



Memorandum

To: Planning Board
1625 Massachusetts Avenue
Lexington, MA 02420

Date: October 19, 2021

Project #: 15233.00

From: Dale Horsman, PE
Sean Colella, PE

Re: 475 Bedford Street Sketch Plan
Impact on Public Facilities Memorandum

On behalf of Cresset Lexington LLC (the "Applicant"), VHB is submitting the following memorandum as part of the associated Sketch Plan for the Bedford Street Redevelopment (the "Project"). The Project is located at 475 Bedford Street in Lexington, MA, and is a redevelopment of an existing 9.0-acre site that contains an existing sports and tennis club building, associated amenities and parking (the "Site") which was originally developed in 1965. The proposed redevelopment includes a 5-story, 225,500-SF lab/R&D facility with first floor retail space and a 5-story structured parking garage. The Applicant is proposing to create a Planned Development District for the Site.

There is an existing Order of Conditions for the Site which allowed the tennis club to operate in the RO Zoning District. The Site history of development and site improvements by the Special Permits and Lexington reviews are listed as follows:

- July 1965; Approval to construct and operate a tennis and athletic club
- June 1967; Approval for site variance
- April 1969; Approval to construct four outdoor tennis courts
- August 1969; Approval to install a freestanding sign
- June 1972; Approval to permit the use of the tennis club and parking
- August 1974; Approval to permit minor site alterations
- August 1982; Approval to allow cafeteria/eating area for members only
- May 1987; Approval for interior renovations, reconstructed parking, new signage and construction of outdoor racquetball courts
- June 1993; Approval to permit a satellite receiving antenna on site
- August 2001; Approval to replace outdoor tennis courts with a swimming pool and additional parking
- January 2003; Approval for new signage at Boston Sports Club facility

Please refer to the body of this memorandum for utility, environmental, and mitigation associated with the Project.

Existing Conditions

The Site is located within the One Family Dwelling (RO) zoning district at 475 Bedford Street in Lexington, MA and is currently occupied by the Lexington Tennis Club. The Site has been used and operated commercially as a fitness facility since the 1960's. The Site is directly abutted by planned residential (Drummer Boy Condo Association), and government civic. An existing manufacturing (CM) zoning district is located directly across Bedford Street and extends further down Hartwell Avenue. A 30-ft natural gas easement bisects the Site separating the tennis club facilities to the west and existing surface parking lot to the east. An overhead electric transmission line within a maintained 250-ft utility right-of-way occupies the majority of the eastern half of the Site. The Town of Lexington 40-ft sewer easement is also located along the eastern property boundary.

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The Site is bounded by Bedford Street to the south and southwest, the Commonwealth of Massachusetts Armory to the southeast, a utility transmission right-of-way and forested land to the east and northeast, and Drummer Boy Condominium development to the north and west. The majority of the existing paved parking is at elevation 125'. The site generally slopes from west to east. The highest elevations are approximately 135' at the west property boundary along Bedford Street and northwest property boundary adjacent to Drummer Boy Way. The lowest elevations are approximately 120' along the eastern property boundary within the large wetland complex. The Site is a substantially altered condition, with the current parking lot and buildings discharging stormwater runoff to the wetlands around the perimeter of the developed area. There is a natural tree line screening the Site to the north and the west from abutting properties.

According to the most recently available data provided by the Massachusetts Natural Heritage and Endangered Species Program (NHESP), no portion of the Site is within Priority Habitat of Rare Species or Estimated Habitat of Rare Wildlife. There are no Certified or Potential Vernal Pools in the vicinity of the Site. The most recently issued Flood Insurance Rate Map (FIRM) for the area, produced by the Federal Emergency Management Agency (FEMA), indicates that a minor portion of the Zone X floodplain extends across the southeastern area of the property. Reference 'Existing Conditions Plan of Land' for approximate location of Zone X floodplain.

Wetlands on the Site were delineated on April 20, 2021 by environmental scientists with Vanasse Hangen Brustlin, Inc. (VHB) in accordance with methods developed by the Bylaw, the DEP and the U.S. Army Corps of Engineers. The following sections of this narrative describe the wetlands and identify resource areas on the Site that are regulated under the WPA Regulations (310 CMR 10.00) and/or the Bylaw. Reference 'Existing Conditions Plan of Land' for locations of wetlands and resource areas identified.

Wetland resource areas identified on or near the Site include Bank, BVW, LUWW. These resources are defined under the WPA Regulations (310 CMR 10.00) as follows:

- **Bank:** As defined at 310 CMR 10.54 (2), a Bank is the portion of the land surface, which normally abuts and confines a water body. The upper boundary of Bank is the first observable break in slope.
- **BVW:** As defined at 310 CMR 10.55(2)(a) and (c), BVWs are 'freshwater wetlands that border on creeks, rivers, stream, ponds, and lakes.' The boundary of BVW is determined by the presence of 50 percent or more of wetland indicator plants and saturated or inundated conditions.
- **Land Under Water Bodies and Waterways (LUWW):** As defined at 310 CMR 10.56 (2), LUWW is the land beneath any creek, river, stream, pond or lake. The boundary of LUWW is the mean annual low water level.

The Bylaw also protects Isolated Vegetated Wetlands (IVW) and areas meeting only one criteria (vegetation or hydric soils).

Proposed Conditions

The Project scope includes the following:

- Site improvements to support the Project including a proposed 5-story retail, lab and office building, vehicular/pedestrian access, a proposed 5-level parking structure, surface parking, loading spaces, landscape and hardscape amenities, open space, and building utility service connections to public and private utilities
- Environmental improvements including an overall reduction of impervious area, restoration of the 25-ft wetland buffer zone, reduction of surface parking from the 25-ft and 50-ft buffer zones, minimizing impact to an existing on-site wetland, and promoting stormwater quality and Best Management Practices (BMPs)
- Proposed fill of approximately 1,300 SF of (man-made) isolated wetlands, fill of no more than 4,900 SF of bordering vegetated wetland, and complete wetland replication (2:1) area increasing the existing wetland complex. Exact location of the proposed wetland replication is still being coordinated with the Lexington Conservation Commission.

The Applicant is limiting the Project to redevelop the areas previously disturbed by the existing development. Furthermore, the proposed building and structured parking are consolidated on the west half of the Site. Existing gas, sewer and overhead utility easements create a non-advantageous scenario for any future development on the east half of the Site. A Site Constraints visual representation of the existing easements is attached as an exhibit to this memo for reference. The Project proposes an increase in open space, a reduction of impervious area, minimal impacts to public infrastructure, and the betterment of the existing wetland complex by ways of wetland replication and stormwater BMPs. Invasive Species Management is also being considered to mitigate some of the existing conditions on site.

Environmental Impact Assessment

Stormwater and Groundwater

The Site is approximately 9.0-acres of land, which includes approximately 114,850 SF (2.64-acres) of bordering vegetated wetlands. Based upon USGS – Soil Conservation Service Maps for Lexington, the underlying soils within the Site include the following:

- Freetown Muck;
- Udorthents-Urban Land Complex; and
- Charlton Urban Land – Hollis Complex.

Groundwater depths are unknown as of the writing of this memorandum. Test pit excavations were recently conducted and the findings from those investigations are currently being reviewed. As the Project is further developed, subsurface testing will be performed to determine the groundwater elevations, infiltration rates, and confirm the soil classifications to be incorporated into the Project's stormwater management design.

Wildlife and Vegetation

The Project is located on a site that has previously been fully developed. The majority of the Site is impervious, including surface parking, paved access, existing buildings and outdoor hardscape amenities. Trees and shrubs line the north and west property boundaries. The bordering vegetated wetlands contains a variety of plant life, which will be maintained and protected during the Project's development, other than the proposed wetland fill area. There are mature trees surrounding the building and a few along Bedford Street. The Site does not contain any habitats of rare wildlife per the Natural Heritage and Endangered Species Program (NHESP) nor any known or potential vernal pools in the vicinity.

The Project proposes to maintain a vegetated screening buffer along the north and west property boundaries, providing a natural buffer between the Site and the abutting residential condominium complex. Tree loss will be focused to those adjacent to the existing buildings and proposed loading areas. The Project will use native and non-invasive species at proposed open space locations and outdoor amenities, complying with the Town of Lexington Plant Materials Guide. The Project will promote a variety of plant species and minimize the impact to existing vegetation.

Noise

A major source of noise currently is attributed to the vehicular traffic along Bedford Street adjacent to the Site. Potential new sources of noise may be attributed to the Project's rooftop mechanical equipment for heating, cooling, and ventilation for the proposed building. To mitigate these impacts, the building design will include a rooftop penthouse enclosure to dampen increase level of noises. The Applicant will ensure the building design and acoustic dampening equipment is in line with Massachusetts and Lexington noise regulations.

Air Quality

The Project is not anticipated to be subject to MEPA jurisdiction and the procurement of air quality permits for the facility is not anticipated. Air quality will directly benefit from careful selection of building materials and energy-efficient mechanical systems to reduce energy consumption. Additionally, the Applicant will promote the use of public transportation, carpools, and multi-modal transportation options for the proposed lab and office use to reduce single-occupancy commuter trips.

Historical and Archaeological

The Project Site does not have any Historical or Archaeological Assets after a review of the MassGIS Oliver database and the Massachusetts Historical Commission files.

Public Town Services

The Project will affect public utility infrastructure as the Project proposes to connect to existing utilities within Bedford Street. Further description is found later in this memorandum under the Utility Infrastructure section. Public pedestrian access within the Bedford Street right-of-way will be maintained and improved. The Project is not a residential project so there will be no effect on public schools.

The Project Site is located along MBTA bus route #62, which services Bedford Street and Hartwell Avenue in Lexington. There is an existing MBTA bus stop located directly in front of the Site along Bedford Street. The Project should have no negative impacts on this bus route; the Applicant will work with the MBTA and the Town of Lexington as the Project is further developed if needed. The Bedford Street corridor directly abuts the manufacturing (CM) zone along Hartwell Avenue, and includes commercial uses such as the Quality Inn & Suites, iSpecimen biomedical, and Boston Children's Hospital at Lexington across the street from the Site.

The Project will be designed to accommodate emergency vehicle access, including fire trucks. Hydrants will be proposed where needed and the buildings will be designed following Massachusetts Building Code, Massachusetts Fire Code, and National Fire Protection Association (NFPA) regulations.

Passenger vehicle trip generation for the proposed development is projected to be modest compared to the historical use of the site with 46 additional trips during the weekday morning peak hour and 17 fewer trips during the weekday evening peak hour. The preliminary review also indicates the available sight lines at the Bedford Street intersection with the existing site access will exceed the minimum sight lines requirements from AASHTO for the regulatory and 85th percentile travel speeds. Any new plantings or physical landscape features proposed in the sight lines shall be maintained at a height no greater than 2-feet above the adjacent roadway grade. For more detailed information, reference the attached Sketch Plan Traffic Study memorandum developed by MDM Transportation Consultants, Inc.

Utility Infrastructure

Sanitary Sewer/Wastewater

Under existing conditions, the building on the Site is serviced by one sanitary sewer connection to the municipal sewer line in Bedford Street through a series of manhole connections. The existing connections are located on the south side of the existing building under the pool area and at the southeast corner. One 6-in gravity line from the building sanitary system ultimately flows to the existing 15-in VCP gravity sewer in Bedford Street. The gravity sewer main in Bedford Street transitions to a 24-in VCP gravity sewer at the intersection of Bedford Street and Eldred Street. The municipal sewer system is connected to the regional Massachusetts Water Resource Authority (MWRA) sewer collection system, and the wastewater ultimately flows to the Deer Island Wastewater Treatment Plant in Boston, MA for treatment and disposal.

Under existing conditions, it is estimated that the Site produces approximately 18,250 GPD of wastewater. As currently proposed, the Project is estimated to produce approximately 30,625 GPD of sewage flow, which is a 168% increase in sewage generation compared to existing conditions. As the Project is developed and the space of the proposed office/lab building is further designed, a sewer capacity analysis will be performed for the Project.

Water Supply

The existing development has two water connections servicing the existing building that connect to the water main in Bedford Street. Further survey is required to determine the sizes of the existing water main in Bedford Street and the building water service connections. The municipal water system is connected to the MWRA regional water distribution system, which is controlled locally by the Lexington Water Department. The water lines currently provide domestic and fire protection for the existing buildings.

Under existing conditions, it is estimated that the swim and tennis club uses on average approximately 18,250 GPD of water. As currently proposed, the Project is estimated to use approximately 33,700 GPD of water, which is a 185% increase in water usage compared to existing conditions. Hydrant flow testing will be performed and overseen by the Lexington Department of Public Works to obtain water pressure and flow data for future design of the Project's domestic and fire protection water services.

Stormwater

All the existing stormwater drainage structures and pipe on site will be excavated, filled or abandoned in place during the redevelopment project. The Project will restore the 25-foot no disturb buffer surrounding the existing wetland(s). The Project will incorporate a variety of BMPs that include structural methods for mitigating peak runoff rates, providing water quality, approximating existing drainage patterns, and promoting infiltration to the maximum extent feasible, based on subsurface hydrogeology. Preliminary drainage analyses and designs have not been completed at this time.

Due to the presence of the existing wetlands, the Project will be subject to an Order of Conditions by the Lexington Conservation Commission. Due to its status as a redevelopment, the Project's proposed stormwater management system(s) will meet the Ten (10) Stormwater Standards set forth by the Massachusetts Department of Environmental Protection (MassDEP) to the maximum extent feasible. The Project's stormwater management design will also follow the Lexington Stormwater Management By-law requirements.

Electrical

Eversource provides electrical services to the Town of Lexington. It is assumed that adequate electric grid capacity exists within Bedford Street to service the proposed use(s). As the Project is developed and the space of the proposed office/ lab building is further designed, a preliminary calculation of the projected electrical loads for the building will be performed and shared with Eversource. The Applicant will work with Eversource to ensure the Project has the required power.

Gas

National Grid provides natural gas services to the Town of Lexington. It is assumed that adequate natural gas pressure and capacity exists within Bedford Street to service the proposed Project. As the Project is developed and the space of the proposed office/ lab building is further designed, a preliminary calculation of the projected gas load for the building will be performed and shared with National Grid. The Applicant will work with National Grid as they continue Project development.