

July 15, 2021

Mr. Xerxes Agassi
PO Box 2109
Vineyard Haven, MA 02568

Dear Mr. Agassi,

I have been retained by Xerxes Agassi to assess stormwater runoff conditions at the existing Educomp building located at 4 State Road, Vineyard Haven, Mass. This site assessment was performed as per Massachusetts DEP's Hydrology Handbook, utilizing the "RATIONAL METHOD" to determine peak storm water runoff from drainage areas less than 20 acres.

On June 30, 2021, I inspected the outside, "at grade," portion of the Educomp building with particular attention to the rear parking area where most stormwater runoff originated. From my review and site inspection, I estimate the average "down slope" grade of the parking area behind the building ranged from 2% to 4%. Two access ways running along the sides of the Educomp building connect the rear parking area to State Road. These two accesses are generally level and would contribute little to site storm water.

Based on Tisbury Assessor's tax maps, the rear parking area is 100+/- ft. wide. The parking area slopes down and away from the Educomp building and extends about 180 ft. +/- downhill to the current terminus of the parking area. The Tisbury soccer field is located adjacent to this low end of the parking area. In this low area, there is a 20-30' +/- thick and well established vegetated "belt" of flowers and tall grasses several hundred feet long between the bottom of the Educomp parking area and the municipal soccer field. Based on my inspection, this thickly vegetated high water content "belt" of dense soil absorbs and assists in controlling storm water runoff from both the subject parking area and municipal soccer field. It's my opinion this densely vegetated area should be preserved and maintained.

DETERMINATION OF STORM WATER DISCHARGE USING THE RATIONAL METHOD.

Rainfall data used for this report was derived from Massachusetts rainfall data Atlas showing Dukes County having a 5-year/24 hr. storm precipitation intensity rate of 4.6" per hr. as depicted on the RAINFALL DATA MAP.

- a) Storm water runoff from a 4.6" intensity design storm will require construction of stormwater collection basins, particularly at all Educomp roof drain discharge points. These basins allow storm water runoff to be absorbed into the soil.
- b) Based on my stormwater drainage calculations, catch basins can adequately handle the generated stormwater runoff. The partially surfaced parking area can handle some storm water from the roof runoff.
- c) The parking area is 0.36 ac. +/- . Based on design storm criteria the parking area will generate 0.056 cfs of stormwater runoff.

Based on my estimated in place mixed gravel density of 100 lbs /ft(3), a parking area slope of 2 to 4

%, and an estimated roof area of 3600 sq. ft., I estimate a total site storm water runoff to be 4+/- inches per hour.

Respectfully submitted,

John Lolley PE



Stormwater falls on the building roof draining into the gravel parking area.

Off-street parking area behind Educomp building.





Parking area erosion caused by stormwater run-off.



Stormwater drains into vegetated area, at the end of the parking area.