

# **DRAINAGE REPORT**

**Esteem Manufacturing Corp.**

**187 South Satellite Road**

**South Windsor, CT**

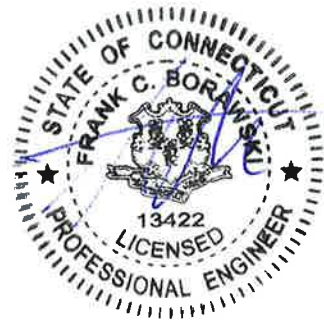
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## Project

Esteem Manufacturing Corp. proposes to construct a 5,400 sf addition to their existing facility at 187 South Satellite Road in South Winsor, CT.

The existing paved parking and loading area, to the south of the existing building, presently drains directly to the storm drainage in the street. This pavement in this area will be removed and replaced. There will be no change in runoff or the drainage system.

The existing paved parking and the existing roof leaders, to the north and east of the existing building, presently drains to the existing catch basins and into existing Stormtech subsurface detention chambers. The underground Stormtech Chambers were designed to handle the storm water runoff from the area and provide .035 ac/ft of the required .04 ac/ft of Water Quality Volume.

Because there is no proposed change in the impervious cover , the pre and post stormwater runoff will remain the same. The required Water Quality Volume (WQV) has been calculated to be .04 ac/ft.

(6) Addition Stormtech chambers have been added to raise the provided Water Quality Volume to .046 ac/ft.

## Property

The subject parcel consists of approximately 1.00 acre. The site contains an existing 3600sf building facing South Satellite Road and associated paved parking and loading areas.

The proposed project will add 5400sf of industrial space and the remaining paved areas will be repaved. All storm drainage is to remain, except for the additional Stormtech Chambers for additional Water Quality Storage Volume.

## Summary

Existing Site Runoff & Proposed Site Runoff will remain unchanged

Required Water Quality Volume = .04 ac/ft

Existing Water Quality Volume = .035 ac/ft

Proposed Water Quality Volume = .046 ac/ft

### Calculate Water Quality Volume

$$A = 1.00 \text{ acre}$$

$$I = 0.56 / 1.00 = .56 \text{ ( 56\%)}$$

$$R = 0.05 + 0.009 (56) = .55$$

$$WQV = (1") (.55) ( 1.00 ) / 12 = 0.04 \text{ acre/ft}$$

Actual Proposed Volume:

$$(50) \text{ Existing StormTech SC-310 Chambers} = 1550 \text{ cu/ft}$$

$$(6) \text{ Proposed StormTech SC-740 Chambers} = 490 \text{ cu/ft}$$

$$1550 + 490 = 2040 \text{ cu/ft} = .046 \text{ acre/ft}$$