



100 GROVE ST. | WORCESTER, MA 01605

October 4, 2021

Grafton Planning Board
Grafton Municipal Center
30 Providence Road
Grafton, MA 01519

T 508-856-0321
F 508-856-0357
gravesengineering.com

**Subject: North Street Subdivision
Preliminary Plan Review**

Dear Planning Board Members,

We received the following documents in our office on August 30, 2021:

- Plans entitled Preliminary Plan of North Street Subdivision, Grafton, MA dated May 28, 2021, prepared by Connorstone Consulting Civil Engineers and Land Surveyors for Circle Assets, LLC. (5 sheets)
- Correspondence from Connorstone Engineering, Inc. to Grafton Planning Board dated August 10, 2021, re: Preliminary Subdivision Application, 4 Lot Subdivision, Off Magnolia Lane, Grafton, MA, with attachments.

Graves Engineering, Inc. (GEI) has been requested to review and comment on the plans' conformance with applicable Rules and Regulations Governing the Subdivision of Land; Grafton, Massachusetts revised through April 27, 2009; the Grafton Zoning By-law with amendments through June 20, 2020; and standard engineering practices. GEI visited the site on November 7, 2019 during review of a previous preliminary plan submittal.

Our comments follow:

Subdivision Rules & Regulations

1. GEI has no issues relative to compliance with the Grafton Rules and Regulations Governing the Subdivision of Land except as noted in the following four comments.
2. The dimension is missing for Lot 1's front lot line; the dimension will need to be provided on any definitive plans. GEI scaled the front lot line and found there to be more than the required 140 feet of frontage. (§3.2.3.6)
3. The plans are missing a space for Planning Board action. (§3.2.4.1.A)
4. To accommodate a 30 mile per hour design speed, a minimum K-value of 37 must be used for sag vertical curves. The plans propose a sag vertical curve K-value of 35 on Road "B" at approximately Sta. 1+85. In GEI's opinion, this minor revision could be addressed during definitive plan design. (§4.1.5.3)
5. There must be at least 50 feet between the side right-of-way lines of intersecting ways and a driveway. At the proposed Magnolia Lane intersection, the proposed right-of-way line and edge-of-pavement cross over the abutter's driveway. Please note that although the abutter's

x:\shared\projects\graffonpb\northstreetsubdivision(magnolialane)\docs\reviews\gpb100421nsprelim.doc

driveway is located within an existing roadway and grading easement, coordination will need to be made with the abutter regarding any proposed work. Nevertheless, alternatives should be considered to maximize separation (visual, physical) between the abutter's driveway and the proposed roadway or to tie the existing driveway into the new road. (§4.3.3)

Zoning By-law

6. GEI has no issues.

General Engineering Comments

7. GEI recommends that the proposed cul-de-sac have a centerline grade greater than the proposed 1.0% to minimize the potential for water puddling along the cul-de-sac edges, where the grade will be less than 1.0%.

General Comments

8. On Sheet 4, the proposed "R.O.W. Easement" was labeled to be 50 feet wide. However, as scaled from the plans sheet the width was 56 feet.

9. On Sheet 4 at station 3+00+/-, the proposed contour was inadvertently labeled as 274 feet instead of 474 feet.

We trust this letter addresses your review requirements. Feel free to contact this office if you have any questions or comments.

Very truly yours,
GRAVES ENGINEERING, INC.



Jeffrey M. Walsh, P.E.
Principal

cc: Vito Colonna, P.E., Connorstone Engineering, Inc.