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CIVIL & ENVIRONMENTAL ENGINEERING

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April 30th 2024

Attorney Jeffery Miller Esq.
35 Harvard Street
Suite 311
Worcester, MA 01609

Subject: Slope Stabilization Analysis & Recommendation
Site Address: **17 Montclair Drive, Worcester MA**

Attorney Miller:

Pursuant to your request on behalf of the owner Adnan Paloja, I am pleased to offer you the opinion and recommendation:

On 4/27/2024, I performed a site inspection to observe the existing conditions of the east facing side of the property. The purpose of the inspection was to assess the slope for stability and erosion potential.

It is my understanding that sometime prior to January of 2024, the owner obtained the services of an excavation and landscape contractor to furnish and install clean fill on the eastern side of the property for the purpose of extending the flat area to provide useable area adjacent to the driveway. The fill was imported from a virgin source and is understood to be structural fill suitable for the intended use.

The area of interest is graded in excess of 15% cannot be graded to less than 15% due to the physical constraints of the site (ie existing grades of the abutting property). The following erosion control measures were in place at the time of inspection:

- Staked compost filled socks at top, toe and perimeter of slope
- Erosion control blankets were installed over the entire disturbed area
- The erosion control blankets were stapled down and seeded
- Approx 30% vegetative growth has been established
- No erosion or slope destabilization was evident at the time of inspection

After close inspection of the surrounding topography and review of plans prepared by HS&T Group Inc, entitled "Topography Plan" dated 01/09/2024 it is evident that the area in question is not subject to any significant area contributing runoff. As a result, the

slope should not experience concentrated flows that will cause erosion. Additionally, during the site visit, I inspected the (2) leaching catch basins that are existing on the site. The basins do not have outlets and are indeed leaching catch basins. There was no evidence of undermining by the work conducted and no evidence of overtopping.

Recommendations:

- Hydroseed entire slope with a hearty seed containing bonded fiber matrix “Eco Agis” or equal with perennial erosion control vegetation. Specification to be submitted to MSPE for review prior to use.
- Monitor monthly or after 2” plus rainfall events area in question for (2) growing seasons and oversee if needed to obtain 95% vegetative cover
- Correct any problem areas if they arise by installing 3-6” rip rap selectively to prevent erosion gullies (not required at this time)
- Monitor mature trees for health and remove if they do not survive or remove proactively.
- Continue to inspect leaching catch basins (follow existing O&M plan) and clean sumps as needed to ensure continued operation.

I remain available to follow up as needed and look forward to assisting you to ensure compliance with any conditions that may arise from your pending application with the City of Worcester,

Please feel free to contact me as needed

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark Santora".

Mark Santora, PE #40167