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January 11, 2022

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Mr. Tom Cummings, PE
 CLA Engineers, Inc.
 317 Main Street
 Norwich, CT 06360

RE: Bluewater Campground
 IWWC #2021-12
 CLA-5918R

Dear Mr. Cummings:

Following please find our review of your comments, dated December 8, 2021, for the above-mentioned project. Our responses are included in **bold**.

1. Rain gardens #'s 5 and 6 are noted in the drainage calculations but not evident on the plans.

✓ **Response: There are four (4) detention ponds and five (5) rain gardens. The Grading and Drainage Plans (Sheet C-3 series) and the water quality volume computations (Appendix D of the Stormwater Management Report) have been updated to reflect this.**

2. Detention Pond #2 is designed for 100% infiltration, permeability testing must be done in the pond area.

WATER APPARENTS
 IF

Response: Test Pit #23 (Appendix H of the Stormwater Management Report) was performed in this general area and it indicates silty sand and gravel with no groundwater to 10' below grade and the proposed design results in a maximum cut of approximately three (3) feet. We are assuming a 2 inches per hour exfiltration rate for the stormwater management areas, which is a conservative estimate. We will call for confirmation infiltration testing for Detention Pond 2 to be performed at the beginning of construction.

OVERFLOW TO W/IN R. P. 2 AP. APPROX SILTY SAND PAD

3. Listing (#16) on the plans (C-2.0) states 5 stormwater basins, there appear to be 4 detention basins and 4 rain gardens on the site.

✓ **Response: The table on Sheet C-2.0 has been changed.**

4. The water quality volume computations arrive at an acceptable total capacity, however it is the individual watersheds that matter in this case. Each watershed must have the necessary water quality required volumes satisfied.

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Response: Each stormwater management area has been analyzed and increased, where necessary, to provide adequate water quality volume for it's tributary area. The total resulting volumes are such that the total required volume is approximately 40,500 cf and the total provided volume is approximately 96,600 cf.

5. The soils map shows a line as "SLP." This line is not shown in the legend for the map.

✓ **Response:** That map is an autogenerated map by NRCS and we are unsure of it's meaning.

6. Flow calculations must be provided for the several swales shown on the plans.

? **Response:** We will provide these computations in a separate submission.

7. Grading is shown on the plans right up to the apparent wetland limit lines. The wetlands will likely be disturbed at these several points. The wetland flags are sparse in the field, and it appears that wetlands were flagged several years ago. Given the above, the wetland limits must be reflagged.

Response: The wetlands flags were reset in early January 2022. The soil scientist redelineated the known limits of wetlands and the result was the reduction of wetland areas by approximately 20,000 square feet. Additionally, the design has been revised to pull the limits of grading to an approximate minimum distance of 25' from the original wetland limits. This all has resulted in a reduction of upland review area disturbance of approximately 71,000 square feet, as well as any disturbance immediately adjacent a wetlands or watercourse.

- 134 CT → 8. Temporary sediment traps must follow DEEP guidelines and capture runoff from all the disturbed areas.

Response: Additional temporary diversion swales have been added to the plans. The vast majority of disturbed areas will be tributary to areas draining to diversion swales/sediment traps.

9. The "peninsula" area, showing 15 safari tent sites, drains largely directly to the wetlands without treatment. A portion of the area containing 13 safari camp sites also drains to the wetlands without treatment.

✓ **Response:** The northwest area has been reconfigured to shift all work away from wetlands. The redesign preserves the ridge line to the west, interacts better with existing topography, and introduces a new rain garden at the natural low point of this area. These revisions have reduced the number of tent sites in this area from 15 to 9. The northeast area has been reconfigured to remove the 24' wide bituminous drive down to a 16' gravel drive, for golf carts only. Additionally, the design layout of the safari tents will accommodate the existing knoll and reduce earthwork significantly. All flow from these peninsulas now drains to a stormwater management area.

10. The detention basins contain outlets with inverts which are 6 inches above the basin bottoms. The size of the basins and the amount of grading within the basins would make it difficult to construct and maintain the basins.

Response: The basins have been specifically designed to have undulating low points, with significant infiltration. We anticipate the smaller storms will all infiltrate and the design storms will be regulated with our outlet control structures. The bottom orifices, although only 6 inches above the bottom of the pond, are still significantly below the top of the basins. Additionally, a substantial area adjacent the stormwater management areas inflow and outflow have been redesigned to not contain plantings.

11. Planting in the basins must be kept to a minimum and only on the banks. The flat depth and the shallow inlet and outlet inverts will require frequent cleaning and mowing of the basins.

1100000 → **Response:** Plantings have been reconfigured to areas outside of the inflow/outflow locations but are intended for aesthetics and habitat creation, in coordination with the soil scientist.

Mr. Tom Cummings

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If you have any questions about this information, please call or e-mail me at 860-494-4359 or wwalter@benesch.com.

Sincerely,

Alfred Benesch & Company

A handwritten signature in black ink, appearing to read "Will Walter". The signature is written in a cursive, slightly slanted style.

Will Walter, PE
Senior Project Manager