



January 29, 2025

Ms. Rachael Dickinson
Pre-Construction Project Manager
Mavis Tire Supply, LLC
200 Summit Lake Drive, Suite 350
Valhalla, NY 10595

ECS Project Number: 44:2100-A

Reference: Addendum No. 1 - Results of Test Pit Excavation and Infiltration Testing
Mavis Store #2296
460 Prospect Avenue,
West Orange, New Jersey

Dear Ms. Dickinson:

ECS Mid-Atlantic, LLC (ECS) is pleased to present the interpreted subsurface profiles and results from the test pits excavations and infiltration testing completed at the referenced project site location. The work described herein was performed to supplement the previous subsurface exploration executed under ECS project No. 44:2100. The purpose of the explorations was:

- To perform infiltration testing, the results of which will be considered in the design of the potential stormwater management (SWM) facilities.
- To further evaluate the existing fill materials and to better understand the make-up and depth of these materials to further determine suitability for support of the foundations and/or if undercuts will be necessary.

Our services were provided in general accordance with the scope provided to Mavis in email correspondence dated December 12, 2024 (ECS Proposal No. 44:2237-GP), which was authorized via email on December 16, 2024.

PROJECT UNDERSTANDING

The project site is located at 460 Prospect Avenue, West Orange, Essex County, New Jersey. In discussions with Mavis, further evaluation of the fill material within the footprint of the proposed retail auto service building was required. In addition, as understood from information provided by Mavis, a stormwater management (SWM) facility is proposed as part of the overall site development. Limited details regarding the SWM facility were available at the time of testing and the infiltration testing locations were selected in the general location of the SWM facility as approved by Mavis.

The soil profiling and infiltration test program performed was based on the information obtained from our previous subsurface exploration and discussions with Mavis.

SUBSURFACE EXPLORATION AND TESTING

Our exploration procedures are explained in greater detail in the Attachment 2 in the insert titled Subsurface Exploration Procedure. A rubber tracked excavator was used by Sano Drilling, and the Exploration Location Diagram in Attachment 1 depicts the approximate as-completed locations of the test pit excavations. Soil profiling and field infiltration testing was performed in general accordance with Chapter 12 of the BMP Manual. The Single Ring Infiltration Test (Subsection A5 of the Chapter 12 Appendix) was used.

Upon completion of the infiltration testing, the test pits were backfilled with the excavation spoils. The spoils were placed in consecutive, generally horizontal lifts of relatively uniform thickness and tamped with the excavator bucket. Excess spoils were mounded above the backfilled test pit footprint and smoothed and firmed with the excavator bucket.

SUBSURFACE CHARACTERIZATION

Soils encountered were visually classified during logging on the basis of texture in general accordance with the United States Department of Agriculture (USDA) Textural Classification System per the requirements of the BMP Manual. After classification, the samples were grouped in the major zones noted on the exploration logs contained in the Attachment 2. Divisions between soil strata/soil horizons on the exploration logs are approximate; in-situ, the transitions may be gradual. Additionally, index property tests were performed on select soil samples collected to confirm USDA classifications made in the field. Each laboratory test was completed in general accordance with the applicable ASTM Standard Test Method as indicated on the laboratory testing sheets included in Attachment 3.

The subsurface conditions encountered were generally consistent with the published geologic mapping available from the New Jersey Geological and Water Survey via NJ-GeoWeb and the United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) via Web Soil Survey for the general site vicinity.

TEST PIT DESIGNATION	EXISTING GROUND SURFACE ELEVATION	BOTTOM OF FILL ELEVATION	APPROXIMATE FILL DEPTH (feet)
TP-01	±619.0	±617.0	±2.0
TP-02	±619.0	±615.75	±3.25
TP-03	±619.0	±616.0	±3.0
TP-04	±618.0	±617.0	±1.0
TP-05	±616.0	±613.0	±3.0

GROUNDWATER

During the test pit exploration, groundwater was not observed within the test pits. No water was observed entering the other test pits; however, each of the test pits were not left open for 24-hour to monitor the seasonal high-water determination (SHWT). No mottling was observed in any of the test pits as well.

The possibility of groundwater level fluctuations should be considered in stormwater design development. Variations in perched groundwater levels and long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff, construction activities, and other factors.

INFILTRATION TEST RESULTS

As previously indicated, field infiltration testing was performed within two of the test pits in general accordance with the Appendix to Chapter 12 of the BMP Manual, Subsection A5, Single Ring Infiltration Test. Findings from our field infiltration testing are reported on the Single Ring Infiltrometer Test Logs contained in the attachments. Listed in the following table present the hydraulic conductivity rate of the soil layers tested as determined by the procedure outlined in Subsection A5.

TEST PIT DESIGNATION	INFILTRATION TEST ID	APPROXIMATE TEST ELEVATION	USDA TEXTURAL CLASSIFICATION AT TEST ELEVATION	TESTED SOIL HYDRAULIC CONDUCTIVITY RATE
				(inch/hour)
TP-01	TP-01A	±615.0	SANDY LOAM	0.04
TP-02	TP-02A	±615.0	SANDY LOAM	0.39

EXISTING FILL AND SHALLOW FOUNDATIONS

Based on the visual observation of the fill materials encountered while test pitting the existing fill materials on the site do not appear to be suitable for support of the building foundations. The existing fills are variable in composition, containing deleterious debris such as brick, plastic, glass, and metals. Therefore, the recommendation included in the report should be followed and these materials should be removed in their entirety below foundation elements and heavily proofrolled during site grading operations in areas supporting pavements and slabs on grade.

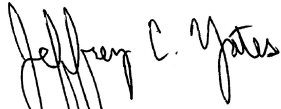
CLOSING

This letter has been prepared as an addendum to our Geotechnical Engineering Report dated December 10, 2024 (under ECS Project No. 44:2100); as such, it should only be utilized in conjunction with that exploration and report. Should any of the assumptions outlined above regarding the proposed conditions be inaccurate, alternative recommendations may apply including those provided in our geotechnical report.

It has been our pleasure to be of service during this phase of the project. Please note, ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data contained in this letter and its associated attachments. Should you have any questions concerning the information contained herein, or if we can be of further assistance to you, please contact us.

Respectfully,

ECS MID-ATLANTIC, LLC



Jeffrey C. Yates, P.E.

Geotechnical Department Manager

jcyates@ecslimited.com

**Jeffrey
Yates**

Digitally signed
by Jeffrey Yates
Date: 2025.01.29
10:05:50 -05'00'



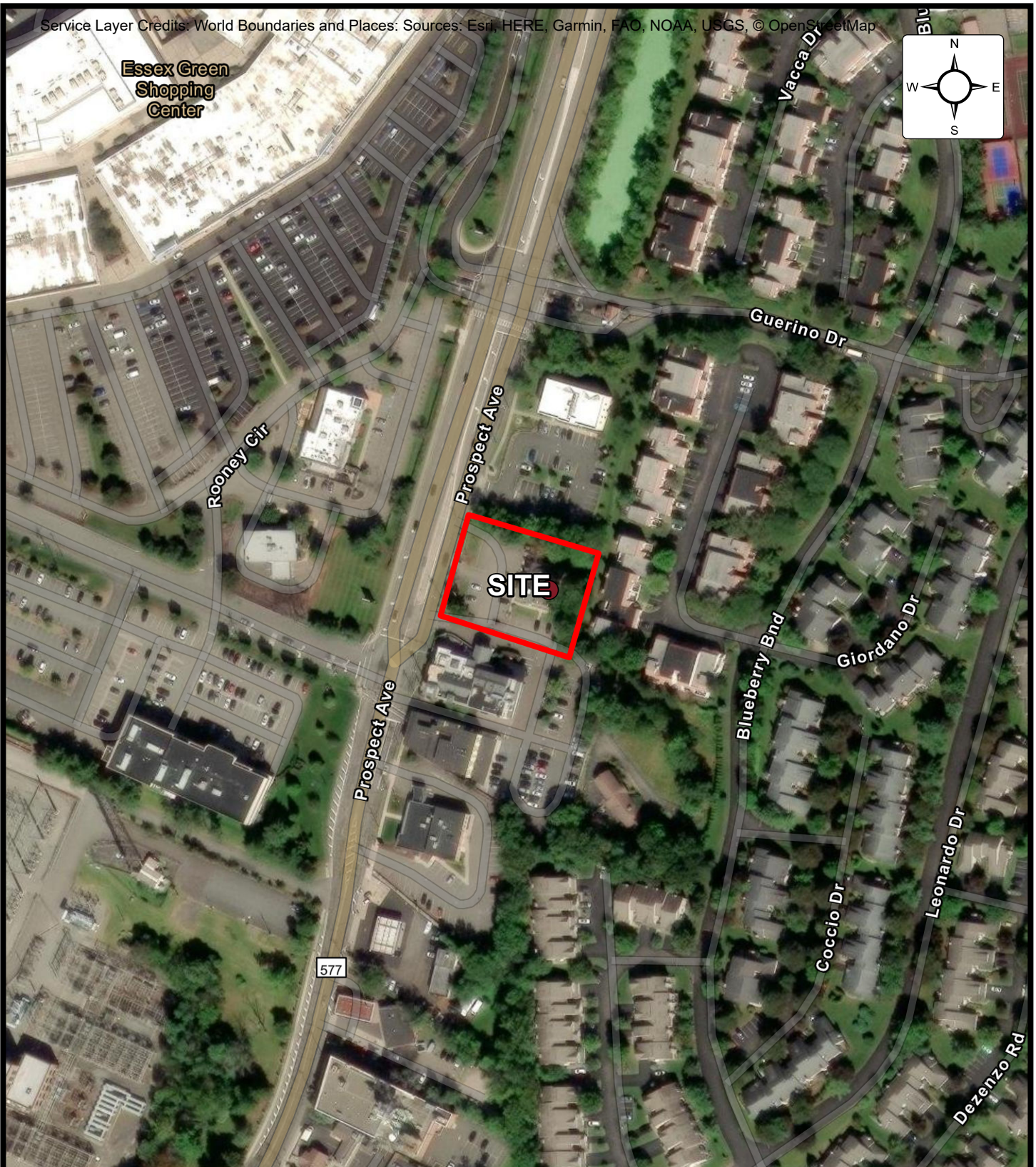
Stephen F. Patt, P.E.

Geotechnical Principal Engineer

spatt@ecslimited.com

Attachments: Attachment 1 – Drawings and Reports
Attachment 2 - Test Pit and Infiltration Logs
Attachment 3 - Laboratory Testing

Attachment 1
Drawing and Reports



SITE LOCATION DIAGRAM Mavis #2296 - West Orange, NJ

460 Prospect Avenue
West Orange, New Jersey

Mavis Tire Supply, LLC

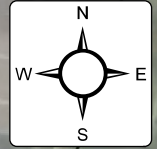
ENGINEER
JCY

SCALE
1" = 200'

PROJECT NO.
44:2100

SHEET
1

DATE
12/10/2024



EXPLORATION LOCATION DIAGRAM Mavis #2296 - Additional Infiltration

460 Prospect Avenue
West Orange, New Jersey

Mavis Tire Supply, LLC

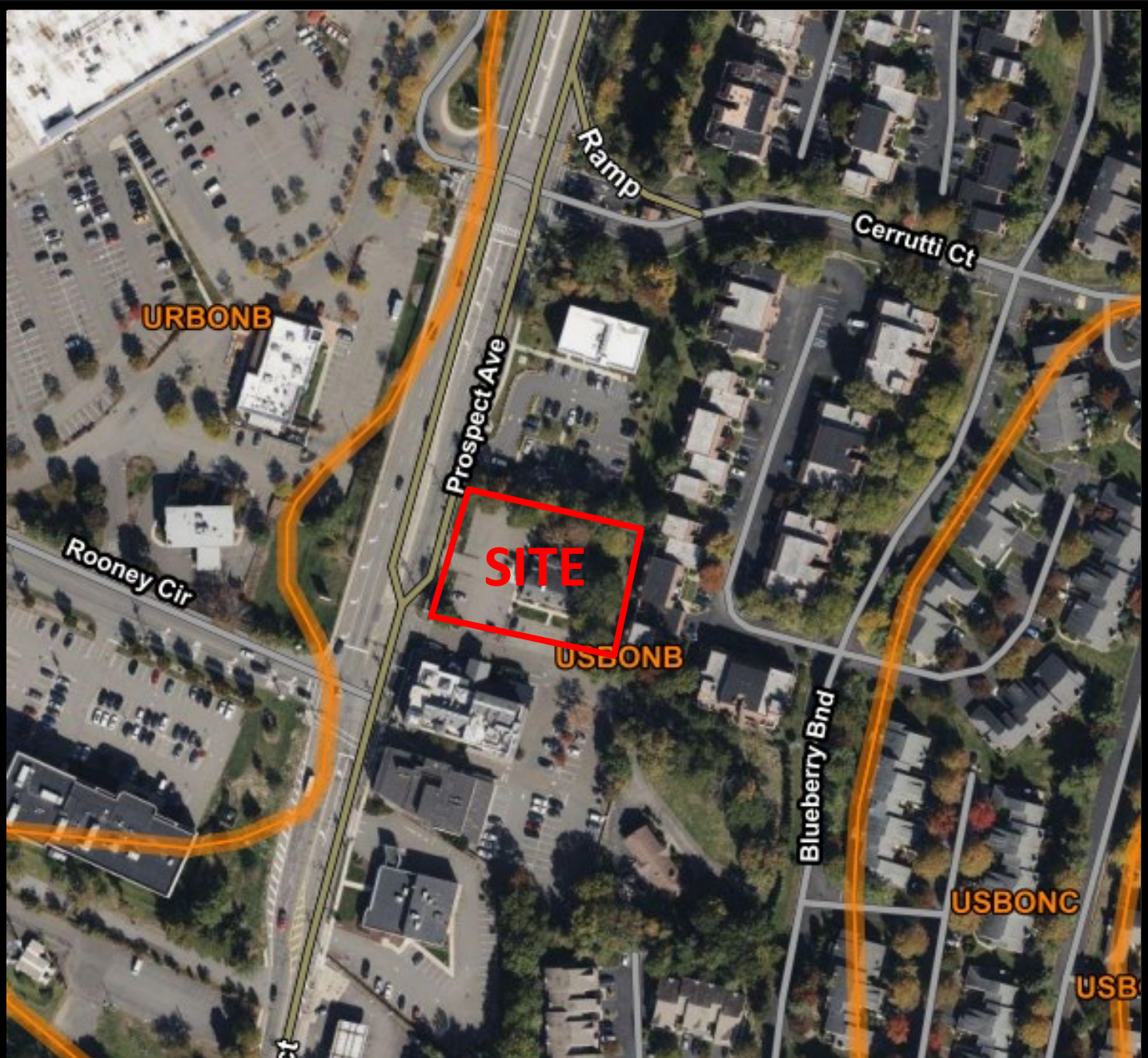
ENGINEER
JCY

SCALE
1" = 40'

PROJECT NO.
44:2100-A

SHEET

DATE
1/20/2025



Map Unit Symbol	Map Unit Name
USBONB	Urban land, Boonton substratum - Boonton complex, 0 to 8 percent slopes
URBONB	Urban land, Boonton substratum - Boonton complex, 0 to 8 percent slopes
USBONC	Urban land, Boonton substratum - Boonton complex, 8 to 15 percent slopes

Source: Web Soil Survey



Mavis Store #2296

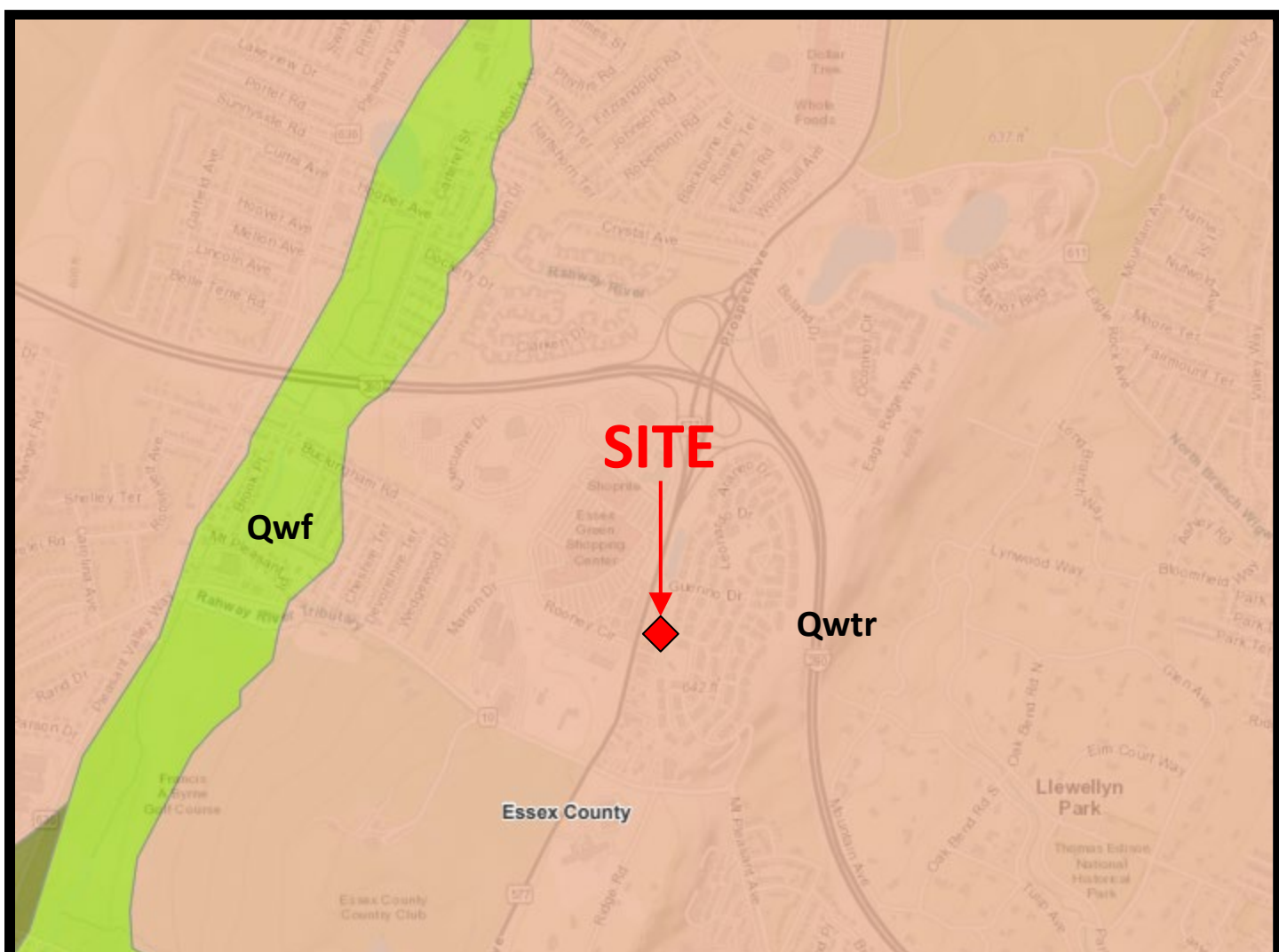
460 Prospect Avenue
West Orange, NJ

Mavis Tire Supply



SOIL SURVEY MAP

ECS Project 44:2100
December 10, 2024



Geologic Formation Name (Abbreviation)	Lithology	Notes
Rahway Till (Qwtr)	Clayey silt to sandy silt with some to many pebbles and cobbles and few boulders; reddish brown, reddish yellow, yellowish brown, brown. As much as 100 feet thick, generally less than 40 feet thick.	Deposited directly from glacial ice during the late Wisconsinan glaciation.
Late Wisconsinan Glaciofluvial Deposits (Qwf)	Sand and pebble-to-cobble gravel, minor silt; yellowish brown to reddish brown. As much as 50 feet thick.	Form plain and terraces (undifferentiated) deposited by glacial streams during the late Wisconsinan glaciation. Where plains and terraces are differentiated they are mapped separately as units Qwfv and Qwft, respectively

Source: NJ-Geoweb (Surficial Geology)



Mavis Store #2296

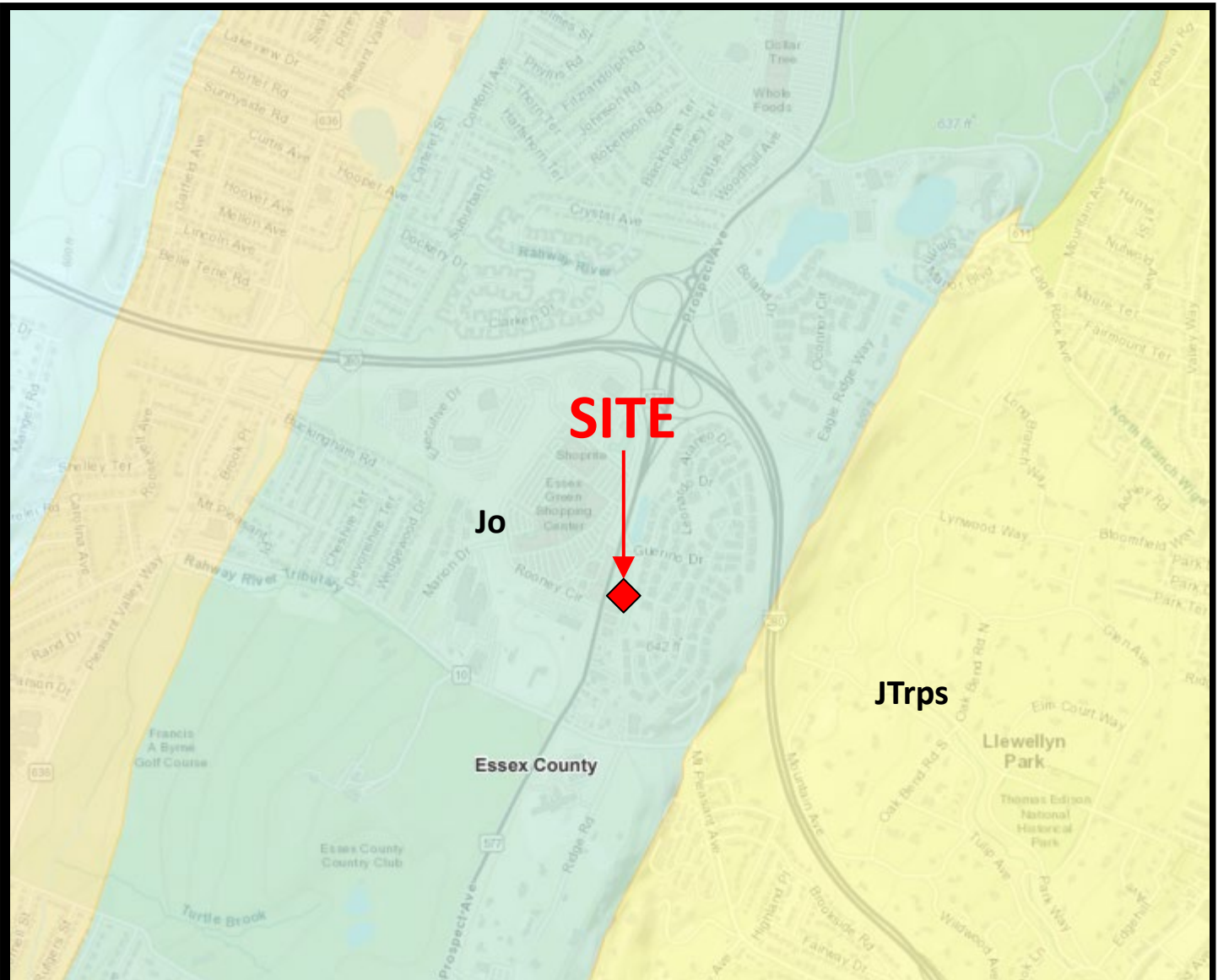
460 Prospect Avenue
West Orange, NJ

Mavis Tire Supply



SURFICIAL GEOLOGY MAP

ECS Project 44:2100
December 10 2024



Stratigraphic Unit Name (Abbreviation)	Stratigraphic Unit Number	Lithology
Orange Mountain Basalt (Jo)	3,700	Basalt, fine-to-medium-grained
Passaic Formation Sandstone and Siltstone Facies (JTprs)	4,500	Sandstone and siltstone

Source: NJ-Geoweb (Regional Geology)



Mavis Store #2296

460 Prospect Avenue
West Orange, NJ

Mavis Tire Supply



REGIONAL GEOLOGY MAP

ECS Project 44:2100
December 10, 2024

Attachment 2

Test Pit and Infiltration Logs

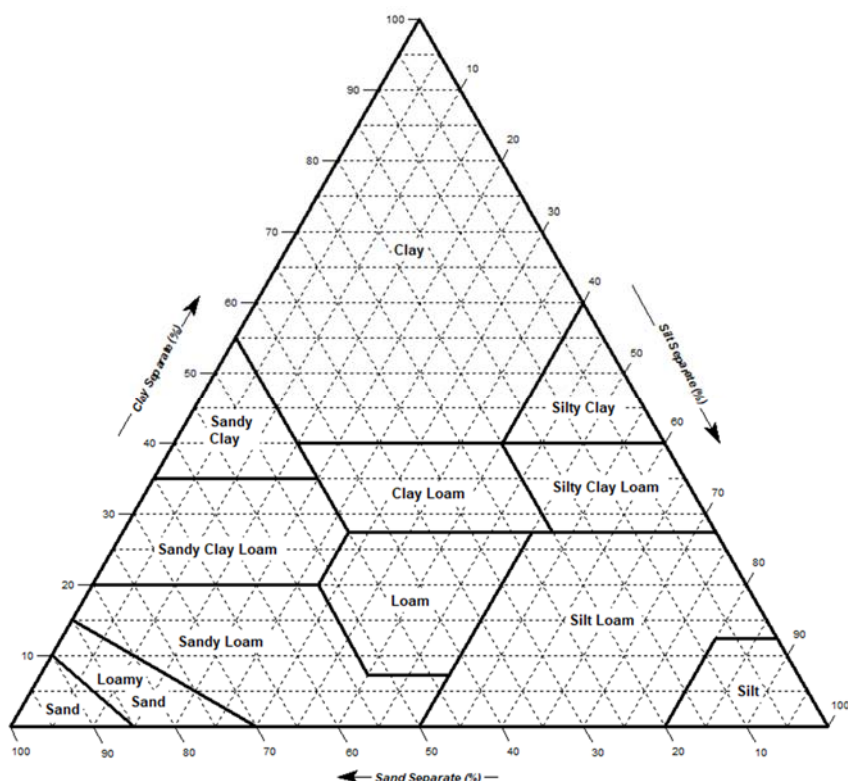
Test Pit Photolog



U.S. Department of Agriculture (USDA) Soil Classification System

Texture Triangle

Fine Earth Texture Classes (—)



Texture Class

Texture Class or Subclass	Code	
	Conv.	NASIS
Coarse Sand	cos	COS
Sand	s	S
Fine Sand	fs	FS
Very Fine Sand	vfs	VFS
Loamy Coarse Sand	lcos	LCOS
Loamy Sand	ls	LS
Loamy Fine Sand	lfs	LFS
Loamy Very Fine Sand	lvfs	LVFS
Coarse Sandy Loam	cosl	COSL
Sandy Loam	sl	SL
Fine Sandy Loam	fsl	FSL
Very Fine Sandy Loam	vfsl	VFSL
Loam	l	L
Silt Loam	sil	SIL
Silt	si	SI
Sandy Clay Loam	scl	SCL
Clay Loam	cl	CL
Silty Clay Loam	sicl	SICL
Sandy Clay	sc	SC
Silty Clay	sic	SIC
Clay	c	C

Texture Modifiers – Conventions for using “Rock Fragment Texture Modifiers” and for using textural adjectives that convey the “% volume” ranges for **Rock Fragments – Size and Quantity**.

Fragment Content % By Volume	Rock Fragment Modifier Usage
< 15	No texture adjective is used (noun only; e.g., <i>loam</i>).
15 to < 35	Use adjective for appropriate size; e.g., <i>gravelly</i> .
35 to < 60	Use “very” with the appropriate size adjective; e.g., <i>very gravelly</i> .
60 to < 90	Use “extremely” with the appropriate size adjective; e.g., <i>extremely gravelly</i> .
≥ 90	No adjective modifier. If ≤ 10% fine earth, use the appropriate noun for the dominant size class; e.g., <i>gravel</i> . Use terms in lieu of texture.

Texture Modifiers – (Adjectives)

Rock Fragments: Size and Quantity	Code		Criteria: Percent (by volume) of total rock fragments and dominated by (<i>name size</i>):
	Conv.	PDP/ NASIS	
<i>Rock Fragments (> 2mm; ≥ Strongly Cemented)</i>			
Gravelly	GR	GR	≥ 15% but < 35% gravel
Fine Gravelly	FGR	GRF	≥ 15% but < 35% fine gravel
Medium Gravelly	MGR	GRM	≥ 15% but < 35% med. gravel
Coarse Gravelly	CGR	GRC	≥ 15% but <35% coarse gravel
Very Gravelly	VGR	GRV	≥ 35% but < 60% gravel
Extremely Gravelly	XGR	GRX	≥ 60% but < 90% gravel
Cobbly	CB	CB	≥ 15% but < 35% cobbles
Very Cobbly	VCB	CBV	≥ 35% but < 60% cobbles
Extremely Cobbly	XCB	CBX	≥ 60% but < 90% cobbles
Stony	ST	ST	≥ 15% but < 35% stones
Very Stony	VST	STV	≥ 35% but < 60% stones
Extremely Stony	XST	STX	≥ 60% but < 90% stones
Bouldery	BY	BY	≥ 15% but < 35% boulders
Very Bouldery	VBY	BYV	≥ 35% but < 60% boulders
Extremely Bouldery	XBY	BYX	≥ 60% but < 90% boulders
Channery	CN	CN	≥ 15% but < 35% channers
Very Channery	VCN	CNV	≥ 35% but < 60% channers
Extremely Channery	XCN	CNX	≥ 60% but < 90% channers
Flaggy	FL	FL	≥ 15% but < 35% flagstones
Very Flaggy	VFL	FLV	≥ 35% but < 60% flagstones
Extremely Flaggy	XFL	FLX	≥ 60% but < 90% flagstones



SUBSURFACE EXPLORATION PROCEDURE: TEST PIT EXCAVATION

A test pit is an excavation of subsurface materials to characterize the composition and rippability/excavation efforts. Test pit exploration allows observation of the boundary relationships within a soil and rock profile and is useful to identify existing fill composition, disturbed material or the depth of soft sediments. Both track mounted excavators and backhoes are used in a variety of ground conditions allowing for difficult terrain to be accessed. The excavation process also provides access for in-situ and field testing and acquisition of samples for laboratory testing.

TEST PIT Procedure:

- Involves excavation subsurface material to observe composition and physical characteristics
- Recording the approximate depth of subsurface strata
- Excavation is continued as prescribed or to limits of equipment and subsurface conditions
- The exploration is typically carried out with an excavator or backhoe, with the depth dependent on machine size and ground



Soil Profile Report

Project Name/#:	Mavis #2296 - Additional Infiltration Testing	Municipality:	West Orange		
Project Location:	460 Prospect Avenue	Block/Lot:	Block: 105 Lot: 64.01		
Driller:	Sano Drilling	Inspector:	Maddie Trudnak / ECS		
Date of Observation:		1/14/2025		Lowest point in BMP (ft) =	
Prepared by:		JCY		Maximum Impounded Water Depth (ft) =	
				Required Soil Profile Depth (ft) =	
				Elevations are approximate and based on Google Earth©.	
Exploration ID:	TP-01				
		Elevation (ft)			
Existing Ground Level:		619.0			
Proposed SWM Basin Bottom Level:		-			
Seasonal High Water Table:		-			
Termination:		611.0			
USDA Soil Texture	Mark Most Hydraulically Restrictive	Top Elevation/Bottom Elevation (ft.)	Observed Water Table Elevation (ft.)	Soil Morphological Observations	Note
Loamy Silt		619.0/618.5		10 YR 4/2 dark grayish brown, moist, blocky, friable	Topsoil, contains roots
Silt Loam		618.5/617.0		7.5 YR 4/4 brown, moist, blocky, very friable	Fill, contains metal nails, plastic sprinkler system, roots
SANDY LOAM	x	617.0/611.0	Not encountered	5 YR 3/3 dark reddish brown, moist, blocky, very friable, 10% gravel	Infiltration Test at 615.0

Soil Profile Report

Project Name/#:	Mavis #2296 - Additional Infiltration Testing	Municipality:	West Orange		
Project Location:	460 Prospect Avenue	Block/Lot:	Block: 105 Lot: 64.01		
Driller:	Sano Drilling	Inspector:	Maddie Trudnak / ECS		
Date of Observation:		1/14/2025		Lowest point in BMP (ft) =	
Prepared by:		JCY		Maximum Impounded Water Depth (ft) =	
				Required Soil Profile Depth (ft) =	
				Elevations are approximate and based on Google Earth©.	
Exploration ID:	TP-02				
		Elevation (ft)			
Existing Ground Level:		619.0			
Proposed SWM Basin Bottom Level:		-			
Seasonal High Water Table:		-			
Termination:		611.0			
USDA Soil Texture	Mark Most Hydraulically Restrictive	Top Elevation/Bottom Elevation (ft.)	Observed Water Table Elevation (ft.)	Soil Morphological Observations	Note
Silt Loam		619.0/618.75		10 YR 4/2 dark grayish brown, moist, blocky, hard	Topsoil, Fill
Loamy Silt	x	618.75/615.75		7.5 YR 4/4 brown, moist, blocky, very friable	Fill, contains brick
SANDY LOAM		615.75/611.0	Not encountered	5 YR 3/3 dark reddish brown, moist, single grain, loose, 10% gravel	Infiltration Test at 615.0

Soil Profile Report

Project Name/#:	Mavis #2296 - Additional Infiltration Testing	Municipality:	West Orange		
Project Location:	460 Prospect Avenue	Block/Lot:	Block: 105 Lot: 64.01		
Driller:	Sano Drilling	Inspector:	Maddie Trudnak / ECS		
Date of Observation:		1/14/2025		Lowest point in BMP (ft) =	
Prepared by:		JCY		Maximum Impounded Water Depth (ft) =	
				Required Soil Profile Depth (ft) =	
				Elevations are approximate and based on Google Earth©.	
Exploration ID:	TP-03				
		Elevation (ft)			
Existing Ground Level:		619.0			
Proposed SWM Basin Bottom Level:		-			
Seasonal High Water Table:		-			
Termination:		610.5			
USDA Soil Texture	Mark Most Hydraulically Restrictive	Top Elevation/Bottom Elevation (ft.)	Observed Water Table Elevation (ft.)	Soil Morphological Observations	Note
Loamy Silt		619.0/618.5		10 YR 4/2 dark grayish brown, moist, blocky, loose	Topsoil, contains roots
Silt Loam	x	618.5/616.0		10 YR 3/2 very dark grayish brown, moist, blocky, friable, 10% gravel	Fill, plastic sprinkler system
Sandy Silt		616.0/610.5	Not encountered	5 YR 3/3 dark reddish brown, moist, single grain & blocky, loose, 50% gravel	Bucket refusal @ 8.5' bgs

Soil Profile Report

Project Name/#:	Mavis #2296 - Additional Infiltration Testing	Municipality:	West Orange
Project Location:	460 Prospect Avenue	Block/Lot:	Block: 105 Lot: 64.01
Driller:	Sano Drilling	Inspector:	Maddie Trudnak / ECS

Date of Observation:	1/14/2025	Lowest point in BMP (ft) =	-
Prepared by:	JCY	Maximum Impounded Water Depth (ft) =	-
		Required Soil Profile Depth (ft) =	12.0
Exploration ID:	TP-04	Elevations are approximate and based on Google Earth©.	
	Elevation (ft)		
Existing Ground Level:	618.0		
Proposed SWM Basin Bottom Level:	-		
Seasonal High Water Table:	-		
Termination:	606.0		

USDA Soil Texture	Mark Most Hydraulically Restrictive	Top Elevation/Bottom Elevation (ft.)	Observed Water Table Elevation (ft.)	Soil Morphological Observations	Note
Silt Loam		618.0/617.7		10 YR 3/2 very dark grayish brown, moist, blocky, loose	Topsoil
Sandy Loam		617.7/617.4		7.5 YR 5/4 brown, moist, blocky, loose, 5% gravel	Fill
Silty Loam		617.4/617.0		2.5Y 5/1 gray, moist, blocky, loose, 90% gravel	Fill, contains glass bottles
Clay Loam	x	617.0/615.0		7.5 YR 3/1 very dark gray, moist, blocky, friable, 20% gravel	
Sandy Silt		615.0/606.0	Not encountered	5 YR 3/3 dark reddish brown, moist, single grain, loose, 40% gravel	

Soil Profile Report

Project Name/#:	Mavis #2296 - Additional Infiltration Testing	Municipality:	West Orange		
Project Location:	460 Prospect Avenue	Block/Lot:	Block: 105 Lot: 64.01		
Driller:	Sano Drilling	Inspector:	Maddie Trudnak / ECS		
Date of Observation:		1/14/2025		Lowest point in BMP (ft) =	
Prepared by:		JCY		Maximum Impounded Water Depth (ft) =	
				Required Soil Profile Depth (ft) =	
				Elevations are approximate and based on Google Earth©.	
Exploration ID:	TP-05				
		Elevation (ft)			
Existing Ground Level:		616.0			
Proposed SWM Basin Bottom Level:		-			
Seasonal High Water Table:		-			
Termination:		607.0			
USDA Soil Texture	Mark Most Hydraulically Restrictive	Top Elevation/Bottom Elevation (ft.)	Observed Water Table Elevation (ft.)	Soil Morphological Observations	Note
Asphalt		616.0/615.2			
Sandy Loam		615.2/615.0		10YR 6/2 light brownish gray, moist, 90% gravel	Subgrade
Sandy Loam		615.0/613.0		10YR 5/1 gray, moist, blocky & single grain, loose, 30% gravel	Fill, contains brick, plastic, cobbles
Silty Clay Loam	x	613.0/607.0	Not encountered	5YR 3/3 dark reddish brown, moist, blocky, friable, 30% gravel and cobbles	Bucket refusal @ 9.0' bgs

Single Ring Infiltrometer Test Log

ECS Project No.: 44:2100-A

Project Location: 460 Prospect Avenue

Project Name: Mavis #2296 Infiltration Testing - West Orange

Township: West Orange

Block/Lot:

Testing per New Jersey Stormwater Best Management Practices Manual, Chapter 12, Subsection A5 (April 2022)

				TEST ID:	TP-01A			Soil Layer Classification:	Sandy Loam	Infiltration Test Elev.:		615.0
				Date:	1/14/2025							
Water Level Drop	MM	SS	.ss	Trial #	Water Level Drop (in)	Field Recorded Time (MM:SS.ss)	Calculated Time Per 1-inch Water Level Drop (MM.mm)	Field Observed Intake Rate (inches/min)	Field Observed Intake Rate (inches/hr)	Converted Hydraulic Conductivity (inches/hr)	Averaged Hydraulic Conductivity Rate (inches/hr)	
0.13	60	00	00	1	0.1	60:00.00	60.00	0.0021	0.13	0.04	0.04	
0.13	60	00	00	2	0.1	60:00.00	60.00	0.0021	0.13	0.04		
0.13	60	00	00	3	0.1	60:00.00	60.00	0.0021	0.13	0.04		
0.13	60	00	00	4	0.1	60:00.00	60.00	0.0021	0.13	0.04		

				TEST ID:	TP-02A			Soil Layer Classification:	Sandy Loam	Infiltration Test Elev.:		615.0
				Date:	1/14/2025							
Water Level Drop	MM	SS	.ss	Trial #	Water Level Drop (in)	Field Recorded Time (MM:SS.ss)	Calculated Time Per 1-inch Water Level Drop (MM.mm)	Field Observed Intake Rate (inches/min)	Field Observed Intake Rate (inches/hr)	Converted Hydraulic Conductivity (inches/hr)	Averaged Hydraulic Conductivity Rate (inches/hr)	
1.00	28	00	00	1	1.0	28:00.00	28.00	0.0357	2.14	0.73	0.39	
1.00	53	46	00	2	1.0	53:46.00	53.77	0.0186	1.12	0.38		
0.83	60	00	00	3	0.8	60:00.00	60.00	0.0138	0.83	0.28		
0.50	60	00	00	4	0.5	60:00.00	60.00	0.0083	0.50	0.17		





Photograph 1 (Top left):

TP-01: Sprinkler system, wires, roots between 0.5 and 1.5 feet below ground surface.

Photograph 2 (Top right):

TP-01: Metal nails encountered between 0.5 and 1.5 feet below ground surface.

Photograph 3 (Bottom left):

TP-02: Sprinkler system and brick encountered between 0.25 and 3.25 feet below ground surface .

**Mavis #2296 – Additional
Infiltration Testing**

460 Prospect Avenue
West Orange, NJ

Mavis Tire Supply, LLC



SELECT PROJECT PHOTOGRAPHS

ECS Project 44:2100-A
January 23, 2025



Photograph 4 (Top left):

TP-03: Sprinkler system and wires encountered between 0.5 and 3.0 feet below ground surface.

Photograph 5 (Top right):

TP-04: Subgrade and fill materials encountered between 0.0 and 1.2 feet below ground surface.

Photograph 6 (Bottom left):

TP-04: Glass bottle recovered from approximately 3.0 feet below ground surface.

**Mavis #2296 – Additional
Infiltration Testing**

460 Prospect Avenue
West Orange, NJ

Mavis Tire Supply, LLC



SELECT PROJECT PHOTOGRAPHS

ECS Project 44:2100-A
January 23, 2025



Photograph 7 (Top left):

TP-05: 10 inches of asphalt underlain by gravel. Wires, large gravel, cobble, and brick encountered between 1.0 and 3.0 feet below ground surface.

Photograph 8 (Top right):

TP-05: Reddish brown Silt and Sand Loam encountered between 3.0 and 9.0 feet-below ground surface.

Photograph 9 (Bottom left):

TP-05: Fill encountered.

**Mavis #2296 – Additional
Infiltration Testing**

460 Prospect Avenue
West Orange, NJ

Mavis Tire Supply, LLC



SELECT PROJECT PHOTOGRAPHS

ECS Project 44:2100-A
January 23, 2025

Attachment 3
Laboratory Testing

Laboratory Testing Summary

Sample Location	Sample Number	Depth (ft)	^MC (%)	Soil Type	Atterberg Limits			**Percent Passing No. 200 Sieve	Moisture - Density		CBR (%)		#Organic Content (%)
					LL	PL	PI		<Maximum Density (pcf)	<Optimum Moisture (%)	0.1 in.	0.2 in.	
TP-01	S-1	4	16.5					37.6					
TP-02	S-1	4	11.7					38.1					

Notes: See test reports for test method, ^ASTM D2216-19, *ASTM D2488, **ASTM D1140-17, #ASTM D2974-20e1 < See test report for D4718 corrected values

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content

Project: Mavis #2296 - Additional Infiltration Testing
Client: Mavis Tire Supply, LLC

Project No.: 44:2100-A
Date Reported: 1/29/2025



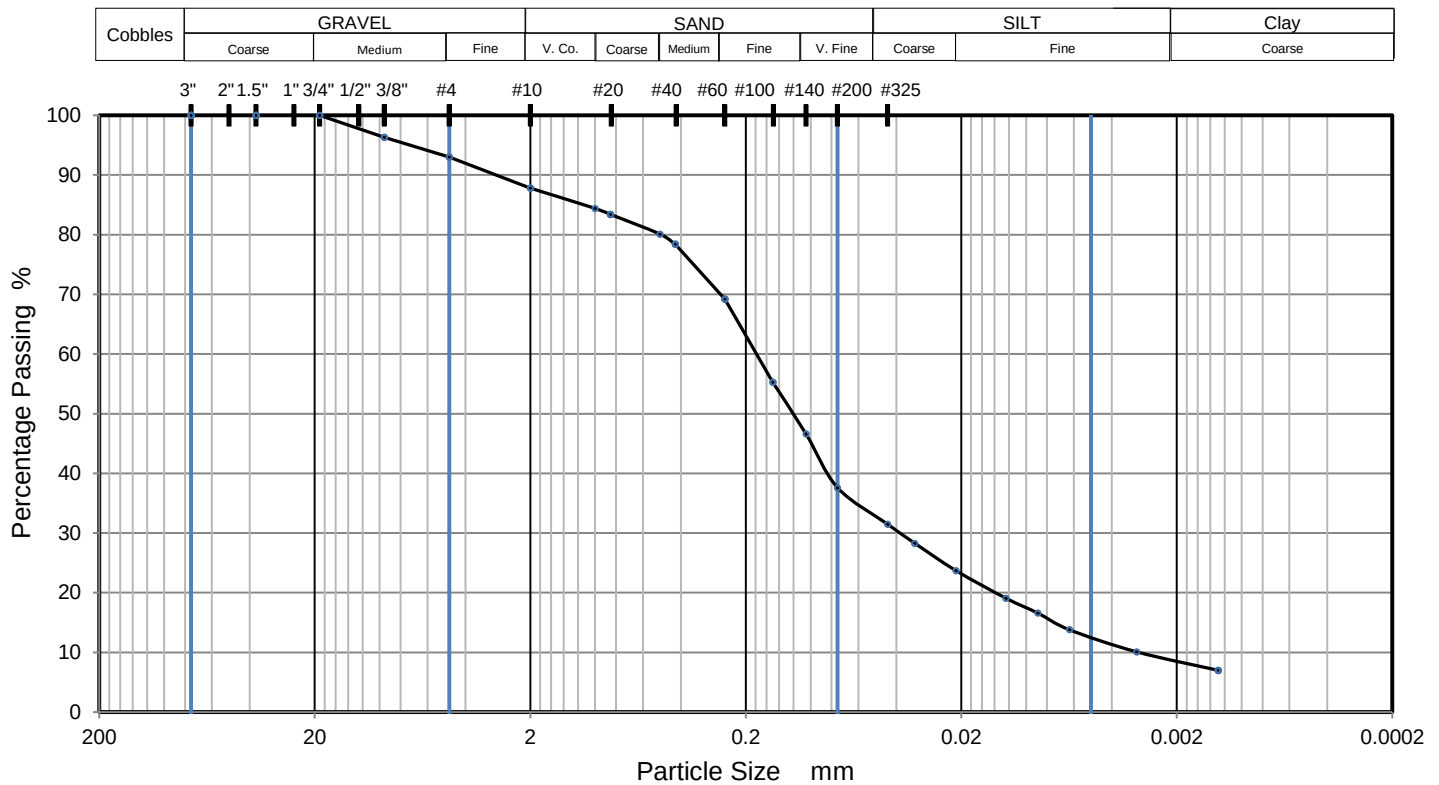
Office / Lab
ECS Mid-Atlantic LLC - Philadelphia

Address
2 Executive Drive
Suite 11
Moorestown, NJ 08057

Office Number / Fax
(609)832-3910
(484)840-5586

Tested by	Checked by	Approved by	Date Received
J Gross	M Trudnak	J Yates	1/23/2025

PARTICLE SIZE DISTRIBUTION



TEST RESULTS (ASTM D6913M-17-METHOD B & ASTM D422-63(2007))

Sieving			Hydrometer Sedimentation		
Particle Size mm	Wgt. Retained, g	% Passing	Particle Size mm	Calc. Wt. Retained, g	% Passing
75	0.00	100.0	0.0329	17.69	28.3
37.5	0.00	100.0	0.0212	25.44	23.7
19	0.00	100.0	0.0124	25.44	19.1
9.5	20.32	96.3	0.0088	13.82	16.6
4.75	38.96	93.0	0.0063	15.48	13.8
2	67.45	87.8	0.0031	20.46	10.1
1	2.04	84.4	0.0013	17.14	7.0
0.85	2.65	83.4			
0.5	4.63	80.1			
0.425	5.61	78.4			
0.25	11.13	69.2	Specific Gravity (Historical) 2.65		
0.15	19.47	55.3			
0.105	24.67	46.6			
0.075	30.08	37.6			
0.044	33.73	31.5			

Dry Mass of sample, g

553.0

Uncorrected USDA Soil Percentages:

% GRAVEL	12.20
% SAND	54.84
% Very Coarse Sand	3.40
% Coarse Sand	4.30
% Medium Sand	10.90
% Fine Sand	23.91
% Very Fine Sand	12.33
% SILT	24.39
% Coarse Silt	9.76
% Fine Silt	14.60
% CLAY	8.57
% Coarse Clay	
% Fine Clay	

Project: Mavis #2296 - Additional Infiltration Testing

Client: Mavis Tire Supply, LLC

Sample Description: Reddish Brown Sandy Loam

Sample Source: TP-01

Project No.: 44:2100-A

Depth (ft): 4

Sample No.: S-1

Date Reported: 1/29/2025



Office / Lab

Address

Office Number / Fax

ECS Mid-Atlantic LLC - Philadelphia

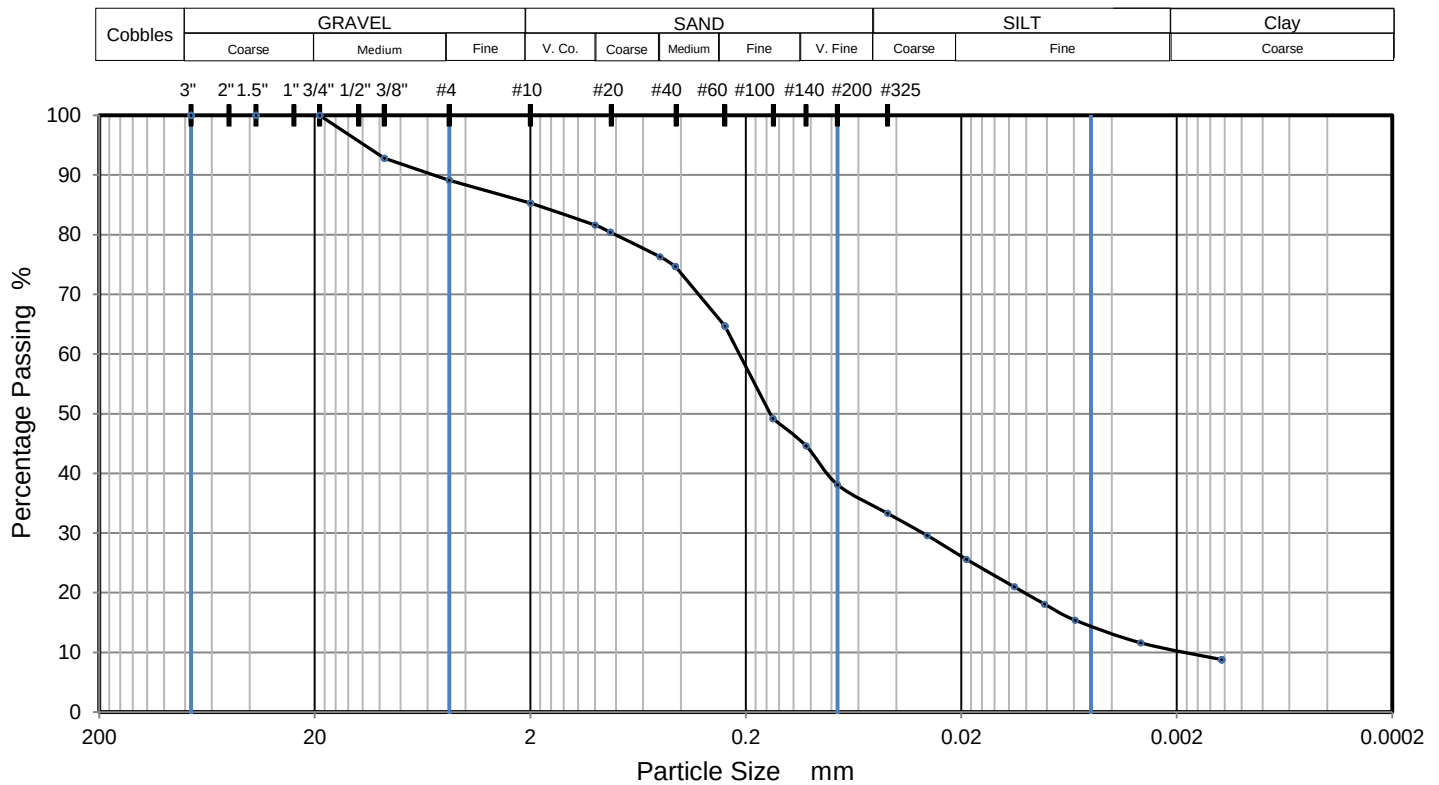
2 Executive Drive
Suite 11
Moorestown, NJ 08057

(609)832-3910

(484)840-5586

Tested by	Checked by	Approved by	Date Received	Remarks
J Gross	M Trudnak	J Yates	1/23/2025	

PARTICLE SIZE DISTRIBUTION



TEST RESULTS (ASTM D6913M-17-METHOD B & ASTM D422-63(2007))

Sieving			Hydrometer Sedimentation		
Particle Size mm	Wgt. Retained, g	% Passing	Particle Size mm	Calc. Wt. Retained, g	% Passing
75	0.00	100.0	0.0288	20.48	29.6
37.5	0.00	100.0	0.0189	22.14	25.6
19	0.00	100.0	0.0114	25.46	21.0
9.5	39.68	92.8	0.0082	16.05	18.1
4.75	60.25	89.1	0.0059	14.94	15.4
2	81.09	85.3	0.0029	21.03	11.6
1	4.45	81.6	0.0012	15.50	8.8
0.85	5.87	80.4			
0.5	10.72	76.3			
0.425	12.70	74.7			
0.25	24.56	64.7	Specific Gravity (Historical) 2.65		
0.15	42.98	49.2			
0.105	48.50	44.6			
0.075	56.19	38.1			
0.044	61.93	33.3			

Dry Mass of sample, g

553.4

Uncorrected USDA Soil Percentages:

% GRAVEL	14.70
% SAND	50.85
% Very Coarse Sand	3.70
% Coarse Sand	5.30
% Medium Sand	11.60
% Fine Sand	21.04
% Very Fine Sand	9.21
% SILT	24.10
% Coarse Silt	8.35
% Fine Silt	15.70
% CLAY	10.35
% Coarse Clay	
% Fine Clay	

Project: Mavis #2296 - Additional Infiltration Testing

Client: Mavis Tire Supply, LLC

Sample Description: Reddish Brown Sandy Loam

Sample Source: TP-02

Project No.: 44:2100-A

Depth (ft): 4

Sample No.: S-1

Date Reported: 1/29/2025



Office / Lab

Address

Office Number / Fax

ECS Mid-Atlantic LLC - Philadelphia

2 Executive Drive
Suite 11
Moorestown, NJ 08057

(609)832-3910

(484)840-5586

Tested by	Checked by	Approved by	Date Received	Remarks
J Gross	M Trudnak	J Yates	1/23/2025	

USDA Classification

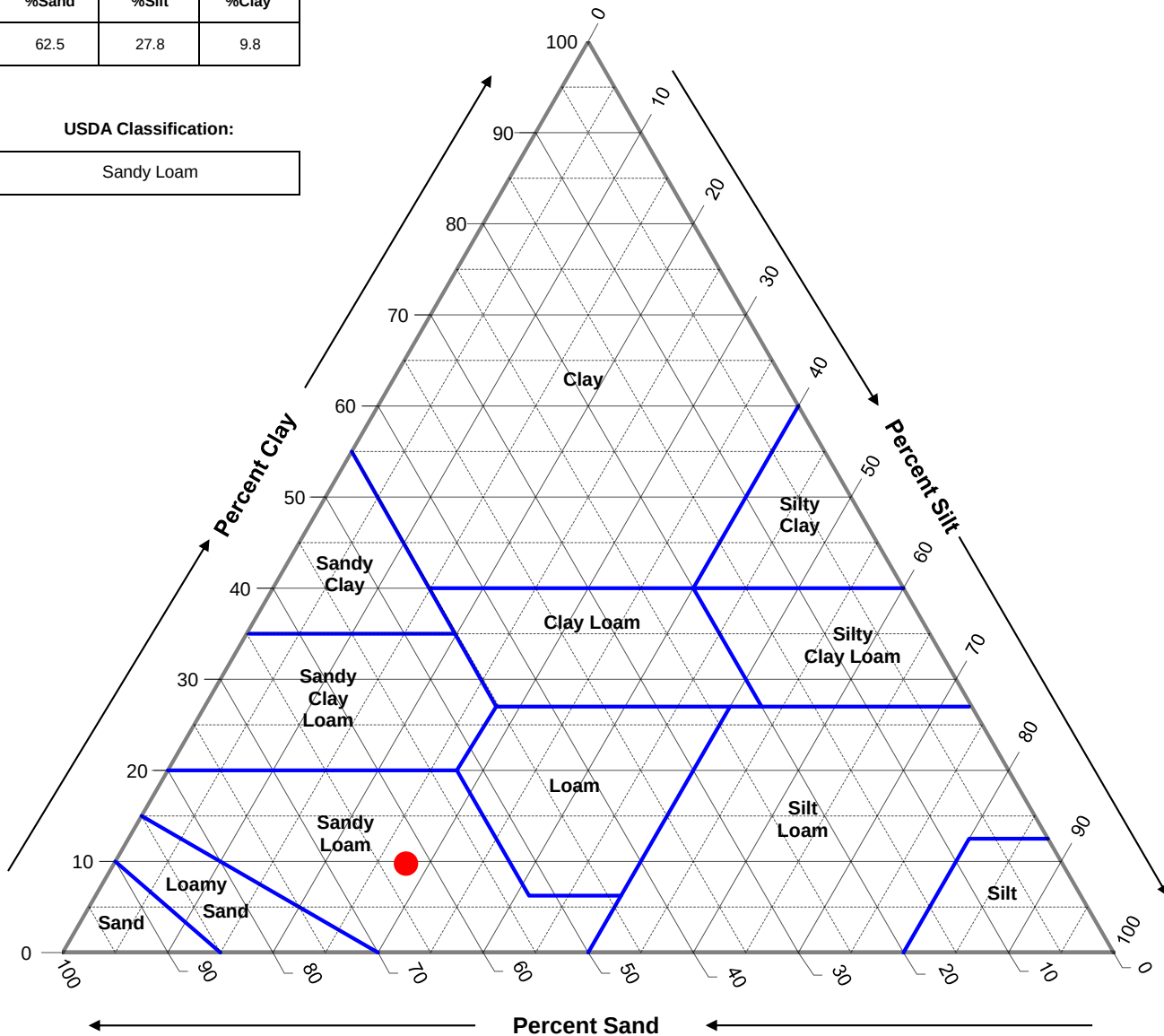
TEST RESULTS (ASTM D6913M-17-METHOD B & ASTM D422-63(2007))

USDA Soil Percentages
(Corrected for Gravel):

%Sand	%Silt	%Clay
62.5	27.8	9.8

USDA Classification:

Sandy Loam



Project: Mavis #2296 - Additional Infiltration Testing

Client: Mavis Tire Supply, LLC

Sample Description: Reddish Brown Sandy Loam

Sample Source: TP-01

Project No.: 44:2100-A

Depth (ft): 4

Sample No.: S-1

Date Reported: 1/29/2025



Office / Lab

ECS Mid-Atlantic LLC - Philadelphia

Address

2 Executive Drive
Suite 11
Moorestown, NJ 08057

Office Number / Fax

(609)832-3910
(484)840-5586

Tested by	Checked by	Approved by	Date Received	Remarks
J Gross	M Trudnak	J Yates	1/23/2025	

USDA Classification

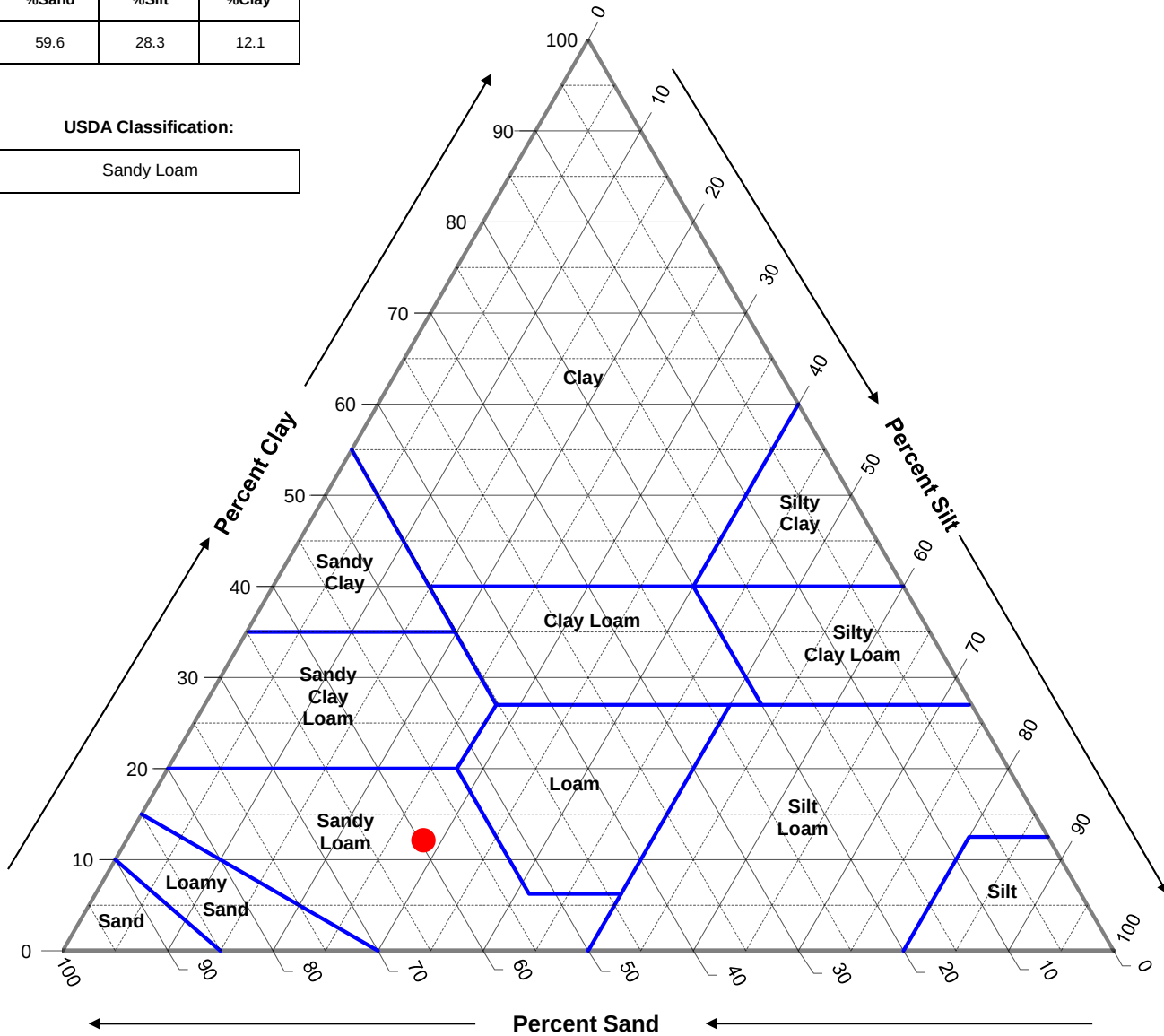
TEST RESULTS (ASTM D6913M-17-METHOD B & ASTM D422-63(2007))

USDA Soil Percentages
(Corrected for Gravel):

%Sand	%Silt	%Clay
59.6	28.3	12.1

USDA Classification:

Sandy Loam



Project: Mavis #2296 - Additional Infiltration Testing

Client: Mavis Tire Supply, LLC

Sample Description: Reddish Brown Sandy Loam

Sample Source: TP-02

Project No.: 44:2100-A

Depth (ft): 4

Sample No.: S-1

Date Reported: 1/29/2025



Office / Lab

ECS Mid-Atlantic LLC - Philadelphia

Address

2 Executive Drive
Suite 11
Moorestown, NJ 08057

Office Number / Fax

(609)832-3910
(484)840-5586

Tested by	Checked by	Approved by	Date Received	Remarks
J Gross	M Trudnak	J Yates	1/23/2025	