



City of Cambridge
Department of Public Works

Owen O'Riordan, Commissioner

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October 14, 2014

TO: Planning Board

FROM: Katherine F. Watkins, PE
City Engineer

RE: PB 198 – Discovery Park Amendments, Buildings 400, 500, 600 & Garage B

The proposed project is within the Alewife Flood Plain Overlay District and is also within the Concord / Alewife zoning district. I have reviewed the Planning Board Major and Minor Amendments dated August 20, 2014, and the Conservation Commission Notice of Intent (NOI) application for an Amendment of Order of Conditions, dated August 21, 2014, and the Stormwater Report, dated August 21, 2014. Based on my review, the applicant has complied with the requirements of the ordinances and regulations.

Stormwater

The project provides adequate compensatory flood storage in an incremental fashion in conformance with the requirements. The storage requirement is primarily met through the construction of a stormwater storage space under the building. The design of the stormwater storage space is similar to the other systems previously constructed in Discovery Park.

The Department of Public Works, in conformance with the Concord / Alewife zoning requirements, further requires that the development provides additional storage so as to better the performance of the municipal drainage system in the area. To meet that standard, the development provides additional stormwater storage so that during the 25-year storm event, the maximum discharge from the site is less than or equal to the pre-construction 2-year discharge.

The effective maintenance of the stormwater systems is key to the successful management of the stormwater. The Stormwater Report outlines the inspection schedule and the proponent has confirmed that they are meeting this schedule.

- 4 times a year for catch basins.
- 4 times a year and after major storm events for the vegetative sediment forebay.
- Annually for the stormwater wetland.

Design Elevations

When the first building was being designed and permitted, FEMA's flood study consultant indicated that the 100-year flood elevation might increase to as high as 10.8 NGVD. The original building and subsequent buildings have been designed to 10.8 NGVD, over 3' higher than the actual 100-year flood elevation of 7.6 NGVD. I strongly support the continued use of this higher elevation for the ground floor for additional protection from large storm events, as included in the submitted design.

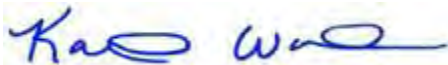
Sewer Use

The project is implementing the required sewer mitigation, which includes sewer storage during heavy rainfall and the elimination of inflow from the City sewer system at a rate of 4:1 over pre-construction volumes, in accordance with state standards. The proposed amendments and the change in use will increase the anticipated sewer flow over the 2004 Master Plan by approximately 9%, 75,204 gallons per day vs. 68,990 gallons per day. This increase is modest in terms of the overall system and will be mitigated by the proponent increasing the on-site sewer storage and inflow removal. The total inflow removal required for the project area will be 170,296 gallons (4 times the increase over the pre-construction sewer use).

Summary

DPW will be reviewing the Buildings 400, 500, 600 and Garage B again during the building permit review process. At that time, DPW will work with the proponent to finalize the details of the inflow removal and the Stormwater Pollution Prevention Plan.

Sincerely,

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

Katherine F. Watkins, P.E.
City Engineer