



City of Cambridge  
Department of Public Works

*Owen O'Riordan, Commissioner*

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November 26, 2019

TO: Planning Board

FROM: Katherine F. Watkins  
City Engineer

**RE: 87-101 Cambridge Park Drive: Application for Special Permit**

We are in receipt of the Special Permit Application materials, dated October 4<sup>th</sup>, 2019 for the redevelopment of the site known as 87-101 Cambridge Park Drive. We have reviewed the materials and have presented below some comments related to the interests of the Department of Public Works.

The Applicant has met with the Engineering, Conservation Commission and Urban Forestry divisions of the DPW and has been made aware of permitting requirements for the project. The DPW, based on the provided documentation, does not anticipate the project having any issue meeting all of the requirements of the DPW as the project will be subject to thorough and complete engineering review at the time of the Building Permit Application.

**Conservation Commission and Flood Plain Mitigation:**

The Conservation Commission held a Public Hearing for the project on November 18, 2019 in response to the filing of a Notice of Intent (NOI). The project falls under the jurisdiction of the Conservation Commission for work in the Floodplain and work within the Riverfront of the Old Alewife Brook as well as buffer zone to Bordering Vegetated Wetland (BVW). The hearing has been continued to December 16, 2019 pending the submission of supplemental materials. The project meets the mitigation measures for the altered Wetland Protection Act (WPA) wetland resource areas and an Order of Conditions is expected.

DPW, through the Conservation Commission Filing and initial hearing, has reviewed the Incremental (per foot) Flood Storage Capacity Calculations. The documentation submitted demonstrates that the project has met the Criteria in Section 20.75. There is no filling or encroachment that would impair Special Flood Hazard Areas to carry or discharge flood waters. The submitted flood storage capacity calculations show an increase in flood storage for the parcel for the FEMA 1% annual occurrence flood elevation.

It is worth noting, as you are in consideration of the Special Permit Application, that the Applicant did present the alternate layout for the shared use path to the Commission, for informational purposes only. This alternate path location, on land owned by the MBTA, will require the Applicant, in

conjunction with the MBTA, to file another Notice of Intent for the review and approval of this layout and the work adjacent to the wetland resource areas.

### **Climate Change / Resiliency:**

The Applicant has been asked to address flood level impacts and building resiliency associated with increased flood elevations presented in the November 2015 *Climate Change Vulnerability Assessment*. Flood Elevations associated with the 2070 10-year and 2070 100-year storm events have been provided to the Applicant.

The Applicant has been before the DPW on numerous occasions to review the City's expectations and their plans to address flooding and resiliency concerns for a commercial building at this location. The Applicant and their team have made significant improvements to their proposal through the process and have presented a plan that provides protections while maintaining connectivity to the existing adjacent uses and public right of way. The proposal for the structure to be designed to experience some vestibule/nuisance flooding in the 2070 storm surge/ sea level rise events allows for the building to quickly recover from a flood event. The Applicant is also proposing a passive flood gate at garage entrance. A passive gate for protection is preferable to any deployable system as it does not rely on advance warning of a flooding event and man power to provide protection.

In response to the City's Alewife Preparedness Plan , as the project design is progressed, the DPW will work with the Applicant to develop a Site Action Plan. The Site Action Plan shall allow for future building adaptation to flooding risks associated with climate change with an emphasis on providing safety and comfort to the building occupants. The plan shall include the below and be reviewed and approved by DPW and Fire Department staff through the building permit process.

- a. The Action Plan shall be reviewed by the Permittee and property management team every five years through 2070 to confirm the effectiveness of existing adaptation measures and the need for additional measures. The reviews shall be reviewed with DPW and the Fire Department.
- b. The Action Plan shall develop a notification regarding flooding risks that shall be included in the leases to ensure building occupants are informed of the flood risk. This plan shall be operational immediately upon occupancy of the building.
- c. The Action Plan shall develop a building user notification / evacuation plan. This plan shall be operational immediately upon occupancy of the building.
- d. The Action Plan shall develop information, guidance, and resources to assist building occupants sheltering in place, such as a disaster supply kit. This plan shall be operational immediately upon occupancy of the building.
- e. The Action Plan shall detail an operations plan for and flood protection measures. This plan shall be operational immediately upon occupancy of the building.

- f. The Action Plan shall develop the operation of the fire detection and suppression systems to ensure that they remain operable during flood events or loss of power. This plan shall be operational immediately upon occupancy of the building.
- g. The Action Plan shall address elevator operation and heated gathering spaces in each building in the event of loss of power. This plan shall be operational immediately upon occupancy of the building.
- h. The Action Plan shall identify appropriate public spaces in each building to locate key emergency medical supplies and other emergency response supplies. This plan shall be operational immediately upon occupancy of the building.
- i. The Action Plan shall develop a notification protocol to be utilized in the event of a flooding or other natural disaster. This plan shall be operational immediately upon occupancy of the building.
- j. The Action Plan shall detail future adaptation measures that can be implemented at the site to reduce flooding risks.

### **Stormwater Management:**

The submitted documentation includes discussion of the proposed storm water management system for the development. The documentation indicates that the proposed system will meet the Mass DEP and City of Cambridge Concord Alewife Design Standards. Under the City Land Disturbance Regulations due to the project requiring a Special Permit from the Planning Board, the Applicant will need to obtain a Stormwater Control Permit from the Department of Public Works. The permit requirements cover the design standards and long term operation and maintenance of a management system for the project site, as well as the construction phase erosion and sedimentation control plans. A thorough review of the design will be completed at the time of this permit submission.

The design presented in the Special Permit Application is based on design storm events consistent with NOAA Atlas 14, Volume 10, Version 2 Point Precipitation Frequency Estimates. These design storms are more consistent with current storm intensities and frequencies than the model storm events typically used and required by the Mass DEP. In supplemental documentation provided to the DPW, the Applicant has also indicated that the Stormwater Management system is adequately sized to meet the City of Cambridge requirements for future storm events consistent with what the City's Climate Change Studies are anticipating for 2030. The DPW appreciates the Applicants efforts in considering the projected 2030 storm events in the planning for their project.

### **Urban Forestry and Tree Ordinance:**

The Applicant has submitted a plan in accordance with the City Tree Ordinance. The plan, as currently presented, indicates that the project will result in a loss of caliper inches of trees that will not be able to be mitigated through planting of new trees or transplanting of existing trees. As a result the Applicant shall be required to make a payment to the Tree Fund to provide for planting of trees by the City.

The City Arborist will defer final calculation of the tree fund payment, currently set at \$850.00 per caliper inch (DBH) of deficit, until Building Permit submission. This will allow for the plans to fully develop and reduce the potential for changes in the planting plans after the mitigation payment.

The Application did propose transplanting of trees as part of their landscape plan for the development. Prior to approving any transplanting, additional details related to the scheduling, methods and logistics of the transplanting will be required to determine the feasibility of proposal. We respectfully request that the Applicants team reach out to the Arborist in advance of their building permit submission to review their plans for this work.

**Public Infrastructure:**

The Applicant understands the DPW requirements associated with public infrastructure and has committed to working with the DPW through the building permit process on design details.

- The applicant indicates that the proposed sewer generation will be below the 15,000 gallon per day threshold that would trigger removal of inflow and infiltration from the sewer system. The DPW will confirm the sewer generation calculations at the submission of the Building Permit to confirm sewer generation calculations for the final programming of the building. Any changes to the programming that causes the project to exceed the 15,000 gallon per day threshold will trigger I/I Mitigation at the rate of 4:1.
- Work in the Public right of way of Cambridgepark Drive will need to be reviewed and coordinated with the DPW, other interested City Departments and other adjacent development projects.

Again, to confirm that all of the items above are addressed by the proposal, a thorough review of the development at submission of a building permit and during design and construction will be required by the DPW .

Please feel free to contact me with any questions or concerns related to the comments provided above.

Sincerely,

A handwritten signature in blue ink, appearing to read "Katherine F. Watkins".

Katherine F. Watkins, P.E.  
City Engineer