

STAFF REPORT
Application #WPL-11720-23
11 Murvon Court
Assessor's Map: D03 Tax Lot: 040
Prepared: April 26, 2023 and last revised May 9, 2023
Public Hearing: May 17, 2023

Application Request: Applicant is proposing to demolish an existing single-family residence, deck, and patio, fill in two (2) ornamental ponds construct a new single-family residence and a pervious driveway and patio with associated site improvements. The proposed work is occurring partially within the WPLO (elevation 9') area of the Saugatuck River.

Plans Reviewed:

- 1. Improvement/Location Survey Map of Property**, prepared for Eymard Chitty & Madhurya Chitty, 11 Murvon Court, Westport, Connecticut, prepared by Walter H Skidd, Land Surveyor, LLC, dated: January 9, 2023, Scale: 1" = 10'.
- 2. Site Plan, Details & Notes**, prepared for Eymard & Madhurya Chitty, 11 Murvon Court, Westport, CT, prepared by Chappa Site Consulting LLC, dated: April 6, 2023, Scale: NTS.
- 3. Architecturals**, prepared for Compo Luxury Homes, 11 Murvon Court, Westport, CT, prepared by John Jones Architect, dated March 22, 2023 and revised to April 6, 2023, Scale As Noted.
 - i. Foundation Plan**
 - ii. First Floor Plan**
 - iii. Second Floor Plan**
 - iv. Attic Floor Plan**
 - v. Roof Plan**
 - vi. Front (North) Elevation**
 - vii. West Elevation**
 - viii. South Elevation**
 - ix. East Elevation**

Past Permits:

None

Property Description:

Location of 25-year flood boundary: 9 ft. contour interval. A portion of the property is within the Waterway Protection Line Ordinance (WPLO) boundary.

Property is situated in Flood Zones AE (el. 11') as shown on F.I.R.M. Panel 09001C0551G Map revised to July 8, 2013.

Proposed First Floor Elevation of House: 12.1 ft.

Proposed Average Site Grade Elevation: 8.9 ft.

Proposed Patio and Barbeque Elevation: 9.2 ft.

Lot Size: 0.124 acres (5,400 sq. ft.)

Existing Site Coverage: 51.25% (2,767.5 sq. ft.)

Proposed Site Coverage: 43.40% (2,344 sq. ft.)

Existing Building Coverage: 37.92% (2,047.5 sq. ft.)

Proposed Building Coverage: 34.72% (1,875 sq. ft.)

Sewer Line: The existing residence is serviced by municipal sewer.

Existing Residence: The existing residence was constructed in 1920.

Aquifer: Property underlain by Sherwood Island Aquifer which is a coarse-grained stratified drift aquifer. The property is NOT within the Town's wellfield protection zone.

Coastal Area Management: The subject property is located within the Coastal Area Management (CAM) zone. The coastal resource is identified as Coastal Flood Hazard Area. Coastal Flood Hazard Areas are defined as land areas inundated during coastal storm events. A-zones are subject to still-water flooding during "100-year" flood events. Coastal Hazard Areas serve as flood storage areas. They are, by their nature, hazardous areas for structural development, especially residential type uses.

Proposed Storm Water Treatment: The applicant proposes a drainage system consisting of 32 linear feet (LF) of precast concrete stormwater galleries within a crushed stone reservoir, located at the rear (south) of the property. Secondary stormwater storage will be within the stone reservoir beneath the proposed pervious driveway. Surface drainage features include a pervious driveway surface, a pervious patio surface, and a single overflow yard drain.

Discussion:

The WPL Ordinance requires that the Conservation Commission consider the following when reviewing an application:

“ An applicant shall submit information to the Conservation Commission showing that such activity will not cause water pollution, erosion and/or environmentally related hazards to life and property and will not have an adverse impact on the preservation of the natural resources and ecosystems of the waterway, including but not limited to: impact on ground and surface water, aquifers, plant and aquatic life, nutrient exchange and supply, thermal energy flow, natural pollution filtration and decomposition, habitat diversity, viability and productivity and the natural rates and processes of erosion and sedimentation. ”

Most of the property lies within the WPLO boundary (elevation 9') of Grays Creek. The property is situated ~550' east of Grays Creek and ~450' North of the Saugatuck River. The mean high water line of the Saugatuck River is established at elevation 3.3' (NAVD88) to the south of the property. Isolated to the west of the property is Grays Creek, a tidal watercourse featuring tidal wetlands and mudflats. The portion of the Saugatuck River nearest to the subject property is the Ned Dimes Marina basin. The intertidal zone within the marina basin can be characterized as highly modified, noting the presence of a stone/concrete seawall along much of the shoreline.

Based on the existing spot elevations shown on the site plan, the topography of the site is relatively flat. The elevations indicate the site generally drains towards the southeast corner of the site. Noting that the Saugatuck River is located to the south of the site staff assumes potential flood waters may originate from the Saugatuck River during heavy storm events, though flooding from Grays Creek is likely to occur in more extreme events.

The application proposes to demolish the existing single-family residence and construct a FEMA-compliant, two-story, single-family residence with a first-floor elevation of 12.1' and garage floor elevation of ~9.0'. The proposed location of the house and pervious patio is substantively within the footprint of the existing house, but the proposed dwelling area footprint is about 10% larger than the existing house, porch and deck combined. The existing impervious driveway will be replaced with a pervious driveway with storm water storage beneath. The existing deck and bbq area will be replaced with a pervious patio and attached impervious bbq area.

Application proposes to remove two ornamental ponds. Since the ponds are man-made and lined the ponds cannot be characterized as inland wetlands and watercourses as defined by the Town's Inland Wetlands and Watercourses Regulations.

The proposed residence will be built to conform to FEMA standards with the first habitable floor (el. 12.1') constructed above the 100-year base flood elevation (el. 11'). The garage is proposed at elevation ~9'. The architectural rendering, "Foundation Plan", demonstrates the flood vents are within one foot of the adjacent grade. The architectural drawings show the surrounding proposed average grade around the residence is 8.9'. The foundation level includes a crawl space and garage. The "Foundation Plan" demonstrates the plan proposes eight (8) flood vents along the exterior wall of lower level of the residence and one flood vent on the interior wall between the garage and the crawl space. Each of the flood vents is sized to account for 200 sq. ft. of coverage. During the Flood and Erosion Control Board meeting held on May 3, 2023, the application was approved by the Board with no special conditions.

Though the footprint of the proposed residence is larger than the existing residence, it is substantively within the same location of the existing house. The plan proposes to install air conditioning units and a generator on the roof of the proposed dwelling.

The plan proposes to install a 500-gallon underground propane tank. A note for the specifications of the UST is provided on the site plan. The note specifies that the tank will be anchored with cable straps to a concrete counterweight which is consistent with the FEMA guidance for installing underground tanks, "***Principles and Practices for the Design and Construction of Flood Resistant Building Utility Systems***".

The site plan demonstrates that groundwater was not encountered at test pits advanced to 64" and 84" below grade on the adjacent property at 8 Murvon Court. Staff does not anticipate that groundwater will be encountered for excavation activities for the installation of the foundation footing at 63' below grade or for the installation of the 500-gallon underground propane storage tank (proposed depth unknown). Staff notes a dewatering plan for excavation activities was not provided on the site plan. Given ground water was not encountered in test pits on the adjacent property, staff feels a dewatering plan for this project is not necessary.

The potential for the proposed project to have an adverse impact on the preservation of natural resources and the ecosystem of the adjacent waterways should focus on stormwater quality impacts and percentage of impervious area. The project proposes a 7.85% reduction in coverage.

The proposed site coverage is be **43.4%**, which is greater than the 10-25% cover that is expected to impact water quality. Coverage calculations are provided on the site plan. The 2004 Connecticut Stormwater Manual provides research that water quality experiences degradation when coverage in a watershed exceeds 10%. As the Saugatuck River watershed is densely developed, the coverage exceeds the percentage in which water quality can be assumed to be impacted.

Sediment release from loose soil is one of the most significant potential impacts from soil stockpiling. Sediment releases during storm or flood events can result in temporary and long-term impacts to water quality. The site plan depicts one layer of perimeter silt fence. A detail for typical silt fence installation is provided on the site plan. Soil stockpiling will occur at the northwest corner of the property. The site plan depicts row of silt fence as the erosion and sediment controls around the soil stockpile area. The application proposes minimal grading across the site. The site plan provides calculations for excavation and fill and establishes that the proposed amount of cut and fill is 75 cubic yards (cu. yd.) A construction entrance will be installed at the apron of the existing driveway. It will be constructed of 2" crushed stone. A detail for the construction entrance is provided on the site plan. Staff feels the level of S&E controls shown on the plan is adequate for the proposed conditions.

The grade across the property will slightly change, as proposed spot elevations on the site plan indicate the site will remain relative level but gradually slope towards the eastern property boundary. General site stormwater runoff that is not collected by the proposed drainage features will drain as sheet flow over the ground surface to the south along the western side of the residence and to the east along the eastern side of the residence. Stormwater from the roof of the house and covered patio will be conveyed through roof leaders and underground drainage pipes towards the stormwater reservoir. Stormwater runoff from the patio will be collected within the reservoir beneath the patio. Stormwater runoff from the driveway will be collected within the reservoir beneath the driveway.

Stormwater calculations are provided in the "Drainage Computations" report. The calculations demonstrate that the new stormwater management system will collect the stormwater runoff from the 25-year storm event and will be able to store the first inch of runoff from the impervious areas of the site. The proposed driveway stormwater reservoir has a retention volume of 10 cu. ft. while the proposed 32 LF of stormwater galleries within the crushed stone reservoir have a volume of 269 cu. ft. which is greater than the 213 cu. ft. required by Town drainage standards. The applicant provided drainage to treat the first inch of runoff from the impervious areas proposed onsite, which is considered the Water Quality Volume (WQV). Staff considers the proposed pervious surfaces as a benefit, and these features should enhance the stormwater quality across the site from the existing conditions. Staff recommends that the design engineer shall witness and certify all site drainage and submit said certification to the Conservation Department prior to the issuance of a Conservation Certificate of Compliance.

Staff recommends the Commission requires a deed restriction to be filed on the land record stating that the proposed rear patio and driveway will remain pervious in perpetuity.

Although staff does not anticipate temporary or long-term impacts to water quality, natural resources, or habitat. Staff feels the extensive redevelopment of the site prioritizes maximizing the size of the dwelling while maintaining a high percentage of site coverage.

Information Gaps / Errors

- The applicant does not indicate which, if any, trees are to be removed to accommodate the removal /filling of the ornamental ponds, removal of the existing garage, and installation of the stormwater galleries.

Alternatives to Reduction of Impacts

1. No construction alternative.
2. Approval of application with the following conditions:
 - a) Conformance to Flood & Erosion Control Board **May 3, 2023** conditions of approval.
 - b) The driveway and patio shall remain permeable in perpetuity with said restriction placed on the land records prior to issuance of a Conservation Certificate of Compliance.
 - c) Design Engineer shall witness and certify the construction of all permeable surfaces proposed for this project (driveway and patios) and submit said certification to the Conservation Department prior to the issuance of a Conservation Certificate of Compliance.