Stormwater Management Report

For

423-427 MORRIS AVENUE
Block 11; Lot 697
City of Elizabeth
Union County, New Jersey

Prepared By

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SECTION 2 - MAPS

Soils Map
Existing Drainage Area Map
Proposed Drainage Area Map
Section 1 – Drainage Analysis Narrative

A. Introduction

1. Purpose of Report

The purpose of this report is to address the impact to the existing stormwater management measures on-site from the project described below. The criteria to determine this is in accordance with the most current City of Elizabeth Ordinance, Union County Regulations, and the Standards for Soil Erosion and Sediment Control (SESC) in New Jersey.

2. Project Location

The entire tract area is approximately 11,812 square feet (0.27 Ac.) and is known as Block 11, Lot 697 as shown on the City of Elizabeth tax maps. The property is regularly shaped with approximately 55 LF of frontage on Morris Avenue. The site is bounded to the south by Morris Avenue, to the north by the Elizabeth River, and to the east and west by mixed-use residential/commercial properties.

3. Hydrologic Methodologies

The proposed disturbance for this project is approximately 0.27 acres and the impervious cover will be increased slightly by approximately 0.08 acres from current existing conditions. The increase in impervious cover is due to the former building (0.10 Ac) at the site having been razed approximately April of 2018, and the site would see a net increase in pervious coverage of 0.2 acres to the formerly developed condition. With regard to Stormwater Management, as a result of this work disturbing less than 1 acre of land and providing less than one-quarter (1/4) acre of new impervious area, this project is not classified as a “Major Development” by the NJDEP Stormwater Management Regulations contained in NJAC 7:8. Therefore, stormwater detention, water quality and groundwater recharge measures are not required for this project.

B. Present Land Use and Drainage Patterns

1. Land Use

Presently, the site is currently vacant although there are remnants of the previous building on the property. There are paved areas outside of where the previous building was.
2. Topography and Soils

The site generally drains from south to north toward the Elizabeth River overland. The site soils consist of Urban Land. A soils map illustrating this can be found in Section 2 of this report.

C. Developed Land Use and Drainage Patterns

1. Land Use

The project proposes to construct an apartment building with at-grade parking with associated improvements to curbing, pavement, landscaping, and lighting.

2. Drainage Patterns

Existing drainage patterns will be maintained in the proposed condition. Additionally it should be noted that the site increases pervious coverage from previously existing developed condition.

D. Conclusion

The existing stormwater management facilities will continue to function as originally intended. No modifications to this system or additional stormwater measures are required as there will be a minor increase in pervious coverage in the proposed condition when compared to the previously developed site. This is in accordance with the most current City of Elizabeth Ordinance, Union County Regulations, and the Standards for Soil Erosion and Sediment Control (SESC) in New Jersey.
The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)
Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Union County, New Jersey
Survey Area Data: Version 13, Sep 16, 2019
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 25, 2019—Jul 30, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.
Hydrologic Soil Group

<table>
<thead>
<tr>
<th>Map unit symbol</th>
<th>Map unit name</th>
<th>Rating</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TunudB</td>
<td>Tunkhannock - Udorthents complex, 0 to 8 percent slopes</td>
<td>A</td>
<td>0.9</td>
<td>3.2%</td>
</tr>
<tr>
<td>UR</td>
<td>Urban land</td>
<td></td>
<td>28.7</td>
<td>96.8%</td>
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<tr>
<td><strong>Totals for Area of Interest</strong></td>
<td></td>
<td></td>
<td><strong>29.6</strong></td>
<td><strong>100.0%</strong></td>
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</tbody>
</table>

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

*Aggregation Method: Dominant Condition*
Component Percent Cutoff: None Specified
Tie-break Rule: Higher
EX. DA 1 IMPERVIOUS
0.22 Ac. IMPERVIOUS CN = 98
0.03 Ac. GRAVEL CN = 96
0.15 Ac. TOTAL, CN = 98
Tc= 6.0 MIN

EX. DA 1 PERVIOUS
0.02 Ac. GRASS CN = 74
Tc= 6.0 MIN

LOCATION OF FORMER BUILDING (0.10 Ac.) REMOVED APPROXIMATELY APRIL 2018.
**REVISIONS**

<table>
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<tr>
<th>NO.</th>
<th>DATE</th>
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**DRAWINGS**

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<th>DRAWING NUMBER</th>
<th>JOB NUMBER</th>
<th>DATE</th>
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MICHAEL D. SOUSA

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**PROPOSED TWO-STORY APARTMENT BUILDING OVER GROUND FLOOR PARKING**

(1 ONE-BR/STUDIO UNITS, 9 TWO-BR UNITS)

**SCALE: 1" = 40'**

**HORIZONTAL SCALE: 1" = 40'-0"**

**DUE TO INHERENT ERRORS IN REPRODUCTION METHODS, ERRORS MAY OCCUR WHEN SCALING THIS DRAWING**