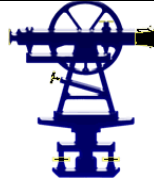


# NORWAY PLAINS ASSOCIATES, INC.

LAND SURVEYORS • SEPTIC SYSTEM DESIGNERS • CIVIL ENGINEERS

P.O. Box 249  
Continental Blvd. (03867)  
Rochester, NH 03866-0249  
Fax (603)332-0098  
Phone (603) 335-3948 / (800) 479-3948



P. O. Box 268  
31 Mooney St.  
Alton, NH 03809  
Phone & Fax (603) 875-3948  
[www.norwayplains.com](http://www.norwayplains.com)

May 27, 2020

Ms. Marcia Gasses  
Town Planner and Land Use Administrator  
Town of Barrington  
PO Box 660  
Barrington, NH 03825

## Re: Proposed Welding and Fabrication Facility; Anderson Properties LLC; Tax Map 220, Lot 29

Dear Ms. Gasses:

The following is a summary of actions taken to address the comments from the Stormwater Engineering Review by DuBois & King Inc. for the proposed Welding and Fabrication Facility for Anderson Properties LLC located on Colonial Way in Barrington. To expedite the review process; I have maintained the same order as the letter received on May 21, 2020.

1. We recommend that the applicant provide a pipe trench detail that meets the bedding and backfill requirements of Barrington Site Plan Review Regulations 4.7.7(4).
  - *A trench detail has been added to sheet C-7.*
2. We recommend that the applicant clarify if the site is defined as a “high-load” area as defined in Env-Wq 1502.30. If so, we recommend that the applicant provide an impermeable liner for the vegetated treatment swale due to the fact that the proposed project is within a wellhead protection area, and also for the detention basin as required by the NH Stormwater Manual Volume 2.
  - *The site is not considered a “high-load” area as defined in Env-Wq 1502.30, therefore no impermeable liner is required.*
3. Sheet C-3. We recommend that the applicant provide an emergency spillway for the proposed detention basin to protect against embankment failure if the primary outlet fails to function.
  - *An emergency spillway has been added to the detention basin. No stormwater will leave the spillway unless the outlet structure clogs. An emergency spillway detail has been added to sheet C-7.*
4. Sheet C-3. Grading and Drainage Plan. The plan shows the proposed solid drainage pipes to be “CPP”. We recommend that the applicant confirm with a note on the plans that the proposed pipe type is high-density polyethylene, dual wall N-12 corrugated pipe in accordance with Barrington Site Plan Review Regulations 4.7.7(5).
  - *A note has been added to indicate ADS N12 or Equivalent for the pipes.*
5. Sheet C-3. Grading and Drainage Plan. The plan shows proposed solid drainage pipes with a diameter of 12 inches. We recommend that the applicant revise the proposed

solid drainage pipes to have a minimum diameter of 15 inches in accordance with Barrington Site Plan Review Regulations 4.7.7(1).

- *The pipe size has been increased to 15 inch in accordance with Barrington Site Plan Review Regulations 4.7.7(1).*
6. Sheet C-3. The proposed 12” CPP Outlet pipe invert out does not match the outlet elevation defined in the drainage analysis. We recommend that the applicant revise the outlet elevation to match the Hydrocad outlet control structure outlet pipe elevation.
    - *The outlet has been revised, both the plans and HydroCAD have correct invert information.*
  7. Sheet C-4. Erosion & Sediment Control Plan. There is a small portion of the site on the northern limits of work adjacent to Colonial Way where erosion control is not depicted at the toe of slope of the proposed limits of grading. We recommend that the applicant revise the plans to provide erosion control measures in all areas at the toe of slope of the proposed limits of grading.
    - *Silt sock has been added to this area on sheet C4.*
  8. Sheet C-7. Detention Basin Cross Section. We recommend that the applicant revise the proposed basin bottom elevations so that the basin bottom is at or below existing ground and does not have fill.
    - *The basin bottom has been revised to an elevation of 200 feet.*
  9. Sheet C-7. Detention Basin Cross Section. We recommend that the applicant provide a low-permeability fill embankment material gradation and compaction requirements for the proposed embankment.
    - *A note has been added to the Detention Basin cross section on sheet C-7.*
  10. Sheet C-7. Detention Basin Cross Section. We recommend that the applicant add a note to indicate that the minimum width of the top of the embankment is 6’.
    - *The detention basin and swale have been designed with a berm width of 5 feet which is sufficient for maintenance.*
  11. Drainage Analysis. Pond ‘DB’ HydroCAD summary. We recommend that the applicant add the pipe inlet between the detention pond and the outlet control structure at inv. 201.0 to the outlet device definition.
    - *The pipe inlet between the detention pond and the outlet structure is meant as an equalizer between the pond and the outlet structure. The controlling outlet is the small orifices along the 15” standpipe. HydroCAD does not have the ability to properly model the equalizer pipe between the detention basin and the outlet structure properly. Hydraulics will keep the stormwater equal through the system, thus the HydroCAD is properly modelling the stormwater leaving the system.*
  12. Drainage Analysis. Page 4. Tables 2 and 5. The post development values for the 2-Yr, 10-Yr, and 50-Yr peak flow rates for POA-2 do not match the HydroCAD summaries. We recommend that the applicant revise the tables to match the HydroCAD modeling results.
    - *The table for the detention basin in the drainage report has been revised to match the HydroCAD results.*
  13. Drainage Analysis. Riprap outlet protection. We recommend that the applicant provide riprap

apron and stone sizing calculations for the FES outlet in the drainage analysis in accordance with Site Plan Review Regulations 4.7.2(11).

- *Riprap Apron sizing has been added to the appendices; it is appendix 9.*


14. Drainage Analysis. Appendix A-8. Inspection and Maintenance (I&M) Manual. Section 2.1 discusses inspection of sediment forebay and bioretention basins which do not appear to be associated with this project. We recommend that the applicant revise the I&M manual to reference inspection requirements specific to the proposed project. Additionally, we recommend that the applicant revise the I&M manual to define the maintenance requirements of the proposed stone check dams.

- *The Inspection and Maintenance Manual has been revised to remove any mention of sediment forebays and bioretention basins.*
- *The Inspection and Maintenance Manual is intended for permanent structures on the property. The stone check dams are temporary erosion and sedimentation control devices. There are maintenance instructions on sheet C-8.*

If you have any questions regarding the revisions made to this plan set, the design itself or any supplemental material submitted to satisfy the conditions of approval, please feel free to call or email me.

Sincerely,

**NORWAY PLAINS ASSOCIATES, INC.**

By:   
\_\_\_\_\_  
Scott A. Lawler, P.E., Project Engineer

Cc: Anderson Properties LLC.