



City of Cambridge  
Department of Public Works

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September 24, 2020

TO: Planning Board

FROM: Katherine F. Watkins, PE  
City Engineer

**RE: Cambridgeside 2.0: PUD Special Permit Application**

We are in receipt of the Special Permit Application Documents for the Cambridgeside 2.0 Redevelopment, dated August of 2020. We have reviewed the materials and have presented below some comments related to the interests of the Department of Public Works.

Generally, based on the provided documentation and narratives, the DPW does not anticipate the project having any issue meeting all of the requirements of our Department. The DPW has also met with the Applicant and their consultants to review the proposal for the proposed redevelopment infill project. The Applicant's team have demonstrated an understanding our Department's requirements and have continuously expressed willingness to work with the DPW to meet the requirements and to address our concerns.

Items presented in this memo relate to broad level review associated with the PUD planning, scheduling and implementation, and not specifically the Design Review Materials included for the first phases of the PUD. As the project is further advanced, DPW will work with the applicant to ensure that the requirements noted below are addressed. Formal complete engineering review will be undertaken by the DPW at each phase of the development, at the time of each Building Permit Application, to confirm that all DPW Standards have been met.

**Project Phasing and Construction:**

With any phased development of this kind, the Applicant should be aware that at the completion of any phase the project shall be in compliance with all DPW standards. The DPW is always willing to consider innovative shared infrastructure solutions, particularly if they can reduce the projects impacts on the environment and community. That said, the phasing of the project shall allow for completion of these shared solutions in a manner that maintains the projects compliance with DPW regulations throughout the phasing of the PUD.

Consistent with other PUD's in the area, the DPW respectfully requests that the Applicant consider

construction logistics and operations of each phase of the project early in the design development. Redevelopment and infill projects can be significantly impactful to the abutting properties and rights-of-way. Considerations in this busy neighborhood will need to be made to minimize the impacts to the greater community including all modes of transportation (vehicles, bikes and pedestrians), street trees, and adjacent buildings and operations.

### **Climate Change and Resiliency:**

The Application presents a Resiliency plan that outlines measures that the Redevelopment will take to address concerns associated with Climate Change. The proposal outlines steps to address concerns related to flooding and heat island effect. The project, with its maintained use as a shopping center and a location along the river, has some unique opportunities to provide services and spaces that can be accessible to the broader community.

The DPW supports the measures that the Applicant has outlined and will work with them to confirm they are implemented as the design progresses.

### **Urban Forest:**

In addition to the Resiliency Plan, the submitted Tree Study indicates that the Project does not plan to remove any significant trees on their property or in the public right of way. This is an important commitment that, along with the proposal to add additional trees, will help to maintain and provide canopy.

The DPW will work with the Applicant to confirm that all phases of the project to look for opportunities for increased tree plantings and that all plantings will be in compliance with the Goals of the Urban Forestry Master Plan.

### **Public Infrastructure:**

As the development progresses through the Design Review and Building Permit process, we will review the site and utility design related to DPW standards and requirements. The DPW reserves the right to establish appropriate mitigation measures, related to impacts to public utility infrastructure and the public right of way (streets and sidewalks), throughout the process as the design presents the full scope of these impacts. These may include vibration monitoring; deflection monitoring of existing utilities; pre and post construction videoing; and resident engineering services on the City's behalf, depending on the phasing of the projects.

The DPW looks forward to working with the Traffic, Parking and Transportation Department and the Applicant on the reimagining of the First Street Corridor. Consistent with items noted above we will request that construction sequencing and scheduling consider how and when First Street Right of Way will be impacted.

### **Stormwater Management:**

Under the City Land Disturbance Regulations, the Applicant will need to obtain a Stormwater Control Permit from the Department of Public Works, prior to the start of construction of each



phase. 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.

The project is located within the Charles River Watershed for which a Total Maximum Daily Load (TMDL) has been established for Phosphorous, the pollutant of concern. In response to the TMDL the City requires that projects within the watershed treat stormwater to reduce the Phosphorous load by 65% from the existing condition.

The Application included calculations and a narrative that acknowledge the requirements noted above. The DPW has reviewed the documentation and expects to again confirm the calculations as the project submits Stormwater Control Permits in advance of their Building Permit Applications. As the design progresses some additional information/modifications that we will be interested in are noted below.

- The Stormwater Control Permits also includes the standard to mitigate the stormwater runoff from the site from the proposed 25-year storm to a rate below the pre-redevelopment 2-year storm event. There is an allowance in the regulations for projects in direct proximity to an outfall to not over detain stormwater to meet this standard, as there is a benefit to our system to have the stormwater released prior to the peak discharge of runoff from the upper reaches of the drainage area. The project commits and provided calculations that demonstrate that the project will not increase the peak rate of stormwater Runoff from the site, consistent with Mass DEP Standards. The DPW agrees that this is an acceptable approach for Stormwater Management for this project at this location.
- For the above noted calculations, the Applicants consultant has utilized the NOAA Atlas rainfall data. The DPW will require that the Applicant evaluate the sites proposed Stormwater Management systems will perform under the future (2030 and 2070) projected rainfall events.
- The Applicant has provided detailed Phosphorous removal calculations for the I/I mitigation work, discussed below. As the design progresses, the DPW will look to understand how the Project Site is meeting the Phosphorous removal requirements. The DPW support the Applicants commitment to implement small scale BMPS in the at grade spaces to provide water quality improvements and will look for all discharges to the Charles River to Meet this Standard. Any stormwater BMP's located in the public right of way will require City Approval.

### **Sanitary Sewer:**

The Application has indicated that the project will result in an estimated sewer flow generation of approximately 176, 000 gallons per day, at full build out. This is a net increase of just over 100,000 gallons per day over the existing design flow from the mall site.

This increase will trigger the requirement for the project to remove 4 times the net increase in

flow of Infiltration and/or inflow (I/I) from the sewer system. To meet the bulk of this requirement the Applicant is proposing to install new drainage infrastructure in Land Boulevard. The proposed infrastructure will collect stormwater runoff from the roadway and adjacent parcels and roofs and redirect it from the sewer system to the City's existing outfall to the Charles River. In advance of discharging to the river runoff from small storm events and the first flush of larger storms will be infiltrated to groundwater to provide a reduction in the volume of water conveyed to the River and improvements in the quality of the water.

The DPW has met with the Applicant on this proposal and agrees that it is an appropriate approach for the project to satisfy the Redevelopments I/I removal requirement. The project is complex and will require coordination with the State and detailed engineering design considerations as should be expected when working in a public right of way in an urban environment. The DPW will continue to work with the Applicant as the design progresses.

**Private Utilities:**

The Application provides some narrative related to the what will be required at the site to support the private utility connections. The Narrative does not include any specific information related to the scope of the utility work required within the Public Right of way. The DPW will look to understand the scope of this work for the entire buildout prior to any construction commencing, as it will be critical for us to evaluate sequencing, construction impacts and surface mitigation requirements.

**Conservation Commission Jurisdiction:**

The DPW would respectfully request that the Applicant review the proposal and outline which project components will be jurisdictional under the Wetland Protection Act and therefore subject to the review and approval of the Conservation Commission. It may be helpful for the Planning Board to have this understanding as they are review those portions of the work.

Again, in summary, the comments above are specific to the PUD Special permit. The DPW anticipates having addition comments to the Board as the discussion progresses to the Design Review Materials.

We look forward to working the Applicant on this project. Please feel free to contact me with any questions or concerns related to the comments or information provided above.

Sincerely,



Katherine F. Watkins, P.E.

City Engineer