City of Newton

Engineering Division

To: Alderman Ted Hess-Mahan, Land Use Committee Chairman

From: John Daghlian, Associate City Engineer

Re: Special Permit – 87 Waban Avenue

Date: January 5, 2012

CC: Lou Taverna, PE City Engineer (via email)
Linda Finucane, Associate City Clerk (via email)
Eve Tapper, Chief Planner (via email)
Alexandria Ananth, Sr. Planner (via email)

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

Topographic Plan
87-89 Waban Street
Newton, MA
Prepared by: Frank Iebba, PE PLS ~Essex Engineering & Survey Inc.
Dated: December 4, 2012

Executive Summary:

This proposal has the construction of 3 new units with a common driveway that will service the existing dwelling and the three new units. The proposed driveway is 12 feet wide which may be problematic for vehicular access and emergency vehicle access, which normally requires 18-feet. Based on the tight site constraint no parking would be feasible within the proposed driveway area; any guest parking will have to be done on the public street [which is not allowed from November 15th to April 15th].

Furthermore, the access to the garage of the new proposed unit in the northern corner of the property is almost impossible; there is an existing garage on the abutting property and the proposed driveway is only 8-feet wide, no vehicles will be able to maneuver in or out of the proposed garage without hitting the existing garage.

There are no proposed finished grades of the site, thus making it impossible to assess drainage patterns or impact to any abutters; this needs to be addressed. There is no

benchmark or datum referenced, the engineer of record should use Newton City datum as benchmark as all utilities are based on this datum.

The drainage design is **Unacceptable as it is based on ASSUMED design**. The DPW requires that on site soil testing be conducted for purposes of obtaining the soil percolation rate and determination of any groundwater which impacts the design of the drainage system for this site.

An existing overhead telephone wire is about 6' off the ground, the wires should be raised to a higher level to avoid damage during construction and post construction. The plan shows the wires to be approximately 1-2-feet off the rear façade of the proposed unit which is unacceptable.

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 material, construction worker's vehicles, phasing of the project with anticipated completion dates and milestones, safety precautions, emergency contact personnel of contractor.

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. The engineer of record has submitted drainage calculations based on ASSUMED percolation rate which is UNACCEPTABLE. 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. Based on actual on site soil testing.

2. Elevations are missing from the proposed drainage design, rim and invert elevations are needed for the proposed catch basin, dry-well systems.

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 apparentness including but not limited to the drywells, catch basins, and pipes are the sole responsibility of the Homeowners Association.

Sewer:

1. The engineer of record needs to expand the survey information for the sewer design. Rim and invert grades are needed for upstream and downstream manholes in order to verify and confirm the proposed sewer connection for this development.

2. The proposed alignment of the sanitary sewer and natural gas services is problematic due to being only 1 foot apart in certain locations. The gas services should be brought onto the site along the easterly side of the property then connected to the units.

3. A detailed profile is needed which shows the existing water main, proposed water service(s), sewer main and proposed sewer service(s) with the slopes and inverts labeled to ensure that there are no conflicts between the sewer services and the water service. The minimum slope for a service is 2.0%, with a maximum of 10%. Pipe material shall be 6" diameter SDR 35 PVC pipe within 10' of the dwelling then 4" pipe per Massachusetts State Plumbing Code. In order to verify the slopes and inverts of the proposed service connection, two manholes of the existing sanitary sewer system need to be identified on the plan with rim & invert elevations. The crown of the service connection & the sewer man need to match.

4. The existing water & sewer services to the existing house shall be cut and capped at the main and be completely removed from the site and properly back filled. As this unit will be gutted, both the water and sewer services must be updated. The Engineering Division must inspect this work; failure to having this work inspected my result in the delay of issuance of the Utility Connection Permit**.**

5. The new sewer service and/or structures shall be pressure tested or video taped after final installation is complete. Method of final inspection shall be determined solely by the construction inspector from the City Engineering Division. The sewer service will NOT be accepted until one of the two methods stated above is completed. 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.***

Water:

1. In accordance to the Director of Utilities, the water services as proposed are unacceptable. The applicant shall install the 2" copper service (if appropriate) connection from the main to a heated utility room in one of the units with one master meter that would be billed to the homeowners association. The applicant may provide sub meters to each dwelling (at their own expense) after the master meter.

General:

1. No street opening permits are granted after the November 15th winter moratorium unless waived by the Commissioner of the DPW.

2. 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.

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

4. 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*

5. 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.*

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

7. 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.*

8. If a Certificate of Occupancy is requested prior to all site work being completed, the applicant will be required to post a Certified Bank Check in the amount to cover the remaining work. The City Engineer shall determine the value of the uncompleted work. *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.