

MetroWest Engineering, Inc.

May 12, 2021

Wellesley Department of Public Works
Engineering Division
2 Municipal Way
Wellesley, MA 02481
Attention: George J. Saraceno, Senior Civil Engineer

RE: 206 Winding River Road, Wellesley, Large House Review

Dear Mr. Saraceno:

I have received your letter to the Wellesley Planning Director dated April 29, 2021 containing review comments regarding the site plan set for improvements to the property at 206 Winding River Road in Wellesley. The Civil drawings, Sheets C1 through C7 have been revised to address the comments from your letter and have a revision date of May 12, 2021. Plans MEP 000 and 100 have also been submitted herewith to provide details for the geothermal wells and snow melt areas. I offer the following comments in response, following the same format as your letter. Please note that responses are listed below the original comment in bold.

GENERAL

1. The existing driveway that extends to a curb cut at the intersection of Winding River Circle and Winding River Road does not conform to the Town of Wellesley Curb Cut Policy, which states "whenever possible, no driveway openings or curb cuts shall be permitted within 50 feet of a street corner measured from the nearest edge of driveway and the cross road edge of pavement." The plans shall be revised to show a new location for existing driveway and curb cut. We do note that the designed does show a reduction in curb cuts from three to two curb cuts, removing the curb cut on Winding River Road

The existing driveway entrance located along the arc intersecting Winding River Circle and Winding River Road will be removed in the proposed condition. The proposed driveway entrance in this location has also been removed from the proposed site plans. The proposed circular driveway located in the northeast corner of the site has been revised to have a proposed entrance off Winding River Circle and a second entrance off Winding River Road. The proposed entrance on Winding River Circle is located approximately 92.8-feet west of the point of intersection of the projection of the edges of pavement on the southerly side of Winding River Circle and the westerly side of Winding River Road. The proposed entrance on Winding River Road is located approximately 68.3-feet south of the point of intersection of the projection of the edges of pavement on the southerly side of Winding River Circle and the westerly side of Winding River Road. The proposed renovations to the driveway entrance and dimensions from the point of intersection of pavement edge projections are shown on the *Proposed Layout Plan, Sheet C3*.

2. Provide a detail of the curb cut closure for the two driveway curb cuts that are proposed to be removed. The curb cut closure shall include adding new curbing, treelawn area and five foot wide sidewalk. A new curb cut permit will be required and approved by the Town of Wellesley Street Occupancy Permit Inspector. Provide a detail for the proposed driveway curb cuts. The maximum allowable width for a single width driveway at the street is 17 feet.

A Curb Cut Closure Detail has been added to the *Details Plan, Sheet C7*.

3. The existing sidewalk is in poor condition. We recommend replacing the entire sidewalk along the frontage of the site, both on Winding River Road and Winding River Circle.

The sidewalk will be replaced along the entire street frontage of Winding River Circle and Winding River Road. Notes specifying the replacement of sidewalk are shown on the *Proposed Layout Plan, Sheet C3*.

4. The proposed cut and fill calculations show a total cut of 2,272 cubic yards and a total fill of 386 cubic yards, with a net earthwork cut of 1,885 cubic yards. The complete earthwork calculations are shown on the Proposed Grading Plan, Sheet C4.

No response required for this comment.

5. On the Proposed Layout Plan, Sheet C3, the retaining wall adjacent to the proposed generator location is 7 feet high, with a top of wall grade of 124.50' and bottom spot grade of 117.50'. The retaining wall must be reviewed as required under zoning bylaw, Section 22D Retaining Walls by the Design Review Board because of the height of the wall.

The proposed retaining wall is located inside the building envelope and conforms to dimensional and height setbacks. The location of the generator and wall were presented to the Design Review Board at a meeting on April 14, 2021.

6. The existing utility lines shown on the Proposed Site Plan, Sheet C5, should be in grey color to contrast the existing utilities from proposed utilities.

The existing utilities, including electric, gas, sewer and water services have been removed from the *Proposed Site Plan, Sheet C5*.

7. Provide a Construction Management Plan that includes work hours, truck route to and from the site, emergency contact information, construction sequence and schedule of work. Provide a summary that includes timing of the project and milestones.

Construction Management Plan prepared by Landscape Architect and has been attached herewith.

8. Notes on the plans should indicate that the plan elevations are on the Town of Wellesley datum and not NGVD 88 datum. On Existing Conditions Site Plan, Sheet C1, the Benchmark table shows 5 benchmarks, which are based on the Town's sewer invert datum, which is essentially the Town Benchmark system.

The elevation reference on the Benchmarks Table has been revised to indicate that the reference for elevations is Town of Wellesley Datum. This is shown on the Existing Conditions Plan, Sheet C1, Erosion & Sediment Control Plan, Sheet C2, Proposed Grading Plan, Sheet C4 and Proposed Site Plan, Sheet C5.

9. Provide a cross section detail view of the proposed geothermal wells. Show the pipe elevations in contrast to the proposed Infiltration System #2 and drainage pipes. We suggest that the Applicant's designer provide a written summary describing the geothermal wells application for this project. The geothermal wells must be included on the as-built plan for the project.

A cross section detail view of the proposed geothermal wells and proposed subsurface infiltration system 2 is shown on the Details Plan, Sheet C6. Notes have been added to this detail illustrating elevations, locations of the wells and construction materials for both geothermal wells and the infiltration system. Plans MEP 000 and 100 and a letter detailing the construction of the geothermal wells have also been included with the revised submittal.

10. The applicant should consider adding screening and noise reduction for the proposed generator, which is close to the neighboring property line at #198 Winding River Road

Screening trees around the proposed generator are shown on the Proposed Landscape Plan, L2.00. The proposed generator will be placed in an enclosure to reduce noise to abutting properties.

STORMWATER

1. The existing impervious area for the property is 7,403 square feet. The proposed impervious area for the site is 19,802 square feet. The total increase of impervious area is 12,399 square feet.

No response required for this comment.

2. We recommend that the proposed roof drain lines include cleanouts at each bend or change in direction in the pipe.

Cleanouts have been added to the proposed roof drain lines at major bends and angle points. The proposed cleanouts are shown on the Proposed Site Plan, Sheet C5.

3. The design engineer provided in the HyrdoCAD drainage analysis a table summarizing the stormwater peak runoff rates and volumes for the 2-yr, 10-yr, 25-yr and 100-yr storm

events, which have been reduced from the pre-development conditions versus the post-development conditions. The reduction of the peak rates and volumes of stormwater are due to the proposed mitigation of the stormwater runoff from the roof, driveway and lawn areas, which are conveyed to two onsite stormwater infiltration systems. The maximum peak elevation during the 100-yr storm event for the Infiltration System #1 is 114.90', which is below the top elevation of 116.5' of the leaching galleys. The maximum peak elevation during the 100-yr storm event for the Infiltration System #2 is 114.86', which is below the top elevation of 115' of the leaching galleys.

No response required for this comment. Please note that the reductions in the rates and volumes of stormwater runoff leaving the site are significant for all storm events.

4. The Total Phosphorous calculations show that TP is reduced by 0.34 pounds per year for the post-development conditions, from 0.54 lbs/yr to 0.20 lbs/yr. The TSS removal rate for the proposed on-site drainage systems and components is 86%

No response required for this comment.

5. The existing site does not have controls for stormwater runoff generated from the existing impervious areas from the roof areas, driveway and walkway. The project proposed two onsite stormwater Infiltration Systems #1 & #2, that infiltrate stormwater runoff from the roof, driveways and lawn areas that are conveyed from 6-inch HDPE drain pipes, and manholes to the infiltration systems. A detail of the on-site infiltration systems show that there is ample separation to groundwater from the bottom of each system as shown on the Details Plan, Sheet C6.

No response required for this comment.

6. The site is located in close proximity to the Charles River, which has a Total Maximum Daily Load (TMDL) or is impaired by phosphorous, E. coli and excess algal bloom. We would recommend that the applicants designer explore the use of LID techniques such as a rain garden, drainage swale, green roof, etc. as a means to filter out pollutants, improving water quality and infiltrating stormwater runoff to groundwater.

The proposed condition will reduce turf lawn from approximately 18,261 square feet in the existing condition to 5,549 square feet in the proposed condition thereby reducing turf lawn by approximately 12,712 square feet (69.6%). This significant increase in naturalized area and decrease in lawn area shall provide a natural method of reducing potential pollutants leaving the property heading toward the Charles River.

7. The plans should include a cross section of the proposed foundation, water proofing and foundation drain. If a foundation drain is proposed for the project, show the foundation drain on the Proposed Site Plan, Sheet C5.

The proposed foundation will not have a gravity drain or sump pump connection. The foundation will have a pre-proof waterproof system under the floor and around the sides.

8. The project should include a copy of the Long Term Operation and Maintenance Plan for the onsite stormwater infiltration systems, trench drain and manhole structures. The Town requires inspection logs of the private drainage system be provided to the Town Engineer on an annual basis.

A Stormwater Operation and Maintenance Plan has been provided and is located in Appendix B of the Hydrologic Analysis.

WATER AND SEWER

1. On the Proposed Site Plan, Sheet C5, show the proposed curb stop, which should be in the public way area, preferably in the treelawn area.

A proposed curb stop has been added to the proposed water service connection in the treelawn area near the northwestern boundary corner. This is shown on the Proposed Site Plan, Sheet C5.

2. The applicant has proposed to replace the existing sanitary sewer service connection with a new sewer house connection from the existing 8-inch sewer main on Winding River Circle to a proposed sewer manhole on private property. From the proposed sewer manhole, there are two separate 4-inc connections to the foundation. The proposed sewer service connections have cleanouts within ten feet of the foundation.

No response required for this comment.

3. The applicant is required to apply for a Street Occupancy Permit for any utility work in the public right-of-way. The DPW Water and Sewer Division should be notified of the proposed sanitary sewer connection by submitting a copy of the approved plan.

The requirement for the applicant or site contractor to obtain a Street Occupancy Permit is shown in Note 3 in the Utility Notes shown on the Proposed Site Plan, Sheet C5.

4. The DPW requires that the sanitary sewer service work be inspected by the Town during installation and an as-built be provided of the new connection.

The requirement for the applicant or contractor to notify the Wellesley D.P.W. for utility inspections is shown in Note 8 in the Utility Notes shown on the *Proposed Site Plan*, Sheet C5.

5. The sewer pipe must be 4" or 6" PVC schedule 35 green pipe to distinguish between sewer and drain pipe.

A note requiring green pipe SDR-35 sanitary sewer pipe has been added to the Typical Sewer Service Detail shown on the *Details Plan*, Sheet C7.

LANDSCAPING

1. Approximately 53 trees are proposed to be removed as part of the redevelopment of the site, see the Erosion and Sediment Control Plan, Sheet C2 and the Tree Protection and Tree Removal Plan, Sheet L2.00. There are a total of 12 trees that are unhealthy or hazardous that need to be removed. Some of the trees are within the 40-foot tree yard setback areas for the lot.

No response required for this comment.

2. Provide a copy of the tree protection plan that shows a chain link fencing protecting existing trees. We recommend revising the tree protection detail on the Details Plan, Sheet C7, to include a chain link fence.

The Tree Protection Detail has been revised to show a chain link fence and is shown on the *Details Plan*, Sheet C7.

3. The total number of trees to be planted is 48 trees, 6 canopy trees and 42 evergreen trees.

No response required for this comment.

Please feel free to contact me should you have any questions or if you require any additional information.

Sincerely yours,



Brian Nelson, P.E.
Project Engineer