Warner River Local Advisory Committee
5 East Main Street, P.O. Box 265
Warner, New Hampshire 03278
kmilender@millerengandtesting.com

Via email: Addison.Mauck@des.nh.gov

August 28, 2020

Mr. Ridgely Mauck
Alteration of Terrain Bureau
DEPARTMENT OF ENVIRONMENTAL SERVICES
29 Hazen Drive, P.O. Box 0095
Concord, New Hampshire 03302-0095

RE: Review Comments
Alteration of Terrain Permit Application #20200724-108
Route 103 West Commercial Development
Warner, New Hampshire

Dear Mr. Mauck:
Warner River Local Advisory Committee has reviewed the Alteration of Terrain Permit Application (#20200724-108) submitted by Ranger Engineering Group, LLC (of Methuen, Massachusetts) for the proposed Route 103 West Commercial Development (street address 9 Route 103 West, Warner, New Hampshire) on behalf of the Applicant (Comet, LLC of Wilmington, Massachusetts). By this letter, we are expressing our concerns about the potential that the proposed development will discharge stormwater with little to no treatment directly to the wetlands that border the Designated Warner River. Moreover, we find the plans and provisions for stormwater management wholly inadequate for a proposed development within the corridor of a New Hampshire Designated River.

Project Narrative and Design

1. Page 2: Applicant states that stormwater will be conveyed to a buried stormwater chamber system which will "outlet to the wetland at the rear of the property." Is this statement correct? We thought stormwater was being pre-treated in the sand filter, conveyed to the infiltration system, and infiltrated into the soils below (and with an overflow discharge to a level spreader when needed).
2. Page 2: Applicant has not (to our knowledge) demonstrated that the proposed stormwater management system conforms to NHDOT and Town of Warner regulations.
3. Page 3: Applicant states "Soil testing results were consistent with the soil mapping for the site." The gradations provided with the application package are not consistent with Podunk or Rumney series soils, and Applicant should be directed to clarify and to provide an opinion on whether this affects the design.
4. Page 4: The in situ hydraulic conductivity testing was performed at a depth of 8 feet (GSI's test pit log indicates the test depth was 90 inches, or 7.5 feet) and was apparently below the estimated seasonal high water table, and should be considered invalid.
5. Page 7: We did not see provisions for removing or reducing dissolved pollutants (such as fertilizers from lawn care and landscaping or deicing salts from the paved areas). WRLAC would like to see provisions added that will minimize potential impacts from dissolved pollutants, and should include pre-construction chemical monitoring to establish a pre-development baseline.
6. Page 7: Applicant refers to "hydraulic class B". Does that mean "Hydrologic Soil Group B"?
7. Pages 7/8: The in-place hydraulic conductivity testing was unsuccessful! Did the Applicant perform the required number of tests? We think the rules require one test per 2,500 SF.
8. Page 8: Overexcavating and removing the existing fill materials to make room for the infiltration system will require backfilling with several feet of compacted granular fill to achieve the design

elevations. The granular fills will be the soil through which the stormwater will be infiltrated. Will the hydraulic conductivity of the granular fill soils be tested during placement of each lift? Will the testing be performed before or after the compaction of each lift? Or will the testing only be performed once the design bottom-of-system elevation has been reached?

9. Will the surface sand filter be constructed within the existing fill materials, or will the fills be overexcavated and replaced? Does the hydraulic conductivity of these imported fills need to be determined?
10. Applicant has not submitted the drainage calculations for Swale-1 and the other drainage swales between West Main Street (Route 103) and the property. These swales will receive significant amounts of stormwater from Route 103.
11. Grading to develop drainage swales and driveways will require NHDOT approval and easements. Should these be depicted on the project plans?
12. We see no provisions for reducing the discharge of salt-laden meltwater to the Warner River and its wetlands. We will reiterate this excerpt from the Aries Engineering report of July 30, 2020: ". . . snow storage areas [should] drain to the site closed drainage system so that road-salt-contaminated snow melt water and stormwater runoff can be captured and treated by the proposed stormwater infiltration system."
13. Is the elevated grate to prevent entry of turtles into the stormwater system the only alternative the Applicant evaluated? Are there other, more protective, solutions? If turtles get into the stormwater system, will they survive?
14. We have not seen an evaluation of the potential impacts from the detention pond/surface sand filter on the adjacent, bordering wetlands.
15. Will stormwater from the south basin, fed back to the infiltration chambers, be short-circuited into the overflow outlet without further treatment?
16. Should Applicant's drawing CS9001 include the Warner River, the Designated Warner River Corridor, and its bordering wetlands? The purpose of this sheet is unclear; however, it should provide more detail than is currently shown.
17. Applicant should clarify and specify what the final slope angles will be for the fill slopes, and provide justification for these slope angles (CS1501, Sheet 7).
18. Applicant should specify the means by which the soils used on the fill slopes will be prevented from eroding following construction (CS1501, Sheet 7).
19. We suggest that the 3H:1V side slopes proposed for the stormwater management basins are too steep to allow for the stable vegetative growth that will be necessary to slow the velocity of surface runoff and for efficient maintenance during the growing season.
20. Applicant has likely not yet determined the source of the water that will be needed during construction of the proposed development. WRLAC would like to see provisions that will impose limits and require documentation of withdrawals of water from the Warner River during construction, and require best management measures that will minimize the physical impacts to the wetlands, the river's flow, and the riverbed during the withdrawals.

Infiltration Feasibility Report

1. Why was laboratory testing performed? We thought AoT regulations prohibit using laboratory determinations in design of infiltration systems.
2. What is the gradation specification for the "sand fill" that will be used to infiltrate the stormwater?
3. We disagree with Applicant's assertion on page 4 that "the result of having more infiltration will be a benefit to the groundwater system in the area." Increased infiltration of stormwater does not automatically confer benefits to the local groundwater regime.
4. GSI's field reports (dated 4/30) indicates that the test locations were submerged in water, so testing could not be performed. We think this is a bad omen for the capacity of the site fill soils to infiltrate the stormwater, and must be further evaluated.
5. Applicant's submittal did not include GSI's test pit logs or a USDA-NRCS texture triangle diagram for the determination of soil type.

6. It is our understanding that Guelph permeameters are used specifically for determining the hydraulic conductivity of unsaturated soil formations, but were apparently used here in saturated soils at and below the groundwater table. This should be addressed.
7. Admittedly a small point, but it is important that GSI's letter report of 06/26/2020 is neither signed by the engineers nor stamped by a NH-licensed engineer or geologist.

Long-Term Pollution Prevention Plan

1. The LTPPP does not include provisions for preventing or minimizing runoff with deicing salts during the winter months. As we wrote in our letter of 05/28/2020 to Warner Planning Board, we request that Applicant commit to incorporating Best Management Practices for winter roadway maintenance into their LTPPP, and Applicant should employ only winter maintenance firms with DES "Green SnowPro" certification.
2. LTPPP Provision #5 should clearly state that the sand and debris from the catch basins, sediment forebays, and infiltration galleries should be disposed of off-site and in accordance with BMPs and NH regulations.
3. The LTPPP should clearly specify that the sand and debris from the annual roadway and parking lot sweeping (Provision #7) should be disposed of off-site and in accordance with BMPs and NH regulations.

Construction Period Erosion & Sedimentation Control Plan

1. Sheet CS8501 (Sheet 16) has an incorrect title (it's called "Existing Conditions Plan").
2. Provision #9 of the E&SC Plan should clearly state that the sand and debris from the catch basins, drainage manholes, and stormwater piping should be disposed of off-site and in accordance with BMPs and NH regulations.

By this letter, WRLAC urges DES to not accept this application for further consideration until the Applicant has provided the additional information requested above.

Thank you for your attention to this matter. Please contact me if you have questions or require additional information.

Very truly yours,
WARNER RIVER LOCAL ADVISORY COMMITTEE

Kenneth W. Milender
Chair

cc. Warner Conservation Commission
Warner Planning Board