



May 20, 2026

Rock Construction & Development, LLC
Attn: Nathan Torok
980 N. 2nd Street
Philadelphia, PA 19123

Via email to: natetorok@gmail.com

Re: Stormwater Infiltration Testing
Penn Street & Lafayette Street
Newtown, PA 18940
T.M.P. Nos.: 29-010-032 & 29-010-032-002
Newtown Township, Bucks County, PA

Dear Mr. Torok:

VW Consultants, LLC (VW) completed an evaluation of the above referenced properties on April 21, 2026 for the feasibility of stormwater infiltration. Testing was conducted at the six locations marked on the attached Test Pit Location Plan, which is based on an existing features plan of the property, prepared by Dynamic Engineering Consultants, P.C., dated 1/29/2026. The results of the testing, including soil test pit descriptions and infiltration rates at specified depths, expressed in inches below ground surface (B.G.S.), are summarized at the end of this report. The infiltration rates were established by the double-ring methodology, as described in the current *PADEP Stormwater Best Management Practices Manual (2006)*. Our findings indicate that infiltration of stormwater runoff is feasible/recommended at Test Pits SW-1 and SW-3 as outlined in the summary table at the end of this report. At areas where infiltration facilities are not feasible or utilized, shallow-based systems are recommended.

Project Setting

The project site consists of two vacant parcels that are mostly covered in open lawn with a tree row in the middle. The site gently slopes downhill to the south. VW performed six test pits on the south side of the project site in support of proposed stormwater management facilities to be utilized for future new residential land development.

Based on a review of a United States Geologic Survey map of Pennsylvania, the project site is underlain by the Stockton Formation. This formation is composed of beds of red to purple sandstone, shale, and siltstone, along with light gray to buff-colored arkosic sandstone. This rock type is moderately resistant to weathering and the overlying soil mantle is typically thin. Moderate porosity and permeability are characteristic of this formation. The excavation of this material varies from easy in weathered rock to difficult in decomposed rock.

Based on a review of the Web Soil Survey, the project area has been mapped by the Natural Resource Conservation Service as containing the Duncannon, Lawrenceville and Urban Land – Lawrenceville Complex soil series. Duncannon silt loams are classified as deep, well-drained soils formed in wind-blown loess over top of residuum weathered from siltstone, shale or sandstone. Lawrenceville silt

loams are classified as deep, moderately well-drained soils formed in wind-blown loess over top of residuum weathered from siltstone, shale or sandstone. While the soil profile characteristics and permeability rates of the Urban Land soil series have not been quantified, the soils are variable and can consist of shallow or deep profiles similar to the nearby undisturbed soils. Duncannon soils are classified as Hydrologic Soil Group B; Lawrenceville soils are classified as Hydrologic Soil Group C; and Urban Land soils are generally classified as Hydrologic Soil Group D.

Site Soils

The site was evaluated by a professional soil scientist and the soil profiles were described in accordance to the criteria of the USDA-SCS *Soil Survey Manual* Handbook No. 18 (3/2017) and the USDA-NRCS *Field Book for Describing and Sampling Soils* Version 3.0 (9/2012). A copy of the prepared soil profile descriptions is included with this report.

Six test pits were performed on the project site, as directed by the project engineer and as shown on the attached Test Pit Location Plan. In the test pits, VW observed brown or dark yellowish brown silt loam topsoil at the surface that was over top of brown, dark brown, strong brown, yellowish brown or dark yellowish brown silt loams and silty clay loams that are most likely wind-blown loess depositional soils. Beneath these surface soils, VW observed residual soils that consisted of reddish brown to dark reddish brown loams or gravelly loams that continued down to test pit completion or bedrock refusal. Bedrock, indicated by machine refusal, was only encountered at Test Pit SW-3 at 60 inches below the existing ground surface.

Redoximorphic features, an indication of seasonal wetness, were observed in five of the six test pits, ranging in depth from 24 to 70 inches below the existing ground surface. These redox features are the result of the soil's fine-grained texture and firm consistence, and do not represent a regional groundwater table where observed shallow in the soil profile. These redox features are formed as a result of hydraulically restrictive subsoils and slow permeability of surface runoff and are not the result of a fluctuating groundwater table; and therefore, should not be referenced or assimilated as such. A regional groundwater table was not observed in any of the test pits during the field investigation. Please see the soil profile descriptions for a more detailed description of the soils observed.

At completion, the test pits were backfilled and compacted with the excavated material, and leveled off with the surrounding grades. No additional compaction effort or site restoration was performed.

Infiltration Testing

To establish infiltration rates, two double-ring infiltrometer tests were conducted at each test pit location. All tests were conducted at the depth noted on the table below, depth expressed in inches below ground surface (B.G.S.). The test rates were averaged to obtain an average infiltration rate at that depth. The infiltration tests were conducted following the procedure of the current *PADEP Stormwater Best Management Practices Manual (2006)* for both test technique and calculation of the infiltration rate. Please be advised that this calculation, which is consistent with the methodology of the current PADEP Stormwater Manual, is not a soil hydraulic conductivity rate as determined by Darcy's Law.

The table below is a summary of the infiltration test depths and the infiltration rates obtained by VW during the field testing.

Pit No.	Pit Depth (in, BGS)	Observed Redox Features (in, BGS)	Depth to Rock (in, BGS)	Depth to Ground Water (in, BGS)	Infiltration Test Depth (in, BGS)	Average Infiltration Rate (in/hr.)
SW-1	80	45 to 55	NE	NE	36	5.25
SW-2	84	30 to 57	NE	NE	60	0.25
SW-3	60	NE	60	NE	36	9.375
SW-4	96	24 to 68	NE	NE	72	0.0
SW-5	96	25 to 66	NE	NE	72	0.0
SW-6	90	26 to 70	NE	NE	66	0.0

NE= not encountered

Conclusions and Recommendations

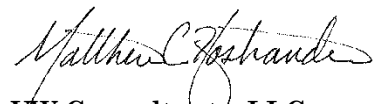
VW observed the site soils and performed infiltration testing at six test pit locations on the subject properties. Based on the observed soil conditions and infiltration rates obtained during the site testing, stormwater infiltration facilities can be designed at the locations and depths tested where suitable infiltration rates were obtained. More specifically, it is recommended to design infiltration facilities at Test Pits SW-1 and SW-3. The infiltration facilities should be designed by a professional engineer at the depth of the infiltration testing using appropriate engineering practices and with a safety factor reduction from the measured infiltration rate. Care should be taken to preserve the soil infiltrative surface during pre- and post-construction of the stormwater management facilities.

At areas where infiltration facilities are not recommended or utilized, the design engineer can provide for water quality and volume control with shallow-based stormwater management facilities that incorporates an underdrain or other positive outflow device so that the systems do not remain ponded during wet times of the year. These stormwater management facilities should be designed by a professional engineer at a suitable depth using appropriate engineering practices relative to the soil, rock and/or water conditions observed on-site.

Our findings are the result of testing conducted in specific locations and conditions. Should conditions contrary to the findings in this report be discovered prior to, during, or after construction of the stormwater control devices, VW must be notified so our recommendations can be reviewed or revised, if necessary. Additionally, if the stormwater management facility location and/or size changes, a VW soil scientist and the project engineer should review the site testing to confirm additional soil testing is not warranted.

Should you have any questions regarding the information included in this report, please contact me at 215-778-5284, or by email at mhostrander@vw-consultants.com.

Respectfully submitted,



VW Consultants, LLC
Matthew C. Hostrander, CPSS
Professional Soil Scientist

Enclosures: soil profile descriptions, infiltration data sheets, test pit location plan

cc: Justin Geonnotti, P.E. of Dynamic Engineering

Brendan J. O'Boyle, CPSS
Professional Soil Scientist

Date: 4/21/26 Pit # SW-1
 Project: Rock Construction
 Location: Penn & Lafayette Streets
 Newtown Township, Bucks Co., PA
 Soil Series Mapped: Duncannon
 Soil Series Classified: Duncannon

Limiting Zone 80+" none

Slope: 1-3%

Conduct Double Ring Infiltrometer Test at 36"

Horizon	Depth (In.)	Matrix Color	Texture	Structure	Consistence	Fe Redox Depletions	Fe Redox Concentrations	Boundary
Ap1	0-12	7.5YR 4/4	sil	2 m gr	friable	none	none	gradual wavy
Ap2	12-28	7.5YR 4/2	sil	1 m sbk	friable	none	none	gradual wavy
Bt1	28-45	7.5YR 4/6	sil	2 m sbk	friable	none	none	gradual wavy
Bt2	45-55	7.5YR 5/6	sicl	2 m sbk	firm	c d	c d	gradual wavy
2BC	55-80+	5YR 3/3	gr l	2 f sbk	firm	none	none	

Township Representative: None Soil Scientist: Brendan J. O'Boyle

Notes: Site evaluation for stormwater infiltration. Bedrock and groundwater not encountered.

Weather / Field Conditions: Sunny, 50s, soils moist.

Others Present at Site: Paul Dougherty of Total Contracting, LLC – backhoe provider and operator.

EPIPEDON

Ochric

SUBSURFACE HORIZON(S)

Argillic

SOIL ORDER

Alfisol

DRAINAGE CLASS

Well Drained

LANDFORM

Upland

POSITION

Shoulder

PARENT MATERIAL

Loess

Residuum

BEDROCK LITHOLOGY

Sandstone

COARSE FRAGMENTS (% of Vol.)

15-35%

(gr) gravelly

(ch) channery

(cb) cobbly

(fl) flaggy

(st) stony

(bd) bouldery

35-65%

(vgr) very gravelly

(vch) very channery

(vcb) very cobbly

(vfl) very flaggy

(vst) very stony

(vbd) very bouldery

>65%

(egr)extr. gravelly

(ech) extr.channery

(ecb) extr. cobbly

(efl) extr. flaggy

(est) extr. stony

(ebd) extr. bouldery

TEXTURE

cos - coarse sand

s - sand

fs - fine sand

vfs - very fine sand

lcos - loamy coarse sand

ls - loamy sand

lfs - loamy fine sand

lvfs - loamy very fine sand

cosl - coarse sandy loam

sl - sandy loam

fsl - fine sandy loam

vfs - very fine sandy loam

l - loam

sil - silt loam

si - silt

scl - sandy clay loam

cl - clay loam

sicl - silty clay loam

sc - sandy clay

sic - silty clay

c - clay

STRUCTURE

Grade

Structureless - 0

Weak - 1

Moderate - 2

Strong - 3

Type

pl - platy

pr - prismatic

cpr - columnar

gr - granular

abk - angular blocky

sbk - subangular blocky

m - massive

s - single grain

Size

vf - very fine

f - fine

m - medium

co - coarse

vc - very coarse

vt - very thin

t - thin

th - thick

vth - very thick

REDOX FEATURES

Abundance

f - Few <2%

c - Common 2-20%

m - Many >20%

Contrast

f - Faint

d - Distinct

p - Prominent

BOUNDARY

Distinctness

Abrupt <1" (thick)

Clear 1-2.5"

Gradual 2.5 -5"

Diffuse >5

Topography

Smooth - boundary is nearly level

Wavy - pockets with width greater than depth

Irregular - pockets with depth greater than width

Broken discontinuous

Brendan J. O'Boyle, CPSS

Professional Soil Scientist

Date: 4/21/26 Pit # SW-2
 Project: Rock Construction
 Location: Penn & Lafayette Streets
 Newtown Township, Bucks Co., PA
 Soil Series Mapped: Duncannon
 Soil Series Classified: Lawrenceville Taxadjunct

Limiting Zone 84+" none

Slope: 1-3%

Conduct Double Ring Infiltrometer Test at 60"

Horizon	Depth (In.)	Matrix Color	Texture	Structure	Consistence	Fe Redox Depletions	Fe Redox Concentrations	Boundary
Ap1	0-7	7.5YR 4/4	sil	2 m gr	friable	none	none	gradual wavy
Ap2	7-15	7.5YR 4/2	sil	1 m sbk	friable	none	none	gradual wavy
Bt1	15-30	7.5YR 4/6	sil	2 m sbk	friable	none	none	gradual wavy
Bt2	30-48	7.5YR 5/6	sil	2 m sbk	firm	c d	c d	gradual wavy
Bt3	48-57	7.5YR 5/8	sicl	2 m sbk	firm	m p	m p	gradual wavy
2BC	57-84+	5YR 3/3	gr l	2 f sbk	firm	none	none	

Township Representative: None Soil Scientist: Brendan J. O'Boyle

Notes: Site evaluation for stormwater infiltration. Bedrock and groundwater not encountered.

Weather / Field Conditions: Sunny, 50s, soils moist.

Others Present at Site: Paul Dougherty of Total Contracting, LLC – backhoe provider and operator.

EPIPEDON

Ochric

SUBSURFACE HORIZON(S)

Argillic

SOIL ORDER

Alfisol

DRAINAGE CLASS

Moderately well drained

LANDFORM

Upland

POSITION

Shoulder

PARENT MATERIAL

Loess

Residuum

BEDROCK LITHOLOGY

Sandstone

COARSE FRAGMENTS (% of Vol.)

15-35%

(gr) gravelly

(ch) channery

(cb) cobbly

(fl) flaggy

(st) stony

(bd) bouldery

35-65%

(vgr) very gravelly

(vch) very channery

(vcb) very cobbly

(vfl) very flaggy

(vst) very stony

(vbd) very bouldery

>65%

(egr)extr. gravelly

(ech) extr.channery

(ecb) extr. cobbly

(efl) extr. flaggy

(est) extr. stony

(ebd) extr. bouldery

TEXTURE

cos - coarse sand

s - sand

fs - fine sand

vfs - very fine sand

lcos - loamy coarse sand

ls - loamy sand

lfs - loamy fine sand

lvfs - loamy very fine sand

cosl - coarse sandy loam

sl - sandy loam

fsl - fine sandy loam

vfs - very fine sandy loam

l - loam

sil - silt loam

si - silt

scl - sandy clay loam

cl - clay loam

sicl - silty clay loam

sc - sandy clay

sic - silty clay

c - clay

STRUCTURE

Grade

Structureless - 0

Weak - 1

Moderate - 2

Strong - 3

Type

pl - platy

pr - prismatic

cpr - columnar

gr - granular

abk - angular blocky

sbk - subangular blocky

m - massive

s - single grain

Size

vf - very fine

f - fine

m - medium

co - coarse

vc - very coarse

vt - very thin

t - thin

th - thick

vth - very thick

REDOX FEATURES

Abundance

f - Few <2%

c - Common 2-20%

m - Many >20%

Contrast

f - Faint

d - Distinct

p - Prominent

BOUNDARY

Distinctness

Abrupt <1" (thick)

Clear 1-2.5"

Gradual 2.5 -5"

Diffuse >5

Topography

Smooth - boundary is

nearly level

Wavy - pockets with

width greater than depth

Irregular - pockets with

depth greater than width

Broken discontinuous

Brendan J. O'Boyle, CPSS

Professional Soil Scientist

Date: 4/21/26 Pit # SW-3
 Project: Rock Construction
 Location: Penn & Lafayette Streets
 Newtown Township, Bucks Co., PA
 Soil Series Mapped: Duncannon
 Soil Series Classified: Duncannon

Limiting Zone 60" Bedrock

Slope: 1-3%

Conduct Double Ring Infiltrometer Test at 36"

Horizon	Depth (In.)	Matrix Color	Texture	Structure	Consistence	Fe Redox Depletions	Fe Redox Concentrations	Boundary
Ap	0-12	10YR 4/6	sil	2 m gr	friable	none	none	gradual wavy
Bt1	12-23	7.5YR 3/3	sil	1 m sbk	friable	none	none	gradual wavy
Bt2	23-40	7.5YR 3/4	l	2 m sbk	friable	none	none	gradual wavy
2BC	40-60	5YR 3/3	gr l	2 f sbk	friable	none	none	
2R	60+	Bedrock						

Township Representative: None Soil Scientist: Brendan J. O'Boyle

Notes: Site evaluation for stormwater infiltration. Bedrock encountered at 60" bgs. Groundwater not observed.

Weather / Field Conditions: Sunny, 50s, soils moist.

Others Present at Site: Paul Dougherty of Total Contracting, LLC – backhoe provider and operator.

EPIPEDON Ochric	COARSE FRAGMENTS (% of Vol.) 15-35% (gr) gravelly (ch) channery (cb) cobbly (fl) flaggy (st) stony (bd) bouldery	35-65% (vgr) very gravelly (vch) very channery (vcb) very cobbly (vfl) very flaggy (vst) very stony (vbd) very bouldery	>65% (egr)extr. gravelly (ech) extr.channery (ecb) extr. cobbly (efl) extr. flaggy (est) extr. stony (ebd) extr. bouldery	STRUCTURE Grade Structureless - 0 Weak - 1 Moderate - 2 Strong - 3 Type pl - platy pr - prismatic cpr - columnar gr - granular abk - angular blocky sbk - subangular blocky m - massive s - single grain Size vf - very fine f - fine m - medium co - coarse vc - very coarse vt - very thin t - thin th - thick vth - very thick	REDOX FEATURES Abundance f - Few <2% c - Common 2-20% m - Many >20% Contrast f - Faint d - Distinct p - Prominent BOUNDARY Distinctness Abrupt <1" (thick) Clear 1-2.5" Gradual 2.5 -5" Diffuse >5 Topography Smooth - boundary is nearly level Wavy - pockets with width greater than depth Irregular - pockets with depth greater than width Broken discontinuous
SUBSURFACE HORIZON(S) Argillic					
SOIL ORDER Alfisol					
DRAINAGE CLASS Well Drained					
LANDFORM Upland					
POSITION Shoulder					
PARENT MATERIAL Loess Residuum					
BEDROCK LITHOLOGY Sandstone					

Brendan J. O'Boyle, CPSS

Professional Soil Scientist

Date: 4/21/26 Pit # SW-4
 Project: Rock Construction
 Location: Penn & Lafayette Streets
 Newtown Township, Bucks Co., PA
 Soil Series Mapped: Duncannon
 Soil Series Classified: Lawrenceville Taxadjunct

Limiting Zone 96+" none

Slope: 1-3%

Conduct Double Ring Infiltrometer Test at 72"

Horizon	Depth (In.)	Matrix Color	Texture	Structure	Consistence	Fe Redox Depletions	Fe Redox Concentrations	Boundary
Ap1	0-12	10YR 4/4	sil	2 m gr	friable	none	none	gradual wavy
Bt1	12-24	10YR 5/6	sil	2 m sbk	friable	none	none	gradual wavy
Bt2	24-51	10YR 4/6	sil	2 m sbk	firm	c d	c d	gradual wavy
2Bt	51-68	5YR 3/2	sil	2 co sbk	firm	m p	m p	gradual wavy
2BC	68-96+	5YR 4/4	l	2 m sbk	friable	none	none	

Township Representative: None Soil Scientist: Brendan J. O'Boyle

Notes: Site evaluation for stormwater infiltration. Bedrock and groundwater not encountered.

Weather / Field Conditions: Sunny, 50s, soils moist.

Others Present at Site: Paul Dougherty of Total Contracting, LLC – backhoe provider and operator.

EPIPEDON

Ochric

SUBSURFACE HORIZON(S)

Argillic

SOIL ORDER

Alfisol

DRAINAGE CLASS

Moderately well drained

LANDFORM

Upland

POSITION

Shoulder

PARENT MATERIAL

Loess
Residuum

BEDROCK LITHOLOGY

Sandstone

COARSE FRAGMENTS (% of Vol.)

15-35%

(gr) gravelly

(ch) channery

(cb) cobbly

(fl) flaggy

(st) stony

(bd) bouldery

35-65%

(vgr) very gravelly

(vch) very channery

(vcb) very cobbly

(vfl) very flaggy

(vst) very stony

(vbd) very bouldery

>65%

(egr)extr. gravelly

(ech) extr.channery

(ecb) extr. cobbly

(efl) extr. flaggy

(est) extr. stony

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TEXTURE

cos - coarse sand

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sil - silt loam

si - silt

scl - sandy clay loam

cl - clay loam

sicl - silty clay loam

sc - sandy clay

sic - silty clay

c - clay

STRUCTURE

Grade

Structureless - 0

Weak - 1

Moderate - 2

Strong - 3

Type

pl - platy

pr - prismatic

cpr - columnar

gr - granular

abk - angular blocky

sbk - subangular blocky

m - massive

s - single grain

Size

vf - very fine

f - fine

m - medium

co - coarse

vc - very coarse

vt - very thin

t - thin

th - thick

vth - very thick

REDOX FEATURES

Abundance

f - Few <2%

c - Common 2-20%

m - Many >20%

Contrast

f - Faint

d - Distinct

p - Prominent

BOUNDARY

Distinctness

Abrupt <1" (thick)

Clear 1-2.5"

Gradual 2.5 -5"

Diffuse >5

Topography

Smooth - boundary is nearly level

Wavy - pockets with width greater than depth

Irregular - pockets with depth greater than width

Broken discontinuous

Brendan J. O'Boyle, CPSS

Professional Soil Scientist

Date: 4/21/26 Pit # SW-5
 Project: Rock Construction
 Location: Penn & Lafayette Streets
 Newtown Township, Bucks Co., PA
 Soil Series Mapped: Duncannon
 Soil Series Classified: Lawrenceville Taxadjunct

Limiting Zone 96+" none

Slope: 1-3%

Conduct Double Ring Infiltrometer Test at 72"

Horizon	Depth (In.)	Matrix Color	Texture	Structure	Consistence	Fe Redox Depletions	Fe Redox Concentrations	Boundary
Ap	0-12	10YR 4/4	sil	2 m gr	friable	none	none	gradual wavy
Bt1	12-25	10YR 5/6	sil	1 m sbk	friable	none	none	gradual wavy
Bt2	25-33	10YR 5/8	sil	2 m sbk	friable	c d	c d	gradual wavy
2Bt	33-66	7.5YR 3/4	sil	2 m sbk	firm	m p	m p	gradual wavy
2BC	66-96+	5YR 3/3	l	2 f sbk	friable	none	none	

Township Representative: None Soil Scientist: Brendan J. O'Boyle

Notes: Site evaluation for stormwater infiltration. Bedrock and groundwater not encountered.

Weather / Field Conditions: Sunny, 50s, soils moist.

Others Present at Site: Paul Dougherty of Total Contracting, LLC – backhoe provider and operator.

EPIPEDON

Ochric

SUBSURFACE HORIZON(S)

Argillic

SOIL ORDER

Alfisol

DRAINAGE CLASS

Moderately well drained

LANDFORM

Upland

POSITION

Shoulder

PARENT MATERIAL

Loess

Residuum

BEDROCK LITHOLOGY

Sandstone

COARSE FRAGMENTS (% of Vol.)

15-35%

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(vch) very channery

(vcb) very cobbly

(vfl) very flaggy

(vst) very stony

(vbd) very bouldery

>65%

(egr)extr. gravelly

(ech) extr.channery

(ecb) extr. cobbly

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(est) extr. stony

(ebd) extr. bouldery

TEXTURE

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scl - sandy clay loam

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sicl - silty clay loam

sc - sandy clay

sic - silty clay

c - clay

STRUCTURE

Grade

Structureless - 0

Weak - 1

Moderate - 2

Strong - 3

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REDOX FEATURES

Abundance

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BOUNDARY

Distinctness

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Clear 1-2.5"

Gradual 2.5 -5"

Diffuse >5

Topography

Smooth - boundary is nearly level

Wavy - pockets with width greater than depth

Irregular - pockets with depth greater than width

Broken discontinuous

Brendan J. O'Boyle, CPSS

Professional Soil Scientist

Date: 4/21/26 Pit # SW-6
 Project: Rock Construction
 Location: Penn & Lafayette Streets
 Newtown Township, Bucks Co., PA
 Soil Series Mapped: Duncannon
 Soil Series Classified: Lawrenceville Taxadjunct

Limiting Zone 90+" none

Slope: 1-3%

Conduct Double Ring Infiltrometer Test at 66"

Horizon	Depth (In.)	Matrix Color	Texture	Structure	Consistence	Fe Redox Depletions	Fe Redox Concentrations	Boundary
Ap	0-12	10YR 4/4	sil	2 m gr	friable	none	none	gradual wavy
Bt1	12-26	10YR 5/6	sil	1 m sbk	friable	none	none	gradual wavy
Bt2	26-38	10YR 5/8	sil	2 m sbk	friable	c d	c d	gradual wavy
2Bt	38-70	7.5YR 3/4	sil	2 m sbk	firm	m p	m p	gradual wavy
2BC	70-90+	5YR 3/3	gr l	2 f sbk	friable	none	none	

Township Representative: None Soil Scientist: Brendan J. O'Boyle

Notes: Site evaluation for stormwater infiltration. Bedrock and groundwater not encountered.

Weather / Field Conditions: Sunny, 50s, soils moist.

Others Present at Site: Paul Dougherty of Total Contracting, LLC – backhoe provider and operator.

EPIPEDON

Ochric

SUBSURFACE HORIZON(S)

Argillic

SOIL ORDER

Alfisol

DRAINAGE CLASS

Moderately well drained

LANDFORM

Upland

POSITION

Shoulder

PARENT MATERIAL

Loess

Residuum

BEDROCK LITHOLOGY

Sandstone

COARSE FRAGMENTS (% of Vol.)

15-35%

(gr) gravelly

(ch) channery

(cb) cobbly

(fl) flaggy

(st) stony

(bd) bouldery

35-65%

(vgr) very gravelly

(vch) very channery

(vcb) very cobbly

(vfl) very flaggy

(vst) very stony

(vbd) very bouldery

>65%

(egr)extr. gravelly

(ech) extr.channery

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(efl) extr. flaggy

(est) extr. stony

(ebd) extr. bouldery

TEXTURE

cos - coarse sand

s - sand

fs - fine sand

vfs - very fine sand

lcos - loamy coarse sand

ls - loamy sand

lfs - loamy fine sand

lvfs - loamy very fine sand

cosl - coarse sandy loam

sl - sandy loam

fsl - fine sandy loam

vfs - very fine sandy loam

l - loam

sil - silt loam

si - silt

scl - sandy clay loam

cl - clay loam

sicl - silty clay loam

sc - sandy clay

sic - silty clay

c - clay

STRUCTURE

Grade

Structureless - 0

Weak - 1

Moderate - 2

Strong - 3

Type

pl - platy

pr - prismatic

cpr - columnar

gr - granular

abk - angular blocky

sbk - subangular blocky

m - massive

s - single grain

Size

vf - very fine

f - fine

m - medium

co - coarse

vc - very coarse

vt - very thin

t - thin

th - thick

vth - very thick

REDOX FEATURES

Abundance

f - Few <2%

c - Common 2-20%

m - Many >20%

Contrast

f - Faint

d - Distinct

p - Prominent

BOUNDARY

Distinctness

Abrupt <1" (thick)

Clear 1-2.5"

Gradual 2.5 -5"

Diffuse >5

Topography

Smooth - boundary is nearly level

Wavy - pockets with width greater than depth

Irregular - pockets with depth greater than width

Broken discontinuous

Double Ring Infiltrometer Test Report

Site: Penn and Lafayette Streets - SW-1

Municipality: Newtown Township

County: Bucks

Date: 4/21/2026

Testing Depth: 36"
(Below Ground Surface)

	Test #1	Test #2
	Drop (in)	Drop (in)
Presoak 1 (30 min)	Dry	Dry
Presoak 2 (30 min)	Dry	Dry

	Test #1	Test #2
Interval 1 (min)	10	10
Drop (in)	1.0	0.75

Interval 2 (min)	10	10
Drop (in)	1.0	0.75

Interval 3 (min)	10	10
Drop (in)	1.0	0.75

Interval 4 (min)	10	10
Drop (in)	1.0	0.75

Interval 5 (min)	10	10
Drop (in)	1.0	0.75

Interval 6 (min)	10	10
Drop (in)	1.0	0.75

Final Drop in/hr	6.0	4.5
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Infiltration Rate= 5.25 in/hr

Double Ring Infiltrometer Test Report

Site: Penn and Lafayette Streets - SW-2

Municipality: Newtown Township

County: Bucks

Date: 4/21/2026

Testing Depth: 60"
(Below Ground Surface)

	Test #1	Test #2
	Drop (in)	Drop (in)
Presoak 1 (30 min)	0.25	0.25
Presoak 2 (30 min)	0.25	0.25

	Test #1	Test #2
Interval 1 (min)	30	30
Drop (in)	0.125	0.125

Interval 2 (min)	30	30
Drop (in)	0.125	0.125

Interval 3 (min)	30	30
Drop (in)	0.125	0.125

Interval 4 (min)	30	30
Drop (in)	0.125	0.125

Final Drop in/hr	0.25	0.25
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Infiltration Rate= 0.25 in/hr

Double Ring Infiltrometer Test Report

Site: Penn and Lafayette Streets - SW-3

Municipality: Newtown Township

County: Bucks

Date: 4/21/2026

Testing Depth: 36"
(Below Ground Surface)

	Test #1	Test #2
	Drop (in)	Drop (in)
Presoak 1 (30 min)	Dry	Dry
Presoak 2 (30 min)	Dry	Dry

	Test #1	Test #2
Interval 1 (min)	10	10
Drop (in)	1.5	2.25

Interval 2 (min)	10	10
Drop (in)	1.25	2.25

Interval 3 (min)	10	10
Drop (in)	1.25	2.25

Interval 4 (min)	10	10
Drop (in)	1.25	2.25

Interval 5 (min)	10	10
Drop (in)	1.25	2.0

Interval 6 (min)	10	10
Drop (in)	1.125	2.0

Final Drop in/hr	6.75	12.00
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Infiltration Rate= 9.375 in/hr



Double Ring Infiltrometer Test Report

Site: Penn and Lafayette Streets - SW-4

Municipality: Newtown Township

County: Bucks

Date: 4/21/2026

Testing Depth: 72"
(Below Ground Surface)

	Test #1	Test #2
	Drop (in)	Drop (in)
Presoak 1 (30 min)	0.25	0.25
Presoak 2 (30 min)	0.0	0.125

	Test #1	Test #2
Interval 1 (min)	30	30
Drop (in)	0.0	0.125

Interval 2 (min)	30	30
Drop (in)	0.0	0.0

Interval 3 (min)	30	30
Drop (in)	0.0	0.0

Interval 4 (min)	30	30
Drop (in)	0.0	0.0

Final Drop in/hr	0.0	0.0
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Infiltration Rate= 0.00 in/hr



Double Ring Infiltrometer Test Report

Site: Penn and Lafayette Streets - SW-5

Municipality: Newtown Township

County: Bucks

Date: 4/21/2026

Testing Depth: 72"
(Below Ground Surface)

	Test #1	Test #2
	Drop (in)	Drop (in)
Presoak 1 (30 min)	0.125	0.125
Presoak 2 (30 min)	0.0	0.0

	Test #1	Test #2
Interval 1 (min)	30	30
Drop (in)	0.0	0.0

Interval 2 (min)	30	30
Drop (in)	0.0	0.0

Interval 3 (min)	30	30
Drop (in)	0.0	0.0

Interval 4 (min)	30	30
Drop (in)	0.0	0.0

Final Drop in/hr	0.0	0.0
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Infiltration Rate= 0.00 in/hr

Double Ring Infiltrometer Test Report

Site: Penn and Lafayette Streets - SW-6

Municipality: Newtown Township

County: Bucks

Date: 4/21/2026

Testing Depth: 66"
(Below Ground Surface)

	Test #1	Test #2
	Drop (in)	Drop (in)
Presoak 1 (30 min)	0.125	0.125
Presoak 2 (30 min)	0.0	0.125

	Test #1	Test #2
Interval 1 (min)	30	30
Drop (in)	0.0	0.0

Interval 2 (min)	30	30
Drop (in)	0.0	0.0

Interval 3 (min)	30	30
Drop (in)	0.0	0.0

Interval 4 (min)	30	30
Drop (in)	0.0	0.0

Final Drop in/hr	0.0	0.0
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Infiltration Rate= 0.00 in/hr

