

CARDINAL

ENGINEERING ASSOCIATES

180 RESEARCH PKWY | MERIDEN, CT 06541 | 203-238-1969
457 BANTAM ROAD | LITCHFIELD, CT 06769 | 860-597-9106

December 14, 2023

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 #2904(S) ASML Acquisitions, LLC
131 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 131 Danbury Road in the Town of Wilton.

Reviewed application documents include:

- Inland Wetlands Commission application WET #2904 (S), Applicant: 131 Danbury Wilton AMS LLC,; Agent: Craig Flaherty, Redniss & Mead
 - SLR Wetland and Watercourse Delineation and Impact Assessment, dated October 23, 2023.
 - William Silveri, LLC-Transmittal of Environmental Documents, dated October 23, 2023.
 - AMS Construction Management Co. Preliminary Construction Management Plan
- ALTA/NSPS Land Title Survey, 131 Danbury Road, Fairfield County, Wilton, Connecticut 06897, dated 6/19/23, revised 10/18/23, prepared by BLEW & Assoc. PA, Jerome Brunner, LS
- Site Plans (in 2 parts): Proposed Multi-Family Development, 131 Danbury Road, Wilton, Connecticut, October 23, 2023 IWC Submission, Prepared by SLR
- Drainage Report: Proposed Multifamily Development, 131 Danbury Road, Wilton, Connecticut, dated October 23, 2023, prepared by SLR

Based on a site visit by Cardinal Engineering conducted on December 5, 2023 and 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 2004 Connecticut Stormwater Quality

Manual, CTDOT Drainage Manual, 2002 Connecticut Guidelines for Erosion and Sediment Control, NPDES/MS4 standards, State Statutes, and current civil engineering design practices/standards.

Town of Wilton Inland Wetlands Commission Application

APP-1: A description of chemical and physical characteristics of the fill materials to be placed in the Regulated Area was not observed.

Engineering Reports

Drainage Report – Proposed Multifamily Development (prepared by SLR International Corporation, dated 10/23/23)

RPT-1: As requested by the Town Engineering Department, additional information is needed on the development in the floodplain. The information should include calculations and a discussion to show there is no net fill within the floodplain of the Norwalk River.

RPT-2: Wilton Zoning regulations require certification by PE that encroachments in the floodway do not result in any increase in base flood elevations (0.00 ft) for the 100-year flood. Certification by a professional engineer with supporting hydrologic and hydraulic info (e.g. Hecras modeling) is needed.

RPT-3: Related to hydraulic documentation, the tailwater elevation used (138.8 feet) for the 18-inch HDPE pipe discharging to the Norwalk River should be based on the hydraulic modeling for Norwalk River and a joint probability analysis.

RPT-4: Provide supporting information (percolation tests, infiltration tests, test pit data, etc.) for the infiltration rates selected (2 inches per hour) and typical groundwater elevations at the site.

RPT-5: On page 4, a description of the soil types described hydrologic soil types B/D, C, and D at the site, but the calculations show mainly HSG D. The site is mapped by NRCS as mainly urban land.

RPT-6: Catch basins with 2-foot sumps are not classified by the CT Stormwater Manual as a stormwater BMP. The manual recommends 4-foot sumps with a hood. CCB-7, CCB-10, and CCB-26 appear to be good candidates for 4-foot sumps.

RPT-7: As related to Stormwater Best Practices, the proposed project includes significant areas of new roof and pavement which often can result in stormwater runoff that is at higher temperatures than runoff from landscaped areas. Pretreatment with respect to potential thermal pollution should be described more specifically in the report to show that it is addressed.

RPT-8: The 100-year runoff for PR-16: East Rooftop is shown on Hydrocad printout as being routed to the front lawn rain garden, but the proposed conditions drainage area map lists "Roof to CLCB 21". Confirm where the East Rooftop drains.

RPT-9: The 100-year peak flow runoff for PR-11: Building Roof is shown as 15.7 cfs with a volume of approximately 50,000 cf, but after routing through reach R1: Roof Leader (8 inch round pipe) the outflow is only 1.4 cfs. The underground detention system S-2 only provides 5,500 cubic feet of storage so there doesn't appear to be sufficient storage to warrant such a large decrease in the peak flow in this area.

RPT-10: The storm sewer report from Bldg to MH 13 shows only 0.77 cfs conveyed of the 4.6 cfs capacity. This seems very small based on size of building.

RPT-11: The plan for the storm sewer report from CCB30 and CCB14 to the outfall (System 3) is hard to read due to overlapping text.

RPT-12: System 3 storm sewer tabulation in the stormsewer report shows several pipes where the total flow is very small in relation to their capacity. Could smaller pipe be used. (Line 6: Total Flow= 0.3 cfs, capacity =3.5 cfs, Line 7: Total Flow= 0.2 cfs, capacity =2.9 cfs, Line 10: Total Flow= 0.8 cfs, capacity =15 cfs, Line 15: Total Flow= 1.1 cfs, capacity =12 cfs)

RPT-13: The CDS unit is shown with four pipe inlets which may not be possible since the unit is one of the smaller CDS units (5-foot diameter). A site specific detail showing the inlet configuration and the treatment efficiency sheet should be provided.

RPT-14: The plan in the stormsewer report for Outlet System 1, 2, and 3 also is hard to read. Lines 7 and 9 do not show a capacity.

RPT-15: The 2004 Connecticut Stormwater Management Manual was revised in September 2023 and the Manual will be effective March 30, 2024 so it may be beneficial to incorporate the changes from the Manual (or at least the significant ones such as WQV calculated on the first 1.3 inches of rainfall) into this project if they could be reasonably accommodated.

Wetland and Watercourse Delineation and Impact Assessment (prepared by SLR International Corporation, dated 10/23/23)

WWI-1: It appears that the narrative does not conform with the current design. The report should be updated to reflect the actual design included in the application

WWI-2: FEMA Mapping, Pg. 6 – FEMA 100-year flood elevations on the site are slightly higher than noted, ranging from 146.3 feet to 146.6 feet.

WWI-3: 6.0 Proposed Project, Pg. 10, Par. 1 – It is stated that there are 318 proposed parking spaces. This may require a Major Traffic Generator application to the Office of the State Traffic Administration (OSTA). Applicant should confirm the total number of spaces. A Traffic Study may be required if the total number of spaces exceeds 200.

WWI-4: 6.0 Proposed Project, Pg. 10, Par. 3 – Note that portions of the building (garage floor slab) is included in the URA.

WWI-5: 6.0 Proposed Project, Pg. 10, Par. 5 – “No significant direct impacts to the wetlands area are proposed.” Note that work includes the removal of the “concrete flume” and the installation of the storm drainage outfall, including installation of the riprap splash pad immediately adjacent to the wetlands / Norwalk River. This will require excavation and installation of riprap directly within the wetlands and within the limits of the Ordinary High Water.

WWI-6: 6.1 Sediment and Erosion Control Measures, Pg. 11, Par. 2 – Revise description of site access during construction. Two points of access are shown on the plans.

WWI-7: 6.1 Sediment and Erosion Control Measures, Pg. 11, Par. 2 – Sediment trap Riprap overflow discharges are not shown on the plans.

Engineering Plans

We recommend including a site demolition plan or site preparation plan that outlines material to be removed (including pavement and concrete) and what materials are to remain. This plan should address any removal/capping/abandonment of existing site utilities including drainage. The site demolition plan should call out the trees to be removed also.

ALTA/NSPS Survey

The survey prepared by BLEW & Associates shows underground electrical, a water line, and overhead electrical on the north side of the building that appear to conflict with the new building. There is an outside aboveground storage tank (AST) on the south side that appears to be using fuel oil that is not addressed in the plans. On the north side of the site, there appears to be a well with a concrete slab cover which should be investigated. Abandonment of the well according to CT State Regulations may be necessary.

Sheet 1 Title Sheet

T-1: Project Vicinity Site Map: Note area of the Norwalk River Floodway. See Sheet 3 Comment EX-1 below regarding limits of 100-year flood.

T-2: Note 10. The CTDOT Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 818 (2002) is scheduled to be replaced with Form 819 on January 2024. All work shall conform to the revised edition.

T-3: Note 12. All materials shall be stored above the flood limits of the Norwalk River.

T-4: Add note that the site shall remain clean of trash and debris at all times. Adequate trash storage facilities (dumpsters, trash cans, etc.) shall be provided and emptied on a routine basis and as needed. Trash shall not be stored within the limits of the 100-year flood.

T-5: Add note stating that a CTDOT Encroachment Permit is required for all work within the

Route 7 ROW.

Sheet 2 Notes and Legend

NL-1: Legend – Show all existing and proposed site features including bollards, bollard lights, FEMA lines, etc. Review survey and legend to verify symbols are correct. For instance, the existing stone walls along the streetline and the southern property line do not match the wall as shown on the legend.

NL-2: Stormwater Maintenance Program – Note A; 1st Par. Four-foot sumps are called out in the note. Catch Basin Detail on Sheet SD-4 calls out a two-foot sump. Revise detail.

NL-3: Stormwater Maintenance Program – Note A; 2nd Par. Last sentence beginning with “Pavement sweeping” is not complete. Appears to be part of 3rd Paragraph.

NL-4: Stormwater Maintenance Program – The hydrodynamic separator is not located prior to the underground galleries.

NL-5: Construction Sequence – The application package contained a sequence or staging plan prepared by AMS Construction Management LLC for the site. The construction duration was listed as 30 months. This sequence and information should be coordinated with the sequence provided on the Notes and Legend plan. Expected temporary parking and construction office locations should be designated.

NL-6: Construction Sequence – The sequencing should include removal of the existing building and associated utility removals/disconnects prior to filling. Utility pole(s) along the roadway may need relocation. Mention of town staff should include Town Director of Environmental Affairs.

NL-7: Construction Sequence – See erosion control note SE-1-11 about leaving pavement buffer along river as long as possible for stabilization.

Sheet 3 Existing Conditions

EX-1: Limits of the 100-year flood. Per FEMA mapping (FIRM 2010) and the Flood Insurance Study (2013), the site falls between cross section N (Elev. 141.2) and cross section O (Elev. 153.1). The limit of the 100-year flood (Zone AE) at the site is at approximate elevation 146.3 at the south end of the property and ±146.6 at the northern side. Revise the plans accordingly. Revise earthwork calculations for cuts and fills within the area of the 100-year flood and impacts on flood storage capacity of the site.

EX-2: Existing rock wall along the southern property line varies in size / width and is not straight. Who owns the wall?

Sheet 4 Site Vicinity Plan

SP-1: Addresses of adjacent properties would be helpful. It might be a plan that could be helpful

in discussions with CT DOT.

Sheet 5 Site Plan-Layout

LA-1: On the north side of the site, the plan calls out the existing evergreen screening to remain, but seems unlikely that it could withstand the significant earthwork planned along this strip including installation of a retaining wall. Also, the landscape plan appears to show plantings here (27 Douglas Firs).

LA-2: The proposed driveway on the north side of the site is a new connection to State Route 7. Per Town of Wilton Engineering, a traffic report or summary along with CT DOT review is necessary. Driveway profiles may be required for both locations.

LA-3: The plan should include a zoning table indicating lot dimensions, coverage, building height, and parking numbers.

LA-4: ADA parking spots should be dimensioned.

LA-5: Since all of the accessible parking is shown at the northeast entrance at the only site entrance, additional safety measures may be warranted for safety for pedestrians. Consider additional measures such as a speed hump, elevated crosswalk, speed table, and an ADA ramp on the sidewalk across from the parking towards front of the building. Review accessible route from the accessible parking area to the building entrance.

LA-6: Some dimensioning of the parking spots (standard and accessible) should be included for the spaces in the building footprint. Is 9 ft. wide spaces between elevator / stairwells and columns adequate for opening of car doors, etc.?

LA-7: It should be checked that the building columns in the on-grade parking area don't interfere with area and access to accessible spaces. The typical building column should be called on the plans.

LA-8: The symbol B in the sign legend appears to be outdated.

LA-9: Direction / orientation of One-way Sign at entrance should be noted.

LA-10: Provide "Van" sign at all Van Accessible parking stalls. Include in table.

LA-11: Site lighting does not appear to be adequate (Insufficient pole mounted lights or wall mounted lighting). A photometric plan should be prepared clearly showing all fixtures and illuminance with closeness of the property lines and river area taken into consideration.

LA-12: Driveway alignment plan may be required to show access to back of building by fire department trucks. The curves on northwest and northeast corner appear to be restrictive.

LA-13: All of the proposed walls should be indicated on the site plan. It appears that only wall #2 is being called out (36-inch high field stone wall). The eastern end of this wall may need to

be relocated due to the installation of the water meter pit or the pit may need to be relocated.

LA-14: The site exit should be labeled.

LA-15: Locations for the storage of snow should be evaluated since the site is situated so close to the property lines and snow melt may impact the wetlands and river.

LA-16: There are 9 dark circles (along the curb line in the front of the building) which appear to be bollards and should be called out on the plan.

LA-17: Provide 4 feet between crosswalks and stop bars.

LA-18: Provide stop sign on north side of exit driveway.

LA-19: Area on south side of building, just east of garage entrance – is this double stack of parking stalls? How is back row of parking to be accessed?

LA-20: Indicate location and swing for doors at stairwells within the building / garage. Where do elevator doors open? Is there a location of safe entering and waiting for elevators? Appears doors to stairs and elevator open to either parking spaces or travel aisles. Note on drawing the location of the elevators.

LA-21: How is access to elevators from handicap spaces provided without having to travel between cars? Provide accessible route.

LA-22: Two move-in truck spaces (9'x24') too small for WB-30, WB-40, etc. Labeled at 15; long. Is this intended for vans and pick-up trucks only?

LA-23: Appears inadequate space available at the southern of 2 truck spaces for turning in and out of space.

LA-24: What is the material between permeable pavers west of garage and garage slab?

LA-25: Appears curb is to be installed between grass pavers and paved parking / drive on west end of property. Is this flush curb? Mountable curb?

LA-26: One bollard light and one tree upright are shown and noted along stone dust path and middle concrete fire truck outrigger pad. Show all. Provide separate symbols for each.

LA-27: How is grass paver drive on west side of site to be maintained in winter? Plowed?

LA-28: Have location and size of concrete fire truck outrigger locations been approved by the fire marshal?

LA-29: Provide parking table with total number of spaces, standard spaces, handicap accessible spaces and van spaces.

LA-30: Note location of all signs, including building signage. It appears there may be signs on Walls 2 & 3.

LA-31: How is snow to be removed from permeable parking spaces on west side of garage? Will snow removal interfere with cobble filter strip? Are spaces to be receive sand and / or salt?

LA-32: Stormwater infiltration areas at northwest and southwest corner of site should be delineated.

LA-33: Is existing stone wall along streetline to be removed? Note on plans.

LA-34: Parking space on south edge of garage, between the two entrances, extends beyond the building. Is this intended? What is the pavement material?

LA-35: ADA ramp and granite stair at front of building – Does wall for ramp continue across the top of the stair? Show on detail.

LA-36: Stair and stair detail shown on SD-4 should correspond with each other. It appears the stair detail is a typical detail that does not apply to this site.

LA-37: ADA ramps along Danbury Road – Identify ramp type per CTDOT Guide Sheets. Ramps may require curbing due to close proximity to roadway curbing.

LA-38: Concrete radius curb at driveways – Note proposed concrete curb shall be tapered to match existing bituminous curb.

LA-39: Call out on plan that the proposed concrete sidewalk along Danbury Road shall meet and match proposed sidewalk to the north. Note sidewalk to end south of exit drive and to match existing grade.

Sheet 6 Site Plan-Landscaping

LS-1: It appears that the plan is to keep the large sycamore on the southwest corner of the site. Installation of the proposed drainage in this location would appear to undermine its root system.

LS-2: New England Wetland mix may not survive in the front of the building if the area doesn't have wetland characteristics. The bioretention mix should have a depth of at least 24 inches and the groundwater elevations expected in the area should be provided. The area may need shading by larger plantings (could the large maple remain?) to create additional biodiversity.

LS-3: The significant amount of plantings may require an irrigation system and plan.

LS-4: Existing evergreen screen on property adjacent to the site to the north is to remain. What is the impact of the proposed landscape buffer (27 Douglas Firs, 10 Norway Spruce) on existing root systems. What is the estimated spread of the Norway Spruce. Can be up to 40 feet. Suggest noting specific variety if smaller tree is proposed.

LS-5: Swamp White Oak at southwest corner of garage. Seems to be too close to building for this species. Island appears to be too small.

LS-6: Tupelo along parking areas may require pruning of lower limbs to allow for access to vehicles.

LS-7: Tufted Hair Grass – concern regarding sightlines at drive intersections. May obstruct views. Also, concern over taller shrubs that may obstruct visibility for safety concerns in parking areas.

LS-8: The landscaped areas in the front of the proposed building may not benefit from the amount of proposed filling. Some of these areas may benefit from being depressed.

Sheet 7 Site Plan-Grading

GR-1: The grading in the area of Retaining Wall 4 on the northeast side of the site appears to be based on the grades at 141 Danbury Road prior to construction. Since construction, the grades in this area are higher.

GR-2: The grading plan should indicate spot grades in the accessible areas (including parking) to show that it complies with ADA requirements. Other areas may benefit from spot grades also (in the footprint of the proposed building, in the driveways close to where they connect to Route 7, in the low spot of the wildflower area, etc.)

GR-3: Spot grades within the building footprint range from 143.8 to 146.00. The entire garage will be below the limits of the 100-year flood (El. 146.3 – El. 146.6). Provide a plan (or narrative) outlining where vehicles will be moved to in the event of a storm event. This is the same for surface parking outside the limits of the building as well.

GR-4: The FEMA FIS profile of the Nowalk River indicates that the 10-year storm flood elevation is ± 144.9 . The western portion of the site, including the infiltration areas and the storm drainage detention systems will be under water. How will they perform in the flooded condition? Approximately 60% of the vehicles parked in the garage will be within the area of flood and the cars parked in the eastern portion of the garage may become trapped.

GR-5: It may assist with readability if the hatch of the proposed building was turned off on the grading plan.

GR-6: Provide top of wall and bottom of wall elevations for all site walls, including at each step / change in elevation. Suggest providing elevation view for each wall. Walls not shown to correct width (24") as noted on the Stone Veneer Masonry Block Wall detail

GR-7: Contour 145 near entrance to building / garage on south side seems to conflict with grading within the garage. Provide spot grades to determine floor slab grade.

GR-8: Construction of Wall #4 will trap water from adjacent site that in the existing condition flows southeasterly across the site. In the proposed condition it will flow westerly between Wall

#4 and the existing wall on the adjacent site and discharge onto the adjacent site. Suggest adding a yard drain at the western end of the existing wall and connect to CCB-28.

GR-9: Wall #4 height is greater than 6 feet at its highest point. Review typical wall section. Concrete cantilever retaining wall or geotextiles may be required for walls with greater heights. Suggest fence along top of wall to prevent falling, etc.

GR-10: Provide spot grades at intersection of drive from drop-off area and exit drive.

GR-11: Provide greater detail of grading of street sidewalk, particularly in relation to front wildflower meadow. Will wildflower meadow overtop and drain onto street? At the south end of the "meadow, the sidewalk drains to the street; in the middle, it drains to the "meadow"; at the north end the sidewalk drains to street. Suggest consistency in draining in one direction or the other. Suggest providing a greater buffer between the "meadow" and the streetline. See note UT-2.

GR-12: Show grading south of Retaining Wall #1 to property line.

GR-13: Wall #1 height is greater than 5 feet at its highest point. Review typical wall section. Concrete cantilever retaining wall or geotextiles may be required for walls with greater heights. Suggest fence along top of wall to prevent falling, etc.

GR-14: Provide flush symbol or note flush condition where flush condition is proposed.

GR-15: Show transformers and switch gear on grading plan. Provide top of slab elevations.

GR-16: Show generator pad and provide top of slab elevation.

GR-17: Grading at storm drainage outlet (endwall) is not shown correctly. Proposed contours are too close together. Either extend the endwall or use wingwall type endwall.

GR-18: The plan omits a small portion of the site on the northwest corner.

Sheet 8 Site Plan-Utilities

UT-1: The plan appears to indicate only one stormwater discharge from the building (located on south side Inv=143.2). Other connections to the underground drainage system may be necessary at other parts of the building. Note all drainage piping from building and note if it is roof drainage only.

UT-2: OVFL-19 - An additional dome grate or drainage structure may be needed in the front wildflower area near the road in case there is a blockage with the proposed one on the south near the site exit. Is TF elev. at the top of riser or dome? Note diameter of riser and dome.

UT-3: Show garage floor drains and piping. Provide oil / grease separator for garage floor drains. Show connection to sanitary sewer.

UT-4: CB CLCB 21 – Inv, 15" HDPE = 150.9; Top of pipe elev. = 152.25; TF elev. = 152.4; Cover = 0.15'. Provide 2.0 ft. cover minimum. Provide roof drain invert.

UT-5: CB CCB 18 – TF elev. = 152.2 appears high.

UT-6: The elevation of the 12-inch HDPE inletting to CCB 18 should be confirmed at the crossing of the water and fire service to insure adequate separation.

UT-7: The inlet pipe (12-inch) appears undersized to convey flow from the building roof (1.8 acres) to MH-13 and into the detention chambers.

UT-8: HDPE pipe lengths for stormwater should be measured from structure wall to structure wall rather than center of inlet structure to outlet structure.

UT-9: Type of HDPE drainage pipe (ADS N-12 or equivalent?) should be called out or reference a detail.

UT-10: The detail (SD-4) of the 18-inch discharge from the site with the flap gate shows both a flared concrete end and a splash pad. The detail shows a larger splash pad.

UT-11: Show connection to underslab and / or foundation drainage.

UT-12: The sanitary lateral appears significantly deep. The lateral may be able to be raised if a drop at the manhole at the street is approved by utility. Or is depth to allow for connection to garage floor drains?

UT-13: Show existing utilities to remain.

UT-14: Note utilities to be removed.

UT-15: Proposed gas service appears to go through ex. utility pole.

UT-16: 4" sanitary Lateral appears to be inadequate based on number of units. Provide pipe sizing calculations. Note pipe material.

UT-17: Show any wall drains and connections to storm drainage system.

UT-18: CB CCB 26 – Invert 15" HDPE = 140.1; Top of pipe = 141.45. Top of frame elev. – 143.3; Cover = 1.85. Provide 2.0 ft. cover minimum. For best hydraulics, invert of 15" HDPE outlet pipe should be 0.25' lower than 12" HDPE inlet pipe.

UT-19: Provide details for MH-15, MH-12 and MH-5 – f ft. dia. with weir.

UT-20: Some storm manholes are relatively shallow. Eccentric cone may not apply. Provide shallow manhole detail.

UT-21: MH-15. TF elevation incorrect ("2.4").

UT-22: Verify 4" domestic water service is adequate for number of units / occupants of building.

UT-23: Provide verification that sufficient pressure is available for fire service to serve entire building.

UT-24: Show limits of trenching in Route 7. Provide State Highway pavement repair detail.

UT-25: CCB 18 TF = 152.5. Grade behind CB is 150.0 Revise TF elevation.

UT-26: Show all underground utilities including but not limited to primary and secondary electric, site lighting services, telephone, CATV, etc.

UT-27: Show location of gas meter.

UT-28: Additional information is needed on generator. Verify approval from gas company that generator is served directly from gas main and if the meter be located at the generator. Provide generator pad detail. Generator is shown in location of trees and other landscaping. Revise landscaping plan. Provide screen to shield generator from view from street. Noise of generators in relation to residential uses (across the street, etc., particularly when testing is a concern. Provide information on noise mitigation.

UT-29: Landscaping may interfere with access to transformers and switch gear. Suggest providing clear area from pavement to transformers and access doors.

UT-30: Water meter vault shown adjacent to retaining wall. Wall footing and vault may be in conflict.

UT-31: Removal of existing discharge pipe from the existing catch basin on the south side of the property will require work on adjacent property. Have rights to perform work on the property been acquired? Show work to be conducted on the adjacent parcel, including restoration after pipe is removed.

UT-32: Provide dia. of riser and dome grate at OVFL-25 and OVFL-3.

UT-33: Has a subsurface soils investigation (borings, test pits) been conducted in the area of infiltration areas and subsurface stormwater storage systems? What is depth to rock / ledge? What is the soil type? Will soil provide infiltration (well drained) or will it retain water (silt / clays). Total depth to bottom of stone from existing grade is up to 7.5 feet.

UT-34: Provide observation and cleaning ports on underground detention systems and isolator rows. Provide locations on plans.

UT-35: Provide manifold to connect underground detention system rows. The underground detention systems should be labeled to prevent confusion since they are located on the south side and two are close to the same size.

UT-36: We do not recommend connecting roof leaders from "Jewel Box" to storm system that requires treatment as roof drainage is considered "clean". Suggest connecting the roof leaders to MH-13.

UT-37: Tupelo trees proposed on the islands along the southern parking area are on top of the subsurface detention units. Taproots may conflict with and damage stormwater units.

UT-38: Suggest providing a sump at MH-9, MH-16 & MH-22 at inlets to isolator rows. Provide detail.

UT-39: OVFL-25 -Consider considerably shortening the 8" HDPE and using a manhole to the east of the infiltration area and matching crowns with the 15" pipe.

UT-40: Consider backflow preventers or check valves to 8" HDPE outlets from infiltration areas to protect the stormwater system from the river during flooding.

UT-41: Consider using RCP pipe in the area east of the main building and at the 18" discharge including at the driveway entrances and exits. RCP would be advised due to close proximity to utilities, added durability, possible high groundwater, and floodplain location.

UT-42: MH-9 has inverts that appear low (137.7 ft).

UT-43: The 18-inch outfall pipe doesn't appear to have enough capacity. If the 15 inch and 18 inch pipes upstream flow full, then the single 18 inch pipe at the flat slope of 0.65% seems inadequate.

UT-44: The outfall, including the required grading and riprap splash pad, require work directly within the limits of the inland wetlands. Provide calculations to show that the remaining streambank will be stabilized and not subject to erosion due to the discharge of stormwater. The riprap pad may need to be installed further towards the river.

Sheet 9 Sediment and Erosion Control Plan

SE-1-1: Provide silt fence along edge of Danbury Road (Route 7).

SE-1-2: At the northwest corner of the site near the river, the lines for the silt fence and straw appear to be cut off and show a break in the E&S controls. It would be recommended to move the wattle farther to the east away from river and OHW.

SE-1-3: Typically, Infiltration areas should not be used as sediment traps. If used as sediment traps, the areas should be over-excavated and thoroughly cleaned.

SE-1-4: Proposed silt fence and straw wattles at drainage endwall cross riprap splash pad. Suggest turbidity curtain along river in this location due to excavation along river bank.

SE-1-5: Addition of a concrete wash out area (outside of the floodplain) with a sign for concrete

trucks is recommended. The detail should include notes specifying its location and appropriate management.

SE-1-6: Soil stockpile areas are in the area of the "Wildflower Meadow" in the front of the property. Where are stockpiles to be relocated during work in this area? This area may be hard to access during start of construction due to proximity of existing building. A phased soil erosion plan to address issues where stockpiles may need to be moved as site is built out seems helpful.

SE-1-7: Construction entrance pads are located in areas of fills up to 5 feet.

SE-1-8: Silt fence along southern property line is shown on top of the existing stone wall and within the existing swale.

SE-1-9: The location of sediment traps and dirt bags should be located out of the floodplain. Grading of sediment traps should be mindful of groundwater elevations.

SE-1-10: Suggest 2 rows of wattles along the river for additional protection. Recommend leaving a strip of pavement in place (25 to 30 feet) along the river in the upland review area from north side of site to the south for as long as possible for stabilization purposes. Fire truck access road with permeable pavers could be scheduled towards end of construction with landscaping.

SE-1-11: Recommend construction fencing with gates along the front of the property. Detail(s) should be included in detail sheets.

SE-1-12: CTDEEP has modified the Guidelines for Soil Erosion and Sediment Control and the revised Water Quality Manual which becomes effective in March 2024.

Sheet 10 Sediment and Erosion Control Specifications and Details

SE-2-1: Dirtbag minimum size and type should be specified.

SE-2-2: Coordinate Temporary Sediment Trap Detail with plans.

SE-2-3: Provide inlet control detail for domed yard drains.

SE-2-4: Recommend minimum size of 12-inch diameter for wattles to be used.

SE-2-5: The dewatering plan requested by the town should have associated dewatering details such as a settling basin for dewatering discharges.

Sheet 11 Site Details SD-1

SD-1-1: The sheet shows details for stamped & colored sidewalk, concrete pavers along integral concrete walk. It is not clear on the plans where these are going to be installed. Additional call outs seem appropriate.

SD-1-2: Standard Duty Bituminous Concrete and standard Base – Is it the intent to use Marshal Mix bituminous concrete (Class 1, Class 2).

SD-1-3: Concrete Pad for Fire Truck Outriggers – Thickness of concrete and base does not appear to be appropriate for proposed load. Concrete called to be “permeable” on site plans. Modify detail accordingly. Provide mix design of permeable concrete.

Sheet 12 Site Details SD-2

SD-2-1: Clarify if all the proposed walls will have a stone masonry veneer. Provide elevation view of all walls, including location of changes in heights, concrete base. Provide detail how concrete base transitions from one elevation to another. We suggest a course of free draining material behind the wall including weep holes or a perforated drain. As noted above, the height of the walls are as high as 6 feet. We suggest changing the wall type to concrete cantilever (with stone facia) or provide a geotextile.

SD-2-2: At top left of sheet, there are painted pavement markings that show arrows that don’t appear to be used for project. It may help to remove these for clarity.

SD-2-3: Provide electric, telephone, utility conduit trench details. Provide handhole detail(s) as required.

SD-2-4: Provide transformer pad detail.

Sheet 13 Site Details SD-3

SD-3-1: Suggest providing structural planting soil in areas where plantings are adjacent to paved areas and sidewalk.

SD-3-2: Concrete Stair with Handrail Detail – Refers to Enlarged Detail “A” which is not provided. Note height of handrail. Does not appear to correspond with site plan and stair at front of building. Trench drain not shown on plans. No retaining wall provided on plans. Detail should match sidewalk material types at top and bottom of stair (pavers). Show location of rail on site plan.

SD-3-3: Accessible Ramp Section – Shown as concrete. Site plan calls out pavers. Coordinate between details and site plans.

SD-3-4: Concrete Ramp at Building Face – Suggest detail for entranceway. We do not recommend pavers at the doorway as pavers may move as a result of frost, etc. and prevent the door from opening.

SD-3-5: Mow strip not shown on plans.

Sheet 14 Site Details SD-4

SD-4-1: Provide CL Basin top detail.

SD-4-2: Provide flap gate detail.

SD-4-3: Provide end wall detail for 18-inch discharge pipe.

SD-4-4: Larger bollard sizes may be more appropriate for the protection of the transformers and generators.

SD-4-5: Provide riprap splash pad detail for endwall outlet.

SD-4-6: Provide manhole frame and cover detail or call-out specific type and size.

SD-4-7: Storm Trench Detail – Note Final Backfill material if existing material is deemed unsuitable.

SD-4-8: Where are square Area Drains located? Remove detail if not required for this project.

SD-4-9: Use Town of Wilton Standard Type C and Type C-L Catch Basin details. Or modify the currently used detail to add 2 courses of brick below top.

SD-4-10: Use Town of Wilton Standard Manhole Detail.

SD-4-11: Rain Garden and Filter Strip Detail – “Rain Gardens” are not identified as such on plans. Coordinate plans and details with same nomenclature. Show location of the infiltration strip on plans. Revise detail to correspond with site plans.

SD-4-12: Provide detail(s) for weirs to be used in manholes.

Sheet 15 Site Details SD-5

SD-5-1: Provide water meter pit detail.

SD-5-2: Provide site information and sizing calculations for the CONTECH CDS 2025-5-C Hydrodynamic Separator.

SD-5-3: CTDOT Trench Repair Detail – Typically, state road sections include 9 inches of pavement. Provide verification that CTDOT has approved the pavement repair detail

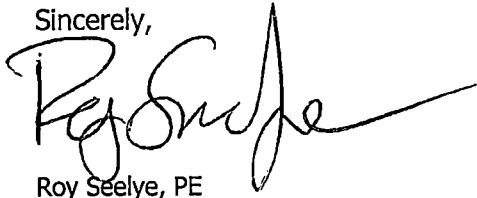
Site Plan – Alternative Compared

A description of the alternatives should be provided. Although only a sketch is required for the alternatives, additional details such as any proposed plantings, storm drainage, rain gardens or

other stormwater treatment measures, etc. should be called out.

It is our understanding that there are existing comments from the Town Engineering Department that need to be addressed. Based on our comments and those from the Engineering Department, we anticipate that the applicant will need revisions to the current plan set 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