

Environmental Engineering

Forensic Engineering

Civil Engineering

Construction Services

March 24, 2022

Boston Landmarks Commission. Environmental Department 1 City Hall Square. Room 709 Boston, MA 02201 Attn: Nicholas Armata MRP

RE: Tree Removal for Safety of Pedestrians on Sidewalk

85 & 95 Sutherland Road (the "Site") Boston, MA 02135

Dear Mr. Armata,

FSL Associates, Inc. (FSL) is pleased to provide you with this letter summarizing the concerns of ledge outcrops and vegetation along portions of 95 Sutherland Road parcel adjacent to Sutherland Road.

On March 15, 2022, FSL was informed by the Site Owner that there was a sudden "partial collapse of a ledge wall where a massive boulder fell on a couple of cars" at 85 Sutherland Road (See Photos #1-#4). The Site Owner requested FSL mobilize to the Site to verify the condition of the remainder of the ledge outcrop and determine possible solutions to reduce chances of future collapses.

On March 16, 2022, FSL mobilized to the Site. Upon entry to Site parking lot, FSL identified an area that was fenced off with large boulders located in the fenced in area. The large boulders appeared to fall from approximately 10-15 above grade from the adjacent ledge outcrop, beneath the footing of a masonry wall on 95 Sutherland Road, adjacent to the north of the subject Site (see enclosed Figure 1). In the collapse area, there was a stump of a tree that had been cut in the past (see Photos #1 and #4).

FSL continued inspecting the ledge outcrop, which continued along the 95 Sutherland Road property boundary along Sutherland Road. Again, FSL identified several sections of deeply cracked ledge from various heights above the municipal sidewalk, with certain areas that could be removed by basic hand pressure. FSL also identified both trees and small brush on top of the ledge outcrop (see Photo #5).

Trees and other vegetation can cause fractures in ledge through growth while seeking water sources, and through decay with creation of void spaces for freeze/thaw seasonal activities. As previously seen at 85 Sutherland, fractures have been shown to suddenly collapse to the ground, with the potential to cause damage to property, and even possible bodily harm.

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Based on the current conditions at the Site, FSL believes that continuing to allow trees and other vegetation to grow within and on-top of the fractured ledge outcrop, including areas along the Sutherland Road sidewalk that is owned by the City of Boston, could cause ledge outcrops to collapse into the sidewalk and Sutherland Road, causing physical damage, and could possibly cause bodily harm should pedestrians be in the areas during the collapse.

Therefore, based on the observations at both 85 Sutherland Road and 95 Sutherland Road, FSL highly advises that the trees and small brush be removed as soon as possible in order to reduce the chances of ledge outcrop fractures collapsing into the sidewalk and Sutherland Road to avoid physical damage and possible bodily harm.

Once all the trees and vegetation are removed on top of the ledge outcrop, FSL then recommends the following:

- 1. Remove loose ledge fractures from the outcrop to reduce chances of future collapse
- 2. Underpin and stabilize the masonry wall on top of the ledge outcrop where necessary once all vegetation and loose ledge fractures are removed.

Please feel free to contact the undersigned at (617) 232-0001 should you have any questions.

Sincerely,

Ronald Tiberi, PE

Mass. Registered Professional No. 34773

Andrew J. Pieroni

Civil Engineering Manager

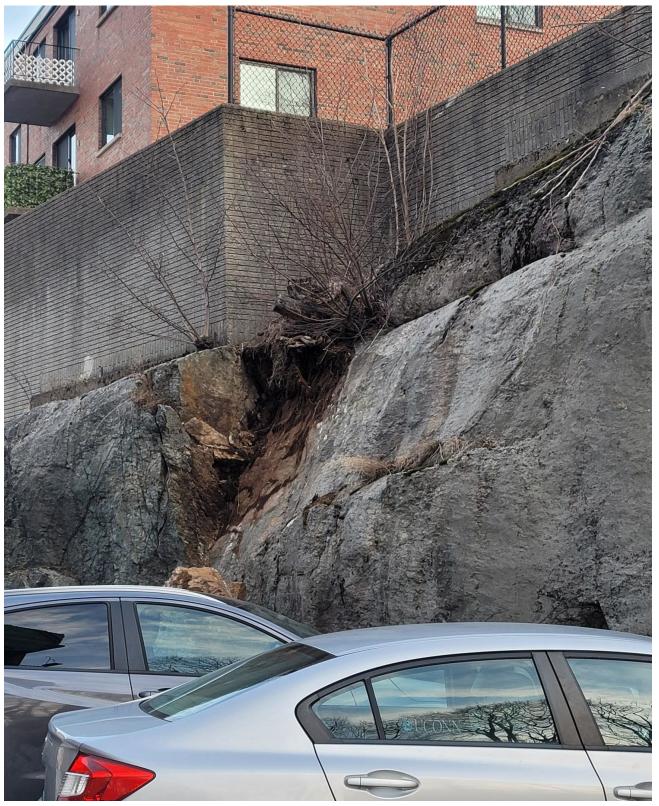
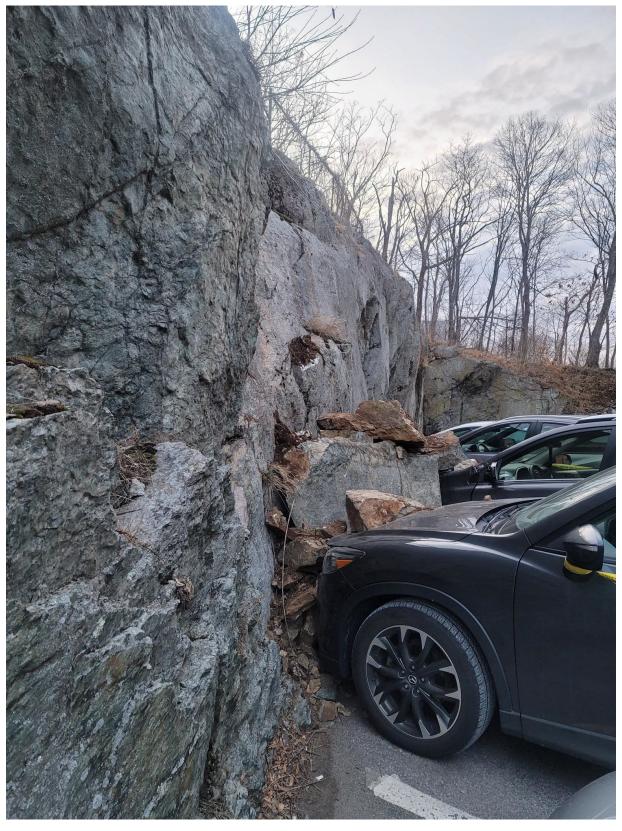


Photo #1 – March 15, 2022 Collapse Area



Photo

#2 – March 15, 2022 Collapse Area and Impact to Cars Beneath

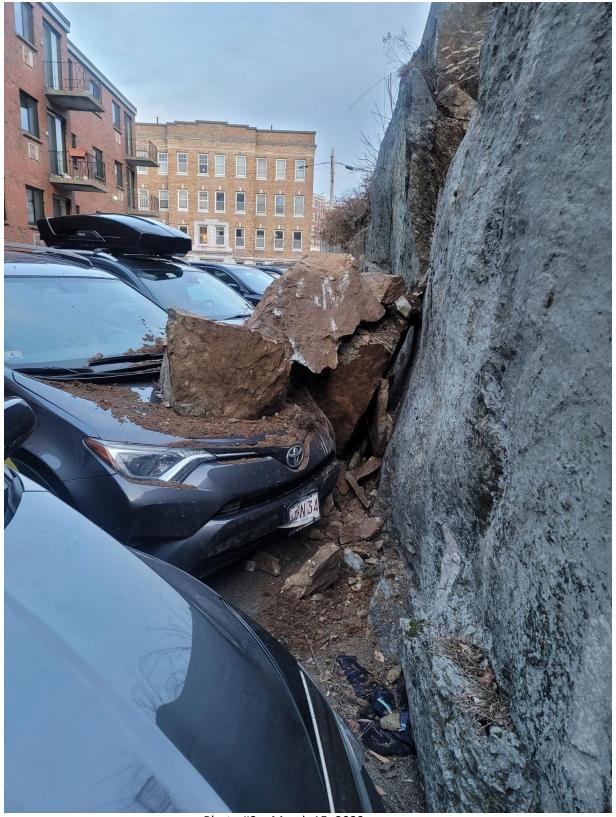


Photo #3 – March 15, 2022 Collapse Area and Impact to Cars Beneath

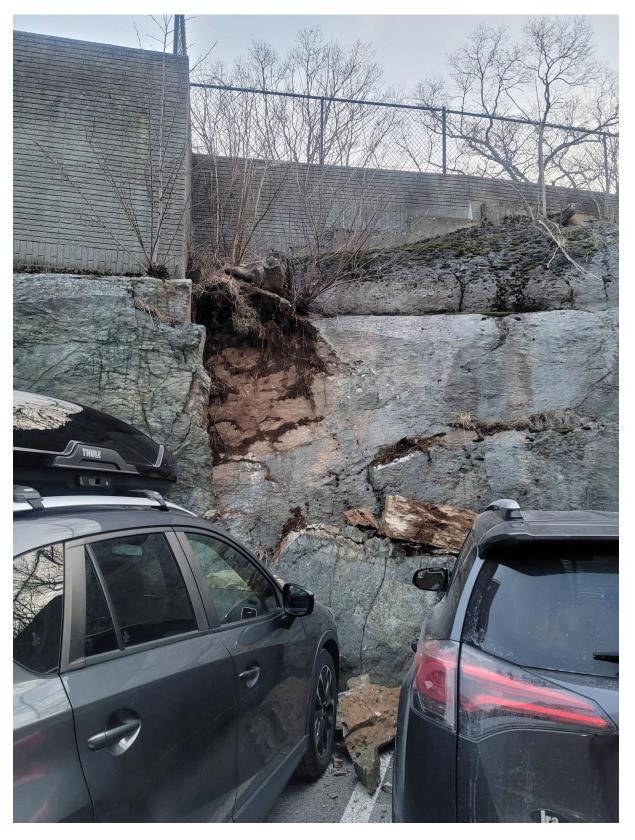


Photo #4 – March 15, 2022 Collapse Area and Impact to Cars Beneath



Photo #5 – March 16, 2022
Trees that must be removed to prevent collapse into sidewalk and Sutherland Road. Evidence of previous sealing of past ledge void areas.