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December 4, 2021

Planning Board  
900 Main Street  
Town Offices  
Millis, MA 02054

Ref: Acorn Place

Dear Members of the Board:

Based on the Board's last meeting where the residents requested that the Fire Lane be revised, I am requesting a field change to allow the surface of the fire lane to Acorn Street to be gravel instead of the specified reinforced turf. This will make the fire lane easier to maintain and will be a more obvious entry point in the event emergency personnel need to use it.

Regarding specifications for the proposed gravel fire lane surface, note the following:

- Most of the area dedicated to the fire lane was a previous gravel road used by trucks for access to the rear portions of the site. As such, it was historically improved with imported gravel.
- The current contractor prepped the subgrade of the road by removing unsuitable soils and by adding at least 8 inches of 3/4"-1.5" crushed process materials throughout the length, except where it approaches the new housing units. I have spot checked several locations of the fire lane to confirm this.
- Note that the fire lane was specifically improved early in the construction effort so that fill could be brought into the site. The contractor reports that the loaded dump trucks had no difficulty traversing the current fire lane surface and there is no indication of any problems.
- We are of the opinion that with the following improvements, the fire lane will be suitable for fire truck access:
  - In the area between the new residential units, remove all unsuitable subsoils and bring the fire lane to subgrade elevation with a minimum of 8 inches of compacted 1.5" processed subgrade gravel.
  - Surface the entire fire lane with 3 inches of compacted 3/4"-1.5" processed gravel.

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Do not hesitate to contact me should you have any questions or comments.

Yours Truly,

LEGACY ENGINEERING LLC

Daniel J. Merrikin, P.E.  
President

cc: File

## MEMORANDUM

Date: December 8, 2021 Job No.: 6096  
To: Richard Nichols, Millis Planning Board Chair  
Cc: Camille Standley – Planning Board, Dan Merrikin, PE – Legacy Engineering  
From: Melissa Recos, PE – BETA  
Subject: Acorn Place – Fire Lane Field Change Request

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BETA received the letter to the Planning Board regarding the fire lane field change request for the Acorn Place project from Legacy Engineering dated 12/4/2021. This memo provides BETA's findings, comments and recommendations on the proposed change of gravel surface instead of reinforced turf for the fire lane.

The engineer is proposing the access road be designed to remove unsuitable subsoils and brought to subgrade with  $\frac{3}{4}$ "-1.5" crushed process stone material compacted to 8 inch minimum depth and a surface layer of  $\frac{3}{4}$ "-1.5" processed gravel placed to a depth of 3 inches.

BETA agrees that using gravel instead of the specified reinforces turf will be easier to maintain and provide for more visible roadway limits if emergency personnel should need to use it.

In order to ensure that the gravel roadway as proposed will perform over time, BETA recommends detail be provided for proposed grading of the roadway surface to create a crown in the cross-section allowing drainage of water from the road surface to a ditch along the shoulder. Maintenance requirements for the gravel road should be identified and documented in the Long-term Operations and Maintenance Plan.