

CITY OF NEWTON
Department of Public Works
ENGINEERING DIVISION

MEMORANDUM

To: Council Rick Lipof, Land Use Committee Chairman

From: John Daghlian, Associate City Engineer

Re: Special Permit – 1114 Beacon Street ~ THE BEACON

Date: June 23, 2021

CC: Barney Heath, Director of Planning
Jennifer Caira, Deputy Director Planner
Neil Cronin, Chief Planner
Lou Taverna, PE City Engineer
Nadia Khan, Committee Clerk
Katie Whewell, Sr. Planner

In reference to the above site, I have the following comments for a plan entitled:

Pemit Site Plan
The Beacon
1114 Beacon Street
Prepared by: DGT Associates Surveying & Engineering
Dated: June 4, 2021

Executive Summary:

This application entails the complete demolition of a commercial building and the construction of a *three-story* 34-unit residential building on a 51,745 square foot [1.18 acre] lot. The site has 158-feet of frontage on Beacon Street, bound on the east by a commercial building, residential homes on the south and a commercial building to the west. Currently two curb cuts provide access to the lot, the easterly curb cut is a “*common drive*” between #1114 & #1106 Beacon Street, and the western driveway provides access to the rear parking lot, this curb cut is to be eliminated. The site has a high point near Beacon Street of elevation of 125-ft and slope downward towards the southwest at approximately 109-ft. to a natural depressed area that looks like a “*swamp*” technically qualifies as an (ILSF) Isolated Land Subjected to Flooding at

elevation 114.55 feet in accordance Wetland Protect Act Regulations. The “swamp” is unkept with trash, debris, and tires laden waste area. The applicant intends to remove all the trash & debris, trees that are in poor condition and some of the asphalt surrounding it that has the approval of the Conservation Commission which has issued an Order of Conditions for plan.



*Isolated Land Subject to Flooding (ILSF) Photo taken by: J. Daghlian 6/17/2021.
aka the “Swamp”*

Currently the *swamp* is the low point for the neighborhood watershed that is approximately 3.1 acres, the site has limited essentially no formal stormwater collection system, stormwater simply sheet flows to the swamp (stormwater basin). The stormwater basin always has 2-3 feet of standing water, however; it does provide infiltration into the surrounding sand and gravel deposits, there is no piped outlet that the City is aware.

The project site is essentially all impervious (roof and paved parking lot); the southwestern corner of the property is within an area that is Isolated Land Subjected to Flooding (ILSF) other than this small area there is no open space.



Looking North ~Existing parking lot & roof that sheet flows to the ILSF photo taken by J. Daghlian 6/17/21

The development has a proposed reduction of impervious surfaces of 2,000 square feet by the removal of existing asphalt and has incorporated water quality improvements for the overall site drainage. The design complies with the DEP's Stormwater Requirements and the City's Stormwater Design Standards by reducing both flowrate and volumes to the two control points associated with the site: being Beacon Street and the ILSF. The design incorporates improvements for water quality and quantity by introducing proprietary stormwater treatment unit, a 63-foot long infiltration trench, and reinforced grassy turf swales prior to the ILSF. The proposed Operations and Maintenance (O&M) plan for the long-term maintenance of the proposed stormwater management facilities is acceptable. The O&M must be adopted by the

applicant/property owner, incorporated into the deeds; and recorded at the Middlesex Registry of Deeds. A copy of the recording instrument shall be submitted to the Engineering Division.

The engineer of record has provided a dewatering plan that is appropriate for the site conditions, if changes are encountered during construction the plan and process will be modified as needed.

The City Ordinances regulate surface stormwater runoff that require on site controls, so no abutter is impacted, which this plan takes into account. On June 26th, Mr. Gary Lesanto [property owner at #1126 Beacon Street] and his consultant; the applicant and his design team, and I met regarding the concern for high groundwater in the neighborhood. The concern was in relation to the proposed foundation drain that would discharge at an elevation near the elevation of elevator pit at #1126 Beacon Street. Based on the soils borings groundwater flow is from east to west, in the direction of #1126 Beacon Street. Although the City Ordinance does not regulate groundwater, we are mindful of potential negative impact that, if possible, can be avoided or mitigated with design modification. I suggested that the developer investigate the possibility of installing an overflow connection to the City's existing drainpipe, a 30-inch reinforced concrete pipe that would receive high groundwater flow. The engineer of record has submitted an engineered sketch plan dated June 21, 2021, that shows a foundation drain being connected to the City's pipe. The amount of flow that will be allowed to this pipe still needs to be determined and can be accomplished if this Special Permit is approved and moves towards a Building Permit phase. As a condition of approval, the engineer of record shall submit capacity calculations for the 30-inch pipe for the anticipated high groundwater flow in gallons per day (gpd) and downstream capacity of the City's drainage system based on the amount of groundwater collected from the site and upstream flows currently directed to the City drainpipe. As with all overflow connections, pre & post construction Closed Circuit Television (CCTV) inspections are required and to be witnessed by the DPW, copies of the inspection shall be submitted to the City Engineer.

As required per City Ordinance upon completion of all utility installation the sidewalk and driveway apron along the entire frontage shall be updated to current standards and Beacon Street shall be paved curb line to curb line for the entire frontage.

Construction Management:

1. Prior to Building Permit application, a construction management plan is needed for this project. At a minimum, it must address the following: staging site for construction materials and equipment, parking for construction workers vehicles, phasing of the project with anticipated completion dates and milestones, safety precautions, emergency contact personnel of the general contractor. It shall also address anticipated dewatering during construction, site safety & stability, siltation & dust control and noise impact to abutters.

2. Catch basins within the Beacon Street work zone and downstream of the construction zone will be required to have siltation control installed for the duration of the project and must be identified on the site plan.
3. Safe pedestrian access along Beacon Street shall be accommodated per the DPW requirements, any sidewalk closures will require a mitigation plan with detoured paths of travel approved by DPW.

Infiltration & Inflow:

- Will be addressed via a separate memo.

Drainage:

- It is imperative to note that the ownership, operation, and maintenance of the proposed drainage system and all appurtenances including but not limited to the drywells, catch basins, trench drains, and pipe(s) are the sole responsibility of the property owner(s).

Sanitary Sewer & Domestic Water Service(s):

1. Existing water and sewer services to building(s) shall cut and capped at the respective mains and completely removed from the main(s) and its entire length and properly backfilled. The Engineering Division must inspect and approve this work, failure to having this work inspected will result in delay of issuance of the new Utility Connection or issuance of a Certificate of Occupancy.
2. All new sewer service(s) shall be pressure tested in accordance to the City Construction Specifications & Standards and inspected via Closed Circuit Television CCTV inspection after installation is completed. A copy of the video inspection and written report shall be submitted to the City Engineer or his representative. The sewer service will NOT be accepted until the two methods of inspection are completed AND witnessed by a representative of the Engineering Division. A Certificate of Occupancy will not be recommended until these tests are completed to the satisfaction of the City Engineer.
3. All sanitary sewer manhole(s) shall be vacuum tested in accordance to the City's Construction Standards & Specifications, the sewer service and manhole will NOT be accepted until the manhole(s) pass the testing requirements. All testing MUST be

witnessed by a representative of the Engineering Division. A Certificate of Occupancy will not be recommended until this test is completed to the satisfaction of the City Engineer and a written report of the test results is submitted to the City Engineer.

4. With the exception of natural gas service(s), all utility trenches within the right of way shall be backfilled with Control Density Fill (CDF) Excavatable Type I-E up to within 18-inches of the asphalt binder level, after which Dense Grade Gravel compacted to 95 % Proctor Testing shall be placed over the CDF. Details of this requirement is the Engineering Division website "Standard Construction Details".
5. To verify the proposed fire suppression service connection, a fire flow test by a qualified consultant of the closest hydrant must be schedule with and witnessed by the Newton Fire Department and the Utilities Division *48-hours* prior notice shall be given to each Department. Results of the fire test shall be submitted to both Departments along with hydraulic calculations that will properly determine the required size for each service connection.
6. Detailed plan and profile of the sanitary sewer connection is required [typically at a horizontal scale of 1" =20' and vertical scale of 1" = 2'] for reviewed and approval.
7. The underground parking garage floor drains must be connected to the sanitary sewer connection which is not this is not indicated on the plan, and to be connected via MDC gas traps and the State Plumbing Codes.
8. For water quality issues a fire hydrant will be required at the end of the proposed water main/service. This hydrant will be utilized for flushing out the main as required.
9. All water services shall be chlorinated, and pressure tested in accordance to the AWWA and the City Construction Standards & Specifications prior to coming online. These tests MUST be witnessed by a representative of the Engineering Division.
10. Approval of the final configurations of the water service(s) shall be determined by the Utilities Division, the engineer of record shall submit a plan to the Director of Utilities for approval.

General:

1. All trench excavation shall comply with Massachusetts General Law Chapter 82A, Trench Excavation Safety Requirements, and OSHA Standards to protect the general public from unauthorized access to unattended trenches or excavations. Trench Excavation Permit is

required prior to any construction. This applies to all trenches on public and private property. *This note shall be incorporated onto the final plans.*

2. All tree removal shall comply with the City's Tree Ordinance.
3. The contractor of record is responsible for contacting the Engineering Division and scheduling an appointment 48-hours prior to the date when the utilities will be made available for an inspection of water services, sewer services and drainage system installation. The utility in question shall be fully exposed for the Inspector to view, backfilling shall only take place when the City Engineer's Inspector has given their approval. *This note shall be incorporated onto the final plans.*
4. The applicant shall apply for a Building Permit with the Inspectional Services Department prior to ANY construction.
5. Before requesting a Certificate of Occupancy, an As Built plan shall be submitted to the Engineering Division in both digital and paper format. The plan shall show all utilities and final grades, any easements and improvements and limits of restoration. The plan shall include profiles of the various new utilities including but not limited to rim & invert elevations (City of Newton Datum), slopes of pipes, pipe materials, and swing ties from permanent building corners. The as built shall be stamped by both a Massachusetts Registered Professional Engineer and Registered Professional Land Surveyor. Once the as built plan is received the Engineering Division shall perform a final site inspection and then make a determination to issue a Certificate of Occupancy. *This note shall be incorporated onto the final plans.*
6. All site work including trench restoration, sidewalk, curb, apron and loam border (where applicable) shall be completed before a Certificate of Occupancy is issued. *This note shall be incorporated onto the final plans.*
7. The contractor of record shall contact the Newton Police Department 48-hours in advanced and arrange for Police Detail to help residents and commuters navigate around the construction zone.
8. If any changes from the final approved design plan that are required due to unforeseen site conditions, the contractor of record shall contact the design engineer of record and submit revised design and stamped full scale plans for review and approval prior to continuing with construction.

Note: If the plans are updated it is the responsibility of the applicant to provide all City Departments [ISD, Conservation Commission, Planning and Engineering] involved in the permitting and approval process with complete and consistent plans.

If you have any questions or concerns, please feel free to contact me at 617-796-1023