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April 22, 2024

Michael Conklin
Director of Environmental Affairs
Town of Wilton
238 Danbury Road
Wilton, CT 06897
Sent via email: mike.conklin@wiltonct.org

**RE: Wilton Inland Wetlands and Watercourses Agency Review
Application for a Significant Regulated Activity
Application #2918(S) - Wilton 64 Danbury Road Owner, LLC
Fuller Development, LLC – Co-Applicant
64 Danbury Road, Wilton, CT**

Dear Mr. Conklin:

Cardinal Engineering Associates, Inc. (CEA) has conducted a review of the following application documents pertaining to the proposed site improvements (Multi-Family Development) at 64 Danbury Road in the Town of Wilton. The revised documents were prepared following Cardinal's initial review letter dated March 25, 2024.

Reviewed application documents include:

- Letter to Mike Conklin, Director of Environmental Affairs Dept., Responses to Third Party Review and Town Comments, dated April 9, 2024, Prepared by Carmody Torrance Sandak & Hennessey.
- Letter from Tighe & Bond to Stephen Santacroce, Town of Wilton, dated April 9, 2024.
- Letter from Tighe & Bond to Cardinal Engineering, dated April 9, 2024.
- Aerial photographs of property, retrieved from UConn Air Photo Archive and Google Earth on April 9, 2024.
- Environmental Land Solutions (ELS) Nonnative Invasive Plan Species Management Plan for Fuller Development, 64 Danbury Road Wilton, Connecticut, dated December 21, 2023.
- Site Plans: 64 Danbury Road, Wilton, Connecticut, dated December 21, 2023, revised April 8, 2024, Prepared by Tighe & Bond.
- Relocation Plan for Buildings 7 & 8, titled "Alternate Site Plan (C-101A)", Wilton, Connecticut, dated March 26, 2024, Prepared by Tighe & Bond.
- Landscape Plans: 64 Danbury Road, Wilton, Connecticut, dated January 2,

2024, with revisions*, Prepared by ELS.

- Landscape & Lighting Plan (L-1) revised to April 5, 2024*.
- Details & Notes (LP-2), revised to February 20, 2024*.
- Supplemental Landscape Plan (LP-3), prepared April 5, 2024.
- Photometric Calculation: 64 Danbury Road, Wilton, Connecticut, dated April 2, 2024 as Revision E, Prepared by Illuminate.
- Route 7 Improvement Plans at Grumman Hill Road, Wilton, Connecticut, dated March 2019, Planning and Zoning Submission, Prepared by CT DOT.
- Engineering Report: 64 Danbury Road, Wilton, Connecticut, dated December 2023, revised April 2024, prepared for Planning & Zoning, prepared by Tighe & Bond.

Based on a review of the above application documents, we offer the following comments for your consideration. This report was prepared to provide comments during the Inland Wetlands and Watercourses Agency application process. Some of the comments may not be applicable to the Inland Wetlands application, but may be applicable to consistency with the 2024 Connecticut Stormwater Quality Manual, CTDOT Drainage Manual, 2024 Connecticut Guidelines for Erosion and Sediment Control, NPDES/MS4 standards, State Statutes, and current civil engineering design practices/standards.

Review comments noted as "Response Noted" do not require a response from the applicant or their consultant unless additional comments were added.

CRITICAL COMMENTS

General-01: Per field visit, it appears test pits were conducted in the areas of the infiltration systems. Provide test pit data. Were permeability tests conducted as well?

Comment Response: Test pit and percolation test results have been added to the revised engineering report and included for review.

Cardinal Follow up: The test pit data have logs for 7 test pits (TP-1A, TP-2A, TP-2B, TP-3A, TP-4A, TP-5A, and TP-6A). Three of the test pits appear to indicate groundwater or saturated soil present ("very wet") but there are conflicting notes that groundwater was not observed.

- **Recommend clarifying the notes on groundwater observations (e.g. removing no groundwater listed) from test pit logs for TP-2A, 3A, and 4A.**
- **The depth of test pits 4A, 5A, and 6A appear shallow. The Stormwater Quality Manual (SQM) recommends going to a depth of 3 feet below the bottom of a proposed infiltration system to check for groundwater and ledge.**
- **The logs for TP-4A, 5A, and 6A show that the bottom of the infiltration**

systems have been proposed with less than the 2 feet separation (between groundwater table and system bottom) recommended by the SQM.

- **Recommend further investigation at TP-6A for groundwater and ledge. Test Pit 6A data and infiltration testing are significant since three systems were designed based on this data.**

General-02: Due to the large number of existing utilities, it is strongly suggested to provide a utility demolition and preparation plan. Note utilities and storm drainage to be removed, to remain and protected, etc.

Comment Response: Per discussions with the Town engineer, the existing conditions plan has been updated to include delineation of the existing storm drainage lines to remain and the ones to be removed.

Cardinal Follow up: Response Noted.

General-03: Provide limits of clearing. Based on the grading and landscape plans, it appears that the areas adjacent to Copts Brook will need to be cleared to the top of bank, both sides. This will result in the removal of the existing vegetative buffer along the brook. Landscape plantings and lawn do not offer the potential for habitat.

Comment Response: A clearing limit line and trees to be removed have been added to the Initial Phase Erosion Control Plan. The purpose of removing existing woody plants in these areas is to remove Norway Maples to allow a replanting of native trees. Norway Maples are a nonnative invasive plant, which is renowned for the shallow roots and dense leaf canopy that will prevent plants from thriving beneath their canopy. Except for one Norway Maple that is strongly leaning toward the proposed building, this clearing is not needed for the development, but offered to provide an enhanced native and more diversity habitat plants selection along the wetlands and watercourse. The existing smaller Sugar Maples (4-6" caliper) will remain. There is no expansion of lawn area proposed on the site.

Cardinal Follow up: Clearing line should include not only significant trees, but any brush / shrubs, etc.

General-04: Provide limits of clearing. Based on the grading and landscape plans, it appears that the areas adjacent to Copts Brook will need to be cleared to the top of bank, both sides. This will result in the removal of the existing vegetative buffer along the brook. Landscape plantings and lawn do not offer the potential for habitat. This is also the same condition at the small wetlands area at the volleyball court. It appears all upland vegetation will be removed.

Comment Response: Similar to the response above, the purpose of removing nonnative invasive existing vegetation is to strictly enhance the vegetation adjacent to the wetlands. The area of the pocket wetland is targeted to remove Japanese Knotweed, an aggressive nonnative plant. The area will be replanted with a dense

thicket of native shrubs. This clearing is not needed for the development. We have added notes to remove existing large Asiatic Bittersweet from the trees.

Cardinal Follow up: Response Noted.

RPT-8: The existing conditions watershed on the east side was stopped at the limit of the topographic survey, but the watershed appears to extend farther to the east into the Whipple Road area. This area is generating stormwater which ultimately flows onto the property. Some of this flow appears to be supporting the wetland near the volleyball court. The watershed should be revised to account for the additional stormwater.

Comment Response: The watershed maps have been revised to more accurately depict this area and are included with the updated engineering report.

Cardinal Follow up: Response Noted.

RPT-18: 3.4.2 Compensatory Storage: It is stated that Building 4 will be constructed on Columns to minimize impact on the flood storage characteristics of Copts Brook. However, neither the architectural plans or site plans indicate that this is proposed. Modify the plans accordingly or provide calculations for the loss of flood storage capacity and provided compensatory grading elsewhere within the limits of Copts Brook 100-year flood.

Comment Response: The garages for Building 4 are at grade and the lower level studio apartments are what is proposed to be on short columns. A foundation wall will be provided between the two to accommodate the grade transition. The civil plans have been updated to include a crosshatch to reflect this area being proposed on columns. The grade under the building was also proposed to be slightly lower to accommodate the minor inclusion of the proposed columns and the northern entry within the floodplain. These compensatory calculations are included in the engineering report.

Cardinal Follow up: Provide proposed grading.

RPT-19: The hydrology section dealing with Copts Brook depicts the watershed as 435 acres, but this is the watershed of the brook where it crosses Grumman Hill Road in twin concrete pipes. Please confirm size of watershed (approximately 470 acres) and include a figure of which clearly shows the limits of watershed boundary with the limits of the site included.

Comment Response: We have updated the hydrology model to accurately reflect the correct design point noted and the revised calculations are included for review. The model was also revised to more accurately reflect lag times within the watershed.

Cardinal Follow up: Additional information is needed to support the revised hydrology modeling results of the brook including a requested figure of the watershed boundary with the subbasins delineated.

- **Additional information on the updated hydrology model should be provided such as the nature of the storage (e.g. ponds, dam, etc.) in upstream area (Wilton Acres Road and Clover Lane) with field pictures if available.**
- **The report (Section 3.1) mentions a 490 acre watershed, but it appears that 470 acres was used in the hydrology model.**
- **The peak flow rate in the Table 3-1 should be revised upward to 170 cfs to match the latest hydrology run for the 100 year storm.**
- **The peak flow rate for the 25 year storm should be provided to confirm the 120 cfs value that has remained unchanged both in the report and in the hydraulic stormsewers model.**

C-201-1: Northeast corner of Building No. 4 is located within the limits of the 100-year flood (El. 139.6). Fin. Flr. 141.7. The construction of the building results in a loss of flood storage capacity of the site. Provide compensatory storage volume. Area will be disturbed during construction. Provide proposed contours. Provide additional existing grades north and west of Building 4. Suggest providing TW and BW elevations of existing retaining wall on Lot 2 N/F Powell. Revise proposed contours north of north end of Building 4 parking area to reflect top of curb elevation of 141.50.

Comment Response: As noted in prior comments, the residential portion of the building is on columns and only a small area of the floodplain is being filled at the northern entry. Grading under the building has been slightly lowered to provide the required compensatory flood storage to account for this and the subsequent columns being added.

Cardinal Follow up: Provide proposed grading on grading plan at Building 4.

C-201-4 Building No. 8: Excavation to a depth of ± 21 feet from existing grade to proposed finished floor elevation. ± 24 feet for footings. Suggest borings to determine depth to ledge and water table. Foundation drains may be required. A detailed sequence of construction for the excavation and disposal of the material should be provided.

Comment Response: For budgeting and design purposes it is anticipated that this excavation will all be rock. The proposed buildings will be slab on grade and no foundation drains are anticipated.

Cardinal Follow up: Typical foundations for slabs on grade include a frost wall around the perimeter of the building. Also, a layer of crushed stone is placed below the slab. Groundwater should be taken into account and provisions for foundation drainage should be incorporated into the plans. Confirm that rock can be removed with large excavators without blasting. Confirm that rock will be hauled offsite and that rock crushing operations are not proposed at the site for this project.

C-201-5: The plan calls for a significant amount of cut and removal of existing soil for

the construction of Buildings 7 & 8 at the northeast corner of the site, which is within the 100-foot regulated area. This is an area of steep existing grades (>30%). The soil in this area is a Canton and Charlton complex which is a fine sandy loam and susceptible to erosion. Additional measures to protect the wetlands should be provided. Only a single row of silt fence with haybales is provided. The sediment trap is only proposed for the completion of the first phase of excavation.

Comment Response: The silt fence adjacent to the wetlands is not standard silt fence, it is heavy duty fencing with angled structural support and reinforced fabric. Another row was added to the erosion control plans during the initial phase to address these concerns.

Cardinal Follow up: Response Noted.

C-301-2: Provide a site demolition plan which includes how existing storm drainage flows are to be maintained where piping is proposed to be rerouted. Plan should also demolition of the existing building and associated utilities. Plan should also specify materials to be placed as backfill in the location of the foundation of the former building.

Comment Response: The existing conditions plan has been updated to document the existing storm drainage to remain and be abandoned/removed.

Cardinal Follow up: Response Noted. However, future submissions should not show the utilities that are removed for clarity. A site demolition plan should be included in the set of drawings.

C-301-5: Level Spreader: Provide elevations of bottom and crest. Detail calls for erosion control blanket. Show limits of the blanket. Detail shows slope of 3:1 on uphill side of level spreader. Existing grades are steeper than 3:1. Confirm that an 8" HDPE Flared End Section is available. It appears that the smallest flared end sections available is 12" diameter.

Comment Response: An erosion control blanket will be provided in the areas of disturbance exiting the level spreader to meet existing grades, approximate locations are shown on the plans.

Cardinal Follow up: Response on matting noted. Level spreader area grading and size of flared end not addressed.

C-301-16: Replace headwalls at the 54" RCP culvert at Copts Brook. Walls are in disrepair. Provide fencing on top of wall (4 ft. vinyl coated chain link) for fall protection. Provide inlet protection (trash screen) to prevent debris from entering and potentially clogging the system. Provide protective fencing (4 ft. vinyl coated chain link) at top of slope at Copts Brook. This will also assist in keeping trash and other debris from the brook.

Comment Response: The design drawings have been revised to show replacing the existing headwall. A trash rack and security fence will be provided as well. The security fence will extend across the headwall and an additional 20 feet past the headwall on both sides.

Cardinal Follow up: The site detail sheets should be revised to include the additional items.

Town of Wilton Inland Wetlands Commission Application

APP-1: Additional description of chemical and physical characteristics of the 4,400 cy of material to be deposited. Characterization of onsite materials (geotechnical testing including sieve analysis) to be reused on onsite should be completed.

COMMENT RESPONSE: The intent for this project is to reuse as much material on site as possible. New material brought in will most likely be associated with the pavement, concrete and associated base materials. The location and composition of these materials is not yet known and will be reviewed during the construction administration phase once a contractor is selected and submittals are provided. Fill material to be deposited will be clean soil, free of large stones, organic material and woody debris.

Cardinal Follow up: Response Noted.

Reports

Engineering Report – 64 Danbury Road, Wilton, Connecticut, dated December 2023, prepared by Tighe & Bond.

RPT-1: In Section 1, the report should include references to the 2002 CT E&S Guidelines and the revised manuals (Soil Erosion & Sediment Control and Water Quality Manual) that become effective at the end of this month.

COMMENT RESPONSE: The report has been revised to reflect this reference.

Cardinal Follow up: Response Noted.

RPT-2: Stormwater management system should treat 50% of WQV based on the 1.3 inch storm.

COMMENT RESPONSE: The initially submitted design provided water quality storage in excess of the 0.65-inch storm (one half the 1.3-inch storm). Based on the revisions required to the storm drainage system as a result of subsequent on-site percolation and deep hole testing, the system has been revised and continues to provide storage for the 0.65-inch storm. The report text has been updated to make this clearer.

Cardinal Follow up: Response Noted.

RPT-3: Soil permeability and infiltration assumptions should be verified with fieldwork along with groundwater elevations. See critical comment 1.

COMMENT RESPONSE: These tests were performed on March 7 and 8, 2024. The results are included in the updated Engineering Report.

Cardinal Follow up: See addition comments under Critical Comment 1.

RPT-4: Section 1.4 describes the delineation of wetlands and says this work was completed in February and March of 2017. Section should be revised with actual dates and indicate that both state and federal wetlands were flagged.

COMMENT RESPONSE: The delineation was performed on February 23, 24, March 9, and April 10, 2017. The summary letter of findings is included with the revised report.

Cardinal Follow up: Response Noted.

RPT-5: Under existing site hydrologic analysis, it is stated that the 54 inch RCP culvert discharges to the Norwalk River. If the pipe connects to the Norwalk River, then a joint probability analysis appears warranted where a 10 to 1 ratio may be appropriate (i.e. 25 year pipe capacity should use 10 year tailwater for the river).

COMMENT RESPONSE: The starting HGL for the stormwater model has been updated to reflect the 10-year tailwater elevation in the Norwalk River at this location.

Cardinal Follow up: Response Noted.

RPT-6: Report should include a description of measures taken to verify condition of the existing 54 inch discharge pipe and condition of the outlet. Was a CCTV inspection conducted or field inspections performed to verify that it is good shape with no cracks, perforation, or joint separations and can handle the additional stormwater. The inclusion of this data into the report would be suggested including any field inspection photos of the interior of the pipe and outlet.

COMMENT RESPONSE: The pipe has not been inspected to confirm current conditions, this is a Town drainage line. We can work with the Town to confirm the condition of this line and any others to remain on site prior to re-using. As a point of clarification, under the proposed development plan the total volume and peak rate of stormwater being directed from the proposed development to this line will be decreasing in all analyzed storm events.

Cardinal Follow up: Response Noted.

RPT-7: The description of the existing hydrology should include that there is flow from wetland near the volleyball court entering the storm drainage system.

COMMENT RESPONSE: The report text was revised to make this clearer.

Cardinal Follow up: Response Noted.

RPT-8: The existing conditions watershed on the east side was stopped at the limit of the survey, but the watershed appears to extend farther to the east into the Whipple Road area. This area is generating stormwater and flowing onto the property. Some of this flow appears to be supporting the wetland near the volleyball court. The watershed should be revised to account for the additional stormwater.

COMMENT RESPONSE: The watershed maps have been revised to more accurately depict the drainage area up to Whipple Road and are included with the updated engineering report. Whipple Road is curbed and its drainage inlets in the area of our site appear to drain to Grumman Hill Road.

Cardinal Follow up: See Critical Comment related to RPT-19. Confirm that the hydrology model of Copts Brook (EX-00) includes Whipple Road pavement drainage.

PR-WS-03 is the watershed area containing the additional area in the Whipple Road area. The time of concentration of 95 minutes appears high for an area of only 4.8 acres. Sheet flow should only be considered for 300 feet maximum.

RPT-9: The flow to design point B (the 54-inch culvert) includes flow from the front of the site at the driveway entrance north to an area in front of Building 64. It is not clear from the survey that they connect to the culvert or actually connect to state drainage on Route 7. The survey shows a 36 inch invert in the southerly direction at 127.4 feet which appears to be the outlet. This conflicts with the time of concentration path for EX-WS-02H.

COMMENT RESPONSE: The design plans for the Route 7 widening are included as a separate attachment with these responses to provide further clarity. The State catch basins on Danbury Road connect to the 54-inch (shown as a 60-inch on State drawings) storm line. The existing infiltration system in question connects to the State catch basin and we are not proposing to touch this system as part of the proposed development plan

Cardinal Follow up: Response Noted.

RPT-10: The proposed conditions watershed figure (PR-WS) should include additional area due to run on from the Whipple Road area. This appears to significantly affect PR-WS-2A (II), PR-WS-2B (I), PRWS-3, and PR-WS-2D.

COMMENT RESPONSE: The watershed maps have been revised to reflect this change. While it is an increase in total area, it will remain unchanged between the existing and proposed conditions as part of the proposed development plan.

Cardinal Follow up: Response Noted.

RPT-11: The flow from wetland near the volleyball court entering the storm drainage system appears to conflict with time of concentration path for PR-WS-2A.

COMMENT RESPONSE: We have revised the watershed map and time of concentration path per the prior comments to more accurately reflect this condition in the existing and proposed condition.

Cardinal Follow up: Response Noted.

RPT-12: The eastern area of PR-WS-1 (north, west, and south of Buildings 7 and 8) is being modeled as forested, but it appears this area is converted to grass after removal of trees (site clearing work).

COMMENT RESPONSE: There will be a small area of grass immediately behind the homes up to the retaining walls. The balance of disturbance will be heavily planted with shrubs and trees per the landscape drawings. We have adjusted the corresponding weighting on the coverage numbers, but it is minor in comparison to the overall watershed.

Cardinal Follow up: Response Noted.

RPT-13: Storm sewers reports should be provided for existing and proposed conditions. The reports should also include other storm events (e.g. 10 year, 25 year, 100 year). The reports should include the hydraulic grade profiles for existing and proposed systems. A proposed network should be provided accounting for CB-08 input, system 4,, system 5 input (from OCS-05), and overflow from infiltrator 1. These appear to account for another 10 cfs during a 25 year storm.

COMMENT RESPONSE: Storm sewer reports are not typically provided for existing drainage systems since they are being either replaced or amended as shown in the proposed model. Furthermore, per Town drainage guidelines, piped drainage is to be designed for the 25-year peak storm event, which the storm sewer model provided documents our system is in compliance with.

Cardinal Follow up: Response Noted.

RPT-14: Report should include a description of how starting hydraulic elevation was selected/calculated for 54 inch RCP to support the stormsewer calculations. The 25 year HGL is shown as 132.24 feet.

COMMENT RESPONSE: We have adjusted the starting HGL in the model to be the 10-year elevation of the Norwalk River at the discharge location of the culvert.

Cardinal Follow up: Response Noted.

RPT-15: The proposed storm sewers model does not include the 24-inch line carrying water underneath the tennis court from the wetland area to DMH-06.

COMMENT RESPONSE: The model has been updated to include this flow.

Cardinal Follow up: Response Noted.

RPT-16: Stormwater line between DMH-02 and DMH03 has a capacity less than the pipe upstream.

COMMENT RESPONSE: The capacity in the two pipes noted is off by 0.06 cfs, or 0.1%. This is due to the calculated pipe slopes between the two lines being off by 0.01%. Since flatter pipes of the same size have less capacity the slight reduction in pipe slope resulted in a slight reduction in capacity. These numbers have since been revised based on the updated storm drainage model.

Cardinal Follow up: Response Noted.

RPT-17: Under Best Management Practices, catch basins and yard drains with sumps are mentioned, but indicates 24-inch sumps are a BMP. The CT Stormwater Manual recommends sump depths of 4 feet or greater.

COMMENT RESPONSE: The sumps have been revised to 4-ft.

Cardinal Follow up: The report still lists 2 ft sumps.

RPT-18: 3.4.2 Compensatory Storage: It is stated that Building 4 will be constructed on Columns to minimize impact on the flood storage characteristics of Copts Brook. However, neither the architectural plans or site plans indicate that this is proposed. Modify the plans accordingly or provide calculations for the loss of flood storage capacity and provided compensatory grading elsewhere within the limits of Copts Brook 100-year flood.

COMMENT RESPONSE: The garages for Building 4 are at grade and the lower-level studio apartments are what is proposed to be on short columns. A foundation wall will be provided between the two to accommodate the transition. The civil plans have been updated to include a hatch to reflect this area being proposed on columns. The grade under the building was also proposed to be slightly lowered to accommodate the minor inclusion of the proposed columns and the northern entry within the floodplain. These compensatory calculations are included in the engineering report.

Cardinal Follow up: Response Noted.

RPT-19: Appendix H presents the hydrology of Copts brook. It depicts the watershed as 435 acres, but this is the watershed of the brook where it crosses Grumman Hill Road in twin concrete pipes. Please confirm size of watershed (it appears closer to

470 acres) and include a figure of which clearly shows the limits of watershed boundary and limits of the site. Description of storage within the watershed should be described.

COMMENT RESPONSE: We have updated the hydrology model to accurately reflect the correct design point and the revised calculations are included for review.

Cardinal Follow up: Response Noted.

RPT-20: Under Section 3 Floodplain Management, the FIS was listed as 2010, but a revised study was completed in October 16, 2013.

COMMENT RESPONSE: The text has been revised to reflect the correct date.

Cardinal Follow up: Response Noted.

RPT-21: Cut and fill grading plans (with tics at 5 or 10 foot grid) should be created to support equal conveyance.

COMMENT RESPONSE: Civil 3D was used to calculate the volumetric difference between the existing and proposed surfaces included in the report.

Cardinal Follow up: Response Noted.

RPT-22: Initial phase of construction should include pre-construction meeting with Town's Director of Environmental Affairs. This should be indicated on E&S drawings also.

COMMENT RESPONSE: Town's Director of Environmental Affairs has been added to the list of attendees at the pre-construction meeting identified on the E&S Drawings.

Cardinal Follow up: Response Noted.

RPT-23: Hydroflow report provides pond report (for outlet control structures) for the 2 year storm only. These reports should also be included for the other storm events especially 25 year and 100 year.

COMMENT RESPONSE: A digital copy of the full report including all these hydrographs was included with our submission, the hard copy was abridged to save on paper. An updated full digital copy of revised calculations has been provided for review with these responses.

Cardinal Follow up: Response Noted.

RPT-24 New Comment: The hydrographs showing the flows leaving Infiltration System 1 for the 25-year, 50-year, and 100-year storms leaving infiltration system 1 are modeled using storage higher than the system capacity (9,675 cf of storage a shown on C302-1). The storage needed for

infiltration system 1 should be verified and Tables 2-2 and 2-3 should be verified that peak flow rates (and volumes) are lower for the proposed conditions for the 25-year, 50-year, and 100-year storms. Table 2-4 value for Infiltration system 4 should be verified to confirm that it provides the required water quality treatment volume if adjusted for the reduced storage amount.

Biological Evaluation–50 60 & 64 Danbury Road Wilton, Connecticut Wetland, dated January 2, 2024, prepared by ELS.

ELS-1: It states the wetlands were flagged by Otto Theall in April 2017. This should be revised to be consistent with Theall report (wetlands flagged February 23, March 9, and April 10, 2017).

COMMENT RESPONSE: We acknowledge that the wetlands were flagged by Otto Theall, and reference three separate field visits to determine the wetland boundary dated February 23, March 9, and April 10, 2017. These flags are noted on the application's "Topographic Survey," prepared by D'Andrea Surveying and Engineering, PC., dated 9/12/23.

Cardinal Follow up: Response Noted.

ELS-2: Indications of diameter breast height (DBH) of trees on northern part of the site near Copts Brook and clearing limits for proposed buildings 7 and 8 should be provided.

COMMENT RESPONSE: ELS visited the site on 3/29/24 and confirmed that existing trees at the front of the site are correctly noted on the plan. In the vicinity of Building 7 & 8 the trees sizes were updated, and trees not previously noted were field located and added to the plans.

Cardinal Follow up: Response Noted.

ELS-3: The proposed grading and drainage in northeast corner of the site appear to result in less flow to the small pocket wetland (AD-13 and AD-14 collect water that discharge to another area of the site) which could lead to the wetland drying out (change in hydrology) and to negative impacts.

COMMENT RESPONSE: The proposed grading plan does change a very minor watershed area of this pocket wetland. However, the watershed that comes off the hillside to the east supplies more than 99% of the surface water to this wetland. The change is not expected to have an impact to the water hydrology supporting this wetland.

Cardinal Follow up: Response Noted.

ELS-4: Material on site might not be suitable for use as construction materials due to high silt and clay content so significant import of soils and materials may be anticipated. Additional information needed on materials to be excavated and materials to be deposited due to significant values (14,000 cy excavated & 4,000 cy deposited).

COMMENT RESPONSE: A licensed geotechnical engineer will be retained to review and certify that all soils material that remains on site will be suitable for reuse.

Cardinal Follow up: Response Noted.

ELS-5: There are several 30-inch trees near Route 7 in front of Building 64 that will need to be removed. Can utilities and layout be adjusted so they can remain.

COMMENT RESPONSE: We acknowledge that several large shade trees along Route 7 will be removed due to the placement of Building #1 and stormwater piping. These trees, planted for the previous development, are identified as White Ash trees. It is expected that these trees will succumb and die from the recent introduction of the Emerald Ash borer into the area. These trees will be replaced with native shade trees, Redmond Linden, that are not prone to this pest. To further mitigate the trees removed in connection with this development, the Applicants propose to plant a total of 11 additional trees and 25 additional shrubs on the office campus as reflected on "LP-3, Supplemental Landscape Plan" dated 4/5/2024 and submitted herewith.

Cardinal Follow up: Response Noted.

Engineering Plans

Topographic Survey (prepared by D'Andrea Surveying & Engineering)

TS-1: Suggest providing a strictly property map that clearly depicts boundary, setbacks and all easements.

COMMENT RESPONSE: Refer to the zoning location survey, prepared by D'Andrea Surveying Associates, P.C., dated July 11, 2017, revised January 2, 2024.

Cardinal Follow up: Response Noted.

TS-2: Survey doesn't show end of 54 inch pipe where most of the site is discharging.

COMMENT RESPONSE: This discharge is off the project site and on private property not owned by the applicant.

Cardinal Follow up: Response Noted. Additional information is provided with inclusion of the DOT Route 7 drawings.

Sheet C-001 General Notes, Legend and Abbreviations

C-001-1: Form 818 Notes: Update Form 818 reference to current supplements. Add 'Facilities' to Form 818 title.

COMMENT RESPONSE: Note has been revised.

Cardinal Follow up: Response Noted.

C-001-2: Form 818 Notes: Note #4 refers to CTDOT District 4. Note does not apply to this project.

COMMENT RESPONSE: Note has been revised.

Cardinal Follow up: Response Noted.

C-001-3: Grading Notes: Note #4. Provide locations of protective fencing on plans. Call out fencing height and material.

COMMENT RESPONSE: Protective fencing shall be black, 4-foot, vinyl-coated chain link. Plans have been updated to include additional call outs and details

Cardinal Follow up: Response Noted.

Sheet C-002 Existing Conditions Plan

C-002-1: Update survey to include reconstructed Route 7 and associated drainage.

COMMENT RESPONSE: Supplemental design drawings for the Route 7 widening have been included with these responses for reference. Approximate locations of relevant storm drainage from these plans have been added to the project base.

Cardinal Follow up: Response Noted.

C-002-2: Does the site drainage connect to the State system for Route 7? If so, review and approval of changes to the storm drainage system on site may be required by CTDOT.

COMMENT RESPONSE: No, the 54-inch line is a Town line the state drainage structures connect to. We are reviewing this with CTDOT as part of our OSTA application with the State.

Cardinal Follow up: Response Noted. Provide documentation that the State approves the proposed drainage plan.

C-002-3: Provide additional contours at the wetlands area near the volleyball court. Invert of 24" pipe = 151.0. First contour is elevation 155. This will better define the area of the brook.

COMMENT RESPONSE: The contouring shown is accurate, the inlet for the pipe will be cleared of sediment and silt, then stabilized with riprap to allow for proper conveyance of runoff from the wetlands.

Cardinal Follow up: Contours at the inlet to the 24" pipe are not shown.

C-002-4 New Comment: The existing conditions plans should be updated to show all the trees. There are trees shown for removal on Sheet C-501 that are not shown on the existing conditions plans (e.g. on both sides of Copts Brook from the culvert inlet to the property line and to the northwest of the pocket wetland within the upland review area).

Sheet C-100 Overall Site Plan

C-100-1: Show limits of clearing / tree removal. Based on the grading and landscape plans, it appears that the areas adjacent to Copts Brook will need to be cleared to the top of bank, both sides. This will result in the removal of the existing vegetative buffer along the brook. Landscape plantings and lawn do not offer the potential for habitat. This is also the same condition at the small wetlands area at the volleyball court. It appears all upland vegetation will be removed.

COMMENT RESPONSE: A clearing limit line and trees to be removed have been added to the Initial Phase Erosion Control Plan.

Cardinal Follow up: Limit of Clearing shall be shown on all proposed site plans for clarity.

The change from heavy duty silt fencing to normal silt fencing is not clear especially near Copts Brook. Suggest having two separate linetypes to clearly distinguish the type of silt fencing and where it is to be installed.

Suggest extending the silt fencing for added protection in below two locations:

- **Suggest extending the silt fence on the northeast so there are no gaps. Any disturbances on top of hill could bypass the silt fence and flow offsite if a gap is left.**
- **Suggest extending the northwest end of silt fence closer to the property line on the north in the vicinity of Hollyhock Road (as was done in the final phase) to protect Copts Brook.**

Suggest moving temporary sediment trap to the east out the upland review area.

Sheet C-101 Site Plan

C-101-1: Show limits of clearing / tree removal. Indicate size of trees to be removed.

COMMENT RESPONSE: The clearing limits have been added to the Initial Phase Erosion control plan and have been update to include the size and locations of trees to be removed as well as landscape plans.

Cardinal Follow up: Limit of Clearing shall be shown on all proposed site plans for clarity.

C-101-2: Review parking count. Appears to be incorrect. Accessible spaces counted twice in total.

COMMENT RESPONSE: Parking counts shown are correct. Accessible spaces are not counted in the 107 surface spaces.

Cardinal Follow up: Response Noted.

C-101-3: Suggest eliminating the parking space in front of tennis court gate for access.

COMMENT RESPONSE: The parking space in question is part of a shared parking area used to accommodate 60 Danbury Road. An additional gate has been added to the Site Plan on the north side of the tennis court for access to the gazebo.

Cardinal Follow up: Grading indicates a drop of 1 foot from the tennis court to the pavement (6" to top of curb). This is fairly steep. This will make this gate inaccessible. Access to new gate on north side is difficult due to the location of the gazebo and the close proximity to the tennis court fence. Also, the proposed grade of the parking lot at the gazebo is 1 foot lower than the tennis court. If the "floor" of the gazebo is set to match the top of curb elevation, then the grade to the gate will be too steep as well.

C-101-4: The partial repaving of the circle south of buildings 1 and 2 does not seem practical. It appears that more than half of the roadway will be disturbed by utility installation and additional drainage seems likely in this area.

COMMENT RESPONSE: The intent is to sawcut and trench utilities within the driveway as required to install the proposed utilities. Once this work is complete, the repaired areas will be milled, and a pavement overlay provided. The plans have been updated to include a hatch for the areas of milling and pavement overlay.

Cardinal Follow up: Response Noted.

C-101-5: What portion of the stone wall south of the tennis court is to remain? Is

some of the stone wall going to be moved?

COMMENT RESPONSE: The stone wall will be removed in all areas where grading is required.

Cardinal Follow up: Note limits of wall to be removed. Note how end of remaining wall is to be treated / repaired.

C-101-6: Trash Compactor Enclosure: Who will be discarding trash into the compactor? If residents, access should be ADA accessible for all residents.

COMMENT RESPONSE: The trash area is accessible from the north side where the accessible space is. Grading in this lot is higher and provides accessible access to the top of the dumpster.

Cardinal Follow up: It appears there is proposed curb between the upper parking area and the concrete pad above the compactor. Provide flush condition and note on drawing.

C-101-7: Suggest sidewalk ramps at crosswalk north of Buildings 3 and 5.

COMMENT RESPONSE: The sidewalk on the north side of the primary driveway ends at a set of stairs and is not accessible.

Cardinal Follow up: Response Noted.

C-101-8: Van spaces at pool: Typically, 8 ft. striping is on the passenger side of the van parking space to allow for a lift.

COMMENT RESPONSE: This current space configuration meets ADA shared space dimensional requirements for vans. If needed, a van can back into the space to utilize the cross hatch on the passenger side.

Cardinal Follow up: Response Noted.

C-101-9: Is speed bump at traffic circle in front of the proposed Clubhouse to be removed? Is the crosswalk to remain or be removed? If to remain, a pedestrian ramp is required on the Clubhouse side of the crosswalk.

COMMENT RESPONSE: The sidewalk within the existing entry circle has been adjusted to provide an accessible route that utilizes a new crossing to the new accessible ramp at the site entry. The speed hump will be relocated to this location.

Cardinal Follow up: Response Noted.

C-101-10: Note retaining wall types, modular block or gravity wall. Two details provided.

COMMENT RESPONSE: The walls will be designed during construction documents. The initial intent is to utilize gravity walls in areas of cut and modular block walls in fill areas.

Cardinal Follow up: Block walls may need chain link fencing for safety. The detail should indicate that. Call out walls between units. Small height walls may become a tripping hazard.

C-101-11: Sidewalk adjacent to Route 7 is going to be trenched through for utilities. Its repair should be noted.

COMMENT RESPONSE: Additional sidewalk repairs have been noted on site plan.

Cardinal Follow up: Response Noted.

C-101-12: Three of the porches of Building 1 are within the front setback zone.

COMMENT RESPONSE: The "porches" of Building 1 are Terraces, which are permitted within the setback in accordance with Section 29-4.C.5 of the Zoning Regulations provided they do not project "closer than one-half of the minimum required building setback distance from any property line."

Cardinal Follow up: Response Noted.

Sheet C-102 Fire Truck Turning Movements Plan

C-102-1: Verify plan is approved by Wilton Fire Marshal. Is the fact that the fire truck cannot access directly in front of Buildings 5 and 7 an issue? What is the maximum allowable distance from the building to the fire truck.

COMMENT RESPONSE: We met with the Fire Marshall (Rocco Grosso) on 3/27/24 to review the site plans and architecture. He was generally supportive of the current layout and access and requested a hard copy for final confirmation and sign-off. Once received we will provide this concurrence to the commission.

Cardinal Follow up: Response Noted.

Sheet C-201 Grading Plan

C-201-1: Northeast corner of Building No. 4 is located within the limits of the 100-year flood (El. 139.6). Fin. Flr. 141.7. The construction of the building results in a loss of flood storage capacity of the site. Provide compensatory storage volume. Area will be disturbed during construction. Provide proposed contours. Provide additional existing grades north and west of Building 4. Suggest providing TW and BW elevations of

existing retaining wall on Lot 2 N/F Powell. Revise proposed contours north of north end of Building 4 parking area to reflect top of curb elevation of 141.50.

COMMENT RESPONSE: As noted in prior comments, the residential portion of the building is on columns and only a small area of the floodplain is being filled in at the northern entry. Grading under the building has been slightly lowered to provide the required compensatory flood storage to account for this and the subsequent columns being added.

Cardinal Follow up: Provide proposed grading / spot grades.

C-201-2: Grading Note #7 refers to survey of 141 Danbury Road.

COMMENT RESPONSE: Note has been corrected

Cardinal Follow up: Response Noted.

C-201-3: Provide Fin. Flr. Elevations and Garage Flr. Elevations on Grading Plan.

COMMENT RESPONSE: Grading plan has been updated to show these elevations more accurately.

Cardinal Follow up: Response Noted.

C-201-4: Building No. 8: Excavation to a depth of ± 21 feet from existing grade to proposed finished floor elevation. ± 24 feet for footings. Suggest borings to determine depth to ledge and water table. Foundation drains may be required. A detailed sequence of construction for the excavation and disposal of the material should be provided.

COMMENT RESPONSE: For budgeting and design purposes it is anticipated that this excavation will all be rock. The proposed buildings will be slab on grade and no foundation drains are anticipated.

Cardinal Follow up: Typical foundations for slabs on grade include a frost wall around the perimeter of the building. Also, a layer of crushed stone is placed below the slab. Groundwater should be taken into account and provisions for foundation drainage should be incorporated into the plans.

Confirm that rock can be removed with large excavators without blasting. Confirm that rock will be hauled offsite and that rock crushing operations are not proposed at the site for this project.

C-201-5: The plan calls for a significant amount of cut and removal of existing soil for the construction of Buildings 7 & 8 at the northeast corner of the site, which is within the 100-foot regulated area. This is an area of steep existing grades ($>30\%$). The soil in this area is a Canton and Charlton complex which is a fine sandy loam and

susceptible to erosion. Additional measures to protect the wetlands should be provided. Only a single row of silt fence with haybales is provided. The sediment trap is only proposed for the completion of the first phase of excavation.

COMMENT RESPONSE: The silt fence in question is not standard silt fence, it is heavy duty fencing with angled structural support and reinforced fabric. Another row was added to the erosion control plans during the initial phase to address these concerns.

Cardinal Follow up: Response Noted. See additional concerns about silt fence contained in comment C-100-1.

C-201-6: Review grades at rear of Building 7. Appears flat and will not drain to area drains at middle units. Suggest relocating AD-16 to the west and lowering to allow area to drain.

COMMENT RESPONSE: Grate elevations have been slightly adjusted to ensure 2% slopes are maintained in these areas.

Cardinal Follow up: Response Noted.

C-201-7: It appears that the proposed grades cut ± 1 ft at the tennis court. How is access to the court to be maintained? Also, consider ADA access to the court.

COMMENT RESPONSE: The 155 contour runs through the curb in this area and the top of curb is at or within 1 to 2 tenths of existing grades.

Cardinal Follow up: Based on the proposed contours within the parking lot, the proposed grade of the lot at the tennis court entrance is ± 1254.5 . Top of curb = 155.0. Tennis court at 155.3. Walk from curb to tennis court is 4 feet long. $0.3' / 4 \text{ ft.} = \text{slope of } 7.5\%$. Too steep. 5% min. should be provided.

C-201-8: Spot grades for accessible parking north of pool area need to be shown on plan.

COMMENT RESPONSE: Additional spot grades have been provided. Grades within the accessible spaces range from 1.5% to 2% per ADA code.

Cardinal Follow up: Response Noted.

Sheet C-301 Drainage Plan

C-301-1: Suggest including structure information (TF elevations, Inverts, etc.) for catch basins and manholes to remain. Provide proposed rim / top of frame elevations for structures to remain.

COMMENT RESPONSE: Additional top of frame and invert information has been added for adjusted structures to remain.

Cardinal Follow up: Response Noted.

C-301-2: Provide a site demolition plan which includes how existing storm drainage flows are to be maintained where piping is proposed to be rerouted. Plan should also demolition of the existing building and associated utilities. Plan should also specify materials to be placed as backfill in the location of the foundation of the former building.

COMMENT RESPONSE: The existing conditions plan has been updated to document the existing storm drainage to remain.

Cardinal Follow up: Response Noted. Provide site demolition plan in construction documents set.

C-301-3: Why is flow from Infiltration System No. 1 being discharged into CB-02? This water has already been treated. Any treatment measures downstream from CB-02 should be designed to handle the total flow going to that measure.

COMMENT RESPONSE: As part of the drainage modifications for the entire site, these systems are no longer routed like this.

Cardinal Follow up: Response Noted.

C-301-4: Provide location of wall footing drains and discharge locations.

COMMENT RESPONSE: These locations will be coordinated with final wall design. A note was added to sheet C-001 stating these drains are to be connected to adjacent storm drainage infrastructure and not daylight to grade.

Cardinal Follow up: Response Noted.

C-301-5: Level Spreader: Provide elevations of bottom and crest. Detail calls for erosion control blanket. Show limits of the blanket. Detail shows slope of 3:1 on uphill side of level spreader. Existing grades are steeper than 3:1. Confirm that an 8" HDPE Flared End Section is available. It appears that the smallest flared end section available is 12" diameter.

COMMENT RESPONSE: An erosion control blanket will be provided in the areas of disturbance exiting the level spreader to meet existing grades, approximate locations are shown on the plans.

Cardinal Follow up: Level spreader area grading and size of flared end not addressed.

C-301-6: Specify which drains are Area Drains, Yard Drains with Dome Grates and Concrete Yard Drains.

COMMENT RESPONSE: Additional clarity to details has been provided. Dome grates are for planting beds only, flat top area drains are for lawn and paved areas. The detail for concrete yard drains has been removed.

Cardinal Follow up: Include material type of yard drains (Nyloplast?) on detail.

C-301-7: Specify manhole diameters (4 ft., 6 ft. etc.).

COMMENT RESPONSE: A note was added stating all manholes unless noted will be 4-ft diameter. Sizing on manholes over 4-ft has been added.

Cardinal Follow up: Response Noted.

C-301-8: Suggest rerouting roof leaders so they do not discharge into water quality treatment structures as runoff from roofs is considered "clean".

COMMENT RESPONSE: Water quality structures are capable of handling the additional flow and prefer to leave some of them as is currently designed to eliminate the need for additional piping and structures to avoid routing to them.

Cardinal Follow up: Response Noted.

C-301-9: Review pipe lengths and slopes.

COMMENT RESPONSE: Pipe slopes and lengths appear accurate and are generated from the Civil 3D pipe network.

Cardinal Follow up: Response Noted.

C-301-10: Review inverts CB-08.

COMMENT RESPONSE: Invert was off by 0.01 and has been adjusted.

Cardinal Follow up: Response Noted.

C-301-11: Provide doghouse manhole detail(s).

COMMENT RESPONSE: An additional detail has been provided.

Cardinal Follow up: Doghouse manhole detail not observed.

C-301-12: Provide detail for converting catch basin to manhole.

COMMENT RESPONSE: This detail has been added to the plan set.

Cardinal Follow up: Response Noted.

C-301-13: Note structures to be modified, new inverts core drilled, abandoned inverts to be sealed with block/brick and non-shrink mortar, etc.

COMMENT RESPONSE: Additional callouts have been added to the plans to show lines to be cut and capped and manholes to be core and drilled.

Cardinal Follow up: Response Noted.

C-301-14: Drainage structures with deep sumps should be specified.

COMMENT RESPONSE: All new catch basins are intended to have deep sumps.

Cardinal Follow up: Dimensions on catch basin details do not correspond to 4 ft. sump.

C-301-15: The drainage plan does not show where the 54 inch pipe ends. Its connection to state drainage in Route 7 or discharge to Norwalk River should be shown so hydraulic grade line calculations and capacity can be determined. A profile of the 54-inch pipe seems warranted showing all of the connection points to pipe from the Norwalk River to Copts Brook.

COMMENT RESPONSE: Supplemental plan sheets for the Route 7 widening have been provided for reference. The 54-inch line (shown as 60-inch on CT DOT plans) discharges to the Norwalk River. Since we are reducing peak flows and volumes discharging to this pipe, and not proposing any new connections to this line off-site, we do not feel additional profiles or documentation of this line are warranted.

Cardinal Follow up: Response Noted.

C-301-16: Replace headwalls at the 54" RCP culvert at Copts Brook. Wall is in disrepair. Provide fencing on top of wall (4 ft. vinyl coated chain link) for fall protection. Provide inlet protection (trash screen) to prevent debris from entering and potentially clogging the system. Provide protective fencing (4 ft. vinyl coated chain link) at top of slope at Copts Brook. This will also assist in keeping trash and other debris from the brook.

COMMENT RESPONSE: The design drawings have been revised to show replacing the existing headwall. A trash rack and security fence will be provided as well. The security fence will extend across the headwall and an additional 20 feet past the headwall on both sides.

Cardinal Follow up: The site detail sheets should be revised to include the additional items.

C-301-17: Pipe lengths are from center of structure to center of structure which results in incorrect pipe slopes.

COMMENT RESPONSE: This is how Civil 3D displays pipe slopes and lengths. Notes are provided on the plans that the contractor should set pipes based on inverts and not pipe slopes. The discrepancy this generates is very minimal

Cardinal Follow up: A contractor using a laser to set pipes typically enters the pipe slope. This may lead to errors including outlet pipes higher than inlet pipes, etc.

C-301-18: Suggest turning off building interiors for clarity (see landscape plan as a example).

COMMENT RESPONSE: These line types cannot be frozen based on how the Architect creates their 3D model. The LA created their own footprints for their drawings, and we would prefer not to do this for various internal drafting related concerns.

Cardinal Follow up: Response Noted.

C-301-19: The location of the pipe from CB-03 to CB-04 may conflict with the wall. The top of the pipe is only 2.5 feet below grade.

COMMENT RESPONSE: This will be coordinated with final wall design to ensure no conflicts.

Cardinal Follow up: Response Noted. Call-out for CB-04 includes an invert from the east. There does not appear to be a pipe coming from this direction.

C-301-20: DMH-03 does not pick up the existing 12" RCP that connects to two drains on the south.

COMMENT RESPONSE: The location of DMH-03 was specifically chosen to capture the pipe in question. The estimated invert has been noted to further clarify.

Cardinal Follow up: Response Noted.

C-301-21: AD-13 and AD-14 are collecting water from area of site that was formerly draining to the small pocket wetland. Reducing of flows to the wetland may lead to impacts.

COMMENT RESPONSE: These areas in question are relatively small in comparison to the overall size of contributing watershed area draining to the wetlands. Based on this we do not anticipate any adverse impacts to the wetlands.

Cardinal Follow up: Response Noted.

C-301-22: Clean water from the roofs of Building 7 and 8 are being collected and infiltrated underneath an existing parking lot. Since the water is being generated from an undeveloped area close to the nearby brook and pocket wetland, additional design appears needed to infiltrate the water on former hillside area to maintain pre development hydrology.

COMMENT RESPONSE: As noted above, these areas are comparatively very small compared to the size of the overall watershed contributing to the pocket wetlands, and even more so to that of Copts Brook. We do not believe these minor changes will have an adverse impact on the overall hydrology to either wetland.

Cardinal Follow up: Response Noted.

C-301-23: AD-01 appears to be collecting clean stormwater that could discharge overland to the east instead of being piped to a treatment unit.

COMMENT RESPONSE: Area Drain 1 is collecting a very small area and has a negligible impact on the size and routing of the storm drainage system. We assume you mean west and not east with this comment and would prefer to route the piping as shown rather than creating a new discharge and outlet in the upland review area.

Cardinal Follow up: Response Noted.

C-301-24: Roof leaders containing clean stormwater are being sent to a treatment system. Some of this should be discharged directly to the ground especially in the areas near the brook to better maintain the pre-development hydrology.

COMMENT RESPONSE: The CTDEEP design criteria for water quality volume is for all directly connected impervious surfaces, not just paved surfaces. Water quality systems are to be sized for building roof areas and their associated runoff should be directed to these systems whenever possible.

Cardinal Follow up: Response Noted.

C-301-25: The 54-inch is very deep on the site and would expect to have a significant amount of baseflow from groundwater. The design should be conservative when accounting for its actual carrying capacity.

Comment Response: If this pipe was experiencing a significant enough groundwater infiltration to affect its conveyance capacity, it would likely be dewatering the area and lowering groundwater to match its invert over time. If the elevated groundwater condition occurred during a storm event it would be very difficult to quantify in the model for the existing and proposed condition.

Cardinal Follow up: As responded regarding the RPT-6 comment, the applicant shall work with the Town to confirm the condition of this line and address any issues found.

C-301-26: CB-08 only collects a portion of the stormwater in parking area of Building 1. Another catch basin seems appropriate on the circle to collect stormwater.

COMMENT RESPONSE: CB-08 is only intended to capture a small portion of the area. There are ridges in the grading on either side of building 1 that send runoff to the north and south respectively. Runoff to the north goes to two catch basins along the curb with parking, while runoff to the south goes to the existing CB in the entry drive as the area currently does in the existing condition

Cardinal Follow up: Response Noted.

C-301-27: Review of grading and drainage in parking area north of the pool area seems warranted. The area is very flat which may lead to ponding of water. Additional connections from north to AD-10 and AD-12 may be needed.

COMMENT RESPONSE: There is a high point at the sidewalk for the accessible spaces that divides runoff from going to the north or to the south. The area to the north drains between 1.5-2.0% (per accessible codes) and will drain as intended. The area to the south is a steeper slope down to the pool patio which will drain to the area drains as intended.

Cardinal Follow up: Response Noted.

C-301-28: The connection from OCS-06 to 54" pipe seems low and would conflict with top of 54-inch pipe.

COMMENT RESPONSE: This area has been redesigned based on the subsurface soil investigation and the comment no longer represents the proposed condition.

Cardinal Follow up: Response Noted.

C-301-29: Roof leader for Building 7 not observed.

COMMENT RESPONSE: It is connected to the storm line discharging from the area drains on either side of the building.

Cardinal Follow up: Response Noted.

Sheet C-302 Drainage Plan Enlargement

C-302-1: Enlargement Part Plan "B": Review inverts for Area Drains AD-05-AD-07. They appear to be mislabeled. It appears that AD-05 and AD-07 both discharge to AD-06, but AD-06 has no other outlet. Review pipe lengths and slopes.

Comment Response: This area has been redesigned based on the subsurface soil investigation and the comment no longer represents the proposed condition.

Cardinal Follow up: Response Noted.

C-302-2: Enlargement Part Plan "C": WQS-04: Suggest not connecting roof leader to water quality structure. Existing manhole – note pipe inverts to be sealed, which to remain.

Comment Response: The water quality structure is the smallest size available and maintains enough treatment capacity for the entire area, including the roof. We see no need to change the design as it only provides for an extra provision for water quality.

Cardinal Follow up: Response Noted.

C-302-3: Enlargement Part Plan "C": Existing manhole – note pipe inverts to be sealed, which to remain. Note new rim elevation.

Comment Response: Additional notes have been added to the plans.

Cardinal Follow up: Response Noted.

C-302-4: Suggest including infiltration systems 1 and 5 in the enlargement plan. An additional sheet appears necessary.

Comment Response: Drainage enlargements for all retention systems are now included on the enlargement plan.

Cardinal Follow up: Response Noted.

C-302-5: Smaller height infiltrators may be needed for front of site (infiltration system 6 western part).

Comment Response: Based on field observations of soil conditions, the specified height of the proposed infiltrators can be maintained.

Cardinal Follow up: Response Noted.

C-302-6 New Comment: Remove sheet references to C-607 for orifice information if low flow orifices not used. See comment C-607-1.

Sheet C-401 Utility Plan

C-401-1: Clay tennis court is irrigated. Show irrigation lines. Area immediately west of the court is to be cut. This may impact irrigation supply line.

COMMENT RESPONSE: Location of irrigation lines are not known. If they are encountered during earthwork they will be repaired/replaced accordingly.

Cardinal Follow up: Response Noted. Suggest noting that irrigation is present and that the contractor should perform test pits as required to locate piping and valves as necessary.

C-401-2: Provide clean-out at bends on 8" PVC sanitary lines from Buildings 6 and 8.

COMMENT RESPONSE: Additional cleanouts have been added to the plans.

Cardinal Follow up: Response Noted.

C-401-3: Sanitary connection to existing manhole in Route 7 will require an Encroachment Permit from CTDOT. Provide limits of trench excavation and pavement repair. Provide State Road Pavement Repair Detail. Provide detail for modifying the manhole to accept new pipe. Provide existing manhole data (rim elevation, inverts). Crossing existing water main and gas main. Provide drainage structure data for storm system (notes are off the sheet).

COMMENT RESPONSE: So noted. Pavement repairs are shown on the site plan, and the CTDOT pavement repair detail has been added to the detail sheets. As we have done on prior projects, we will coordinate the connection to the manhole with the Town of Wilton WPCA in the field prior to commencing any work. The profile of the sewer lateral has been updated to include the Route 7 drainage from the widening work, and extended per DPW comment.

Cardinal Follow up: Response Noted. State road pavement repair detail not observed.

C-401-4: Water connection to existing main in Route 7 will require an Encroachment Permit from CTDOT. Provide limits of trench excavation and pavement repair. Provide State Road Pavement Repair Detail. Provide details for tapping sleeve and valve.

COMMENT RESPONSE: So noted. Pavement repairs are shown on the site plans, and the requested details have been added to the plan set.

Cardinal Follow up: Response Noted. State road pavement repair detail not observed.

C-401-5: Obtain current utility mapping for Route 7. There re 4 manholes in the Rte. 7 NB lane that are not shown on the survey and may associated utility may be in conflict with proposed water and sanitary services.

COMMENT RESPONSE: The design drawings for the Route 7 widening have been provided as a supplemental document depicting the locations of the drainage improvements in Danbury Road. Utility designs have been reviewed to confirm they do not conflict with this information.

Cardinal Follow up: Four manholes not shown on plans. Incorporate utilities from Route 7 plans into this plan.

C-401-6: Sanitary Sewer Profile: Verify elevation of existing storm piping. 36" CPP system upgrade from this location is at 127.5±.

COMMENT RESPONSE: The existing 36-inch pipe is for storage of runoff and set lower to capture and treat runoff. Its inverts are independent of the other storm drains shown.

Cardinal Follow up: Response Noted.

C-401-7: Review all pipe clearances. Inv. 8" san. from SMH-06 = $136.35\pm$ (bot. of pipe = $136.3\pm$) Invert 12" HDPE from OCS-05 = $134.76\pm$ (top of pipe = $135.87\pm$). Clearance = 0.47 ft.

COMMENT RESPONSE: Pipe clearances are shown on the sewer profile and utility plan and have been update accordingly per the recent revisions to the drainage design.

Cardinal Follow up: Response Noted.

C-401-8: Suggest separate fire service. Coordinate with Aquarion, Fire Marshal and Building Official.

COMMENT RESPONSE: Water service will be coordinated with the Aquarian Water Company. Fire Marshall has provided no comment on this.

Cardinal Follow up: Typically, a separate fire service is provided to prevent potential contamination of domestic potable water.

C-401-9: Are each individual units to have their own water meter?

COMMENT RESPONSE: Each building will have its own water meter.

Cardinal Follow up: Response Noted.

C-401-10: It appears each building will have one gas meter, correct? Gas service from existing drive to the south will require removal of mature vegetation along the slope next to the concrete stair, is this the intent?

COMMENT RESPONSE: There will be a meter bank for gas and each unit will have its own meter. The routing of the gas service is approximate and will be coordinated with the gas company to minimize impacts to existing areas to remain.

Cardinal Follow up: Response Noted. As noted for other utilities, gas main connection in Route 7 will require State road pavement section repair.

Sheet C-501 Soil Erosion and Sediment Control Plan Initial Phase

C-501-1: Grading at proposed Sediment Trap at northeast corner is incorrect.

COMMENT RESPONSE: The sediment trap grading has been adjusted.

Cardinal Follow up: The sediment trap is graded as a significant cut. The area calls for excavated greater than 10 feet below grade in an area that has been described to contain all rock. Recommend showing an alternate location in case there are issues due to ledge. Recommend adding stone check dams to swales leading to sediment

trap to reduce runoff velocities.

Previous responses noted this area is assumed to be rock. Explain how sediment trap will be constructed into rock.

C-501-2: Provide erosion control mat on all slopes 3:1 and steeper.

COMMENT RESPONSE: The 1:3 slopes adjacent to buildings 7 and 8 proposed during the initial phase will remain for as brief a time period as possible to facilitate construction of retaining walls. Installing mats in this area is not warranted as the intent is to move immediately into wall construction.

Cardinal Follow up: Provide note that if area is to remain exposed longer than 30 days, the area of slopes 1:3 are to receive erosion control mat. All permanent slopes 1:3 and steeper are to receive erosion control mat.

C-501-3: Additional measures to protect the wetlands and watercourse should be provided. Only a single row of silt fence with haybales is provided. Multiple rows should be considered. Additional silt fence along the front of the site appear necessary.

COMMENT RESPONSE: The silt fence in question is not standard silt fence, it is heavy duty fencing with angled structural support and reinforced fabric. Another row was added during initial phase to address these concerns.

Cardinal Follow up: Recommend specifying strawbale barriers (instead of haybales) to be in accordance with the revised CT Guidelines for Soil Erosion & Sediment Control.

C-501-4: Soil stockpile area seems inadequate considering the amount of materials involved in the site work (14,000 cy excavated & 4,000 cy deposited).

COMMENT RESPONSE: The soil stockpile size is schematic. It is the current intent that the selected contractor will minimize stockpiling as much as possible by removing soils from the site as they are generated when not needed for reuse on site.

Cardinal Follow up: Provide note on drawing directing the contractor to minimize areas of disturbance and stockpiles.

C-501-5: Include whether environmentally impacted materials are expected.

COMMENT RESPONSE: There are no known environmentally impacted materials on the site.

Cardinal Follow up: Response Noted.

C-501-6 Site has enough room to keep stockpiles out of 100-foot regulated area.

COMMENT RESPONSE: Soil stockpile is shown outside the 100-foot regulated area.

Cardinal Follow up: Response Noted.

C-501-7: Show sediment traps meet minimum DEEP criteria for size.

COMMENT RESPONSE: Sediment trap sizing calculations have been added to the engineering report.

Cardinal Follow up: Response Noted.

C-501-8: Catch basin at site entrance on south curb should also have inlet protection.

COMMENT RESPONSE: Additional silt sack was added to the plans.

Cardinal Follow up: Response Noted.

C-501-9: Suggest site to be developed have construction fencing and gates.

COMMENT RESPONSE: Construction fencing and gates have been added to the plans.

Cardinal Follow up: Response Noted.

C-501-10: Depending on building demo schedule, it might make sense to have separate construction entrance north of the existing entrance. This would improve construction access to the rear of the site where most of the earthwork is occurring.

COMMENT RESPONSE: Two construction access points are currently proposed.

Cardinal Follow up: Response Noted.

C-501-11: Temporary staging area not shown. Consideration and planning for temporary storage of construction equipment, contractor parking, construction trailer, and sanitary facilities should be shown.

COMMENT RESPONSE: Staging and logistics will be determined by the selected contractor based on their means and methods for developing the site. No equipment or material storage, or sanitation facilities will be maintained in the floodplain or the regulated area.

Cardinal Follow up: Response Noted.

Sheet C-502 Soil Erosion and Sediment Control Plan Final Phase

C-502-1: Area of disturbance is 3+ acres. Provide additional erosion and sediment controls including sediment traps, additional silt fence, etc. Suggest phasing construction if possible.

COMMENT RESPONSE: Final phase construction sequence is based on a mostly stabilized site and a sediment trap is not practical for this phase. We anticipate an initial phase and final phase,

with no distinct phasing in between them.

Cardinal Follow up: A significant area is to be excavated to subgrade and for building foundations. Either note restrictions to area to be disturbed at any one time or provide erosion and sediment controls as noted.

C-502-2: Provide additional erosion controls at level spreader. Spreader discharges to a steep slope. Single row of silt fence with hay bales is not adequate. Provide erosion control blanket to protect slope.

COMMENT RESPONSE: Erosion control blanket will be provided for level spreader discharge, flows leaving this level spreader will be very minor lawn runoff. Disturbing the lower hillside adjacent to the Copts Brook for additional silt fence and erosion controls we do not feel is warranted.

Cardinal Follow up: What was runoff from a fairly wooded area with tree canopy discharging over a broad area in the existing condition is now coming from a lawn area with concentrated runoff discharge. Provide additional erosion and sediment controls at outlet to level spreader.

C-502-3: Provide additional protections along wetlands areas. Single row of silt fence with hay bales is not sufficient. Straw bales and wattles may be more appropriate close to the brook and pocket wetland. Wood chips generated from land clearing could be used for stabilization.

COMMENT RESPONSE: Additional erosion controls have been added on the initial phase. These will remain in place until the site is largely stabilized. The final phase erosion control plan shows the condition when the site is largely stabilized.

Cardinal Follow up: Response Noted.

C-502-4: Review limits of clearing and proposed grading and landscaping. Silt fence is shown within the areas of disturbance.

COMMENT RESPONSE: Limits of clearing lines have been added to the erosion control plans.

Cardinal Follow up: Show clearing limits on plan.

C-502-5: Extend silt fence and haybales from volleyball court north along slope and property line as area will be cleared. It appears silt fence and haybales are shown incorrectly along small wetlands area. Does not conform to detail.

COMMENT RESPONSE: The silt fence has been revised to be on the other side of haybale barrier.

Cardinal Follow up: Response Noted.

C-502-6: Provide silt fence along property line north of Buildings 7 and 8.

COMMENT RESPONSE: Additional silt fence in this area has been provided.

Cardinal Follow up: Response Noted.

C-502-7: Suggest noting trees to remain and be protected.

COMMENT RESPONSE: Initial Phase Erosion control plans and Landscape drawings were revised to show this.

Cardinal Follow up: Protection of trees to remain not noted.

Sheet C-503 Soil Erosion and Sediment Control Notes Narrative and Details

C-503-1: Sequence of construction is incomplete. Does not reflect significant excavation required for Buildings 7 and 8.

COMMENT RESPONSE: Additional notes were added to the construction sequence.

Cardinal Follow up: Response Noted.

C-503-2: Due to size of the construction and it occurring on a site with existing businesses, a logistics plan is recommended.

COMMENT RESPONSE: The proposed site development will be fenced off and kept separate from the balance of the parcels business operations. Any utility installation provided in common areas will be coordinated with the other property owner to minimize disruption.

Cardinal Follow up: Response Noted.

C-503-3: Sequence mentions building construction, but there are 8 buildings. Construction should include a rough buildout sequence and how site disturbance will be limited as much as possible.

COMMENT RESPONSE: It is the current intent to construct the buildings concurrently as much as possible.

Cardinal Follow up: Response Noted.

Cardinal New Comment C-503-4: Recommend moving of the soil stockpile area and erosion controls up in the initial phase to go along with the mass earthwork step.

Sheet C-504 E&S Details

Cardinal New Comment: The use of straw bales should be specified instead of hay bales.

Sheet C-601 Details 1

C-601-1: Crosswalk striping does not conform to current standards.

COMMENT RESPONSE: The crosswalk design as shown is on private property and falls within current MUTCD standards for bar width, length, and spacing.

Cardinal Follow up: Response Noted.

C-601-2: Accessible van space, striping should be on passenger side of the vehicle to allow for lift.

COMMENT RESPONSE: Current space configuration meets ADA standards and reflects a shared configuration where vans can pull in or back in as needed to access the cross hatch.

Cardinal Follow up: Response Noted.

Sheet C-604 Details 4

C-604-1: Provide 4 ft. sumps on all catch basins.

COMMENT RESPONSE: Plans were revised accordingly.

Cardinal Follow up: Dimensions on catch basin details do are not coordinated with four foot sumps.

C-604-2: Provide hood detail.

COMMENT RESPONSE: Hood detail was added.

Cardinal Follow up: Response Noted.

Sheet C-605 Details 5

C-605-1: Specify Concrete Yard Drain Frame and Grate. Dome Grate detail seems to indicate that it is for Yard Drains.

COMMENT RESPONSE: Additional information has been added to the plans to clarify where each drain type will be used. The detail for concrete yard drains has been eliminated.

Cardinal Follow up: Response Noted.

C-605-2: Suggest erosion control blanket on downhill side of level spreader where slopes are 3:1

or steeper.

COMMENT RESPONSE: That is the intent and drawings were revised to show more clearly.

Cardinal Follow up: Response Noted.

Sheet C-606 Details 6

C-606-1: Inspection ports in paved areas require concrete collars which should be shown on drainage and site plan.

Comment Response: Inspection port locations were added on the drainage plans. Concrete collar details are shown with the system details.

Cardinal Follow up: Concrete collar detail shown for MC-3500 infiltrators, but port detail needed for SC-310 infiltration system. Plan detail for SC-310 is shown, but is mislabeled as MC-3500.

Sheet C-607 Details 7

C-607-1: Outlet Control Structure Detail. Review proposed elevations. Allow for 8" frame and cover, 2 courses of brick, 8" top slab and freeboard (1 ft.?) to top of weir.

Comment Response: The outlet control structures will no longer have internal weir walls and this detail has been eliminated. The design of each system has been revised to reflect an outlet manhole with a single pipe discharge sized and elevated to control discharges as needed to match or reduce existing flows. The invert elevation is set to ensure the required water quality volume is met, and the balance of the chamber volume above that is sized to provide enough additional storage to mitigate peak runoff rates.

Cardinal Follow up: Response Noted.

C-607-2: 15-inch low level orifice seems high for 15-inch outlet pipe.

Comment Response: This retention system has been revised as part of the overall drainage modifications and the updated calculations are provided for review.

Cardinal Follow up: Response Noted.

Sheet C-608 Details 8

C-608-1: Provide tapping sleeve and valve detail.

COMMENT RESPONSE: Tapping sleeve and valve detail added to the plan set.

Cardinal Follow up: Response Noted.

Landscaping and Lighting Plan

LP-1: Overlay drainage plan and utility plan with landscaping and lighting plan to verify conflicts. It appears the proposed light pole east of Building 6 at the south end of the parking area conflicts with the proposed relocated 24" pipe.

COMMENT RESPONSE: The noted light post has been shifted east to avoid conflict with the proposed pipe. This change is reflected on our revised plan LP-1, revised to 4/5/24.

Cardinal Follow up: Response Noted.

LP-2: Provide photometric plan.

COMMENT RESPONSE: A photometric plan was provided with the initial submission. This plan has been updated to reflect the light pole shift noted above. Please note the town of Wilton Lighting regulations require a minimum of 2.5 average footage (Section 29-9.E.2.e). Our submission includes a preferred alternative plan that provides light levels, inline to current industry standards and provide an average of 1 foot candle. The application includes a request to use the alternative plan allowed in Section 29-9.E.2.b.

Cardinal Follow up: Response Noted.

LP-3: Not all species are clearly identified on the plan.

COMMENT RESPONSE: Additional labels have been added to the plan to aid in plant identifications noted on the revised plan LP-1, dated 4/5/24

Cardinal Follow up: Response Noted.

LP-4: Evergreens are shown next to the tennis court but it appears a more biodiverse planting would be appropriate next to woods and wetland pocket (within 100 foot regulated area) considering there is already existing privacy in this area.

COMMENT RESPONSE: The additional screening would be beneficial for the adjoining neighbors that have a view of the existing tennis court during the winter months when the leaves are off the trees. The plants selected will tolerate being planted in the existing understory, provide evergreen screening, and are resistant to deer browsing. The vegetation cleared to allow room for the new plants are restricted to the nonnative invasive shrub understory of Euonymus and Honeysuckle. However, to provide added diversity we have exchanged some of the plants for native America Holly.

Cardinal Follow up: Response Noted.

LP-5: It is not clear what existing trees and landscaping are to remain along Route 7 in front of Building 1. It appears that all existing trees are not taken into account.

COMMENT RESPONSE: ELS has confirmed the existing shade trees and sizes are correctly noted on the site plans.

Cardinal Follow up: Response Noted.

NEW COMMENT: Alternative Site Plan C-101a. Building 8 is shown in the area of the volleyball court, which is in an area not available for this development. Provide an alternative plan that is representative of the actual area available for this development.

Based on our comments, we anticipate that the applicant will need revisions to the current plan set/engineering report and anticipate that additional review will be required once these revised materials are submitted. If you have any questions or require additional information, please feel free to contact us at 203-238-1969.

Sincerely,



Roy Seelye, PE
Senior Project Manager

Darin Lemire, PE, CPESC, CPSWQ
Senior Hydraulic Engineer