

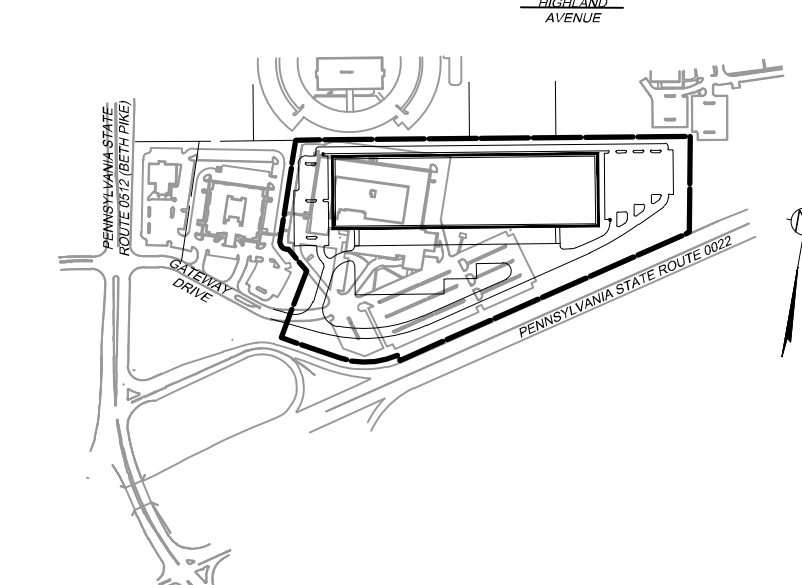
THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

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PROFESSIONAL SEAL

KEY MAP



- NOTES:
1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
 2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF CROSSING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

PLAN PREPARER:
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ALLENTOWN, PA. 18103
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| DATE | DESCRIPTION |
|--------------------|-------------------------------|
| 6 | |
| 5 | |
| 4 JANUARY 19, 2024 | REVISED PER NCCD COMMENTS |
| 3 OCTOBER 31, 2023 | REVISED PER TOWNSHIP COMMENTS |
| 2 OCTOBER 13, 2023 | REVISED PER TOWNSHIP COMMENTS |
| 1 A | 13 |

SCALE: 1"=100'
DATE: MAY 24, 2023
CHECKED BY: RRT
DRAWN BY: JLB, JGU
CAD FILE: Downstream Analysis Plan.dwg
PROJECT NUMBER: 195.2302



CALL BEFORE YOU DIG
SEE SHEET 1

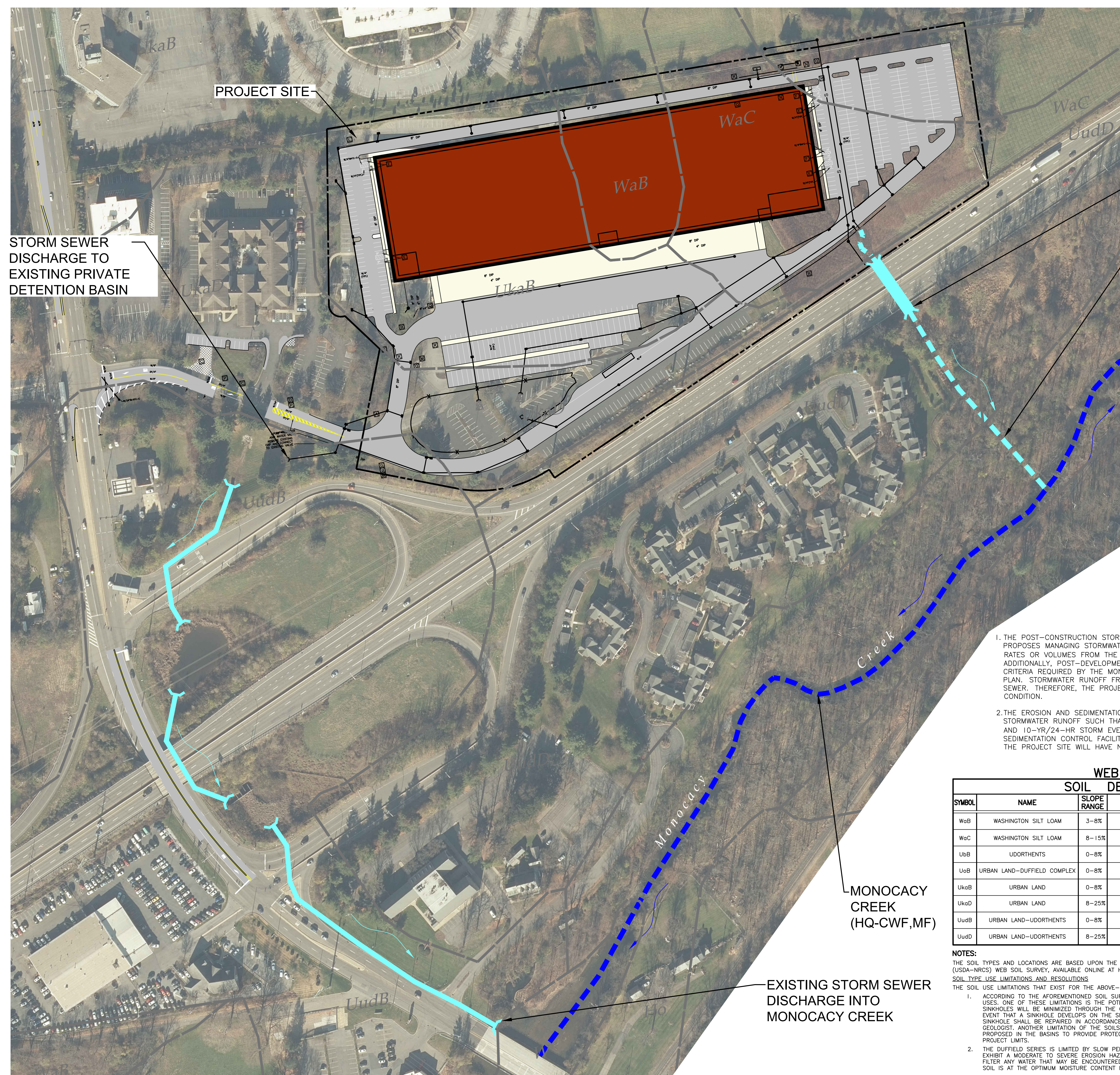
GRAPHIC SCALE: 100' 50' 0' 100' 200'

ARCADIA DEVELOPMENT CORPORATION
PROPOSED INDUSTRIAL DEVELOPMENT
HANOVER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA

OFF-SITE STORMWATER DISCHARGE DOWNSTREAM ANALYSIS PLAN

FILE NUMBER: S-12291

SHEET NUMBER: 1 OF 1



EXISTING STORM SEWER
DISCHARGE INTO
VEGETATED SWALE

EXISTING VEGETATED
SWALE DISCHARGE INTO
MONOCACY CREEK

STORM SEWER
DISCHARGE TO
EXISTING PRIVATE
DETENTION BASIN

PROJECT SITE

MONOCACY
CREEK
(HQ-CWF, MF)

EXISTING STORM SEWER
DISCHARGE INTO
MONOCACY CREEK

NOTES

1. THE POST-CONSTRUCTION STORMWATER MANAGEMENT DESIGN FOR THIS DEVELOPMENT PROPOSES MANAGING STORMWATER RUNOFF SUCH THAT THERE IS NO INCREASE IN THE RUNOFF RATES OR VOLUMES FROM THE 2-, 10-, 25-, 50-, AND 100-YR/24-HR STORM EVENTS. ADDITIONALLY, POST-DEVELOPMENT PEAK RUNOFF RATES COMPLY WITH THE RELEASE RATE CRITERIA REQUIRED BY THE MONOCACY CREEK WATERSHED ACT 167 STORM WATER MANAGEMENT PLAN. STORMWATER RUNOFF FROM SITE PCSM FACILITIES IS DISCHARGED TO MUNICIPAL STORM SEWER. THEREFORE, THE PROJECT SITE WILL HAVE NO IMPACT ON THE DOWNSTREAM DRAINAGE CONDITION.
2. THE EROSION AND SEDIMENTATION CONTROL PLAN HAS BEEN DESIGNED TO MANAGE STORMWATER RUNOFF SUCH THAT THERE IS NO INCREASE IN THE RUNOFF RATES FROM THE 2- AND 10-YR/24-HR STORM EVENTS. STORMWATER RUNOFF FROM SITE EROSION AND SEDIMENTATION CONTROL FACILITIES IS DISCHARGED TO MUNICIPAL STORM SEWER. THEREFORE, THE PROJECT SITE WILL HAVE NO IMPACT ON THE DOWNSTREAM DRAINAGE CONDITION.

WEB SOIL SURVEY

SOIL DESCRIPTION TABLE

| SYMBOL | NAME | SLOPE RANGE | CHARACTERISTICS | HYDROLOGIC SOILS GROUP |
|--------|-----------------------------------|-------------|--|------------------------|
| WaB | WASHINGTON SILT LOAM | 3-8% | WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY | B |
| WaC | WASHINGTON SILT LOAM | 8-15% | WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY | B |
| UaB | UDORTHENTS | 0-8% | WELL DRAINED, VERY LOW TO MODERATELY LOW PERMEABILITY | D |
| UaB | URBAN LAND-DUFFIELD COMPLEX AREAS | 0-8% | PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS | B |
| UkaB | URBAN LAND | 0-8% | PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS | N/A |
| UkaD | URBAN LAND | 8-25% | PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS | N/A |
| UudB | URBAN LAND-UDORTHENTS | 0-8% | PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS | D |
| UudD | URBAN LAND-UDORTHENTS | 8-25% | PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS | D |

NOTES:

THE SOIL TYPES AND LOCATIONS ARE BASED UPON THE U. S. DEPARTMENT OF AGRICULTURE-NATIONAL RESOURCES CONSERVATION SERVICE (USDA-NRCS) WEB SOIL SURVEY, AVAILABLE ONLINE AT [HTTP://WEBSOILSURVEY.SC.EGOV.USDA.GOV/](http://websoilsurvey.sc.egov.usda.gov/).

SOIL TYPE USE LIMITATIONS AND RESOLUTIONS

THE SOIL USE LIMITATIONS THAT EXIST FOR THE ABOVE-MENTIONED SOILS AND THEIR RESOLUTIONS ARE AS FOLLOWS:

1. ACCORDING TO THE AFOREMENTIONED SOIL SURVEY, WASHINGTON SILT LOAM HAS FEW LIMITATIONS TO MOST NON-FARM USES. ONE OF THESE LIMITATIONS IS THE POTENTIAL FOR SINKHOLES. THE POTENTIAL FOR THE FORMATIONS OF SINKHOLES WILL BE MINIMIZED THROUGH THE CONSTRUCTION OF A STORMWATER MANAGEMENT SYSTEM. HOWEVER, IN THE EVENT THAT A SINKHOLE DEVELOPS ON THE SITE, SURFACE WATER SHALL BE DIVERTED AWAY FROM THE AREA AND THE SINKHOLE SHALL BE REPAIRED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A PROFESSIONAL ENGINEER OR GEOLOGIST. ANOTHER LIMITATION OF THE SOILS SERIES ARE THE POTENTIAL FOR PIPING. ANTI-SEEP COLLARS ARE PROPOSED IN THE BASINS TO PROVIDE PROTECTION FROM THIS RISK. NO HYDRIC SOILS ARE PRESENT WITHIN THE PROJECT LIMITS.
2. THE DUFFIELD SERIES IS LIMITED BY SLOW PERMEABILITY AND A SEASONABLY HIGH WATER TABLE. ALSO THESE SOILS EXHIBIT A MODERATE TO SEVERE EROSION HAZARD. A PUMPED WATER FILTER BAG HAS BEEN SPECIFIED TO ADEQUATELY FILTER ANY WATER THAT MAY BE ENCOUNTERED. FURTHER, STRUCTURAL EARTHWORK SHALL ONLY BE DONE WHEN THE SOIL IS AT THE OPTIMUM MOISTURE CONTENT FOR COMPACTION.