**SLR International Corporation**
99 Realty Drive, Cheshire, Connecticut, 06410

December 9, 2024

Attention: Dr. Michael Klemens, Chairman
Planning and Zoning Commission
Town of Salisbury
27 Main Street
PO Box 548
Salisbury, CT 06068

SLR Project No.: 22100.00001

**RE: Comment Response Letter – Artel Engineering Group**
**Wake Robin Inn Redevelopment**
**104 & 106 Sharon Road**
**Salisbury, CT**

Dear Dr. Klemens and Members of the Commission:

SLR International Corporation (SLR) is in receipt of correspondence from Dainius Virbickas, PE, Professional Engineering Manager of Artel Engineering Group, dated November 27, 2024, on behalf of the intervenors for the above-referenced application. Below is our interpretation of the comments provided by Mr. Virbickas and our responses.

**Parking**

C1. *Town of Salisbury Zoning Regulations require a minimum of 24' aisle width for parking spaces at a 90 degree angle.*

**R1. All aisles along 90 degree parking spaces have been increased from 22' to 24'. Refer to revised site plans dated December 9, 2024. All surface changes associated with the increased aisles have been accounted for in the revised Drainage Report dated December 9, 2024.**

C2. *The Salisbury Zoning Regulations require hotels to provide one parking space per room plus "additional for other facilities based on parking needs assessment".*

**R2. The applicant previously prepared and submitted a detailed analysis of the parking demands for the proposed hotel to the Commission. The document is entitled "Wake Robin Inn Parking and Occupancy Analysis" dated August 1, 2024 (uploaded to the Town land use internet site for application materials on August 5, 2024). The applicant's parking analysis was reviewed and accepted by the Commission's traffic engineering consultant. The parking analysis has since been revised by the applicant on November 13, 2024 (uploaded to the Town land use internet site for application materials on November 14, 2024) showing reductions in parking demand from the previous analysis, based on the current proposed onsite facilities. One of the applicants' objectives was not to over-park the site, but to make sure the parking provided will be adequate for the various peak use periods. Accordingly, the site plans currently show 111 permanent**

**delineated parking spaces and 39 temporary overflow parking spaces in the area of the "great lawn" (layout of lawn spaces included in site plans), for a total of 150 onsite parking spaces. Refer to revised site plans dated December 9, 2024.**

C3. *Zoning regulations require that at least 10% of the parking spaces that are provided include necessary infrastructure for electric vehicles. The site plan states that 5-electric vehicle charging spaces will be provided.*

**R3. Refer to revised site plans dated December 9, 2024, showing locations for 8 electric vehicle (EV) pedestals servicing 16 EV parking spaces (>10%), along with a note that provisions for electric vehicle charging infrastructure to be installed at the time of project construction.**

C4. *Four handicap-accessible parking spaces for the hotel are provided next to the deliveries/loading area with the only access to the building provided via a basement level door. The plans do not show an accessible route to the basement door. Additionally, the plans do not show a loading/unloading space nor access to the delivery/loading door that is indicated on the architectural plans.*

**R4. Refer to revised site plans dated December 9, 2024, showing Americans with Disabilities Act (ADA) universally accessible routes to the lower-level building entry and sidewalk access to the service entry door. Bulk deliveries and loading will occur in the area between the Event Barn and the Storage Building adjacent to the Event Barn, as shown on the site plans. Bulk goods will be kept in the Storage Building and distributed throughout onsite buildings via small onsite staff utility vehicles.**

C5. *Pervious surfaces are proposed for the parking spaces. As the site primarily consists of 'D' hydrologic type soils will the proposed pervious surfaces provide the desired function?*

**R5. The proposed permanent parking spaces (excluding ADA universally accessible parking spaces and access aisles) will be gravel. The temporary overflow parking spaces on the "great lawn" will be natural grass turf. No pervious pavers will be used on the site and the site plans have been revised accordingly (refer to revised site plans dated December 9, 2024). A runoff curve number of 98 has been utilized for impervious surfaces (pavement, brick and patio pavers) and a curve number of 96 has been utilized for gravel surfaces in the stormwater analysis (refer to revised Drainage Report dated December 9, 2024).**

**Grading**

C6. *Proposed units 12 and 9 appear to be 8' to 11' above grade. All the proposed cottages must comply with building height requirements of the Zoning Regulations.*

**R6. The maximum heights of all cottages are less than 30' above average grade and in accordance with the Zoning Regulations.**

C7. *Proposed stormwater runoff drainage swale along periphery of the remote parking lot, located in the northwest corner of site, has potential to allow stormwater runoff flows to erode slopes downgradient of the swale.*

**R7. A 30-inch-high freestanding decorative and functional barrier wall has been added to the site plan along the west side of the full length of the proposed swale providing a barrier to prevent the possibility of any water overflowing the proposed swale and eroding the slope. The freestanding wall will assist in directing any water towards Detention Basin 220. The wall will consist of a concrete core, with a decorative field or ledgestone veneer.**

**Stormwater**

C8. *The 2024 CTDEEP Stormwater Quality Manual requires the design to control the 2-year, 24-hour post-development peak flow rate to 50% of the 2-year, 24-hour pre-development peak flow rate for each point at which stormwater discharges from a site using structural stormwater BMPs.*

**R8. There are three stormwater analysis points (i.e., discharge points) from the site, referred to in the Drainage Report as Analysis Points A, B, and C. Reduction in the 2-year, 24-hour post-development peak discharge flow rate by 50% has been achieved for Analysis Point B (Sharon Road Storm Drainage), which is where stormwater discharges from the site using structural BMPs including discharges from Detention Basins 210 and 220 (refer to revised Drainage Report dated December 9, 2024).**

**Stormwater discharging to Analysis Point A (Wells Hill Road) via the intermittent watercourse does not include discharge from onsite structural BMPs; it receives discharges from onsite water quality basins designed as rain gardens. Rain gardens are classified by the 2024 CTDEEP Stormwater Quality Manual as non-structural low-impact development design elements. Therefore, it is SLR's opinion that a 50% reduction in the 2-year, 24-hour post-development peak flow rate is not applicable to Analysis Point A. Furthermore, the watershed area to Analysis Point A also includes upgradient offsite areas (not owned by the applicant) contributing stormwater flow to Analysis Point A. The offsite flow cannot be altered or controlled by the applicant to effectively achieve a 50% reduction for a 2-year, 24-hour post-development peak flow rate at Analysis Point A (i.e., damming of a watercourse to restrict existing flow in the watercourse is not practicable and would significantly alter existing hydrologic conditions).**

**Stormwater discharging to Analysis Point C (Sharon Road and Southern Properties) does not include discharge from structural BMPs and the proposed contributing watershed area does not include any development (existing or proposed). Therefore, it is SLR's opinion that a 50% reduction in the 2-year, 24-hour post-development peak flow rate is not applicable to Analysis Point C. The only way to reduce flow at Analysis Point C is to divert flow from the post-development undeveloped watershed into another watershed toward another discharge point, which would unnecessarily impact undeveloped site areas and would significantly alter existing hydrologic conditions.**

**In addition to providing a 50% reduction in the 2-year, 24-hour post-development peak stormwater flow rate for Analysis Point B as required, the proposed onsite**

**stormwater management design will also provide reductions in the post-development peak flow rates at all points where stormwater discharges from the site (Analysis Points A, B, C) for the 1-year, 2-year, 5-year, 10-year, 25-year, 50-year and 100-year, 24-hour storm events. The 2024 CTDEEP Stormwater Quality Manual states that post-development peak stormwater flow rates are to be controlled for the 2-year and 10-year storm, and potentially the 100-year storm, as required by the review authority. It is SLR's opinion that the proposed stormwater management design treats and controls stormwater flows to the maximum extent practicable on the site, with the minimum design criteria included in the 2024 CTDEEP Stormwater Quality Manual being met and exceeded.**

C9. *Infiltration rates are noted in the drainage design, however, no field test results have been provided. The missing test results should be added to the plans.*

**R9. All soil test pit logs and infiltration testing results have been included on Sheet SD-6 of the revised site plans dated December 9, 2024.**

*C10. The soil infiltration rate utilized for the design of detention basin 210 is exceedingly fast, 6.4 inches per hour, for the 'D' hydrologic type soil noted. Similarly, the soil infiltration rate utilized for the design of detention basin 220 is exceedingly fast, 4.278 inches per hour. These rates are as one would expect in type 'A', sand or loamy sand soils.*

**R10. SLR utilized the Natural Resources Conservation Service "Web Soil Survey" website to obtain soil map units for the site. The onsite soils are fine sandy loam soils including Farmington-Nellis complex (3 to 15 percent slopes very rocky) and Farmington-Rock Outcrop Complex soil units. According to NRCS, the typical profiles of these soil units are as follows:**

**<u>Farmington-Nellis Complex (3 to 15 percent slopes very rocky)</u>**
**Typical Profile (Farmington): 0 to 80 inches of fine sandy loam**
**Typical Profile (Nellis): 0 to 60 inches of sandy loam**

**<u>Farmington-Rock Outcrop Complex (15 to 45 percent slopes)</u>**
**Typical Profile (Farmington): 0 to 80 inches of fine sandy loam**

**Onsite test pits completed by SLR confirmed the fine sand and fine sandy loam characteristics of the site soils. Although it is not common for fine sandy loam soils to be classified as 'D' hydrologic type, it is likely that NRCS has classified these soils as 'D' hydrologic type due to the steepness of the slopes in conjunction with the presence of rock outcrops, areas of shallow depths to rock, and areas of wetland soil inclusions. SLR initially performed soil testing on June 21, 2024. Additional soil testing performed by SLR on September 12, 2024 and November 27, 2024 at the request of the Commission's consultant civil engineer.**

**The finished grades at the bottoms of the stormwater basins are proposed at 3' above observed ledge and seasonal high groundwater (i.e., redoximorphic features). Refer to revised site plans dated December 9, 2024. Notes have been added to the detention basin and water quality basin design details on Sheet SD-6 (refer to revised site plans dated December 9, 2024) requiring the contractor to perform additional test pits to confirm all areas of the basin bottoms are at least 3'**

**above ledge. If there are areas of the basins found to have ledge within 3' of the proposed finished bottom grade of the basin then the ledge will need to be removed and replaced with ASTM C-33 washed sand.**

**All infiltration testing completed by SLR is representative of the infiltration rates of existing soil below the bottom of the stormwater basins. The design of Detention Basins 210 and 220 are based upon dynamic stormwater analysis using the slowest measured infiltration rates of the existing sandy soils below the bottom of the basins. The designs of Water Quality Basins 120 and 140 are based upon static stormwater analysis using the slowest measured infiltration rates for only the post-storm drawdown calculations. The post-storm drawdown durations for all proposed detention basins and water quality basins are less than 48 hours, in accordance with 2024 CT Stormwater Quality Manual guidelines.**

C11. *The deep test information provided on the plans includes references 'tube sample' which implies being used for lab permeability tests. Per the 2024 CTDEEP Stormwater Quality Manual, lab permeability testing is not acceptable for determining soil infiltration rates since lab tests do not adequately represent in-situ or field conditions.*

**R11. The 2024 CTDEEP Stormwater Quality Manual (page 180) lists the use of a Falling Head Permeameter (most current ASTM method) as an acceptable infiltration test method. This is the same testing method that has been used for many years by CTDEEP for determining permeability of soils for both stormwater infiltration systems and large-scale onsite subsurface sewage disposal systems. The Falling Head Permeameter is not an in-situ test and requires that a soil specimen be present within a tubular containment device for execution of the test. Undisturbed tube samples taken from pressing the tube into the unobstructed sidewall of a test pit excavation are used to isolate and preserve the natural soil conditions of the sample to adequately represent field soil conditions. SLR has performed all infiltration testing using the Falling Head Permeameter test method per ASTM D5084 utilizing undisturbed soil samples that SLR engineering staff obtained with a 1 ½" or 2" thin walled metal tube from onsite excavated test pits. All permeameter testing of the undisturbed soil samples was conducted by SLR's qualified professional engineering staff within 24-hours of obtaining the soil samples. No soil samples were sent to a laboratory for permeability testing.**

*C12. The 2024 CTDEEP Stormwater Quality Manual states: If a loam surface is proposed for a surface infiltration system, use a design infiltration rate of 0.5 inch per hour (1 foot per day) for the loam surface when considering the most restrictive layer and the appropriate design infiltration rate.*

**R12. SLR has revised the design for all surface stormwater detention basins and surface water quality basins (rain gardens) to incorporate a rounded river stone or cobble surface for bottoms of each of these surface infiltration systems instead of loam surfaces. Refer to revised site plans dated December 6, 2024.**

**State Road Right-of-Way (ROW)**

C13. *Proposed work in the state road right-of-way is subject to review by the Connecticut Department of Transportation (CTDOT) District IV office.*

**R13. Comment acknowledged. SLR is currently coordinating with the CTDOT District IV office regarding proposed work located within the CTDOT ROW along Sharon Road. Permits for this work will not be issued until such time as local zoning approvals have been granted.**

C14. *The proposed pipe and proposed catch basin CLCB28 are located directly above and/or in direct conflict with the existing water main. Additionally, the proposed storm drain pipe crossing Sharon Road appears to directly conflict with the existing sanitary sewer. Theses proposed conflicts must be corrected.*

**R14. SLR has revised the design for the proposed stormwater conveyance piping within the CTDOT ROW to provide necessary separation to existing utilities and avoid pipe conflicts. Refer to revised site plans dated December 9, 2024.**

C15. *As required by the CTDOT, the applicant's engineer should evaluate the capacity of the existing State drainage system to the discharge end of the drainage system.*

**R15. Comment acknowledged. SLR will complete all analyses required by CTDOT as part of the CTDOT permit process.**

C16. *A retaining wall (up to 10-feet in height) has been proposed along the Sharon Road frontage. Please note, it has been our experience that the CTDOT generally does not permit the construction of private structures within its right-of-way.*

**R16. Comment acknowledged. The retaining wall or exposed rock face is necessary to achieve adequate sight lines and sight distances at the existing driveway entrance to the Wake Robin Inn, regardless of the applicant's development proposal for the property. SLR is currently coordinating with CTDOT to finalize design details and locations for the much needed safety improvements.**

**Sanitary Sewer**

C17. *Proposed grease trap sizes and pipe information are to be added to the plans.*

**R17. Grease trap sizes and pipe information have been added to the revised site plans dated December 9, 2024.**

C18. *The applicant should depict a proposed sanitary sewer lateral location for the pool house as well as for cottage 5.*

**R18. Sanitary sewer laterals for the pool house and for cottage 5 have been added to the revised site plans dated December 9, 2024.**

C19. *We note that the applicant mistakenly utilized 100-gpd per bedroom for the calculations. The correct flow quantity is 150-gpd per bedroom.*

**R19. Average daily flow has been revised to 150 gallons per day (gpd) per bedroom per Connecticut Department of Public Health standards (CTDPH). The proposed**

**sewage flow estimate has been revised to 24,925 gpd. Refer to revised sewage flow estimate submitted by the applicant dated December 9, 2024.**

## Water

C20. *The applicant must request service and confirm that the water company has adequate water pressure and volume to provide for both, domestic and firefighting purposes.*

**R20. The applicant has been coordinating with Aquarion to finalize a will-serve commitment from Aquarion for water supply to the proposed Wake Robin Inn facilities. It should be noted that the existing inn is serviced by public water with an existing 12-inch water main located along property frontage of Sharon Road, along with an existing 6-inch water main located along the property frontage of Wells Hill Road. The existing 12-inch water main provides domestic water and fire water supplies to the Hotchkiss School campus buildings, which are located at elevations approximately 70 feet to 100 feet higher in elevation than the buildings proposed on the Wake Robin Inn site, thus making water service to this proposed project feasible.**

C21. *The building should be adequately protected by fire by utilizing proposed sprinkler systems. Fire service connection locations should be depicted on the plans.*

**R21. The buildings will be designed according to the current State of Connecticut Fire and Building Codes. Fire department service connection locations will be determined during the building permit process and shown on the building permit site plans. Fire water supply service connections to buildings for building sprinkler systems are shown on the revised site plans dated December 9, 2024.**

C22. *The local fire-fighting authority should review the site plans for safety and adequacy of access to and around all existing and proposed buildings on site.*

**R22. The site plans were originally submitted by the applicant to the Planning and Zoning Commission in August 2024. It is the applicant's understanding that the Town Land Use Department and the Town Planning and Zoning Commission have not received any comments from the Town Fire Marshal following submission of the application documentation. Although review and comment by the Fire Marshal is preferred during the Planning and Zoning application process, the Fire Marshal must complete their respective review and provide comments or approval prior to issuance of a building permit.**

C23. *The plans do not provide the required minimum separation distance between the proposed water main and proposed sanitary sewer main.*

**R23. A minimum horizontal separation distance of 10 feet has been provided between the proposed water mains and sanitary sewer mains and the proposed water services and sanitary sewer services, in accordance with Connecticut Department of Public Health (CTDPH) standards. Refer to revised site plans dated December 9, 2024. It should be noted that separating distances between water supply and sanitary sewer piping can be reduced when either the water supply pipe or the sanitary sewer pipe is encased in concrete, in accordance with CTDPH standards.**

**Cottages**

C24. *The cottages as shown on the plans are not permitted as a Special Exception use and must be eliminated from the plans.*

**R24. The cottages are part of the hotel use and are permittable as a Special Permit use accordingly.**

C25. *Three of the proposed cottages are located within 50-feet of a watercourse which may be regulated by the Salisbury Conservation Commission.*

**R25. Site plans have been revised to ensure no buildings, including cottages, are within 50-feet of any watercourse. It should be noted that the applicant received approval from the Town of Salisbury Inland Wetlands and Watercourses Commission for the proposed site development November 26, 2024.**

Please feel free to contact me directly at (203) 271-1773 should you have any questions.

Regards,

**SLR International Corporation**

**Todd Ritchie, PE, BCEE, CFM, REHS/RS**
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# Todd D. Ritchie, PE, BCEE, CFM, REHS/RS

Principal Civil Engineer | Cheshire, CT

Todd Ritchie brings over 25 years of experience in land development, civil and wastewater infrastructure. He is an accomplished civil/environmental engineer and project manager with a professional reputation for integrity, dedication and commitment to project success and client service. He has experience in management and engineering capacities for a wide variety of site development, civil infrastructure, and wastewater projects from inception through design, permitting, bidding and construction. His design projects have involved small to large scale residential, commercial, institutional and municipal site development and redevelopment. Todd is also a trusted advisor to city and town land use boards and commissions providing third-party civil engineering reviews of proposed site plan applications. He has provided third-party civil engineering reviews for Connecticut municipalities including Bridgewater, Middlebury, Fairfield, Westport, Easton, Redding, Weston, Darien, New Canaan, Southbury, Sherman, New Milford and Groton. Todd has served in the role of third-party civil engineering reviewer for the Town of Bethel on an on-going basis for over 5 years.

## Years of Experience

4 years with the firm | 21 years with other firms

## Professional Registrations and Certifications

- Professional Engineer - CT, MA, ME, NH, RI, VT, NY, MI
- Board Certified Environmental Engineer (BCEE)
- Certified Floodplain Manager (CFM)
- Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS)
- Leadership in Energy and Environmental Design Accredited Professional (LEED AP)
- Envision Sustainability Professional (ENV SP)
- Certified Professional in Erosion and Sediment Control (CPESC)
- Certified Professional in Stormwater Quality (CPSWQ)
- Certified Erosion, Sediment and Stormwater Stormwater Inspector (CESSWI)

## Education

- Certificate of Graduate Study, Environmental Engineering, Worcester Polytechnic Institute
- MBA, Business Administration, University of New Haven
- BS, Civil Engineering, Clarkson University

## Memberships and Affiliations

- American Society of Civil Engineers
- American Academy of Environmental Engineers & Scientists
- Association of State Floodplain Managers
- National Environmental Health Association
- Connecticut Environmental Health Association
- International Erosion Control Association
- Professional Engineer Member of the CTDPH Code Advisory Committee for Subsurface Sewage Disposal Systems Technical Standards