CITY OF NEWTON
Department of Public Works
ENGINEERING DIVISION

MEMORANDUM

To: Council Gregory Schwartz, Land Use Committee Chairman

From: John Daghlian, Associate City Engineer

Re: Special Permit – !45 Warren Street

Date: May 13, 2019

CC: Barney Heath, Director of Planning
Jennifer Caira, Chief Planner
Jennifer Steel, Sr. Environmental Planner
Lou Taverna, PE City Engineer
Ted Jerdee, Director Utilities
Nadia Khan, Committee Clerk
Neil Cronin, Sr. Planner

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

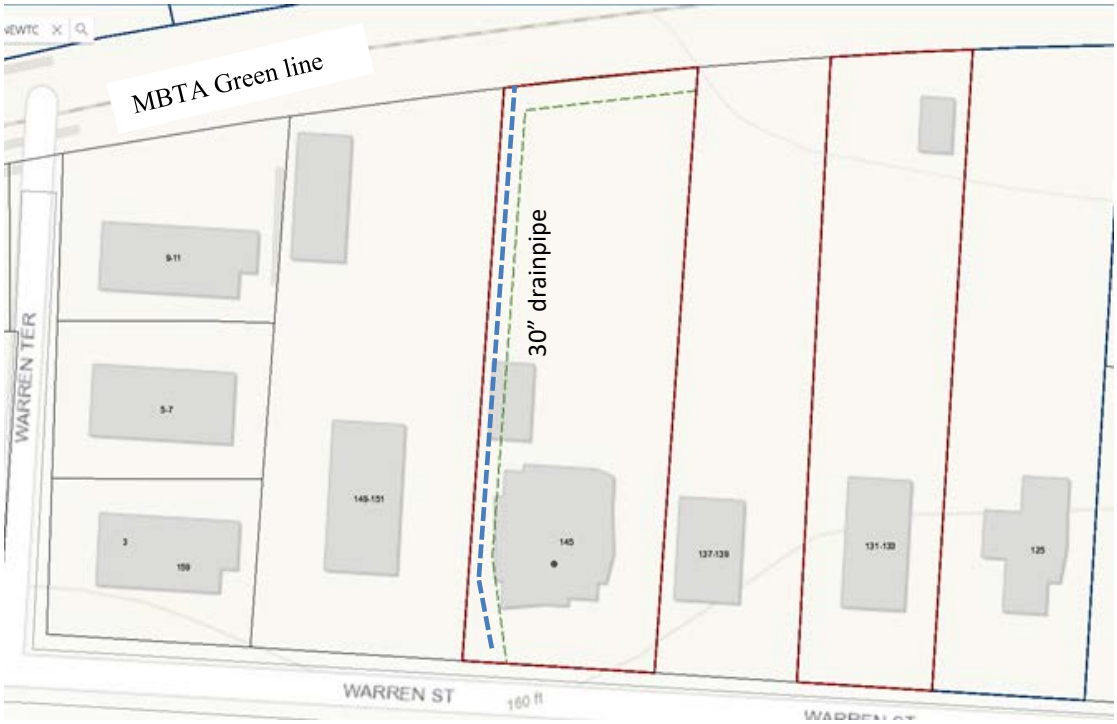
Topographic Site Plan
Showing Proposed Conditions at
#145 Warren Street
Newton, MA
Prepared by: VTP Associates Inc.
Dated: April 1, 2019

Executive Summary:

This application entails the demolition of a circa 1930 single-family dwelling and the construction of a three-unit residential development. The property has 22,383 square feet [0.51 acres] with 90 feet of frontage along Warren Street. The site is bound by residential homes on the east & west, Warren Street to the south and the MBTA green line along its northern border. The site has a high point at elevation of 163-feet near Warren Street and slopes down towards the north near the MBTA tracks at elevation of 149-feet.

Access to the units, garages and auto court is provided via driveway located near the easterly property line. The driveway has a retaining wall directly on the property line for a distance of +/- 65-feet and is 6-feet at the high point; the construction of the wall may encroach the neighboring property. It is recommended that the wall be pulled back 1-2 feet to avoid any potential of encroachment. Retaining walls over 4 feet high will need a structural engineers design to ensure that the wall does not fail in (overturning, sliding or settlement) along with a safety fence along the top of the wall.

A City Drain Main easement traverses the property along the north and west property lines, a 30-inch drainpipe transmits stormwater from the road collection system through the lot and into the wetlands along the MBTA. The design has a proposed retaining wall located within the drainage easement, should this application be approved, a license agreement will be required for the construction and long-term maintenance of this wall; pre & post construction inspection of the 30" drain pipe via a closed circuit television (CCTV) will be required and should be part of any Board Order.



Exist City Drain Easement

The engineer of record has designed a drainage collection system consistent with the DPW Stormwater Management Policy that collects and infiltrates the 100-year storm event on site. The design includes four infiltration systems for infiltration of roof and driveway runoff.

System #2 is located along the western property line, my concern with the siting of this is the proposed location and long-term maintenance requirement. The Operations and Maintenance [O&M] plan indicates that the system needs to be inspected and cleaned, however; access to this system is difficult at best as it is placed behind the dwelling units and near the drainage easement, there is no easy access to clean the system. I recommend that this proposed infiltration system be located within the proposed auto-court for easier access. The O&M plan does not include any provisions for bi-annual sweeping of the driveway and auto court, this is needed as it impacts the long-term performance of the infiltration systems.

Portions of the site are under the Conservation Commission jurisdiction in regards to wetlands and 100-foot buffer zone, the applicant has applied to the Conservation Commission for an Order of Conditions.

Municipal utilities will be provided for the three units, additionally the sanitary sewer services will require individual pump systems. The design should incorporate a standby generator for these systems in the event of prolonged power outages since these systems do not have a large storage capacity.

As a public benefit the sidewalk should be upgrade to City Standards to include cement concrete sidewalk, driveway apron and granite curbing along its entire frontage.

Construction Management:

1. A construction management plan is needed for this project. At a minimum, it must address the following: staging site for construction equipment, construction materials, parking of construction worker's vehicles, phasing of the project with anticipated completion dates and milestones, safety precautions, emergency contact personnel of contractor. It shall also address any anticipated dewatering during construction, site safety & stability, and impact to abutting properties.

2. Stabilized driveway entrances are needed during construction which will provide a tire wash and mud removal to ensure City streets are kept clean.

Drainage:

1. An Operations and Maintenance (O&M) plan for Stormwater Management Facilities needs to drafted and submitted for review. Once approved the O&M must be adopted by applicant, 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.

2. 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, and pipes are the sole responsibility of the property owner(s).

Environmental:

1. Has a 21E investigation & report been performed on the site, if so copies of the report should be submitted the Newton Board of Health and the Engineering Division.

2. Are there any existing underground oil or fuel tanks, are they to be removed, if they have been evidence should be submitted to the Newton Fire Department, and Newton Board of Health.

Sewer:

1. The existing water & sewer services to the building shall be cut and capped at the main and be completely removed from the main and the site then properly back filled. The Engineering Division must inspect this work; failure to having this work inspected may result in the delay of issuance of the Utility Connection Permit**.**

2. With the exception of natural gas service(s), all utility trenches with the right of way shall be backfilled with Control Density Fill (CDF) Excavatable Type I-E, detail is available in the City of Newton Construction Standards Detail Book.

3. All new sewer service and/or structures shall be pressure tested or videotaped after final installation is complete. Method of final inspection shall be determined solely by the construction inspector from the City Engineering Division. All sewer manholes shall be vacuum tested in accordance to the City's Construction Standards & Specifications. The sewer service will NOT be accepted until one of the two methods stated above is completed. 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 and a written report is received by the City Engineer**.** ***This note must be added to the final approved plans.***

4. All sewer manholes shall be vacuum tested in accordance to the City's Construction Standards & Specifications. The sewer service will NOT be accepted until one of the two methods stated above is completed. 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 and a written report is received by the City Engineer**.**

Water:

1. Fire flow testing is required for the proposed fire suppression system. The applicant must coordinate this test with both the Newton Fire Department and the Utilities Division; representatives of each department shall witness the testing, test results shall be submitted in a write report. Hydraulic calculation shall be submitted to the Newton Fire Department for approval.

2. All water connections shall be chlorinated & pressure tested in accordance to AWWA and the City of Newton Construction Standards and Specifications prior to opening the connection to existing pipes.

3. Approval of the final configuration of the water service(s) shall be determined by the Utilities Division, the engineer of record should submit a plan to the Director of Utilities for approval

General:

1. All trench excavation contractors shall comply with Massachusetts General Laws Chapter 82A, Trench Excavation Safety Requirements, to protect the general public from unauthorized access to unattended trenches. Trench Excavation Permit required. This applies to all trenches on public and private property. *This note shall be incorporated onto the plans*

2. All tree removal shall comply with the City's Tree Ordinance.

3. The contractor 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 service, and drainage system installation. The utility is question shall be fully exposed for the inspector to view; backfilling shall only take place when the City's Inspector has given their approval. *This note should be incorporated onto the plans*

4. The applicant will have to apply for Street Opening, Sidewalk Crossing, and Utilities Connecting permits with the Department of Public Works prior to any construction. *This note must be incorporated onto the site plan.*

5. The applicant will have to apply for a Building Permits with the Department of Inspectional Service prior to any construction.

6. Prior to Occupancy Permit being issued, an As-Built Plan shall be submitted to the Engineering Division in both digital format and in hard copy. The plan should show all utilities and final grades, any easements and final grading, improvements and limits of restoration work. The plan shall also include profiles of the various new utilities, indicating rim & invert elevations, slopes of pipes, pipe material, and swing ties from permanent building corners. ***This note must be incorporated onto the final contract plans.***

7. All site work including trench restoration must being completed before a Certificate of Occupancy is issued. *This note must be incorporated onto the site plan.*

8. If any changes from the original approved design plan that are required due to unforeseen site conditions, the engineer of record shall submit a revised design & stamped and submitted for review and approval prior to continuing construction**.**

Note: If the plans are updated it is the responsibility of the Applicant to provide all City Departments [Conservation Commission, ISD, 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 @ 617-796-1023.