COLLINS CIVIL ENGINEERING GROUP, INC.

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September 23, 2020

Pembroke Planning Board 100 Center Street Pembroke, MA 02359

Reference: Revised plans for the request for determination of adequacy of a way under The Town of Pembroke Zoning Bylaws, Section 9D. Improvements to Private Ways or Paper Streets, for the proposed improvements to Crescent Ave.

Dear Board Members:

On behalf of the applicant / owner, Roger Warren, Collins Civil Engineering Group, Inc. hereby submits revised plans dated September 23, 2020 per the Town of Planning Board comments and review letter from Merrill Engineers and Land Surveyors dated September 4, 2020. The following is a list of revision items made on submitted plans.

- 1. Soil testing, in the area of proposed underground recharge areas, has been performed by Collins Civil Engineering group Inc. Witnessed by George R Collins, soil evaluator, and Alan Dias, machine operator. Soil logs and test pit locations are shown on Existing Conditions Plan 1 of 1. Soils in both recharge areas are similar to previous test pit holes, medium coarse sand. Water tables have been established at both recharge areas and shown on Cross Section and Detail Plan 1 of 2.
- 2. Pre-Treatment of storm water run-off, prior to both underground infiltration recharge areas, is provided by the use of Ultra-Urban insert filters added to all proposed catch basins. These filters are easy to clean and maintain and will remove 80% of the total suspended solids prior to infiltration. A detail and maintenance plan has been added to Pierce Analysis & Detail Plan Sheet 2 of 2. Notes have been added to catch basin structures on Grading, Drainage & Intersection Detail Plan 1 of 1.
- 3. A 2 foot leveling area has been added to both road cross sections on Cross Section & Detail Plan 1 of 2. The compact base gravel is extended under the leveling area. This will allow emergency vehicles to ride up on the grass areas without sinking in beyond the 6" loam and seed depth giving the road an effective width of 24 feet.

4. The proposed well is relocated to a distance of 100 feet + from proposed underground recharge area 2 as required by the Massachusetts Stormwater Handbook. The new location meets offset requirements for the proposed septic system.

Please let me know if I may be of any further assistance regarding this submittal.

Sincerely,

George R. Collins, P.E. Chief Engineer/President