Town of Wellesley
Department of Public Works
Engineering Division

George J. Saraceno, Senior Civil Engineer

TO: Lenore Mahoney, Executive Secretary of the Zoning Board of Appeals (ZBA)

RE: Comprehensive Permit
Redevelopment of 16 Stearns Road (40B Project)

DATE: November 19, 2018

The Department of Public Works (DPW) Engineering Division received copies of the site plans and design documentation for the redevelopment of 16 Stearns Road, which is proposed to provide affordable housing under the Massachusetts Housing and Community Development Program, Chapter 40B. The official Development Prospectus has been provided for the project. Hayes Engineering of Wakefield, MA prepared the site plans and the stormwater Management Report for the project.

The project consists of the redevelopment of the 44,578 square foot lot with a proposed four story, 24 units (6 affordable units) multi-family residential housing project. The proposed building includes a base story, cut into the sloping site for parking and three residential floors above. The plan indicates a total of 51 parking spaces, 8 spaces accessed from a circular drive in front of the building and 43 in the garage structure, which has a separate access driveway. Other features include retaining walls, onsite stormwater infiltration, walkways, a patio and landscaping. The only access to the site is via Francis Road and Route 9 from the east bound side. Stearns Road is a dead end Street currently paved at 370' long, with 7 driveway curb cuts for this and other abutting lots. The applicant proposes to extend the pavement about 125' and to add 50' of sidewalk to allow for a second curb cut to the garage structure and to provide a pedestrian connection to the abutting Sprague School and Field complex, as part of the development. The portion of the proposed pavement is beyond the publically accepted portion of the road and, is in effect a private way, on which the Town preserved a utility easement specific to adding and maintaining public water, sewer and other utilities. The applicant has indicated that the development will consume about 6,171 gallons of water and produce 5,610 gallons of sewerage per day. Our initial assessment is that the existing infrastructure is sufficient to handle this need.

The project is located in a Single Residence, 10,000 square foot zoning district. There are no wetlands located on the property, and a Negative Determination of Applicability was issued by the Wellesley Wetlands Protection Committee for the site on December 15, 2015. The applicant has shown the approximate 500-year flood plain on the site plan, but the subject lot is not known for flooding based on a review of DPW records. The geology on the site includes moderate to steep grades with evidence of outwash boulders. Four test pits were performed at the site and indicate sandy loam and gravel soils with weathered rock varying in depths from 42 inches to 77 inches. The proposed subsurface infiltration system is located in close proximity to the test pits TH-1 thru TH-4. No percolation tests were performed and only a summary of the hydrologic analysis was provided. We have some concerns with the variability of the soils, depth to refusal and potential for large

boulders and weather bedrock having some impact on the design.

Provided below are preliminary review comments regarding the plans and documents we received for the Redevelopment of 16 Stearns Road (40B Project).

GENERAL

1. The Existing Conditions Plan of Land indicates that Stearns Road is a public way in front of the entire property for 16 Stearns Road and our records are different.
2. The Photometrics Plan, drawing C5, shows 8 proposed wall pack luminaires to be mounted on the building exterior, however it is unclear if some fixtures are missing, and the light levels are not shown.
3. Several of the details on the Utility Detail Sheet, drawing C7, are City of Newton standard details. The proposed details shall be Town of Wellesley standard details.
4. A construction management plan shall be submitted for the project. The construction management plan shall include staging area, hours of work, parking, dewatering location, concrete wash down area, etc.
5. The Erosion Control Plan, drawing C4, indicates proposed haybales for siltation control will be installed in the same location as some of the proposed retaining walls, a better explanation of more detail seems necessary.
6. Proposed silt sacks are shown for the proposed catch basins on the property. Will silt sacks also be provided for catch basins located on Stearns Road and adjacent areas?
7. In the Development Prospectus, the density calculations assume 1 person per bedroom, we are concerned that this assumption is low.
8. The Cover and Index, drawing C, should be stamped, signed and dated by the designer.
9. We recommend that the legend, abbreviations, and general notes sheet was provided and placed after the cover sheet.
10. All existing features/text should be shown in a light line weight. For example, the existing utilities shown on drawing C2 (such as the sewer manholes on Stearns Road) are shown in a darker line weight.
11. Existing features to be removed/demolished (such as the stone wall) should not be shown on proposed work drawings (stone wall shown through driveway on drawing C3).
12. All stamps must be dated by the professional engineer, landscape architect, or land surveyor.
13. A "Subsurface Conditions" plan needs to be provided. This plan must indicate boring locations and boring logs (detailing depth at which water and/or ledge is encountered). The plans should show the location of the test pits, depth to groundwater and depth to ledge.
14. Plan sheets should make references to details on the plans.
15. On the Layout Plan, drawing C1, label each of the proposed parking spaces. Show duplicate dimensions for 24-foot travel aisle between parking spaces. Add directional flow arrows for ingress and egress from the parking garage and main circular driveway.
16. Cuts and fills for the project should be quantified and construction details that assure control of the earthwork seem to be warranted, as the proposed grades indicate a 21-foot cut for the parking garage at the southeast corner of the proposed building. The ledge removal procedures must be reviewed by the Town of Wellesley Fire Department.

17. Details for the retaining wall should be included with the plans. There appear to be inconsistencies with the wall and grading plans, such as the retaining wall near the entrance to the parking garage is higher than the top of wall and should be below elevation 153'. The proposed retaining walls on the eastern and western lot lines are too close to the property line as construction will encroach on neighboring property.
18. Provide a pavement markings and signage plan, including a legend for the proposed signage. Additional signage may be required for Stearns Road.
19. Provide a line type and symbology legend for the Grading Plan, drawing C2.
20. A Plot Plan should be provided that shows three benchmarks for the project as required for SPR.
21. Asbestos pipe found during excavation on the property must be disposed of according to MADEP 310 CMR 4.00.
22. Provide more detail regarding the 24' wide roadway construction. There are several trees in that area that would need to be removed to suit this construction. It would be helpful to conduct a more detailed survey in this area as it is unclear if the existing drainage will be adequate.
23. The lights proposed for the project should be dark sky compatible. Pole mounted lights should be reviewed to ensure that the brightness of the lights do not impact the neighboring properties.
24. Clarify the purpose of the 8-foot wide sidewalk that is blocked off by three proposed bollards. There are no sidewalks on Stearns Road that would be a connection point for the proposed sidewalk.
25. Label the location of the vertical granite curbing proposed for the project. We recommend adding a concrete collar around the granite curbing.
26. The detail for the wheelchair ramp should include a detectable warning panel, cast iron federal yellow. A detail of the detectable warning panels should be shown separately.
27. It is recommended that the project site have three existing benchmarks for survey control purposes, one of which should be located on-site.
28. The utility cuts on Stearns Road shall be milled and overlaid with 2-inches of asphalt to the Town of Wellesley Construction Standards in the public way. The limits of work and notation should be added to the plans.

STORMWATER

1. The proposed BMP's shown on the Utility Plan, drawing C3, should include invert elevations and clearly label downspout connections and/or foundation drain connections. A cross section for each BMP should be included on the Utility Detail Sheet, drawing C8, showing pipe inverts, top of stone, bottom of stone, top of BMP and bottom of BMP. The downspout connection detail should be included in the plan set.
2. Verify that the proposed infiltration chambers have a minimum of two-foot separation to groundwater and ledge.

3. The Stormwater Management Report provides a runoff summary table for the 2-yr, 10-yr, 25-yr and 100-yr design storms, which shows a reduction in the peak runoff rate and volume for each storm event. The reduction in peak runoff rates and volumes discharging from the site is

due to the three proposed infiltration systems for roof runoff, driveways and other impervious surfaces. The designer used HydroCAD v10.0 to analyze the synthetic rain events for the project.

4. The Stormwater Management Report should include a copy of the entire HydroCAD analysis for the various storm events considered. For the total table at the bottom of the Runoff Summary page, the designer should revise the 2-yr storm event to show a peak runoff rate and volume produced by the site for pre and post development conditions.
5. Revise the Water Quality Volume calculation as the total peak flow rate appears to be incorrect.
6. The TSS removal worksheet shows that street sweeping in the parking lot is necessary. How often will this occur and will this requirement be included in a HMA for the property?
7. The Operation and Maintenance Plan for the BMP's proposed for the site should state that maintenance logs must be provided to the Town Engineer on an annual basis.

EROSION CONTROL PLAN

1. Add a legend to the Erosion Control Plan, Sheet C4.
2. We recommend adding erosion controls to the front of the property along Stearns Road and keep a stockpile of haybales or other erosion control material on-site. A silt fence may be necessary for the erosion controls along Stearns Road.
3. The proposed tracking pad shown within the Stearns Road right-of-way must be moved to private property.
4. The designer should add erosion and sediment control notes to the plan and discuss sweeping the street from Route 9 to Stearns Road in the event that debris is tracked from the site to the roadway.

WATER & SEWER

1. Provide the fire flow requirements for the building and provide a description of the type of sprinkler system proposed for the building.
2. The existing utility lines should be added to the plans along with the pipe sizes, material type and directional flow arrows if necessary.
3. The proposed water service to the building shall be a 6-inch fire sprinkler cement lined ductile iron pipe including a gate valve (curb stop) on private property. Branching off of the 6-inch water service shall be a 4-inch domestic water pipe and gate valve.
4. The proposed 6-inch water service requires a 6"x6" tee and gate valve connection to the existing 6-inch water service. A detail of the water service connection to the main should be shown on the Utility Detail Sheet, drawing C7. A note should be added to the plans that the Town of Wellesley Water and Sewer Division shall be onsite to inspect the installation of the water service.
5. We recommend that the existing 6-inch water main on Stearns Road be looped to the existing 6-inch water service line at the Alzheimer's facility, 694 Worcester Street.
6. Indicate on the plans the location and detail of the backflow preventer valve assemble for the proposed building. The Town of Wellesley Water and Sewer Division must approve of the

backflow preventer and inspect the installation.

7. Show the invert elevation at the foundation of the proposed building and include the pipe type, material and slope for the new sanitary sewer service.
8. The project should provide a narrative and include notation on the plans for the dewatering work that may be required for ledge removal, foundation and deep excavations required for the project. Dewatering details should also be shown on the details sheet. An overflow connection to the Town's drainage system during the course of dewatering requires approval from the Town Engineer.
9. Show the location of the floor drains in the parking garage and the connection to the proposed MDC gas trap.
10. The Utility Plan, Sheet C3, should include the pipe type and pipe size for all utilities.
11. The plans should show and identify the utility easement on Stearns Road, which encompasses the 8-inch sewer line that travels to Sprague School.
12. There should be no bends in the proposed water service line. The water service connection must be inspected by the Town of Wellesley Water and Sewer Division. A connection fee is also required prior to performing this work.
13. Provide a detail for service connection into existing sewer manhole on Stearns Road. The invert for the existing manhole on Stearns Road must be modified to suit this connection.

LANDSCAPING

1. The project submission should include a copy of the proposed landscaping plan including tree protection, details and landscape species program for the site.
2. On the Materials and Grading Plan, drawing L300, provide a table indicating quantity of trees to be cut and removed. Also, provide a table summarizing quantity, size and type of proposed plantings.
3. We recommend that the landscaping plan not use the proposed Hemlock, which has had difficulty with the Woolly Adelgid.
4. On the Landscape Plan, drawomg L1, label the proposed plants shown on the site plan by the common name in the plant schedule to help identify the specific plants shown.
5. The landscaping plan should contain the proposed contours that are shown on drawing C2.
6. No bushes or trees are permitted to be planted within 10 feet of a fire alarm connection. Adjust shrub and tree location as necessary.
7. Provide a tree protection detail, which we prefer a chain link fence, to protect trees and scrubs during construction.

REFUSE

1. Solid waste and recycling will be collected privately and taken to a regulated facility offsite. Three (3) each two (2) yard dumpsters will be provided for solid waste and recycling materials. Therefore, the project will not adversely affect the Town's Recycling and Disposal Facility.

Please feel free to email or call me if you any questions or concerns in this matter.

Sincerely,

George J. Saraceno
Senior Civil Engineer

cc: Michael Pakstis
William Shaughnessy
Mike Quinn
David Hickey
Douglas Stewart
Michael Zehner
Victor Panak
Michael Grant