CITY of NEWTON
ENGINEERING DIVISION

MEMORANDUM

To: Alderman Mark Laredo, Land Use Committee Chairman

From: John Daghlian, Associate City Engineer

Re: Special Permit – 79 Shornecliffe Road

Date: April 1, 2014

CC: Lou Taverna, PE City Engineer
Linda Finucane, Associate City Clerk
Alexandria Ananth, Chief Planner
Stephen Pantalone, Sr. Planner

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

Plan of Land in
Newton, MA
79 Shornecliffe Road
Prepared by: Everett M. Brooks Company
Dated: October 17, 2013

Executive Summary:

The plan submitted is not to proper scale.

This single-family dwelling is undergoing a total renovation and the applicant wishes to flatten out the backyard, which has an existing natural slope of 23% on average. The backyard drops in elevation from 165-feet near the rear of the dwelling down to158-feet at the northern property line that abuts another residential home.

To achieve a flatter yard the applicant is proposing a retaining wall near the base of the slope constructed of precast concrete segmental blocks that will be placed on a leveling pad and will rise to 6-feet in height. The back of the wall will be backfilled with a well-drained soil and reinforcement placed in alternating layer. The reinforcement specified by the wall manufacturer is a fiberglass mesh like gridded material (envision a "*plastic construction fence"* placed

horizontally) between layers of soil that interlocks the soil particles to help prevent overturning and shifting of the wall. A safety fence is required for walls over 4-feet; a post detail is shown however, the limits of the fence and type of fence also need to be indicated.

The drainage behind the wall is shown in the cross-sectional detail that indicates a 4" perforated pipe that daylight via weep holes at 40' intervals and at the ends of the wall. The collected water should be directed to underground infiltration system to avoid surface runoff issues to the abutting property.

Furthermore if this permit is approved, a restriction should be imposed that prohibits any in ground swimming pool within the zone of Geogrid© reinforcement of the wall, as that may comprise the design intent.

On site drainage is needed for new impervious surfaces added over 400 square feet of 4% of the lot. Since the garage floor elevation is more than 6" below the street elevation a catch basin or trench drain is required per the City Ordinance.

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.

Drainage:

1. A drainage analysis needs to be performed based on the City of Newton's 100-year storm event of 6-inches over a 24-hour period. All runoff from impervious areas need to be infiltrated on site, for the project. The design of the proposed on site drainage system needs to comply with the MassDEP Stormwater Regulations and City Ordinances.

2. An on-site soil evaluation needs to be performed to obtain the seasonal high groundwater elevation, percolation rate in accordance to Title V. This information must be submitted with the drainage study. The locations of these tests need to be shown on the site plan and must be performed within 20-feet of a proposed system.

3. 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.

4. 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).

Sewer & Water:

1. Since the dwelling is being totally renovated, both the domestic water & sanitary sewer services must be upgraded.

2. 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**.**

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. As of January 1, 2009, 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. *This note must be incorporated onto the site plan.*

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

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.