

SOIL EROSION AND SEDIMENT CONTROL REPORT

PROPOSED MIXED-USE BUILDING RENOVATION
501 Washington Lane, Jenkintown, Pennsylvania
CED Project No. 22001641A

July, 2022

Prepared for:

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Introduction

The subject site is an existing developed lot located at 501 Washington Lane, Jenkintown, Pennsylvania. The existing property contains a 4-story office building with associated parking lot. The proposed project is to renovate the existing building into a mixed-use development with residential units on floors 2-4 and commercial space on the ground floor. The project also includes site improvements related to the parking lot, landscape areas, and stormwater management.

Site Description

The existing site is an existing developed property consisting of a 4-story building, asphalt parking lot, and a small area of overgrown hedges. The site is surrounded by an alley to the North, an adjacent Glanzmann Subaru property to the East, Washington Lane to the south, and Cedar Street to the west. The location of the site is shown on the accompanying Land Development plans. No streams, lakes, ponds, wetlands, or other surface water features existing on-site or within the immediate vicinity of the subject site. The current property has no existing stormwater management features on-site. The site runoff is collected via roof drains and one (1) existing inlet on-site that connect to the existing public storm sewer system. The site drains from East to West.

Based on review of the Borough of Jenkintown Stormwater Management District Watershed Map the site falls in the B – Management District and drains to the Tookany Creek in the Tookany/Tacony-Frankford Watershed.

PAST USES OF THE SITE

After a review of the USGS website and other available information which includes historical aerial images we have identified that the site was previously a parking lot dating back to the 1940's. In the mid-to-late 1970's / early 1980's the property was developed as the 4-story office building that exists today. For the past 40 years the site has remained in this condition.

SOIL CLASSIFICATIONS & LIMITING ZONES (GEOLOGIC FORMATIONS/SOIL CONDITIONS)

UgB – Urban Land:

0 to 8% slopes, Runoff classification is medium
Hydrologic Soil Group – Not Listed

Depth to bedrock: Not known.

Depth to water table: Not known.

UgB – Urban Land-Udorthents, schist and gneiss complex:

0 to 8% slopes, Runoff classification is medium
Hydrologic Soil Group C

Depth to bedrock: Not known. 10-90 inches deep based on soil survey.

Depth to water table: Not known. 60 inches deep based on soil survey.

Geologic/Soil Conditions that affects suitability for building site:

During construction activities, the potential for pollution exists that is typical with construction activities. Such pollution could be associated with sediment transport from silt laden runoff.

Measures to avoid/minimize or mitigate sediment pollution:

To prevent silt laden runoff from being transported off-site, silt soxx, and temporary soil stockpiles, are proposed to prevent sediment transport. Inlet protection is also proposed on existing inlets within the vicinity of the subject site. These filters will minimize sediment from being transported into the existing stormwater infrastructure and conveyed downstream.

FLOOD PLAINS

Based on the flood insurance rate maps for this site location, this property is located in flood hazard zone x (areas determined to be outside the 0.2 annual chance floodplain), and therefore, the site is not located within the floodplain.

Proposed Development

The proposed project is to renovate the existing building into a mixed-use development with residential units on floors 2-4 and commercial space on the ground floor. The project also includes site improvements related to the parking lot, landscape areas, and stormwater management.

A raingarden, green roof, and new landscaped areas are proposed to meet the township stormwater management requirements as indicated in the below summary:

Soil Erosion & Sediment Control

In accordance with the requirements set forth in the Pennsylvania Department of Environmental Protection Erosion and Sediment Pollution Control Program Manual, the following measures and facilities are utilized to aid in preventing accelerated soil erosion and sedimentation during demolition and site construction. Each measure and facility shall be installed and maintained in accordance with these standards.

The operator shall remove from the site, recycle, or dispose of all building materials and wastes in accordance with the department's solid waste management regulations at 25 PA Code 260.1 et seq., 271.1 et seq., and 287.1 et seq. The contractor shall not illegally bury, dump, or discharge any building material or wastes at the site.

The operator shall assure that an erosion and sediment control plan has been prepared, approved by the Montgomery County Conservation District and is being implemented and maintained for all proposed soil/rock spoil and barrow areas on or offsite.

A. TEMPORARY EROSION CONTROL MEASURES

Temporary soil erosion control measures to be used during construction include silt socks sediment control barriers to provide filtration of silt laden runoff as well as inlet protection to provide solids separation prior to run-off entering existing conveyance systems.

B. PERMANENT CONTROL MEASURES

Permanent vegetative ground cover, green roof and a raingarden are the proposed permanent BMP measures for this project.

C. MAINTENANCE PROGRAM

The contractor will be responsible for the installation and maintenance of all temporary erosion control measures. The contractor will also be responsible for the installation of the permanent control measures. The owner will be responsible for the maintenance of all permanent control measures.

Material removed from any temporary control measure will be incorporated back into the earthwork as fill on the site. Such materials shall be distributed on-site in such a way as not to change drainage patterns as they may exist on that particular day.

Below please find the maintenance procedure for the proposed temporary erosion control measures:

Silt Sock (Socks): shall be maintained as follows:

1. Traffic shall not be permitted to cross filter socks.

2. The sock condition must be inspected once a week or after every storm event, whichever comes first. Any necessary repairs must be made immediately.
3. Accumulated sediments will be removed as required to keep the sediment control barrier functional. In all cases deposits will be removed when accumulations reach 1/2 the height of the barrier.
4. All undercutting or erosion of the barrier will be repaired immediately with compacted backfill materials.
5. Adhere to any manufacturer's recommendations for replacing sediment control barrier due to weathering
6. Biodegradable filter socks shall be replaced after 6 months; photodegradable socks after one (1) year. Polypropylene socks shall be replaced according to manufacturer's recommendations.

Construction Entrance: shall be maintained as follows: The construction entrance will be inspected at the end of each workday. At the end of each construction day, any sediment deposited on public roadways, will be removed and returned to the construction site. Washing of the roadway with water will not be permitted.

Inlet Protection: shall be maintained as follows:

1. The inlet protection condition will be inspected once a week or after every storm event, whichever comes first. Any necessary repairs will be made immediately.
2. Filter bags must be cleaned and/or replaced when the bag is half full or when flow capacity has been reduced so as to cause flooding or bypassing of the inlet.
3. Adhere to any manufacturer's recommendations for replacing sediment control barrier due to weathering.

Conclusion

The proposed redevelopment will decrease the peak rate of runoff from the subject site when compared to the pre-development conditions. In actuality, an even greater reduction will be observed as the proposed green roof is not included in the stormwater modeling within the post construction stormwater management report. Through the proposed stormwater management measures, the proposed development will improve the stormwater management conditions downstream of the subject site, which we believe meets the intent of *Chapter 154 Borough of Jenkintown Stormwater Management Ordinance*.

Also, given the erosion control BMPs, the project meets the intent of the PADEP erosion and sediment pollution control program manual which minimize sediment contaminant transport associated with temporary earth disturbance activities.

Appendix

Preparer Qualifications: The Soil Erosion and Sedimentation Pollution Control Plan and Narrative have been prepared by Rhett Chiliberti, P.E. who has been trained and has experience in erosion control methods and design techniques applicable to the size and scope of project.



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Custom Soil Resource Report Soil Map



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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: Montgomery County, Pennsylvania
Survey Area Data: Version 16, Sep 1, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 1, 2019—Aug 4, 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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UgB	Urban land, 0 to 8 percent slopes	0.5	70.6%
UugB	Urban land-Udorthents, schist and gneiss complex, 0 to 8 percent slopes	0.2	29.4%
Totals for Area of Interest		0.6	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

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development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Montgomery County, Pennsylvania

UgB—Urban land, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2dtyq
Elevation: 800 to 1,500 feet
Mean annual precipitation: 36 to 46 inches
Mean annual air temperature: 41 to 62 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Parent material: Pavement, buildings and other artificially covered areas human transported material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Udorthents, unstable fill

Percent of map unit: 10 percent
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

UugB—Urban land-Udorthents, schist and gneiss complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2dtz7
Elevation: 200 to 2,000 feet
Mean annual precipitation: 35 to 55 inches
Mean annual air temperature: 45 to 61 degrees F
Frost-free period: 110 to 235 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 80 percent

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Udorthents, schist and gneiss, and similar soils: 15 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Hills

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Interfluve, nose slope, side slope

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Parent material: Pavement, buildings and other artificially covered areas

Typical profile

C - 0 to 6 inches: variable

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: 10 to 99 inches to lithic bedrock

Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Hydric soil rating: No

Description of Udorthents, Schist And Gneiss

Setting

Landform: Hills

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Interfluve, nose slope, side slope

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Parent material: Graded areas of schist and/or gneiss

Typical profile

Ap - 0 to 6 inches: loam

C - 6 to 40 inches: silty clay loam

R - 40 to 60 inches: bedrock

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: 20 to 70 inches to paralithic bedrock

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 60 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C

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Hydric soil rating: No

Minor Components

Glenelg

Percent of map unit: 1 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Interfluve, nose slope, side slope

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Hydric soil rating: No

Baile

Percent of map unit: 1 percent

Landform: Depressions

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Hydric soil rating: Yes

Edgemont

Percent of map unit: 1 percent

Landform: Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Hydric soil rating: No

Gladstone

Percent of map unit: 1 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Nose slope, side slope

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Hydric soil rating: No

Glenville

Percent of map unit: 1 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Head slope, side slope

Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Hydric soil rating: No