None specified (subject to 22.20)	None specified (subject to 22.20)

*Illustrated Improvements to Main Street & Broad Canal*

The Petition includes exhibits which illustrate proposed improvements in the public and private realms along Main Street and the Broad Canal.

Along Main Street, improvements include bringing ground-floor uses closer to sidewalk edge, raising the existing bicycle lane along the north side of Main Street, transforming the existing vehicle entrance to the parking garage into a pedestrian pathway that cuts through the building to Broad Canal, and adding outdoor amenities such as parklets to the Main Street frontage.

Along Broad Canal, illustrated improvements include expanding ground-floor restaurant and retail uses along the southern walkway, adding a bridge that connects the southern walkway to the northern walkway, and a proposed floating restaurant that will sit in the Broad Canal itself. Should the Petition be adopted, these improvements would all be subject to Planning Board review as part of a PUD Special Permit, and public space improvements would be subject to review and approval by the City and other public agencies.

**Considerations for Review**

*Overall*

The Petition helps to implement some of the City’s planning goals for the area, such as:

- Activation of the ground floors of the building along Main Street and the Broad Canal
- Providing new physical access to the Broad Canal directly from Main Street (and vice versa)
- Public realm amenities that increase the activation of the Broad Canal and improve pedestrian flow and connectivity
- Improvements to bicycle infrastructure along Main Street
- Incorporating K2-recommended parking maximums for new development in the proposed subdistrict

A more detailed discussion of the petition and considerations for Planning Board’s review follows.

*Planning References*

Recent PUDs such as the PUD-CDK make explicit reference to recent City plans and design guidelines as guiding criteria that the Planning Board can then rely upon when making a determination to grant or deny a subsequent PUD Special Permit application. Adding a similar provision to the Petition would help to ensure development in the subdistrict will be generally consistent with the policy objectives set forth in these documents. Plans and guidelines may include:

- Kendall Square Study and Design Guidelines (“K2 Study”) (2013)
- Kendall Square Design Guidelines (“K2 Design Guidelines”)
- “Connect Kendall Square” Open Space Plan
- Volpe Working Group Planning & Design Principles (“Volpe Guidelines”)

#### *Uses*

The Petition expands the permitted uses within the whole PUD-3 district by including that all clinic uses permitted by Section 4.33(d) of the Cambridge Zoning Ordinance be allowed within the PUD-3.

The Petition creates a new land use classification for “Canal Uses” which is defined as follows: “A use that by design requires or is intended to have direct access to the Broad Canal due to its location adjacent to or on the Broad Canal or which location enhances the use or the activation of the Broad Canal, including but not limited to floating restaurants (including sale of alcohol), open air place of entertainment, kayak or similar rentals and launch, marinas, boat basins or other commercial or recreational boating facilities, public walkways, facilities for fishing, waterborne transportation facilities”. These uses would be permitted only by a written determination by the Planning Board that they are consistent with the objectives of the proposed Broad Canal Subdistrict.

The proposed uses are not inconsistent with area planning for the Broad Canal and the PUD-3 area. While some of the proposed Canal Uses, such as “Floating restaurant”, might require additional jurisdictional approvals and/or permitting outside of zoning, it is not inappropriate to include such uses within the proposed subdistrict since the Broad Canal itself is included in the proposed rezoning area.

One consideration for the Planning Board is whether the entitlement of additional commercial development in Kendall Square should be balanced with new residential development, as is supported by area planning such as the K2 Study. An influx of new workers and tenants within Kendall Square will boost demand for housing in the area, and this demand can be counterbalanced by a corresponding increase in housing supply.

The Petition does not require or establish standards for how much of a building’s ground-floor frontage must be occupied by active uses, as has been stipulated in recent rezonings such as PUD-7, PUD-8 and the MXD Amendments.

Another, more minor consideration is whether some of the proposed uses are duplicative of existing land use classifications in Article 4.000 of the Cambridge Zoning Ordinance and how these new uses might align with the proposed amendments to retail land uses.

#### *Gross Floor Area (GFA)*



The Petition amends Section 13.43.1 to add a new subsection (3) which permits the Broad Canal Subdistrict to contain permitted GFA of up to 1,400,000 square feet for a development parcel that consists of more than 80,000 square feet.

The Petition submittal includes a Proposed Building Cross-Section which illustrates changes to ground-floor area along the existing Riverfront Office Park and the addition of new GFA comprising a new building between the existing office towers. Net new GFA included in this cross-section amounts to 417,250 square feet, which is less than the 582,000 square feet of new GFA cited earlier in the petition. A more thorough and detailed accounting – including amount and location – of permitted GFA, existing GFA, and proposed GFA to be constructed, removed, or changed in use will be necessary to fully understand the effect of the Petition.

#### *Building Height*

The PUD-3 district permits buildings up to 230 feet in height, with general guidance that lower buildings are encouraged closer to the Charles River and taller buildings are encouraged closer to Kendall Square.

The Petition amends the PUD-3 zoning by creating a new subsection which stipulates that within the Broad Canal subdistrict, a building may be built up to 250' in height, but the Planning Board may approve a building up to 350' in height if it is so designed to be “a distinctive architectural landmark”.

One consideration for the Planning Board is whether the inclusion of a 350' tall building within this district may have adverse effects on the Broad Canal from additional shadows and/or wind impacts, and whether these effects could be mitigated through the inclusion of additional wind and/or shadow studies that accompany a Final Development Plan proposal within the subdistrict. The K2 study recommends that building space above 250' is reserved for residential uses only and that floorplates above 250' be minimized to maximize light and air on adjacent parcels.

#### *Off-Street Parking, Loading & Bicycle Parking*

The PUD-3 district contains off-street parking minimums for Residence, Public Assembly, Institutional, Retail and Office uses. The Petition establishes that development in the Broad Canal subdistrict will follow the minimum requirements set forth in Article 6.000, supplemented by the following maximum ratios that follow the recommendations of the K2 study:

- Office Uses: 0.9 spaces per 1,000 square feet of GFA
- Lab Uses: 0.8 spaces per 1,000 square feet of GFA
- Residence Uses: 0.75 spaces per dwelling unit
- Retail Uses: 0.5 spaces per 1,000 square feet of GFA
- Hotel Uses: 1 space per 4 sleeping rooms

In addition to off-street parking maximums, the Petition includes a new section 13.47.5 which enables the Planning Board to waive any requirements for the amount, location and design of parking and/or loading facilities for a Development Plan within the Broad Canal subdistrict. Further, Planning Board may authorize developments within the subdistrict to utilize shared loading facilities across uses and lots within the entire PUD-3 district.

There are no cited bicycle parking requirements within the PUD-3, including the proposed Broad Canal subdistrict. Although it would normally be assumed that bicycle parking requirements would follow the standards in Section 6.100 unless otherwise stated, it would be worthwhile to clarify that in the Petition to avoid future doubt.

#### *Open Space*

The Petition makes a minor modification to the existing PUD-3 requirements for open space, by adding a provision that allows the Planning Board to reduce the open space requirement as part of a PUD Special Permit.

More recent rezonings in Kendall Square, such as the PUD-7 and PUD-8 districts, have increased open space requirements above the baseline 15% (20% is required in PUD-8 and PUD-CDK, and 25% is required in PUD-7). The supporting materials for the Petition illustrate several open space improvements, but do not quantify the existing open space on the site or any proposed changes. Other recent Kendall Square zoning has also required the submission of open space and connectivity plans as part of the PUD review process to establish the locations and size of all proposed open space and what areas are open to the public.

#### *Sustainable Design*

Because the Petition does not specify additional sustainable design standards, development would be subject to the Green Building Requirements in Section 22.20 of the Zoning Ordinance, which requires a minimum design standard of LEED Gold, Passive House, or Enterprise Green Communities. Also required is a Net Zero Narrative, describing measures taken to reduce greenhouse gas emissions, a technical pathway to future net zero emissions, and a financial analysis comparing non-carbon-fuel-based building systems with conventional systems.

Recent Kendall Square rezoning efforts have tracked with these requirements but have included some other requirements as well. For example, the PUD-7 district requires a feasibility analysis of utilizing steam energy, reducing water consumption, incorporation of green infrastructure and low-impact development techniques, and requiring the use of cool roofs. Planning Board should consider whether similar updates should be made to the PUD-3 or proposed Broad Canal subdistrict to be in better alignment with recent planning goals.

#### *Proposed Canal Improvements*

The Petition includes exhibits which illustrate many improvements within, and adjacent to, the Broad Canal. A specific set of improvements is not described – such as details of the proposed walkway and bridge facilities. Many of the improvements shown would require other jurisdictional approvals and permitting from the Conservation Commission and Massachusetts Department of Conservation & Recreation, and/or be subject to Chapter 91 licensing requirements. Further investigation and study would be required before these improvements are pursued as part of a future development application.

#### *Letter of Commitment & Development Economic Analysis*

The Petition includes a cover letter that enumerates a number of benefits associated with the Petition, such as:

- Activation of the ground floor along Main Street and the Broad Canal, including a cut-through connecting the two.
- Ground floor uses that complement existing amenities and attract residents of all demographics
- Floating restaurant in the Broad Canal.
- Establishment of a “Cambridge Historical Trail” similar to the Freedom Trail in Boston.
- Broad Canal restoration and maintenance.
- Pedestrian and traffic safety improvements.
- Environmentally friendly initiatives tailored to the subdistrict.
- Tightening parking on-site to incentivize transit, bicycling, and walking as primary modes of commuting.
- Upgrades to Poor Man’s Landing in the Charles River.
- Restoration of the DCR Boathouse (old MDC Boathouse) near the Museum of Science.

This list provides a general description of how the proposed development might improve the area, but does not include a specific set of developer commitments or public contributions, which are typically provided in a separate Letter of Commitment accompanying a zoning petition of this type. Such a Letter of Commitment has not been provided thus far.

Beginning in 2020, in response to a City Council Policy Order, the City has used a third-party consultant to conduct a financial analysis of owner-led upzonings of at least 50,000 square feet. This analysis determines the change in project value from the new development potential granted by the petition as well as the value of public benefits proposed as part of the petition. The analysis will be completed after receiving a more specific and detailed set of proposed public benefits committed to by the Petitioner.