



Date: July 28 2022
To: Waterford Conservation Commission

Re: Application #C-22-07: 48 Great Neck Road
Residential Condominium Development
Application Materials Review Comments

Proposed Regulated Activity:

The application is for the construction of a 40 unit multi-family residential complex on an 11.3 acre parcel located along the east side of Great Neck Road. Within the 100 ft. upland review area of wetlands, the development includes a 20 ft. wide roadway and a culvert crossing of inland wetlands and an intermittent channel, and 4 constructed stormwater basins. Regulated activities associated with this application include:

- clearing, excavation and grading adjacent to inland wetlands for construction of stormwater basins, and a paved roadway;
- disturbance of 0.047 acres (2,000 sq. ft. +/-) of inland wetland for installation of 2 concrete 3-sided box culverts and pre-cast concrete footings;
- discharge of stormwater run-off from the residential development to inland wetlands and an intermittent watercourse.

Wetland Description:

1. Forested Wetland / Intermittent stream: tributary to lower Jordan Brook (ET1)

A forested wetland corridor crosses the property in the western portion of the site. The stream channel varies in width, generally 2-3 feet with a sand and cobble bottom. The wetland width ranges from 100 ft. to 200 ft. and continues north off the property to confluence with a large forested and shrub swamp complex north of the railroad bed. A farm road crosses this corridor at a narrow point with a culvert near the center of the site. The wetland upstream of this crossing exhibits an area of seasonal flooding. Spotted salamander egg masses were noted in this ponded area during 2017 and 2018.

Measures to protect water quality, maintain groundwater base flows and pre-development peak discharge rates, and to treat stormwater discharges to minimize pollutant loading are recommended for development along this tributary. The watershed management goal for this resource is to improve water quality. The plan recommends the designation of an upland protection zone of undisturbed vegetation along the wetland boundary.

2. Isolated Forested Wetland – seasonal ponding:

A forested wetland pocket approximately 0.6 acre in area is located in the southeastern portion of the property, occupying a depressional area in the landscape. The wetland hydrology is seasonally ponded. According to results of vernal pool amphibian surveys conducted in 2017 and 2018 by the applicant's consultant, the area contained one spotted salamander egg mass in 2018.

The majority of the property consists of forested upland. Refer to attached aerial photo and watershed wetland summary information.

Stormwater Controls:

The proposed project includes four stormwater basins designed to capture the water quality run-off volume and detain post-development run-off generated from the developed site. Basins discharge run-off to the forested wetland corridor and intermittent watercourse. A water quality basin maintenance plan and design detail are included on Sheet 7 of the plan submittal.

Plan Review Comments:

- 1) The application indicates 0.047 acres of wetland disturbance is proposed. The area of temporary clearing or grading activity versus permanent fill or loss of wetland substrate should be identified. The wide span culverts will preserve the wetland substrate and functions beneath these structures, thereby reducing permanent wetland impacts.
- 2) The maintenance of a natural vegetated buffer adjacent to the wetland /stream corridor is an important element of the riparian corridor and serves to protect the wetland soils, vegetation and stream hydrology and habitat. The Jordan Brook watershed management plan recommends a minimum 50 ft. vegetated buffer adjacent to inland wetlands and a 100 ft. vegetated buffer from perennial streams. The proposed clearing and disturbance limits extend between 10 and 15 feet into this 50 ft. preferred buffer zone. The disturbed area is then to be re-planted. The applicant should consider reducing the extent of grading and disturbance to the toe of proposed fill along the downgradient slopes of stormwater basins C and D to protect existing tree canopy where possible.
- 3) A detail for the proposed retaining walls at the roadway culvert crossing should be provided along with a construction sequence for the roadway culvert and fill installation. The applicant should identify whether a temporary at-grade construction access is proposed to be used to cross the wetland during construction.
- 4) Details on de-watering measures and locations should be included for excavation and installation of the pre-cast culvert footings.
- 5) The type of soil and channel stabilization measures required/ or proposed within the 2 concrete culvert spans to minimize potential erosion of wetland substrates should be specified.
- 6) The CTDEEP Stormwater Manual recommends use of a forebay area or other component to capture and treat 10% of the water quality volume discharged to a stormwater basin. Designated forebay areas should be included in the basin design.
- 7) Soil test pit information for the proposed stormwater basins is required, including depth to seasonal high water, ledge, and design permeability rates if used in recharge calculations.
- 8) Plan details for the stormwater basins should include the recommended 18 inch layer of bio-filtration soil mix identified in the wetland mitigation and stormwater basin planting plan.
- 9) Plan details of the stormwater basins should indicate the storage elevation for the calculated water quality volume and dry detention storage volumes for each basin.
- 10) The application should identify the proposed type of stormwater treatment pond design; (e.g., wet pond, extended detention pond, etc.), and the level of stormwater treatment and anticipated pollutant removal efficiency of the stormwater treatment system.
- 11) The drainage report models pre- vs. post construction flows to 2 design points on the property, in consideration of the entire contributing off-site drainage area. To determine the change in flows

to the receiving on-site wetlands from the development, the application should provide calculated flows and velocities from the proposed stormwater discharge locations for the pre- and post development condition.

- 12) The plan shows greater than 550 feet of the main access drive impervious area is directed from catch basins to small areas identified as bioretention areas and not the identified stormwater basins. The size and construction detail for these bioretention areas is required. The calculated velocity and stormwater volume discharging to these bioretention areas from the roadway and the contributing stormwater basins should be provided. Stormwater run-off from the access roadway requires treatment to meet the watershed management plan goals.
- 13) The application should identify what surface treatment is proposed along the foot trail leading through the proposed wetland buffer and conservation area and the extent of vegetation and substrate disturbance involved in the trail creation.
- 14) The final site plan requires written signature by the wetland boundary delineator.

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Respectfully,



Maureen FitzGerald
Environmental Planner



SCALE: 1" = 200 FT
2019 Aerial Mapping

GREAT NECK RD

48 GREAT NECK RD

VILLAGE DR

COLONIAL DR

LAUREL CREST DR



WETLAND VALJES

VERY HIGH

HIGH

AVERAGE

LOW

MAJOR ROADWAYS



SCALE 1 INCH = 4000 FT

4000 0 4000 Feet

Project Location in
Jordan Brook Watershed



FUSS & O'NEILL INC.

GIS/31160/PROJECT/SPECIAL/ACT/AM

