



100 GROVE ST. | WORCESTER, MA 01605

January 6, 2022

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

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

Dear Planning Board Members,

We received the following documents in our office on December 17, 2021:

- Plans entitled Preliminary Plan of North Street Subdivision, Grafton, MA dated May 28, 2021 and last revised November 3, 2021, prepared by Connorstone Consulting Civil Engineers and Land Surveyors for Circle Assets, LLC. (5 sheets)
- Correspondence from Connorstone Engineering, Inc. to Grafton Planning Department dated December 10, 2021, re: Peer Review Response, North Street Subdivision.

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. As part of our initial review GEI visited the site on November 7, 2019.

This letter is a follow-up to our previous review letter dated October 4, 2021. For clarity, comments from our previous letter are *italicized* and our comments to the design engineer's responses are depicted in **bold**.

Our comments follow:

Subdivision Rules & Regulations

- 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.*
GEI has no issues relative to compliance with the Grafton Rules and Regulations Governing the Subdivision of Land.
- 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)*
Acknowledged. The dimensions for Lot 1's front lot line have been added to the plans; the frontage is 149.19 feet.
- The plans are missing a space for Planning Board action. (§3.2.4.1.A)*
Whereas the application pertains to a preliminary subdivision plan, GEI defers to the Planning Board or its staff whether a space for Planning Board action is required.

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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)

Acknowledged. The vertical curve has been revised to have a K-value of 37.

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 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)

Acknowledged. The plans have been revised to show an alternative design for the abutters driveway to provide at least 50-feet of separation between the driveway and the intersection. The alternative design would provide driveway access to the abutter's lot from the proposed subdivision. Also, the design engineer responded that the applicant is in initial discussions with the abutting land owner and can provide the Board a status update at the next public hearing.

Zoning By-law

6. GEI has no issues.
No further comment necessary.

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%.

Acknowledged. The proposed cul-de-sac centerline grade has been increased to 2.0%.

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.

Acknowledged. The "R.O.W. Easement" has been revised to be 50 feet wide.

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

Acknowledged. The contour label has been revised.

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.