

STORMWATER BASIN AREA INVESTIGATION REPORT

PROPOSED RESIDENTIAL DEVELOPMENT
621 Valley Road (C.R. 512)
Block 10801, lot 3
Township of Long Hill, Morris County, New Jersey

Prepared for:

Elite Properties
PO Box 4449
Warren, NJ 07509

Prepared by:



245 Main Street, Suite 110
Chester, New Jersey 07930

A handwritten signature in black ink, appearing to read 'PHW', is written over a horizontal line.

Peter H. Howell, P.E.
Principal

NJ PE License No. 24GE04728700

A handwritten signature in black ink, appearing to read 'P. Granitzki', is written over a horizontal line.

Patrick J. Granitzki, PE
Principal

NJ PE License No. 24GE05355900

Project #0555-99-010E
April 16, 2020

STORMWATER BASIN AREA INVESTIGATION REPORT

Proposed Residential Development

621 Valley Road (C.R. 512)

Block 10801, Lot 3

Township of Long Hill, Morris County, New Jersey

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1.0 PROJECT DESCRIPTION

Dynamic Earth, LLC (Dynamic Earth) has completed an exploration and evaluation of the subsurface conditions for the proposed stormwater management facilities associated with the proposed residential development at 621 Valley Road in the Township of Long Hill, Morris County, New Jersey. The subject site is further identified as Block 10801, Lot 3 and is shown on the *Soil Profile Pit Location Plan* included within the appendix of this report.

At the time of Dynamic Earth's investigation, the site was relatively heavily wooded. A portion of the site included the remains of a gravel driveway. We understand the proposed site development includes construction of a residential building with associated new stormwater management facilities, pavements, and utilities. Conceptual site development details were provided on a March 16, 2020 *Grading Plan* prepared by Dynamic Engineering Consultants, PC (Dynamic).

Topographic information was provided on a April 6, 2020 *Boundary & Topographic Survey* prepared by Control Point Associates, Inc. Based on the aforementioned plan, site elevations are based on the North America Vertical Datum (NAVD) 1988.

Existing site elevations within the area of the proposed redevelopment area ranges from approximately 224 feet the central portion of the site and approximately 208 feet within the southern portion of the site. The existing site elevation within the northern portion of the subject site is in approximately 214 feet.

The subject site is bound to the north by Passaic Valley Road with commercial property beyond; to the east by existing residential housing; to the south by wooded areas; and to the west by existing commercial properties.

2.0 SCOPE OF SERVICES

Dynamic Earth's scope of services pertaining to this report included evaluating the subsurface conditions at soil profile pit locations to estimate the apparent seasonal high groundwater level and collecting samples for laboratory permeability testing. Six soil profile pits (identified as SPP-1 through SPP-6) were excavated at the site using a client provided track mounted excavator and operator. Test locations were located within the area of potential stormwater management facilities and were backfilled by the client's provided contractor to the surface with excavated soils at completion. The test locations are shown on the attached *Soil Profile Pit Location Plan*.

The soils encountered were classified in general conformance with the Field Book for Describing and Sampling Soils (Version 3), published by the National Soil Survey Center, Natural Resources

Conservation Service, U.S. Department of Agriculture (USDA). Observations were made for groundwater and/or redoximorphic features indicative of zones of saturation or seasonal high groundwater. Soil logs are included in the Appendix of this report.

Undisturbed tube permeability samples were collected in general accordance with New Jersey Department of Environmental Protection (N.J.D.E.P.) *Stormwater Best Practices Manual – Appendix E* test methods on representative samples obtained from anticipated stormwater management facility locations. Detailed results of the permeability testing are included herein.

3.0 UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) SOIL SURVEY

Based on a review of the United States Department of Agriculture – Natural Resources Conservation Services (USDA-NRCS) soil survey the following soil resources are mapped underlying the area of the proposed site improvements:

Whippany Silt Loam, three to eight percent slopes (WhpB): Whippany Silt Loam, three to eight percent slopes is mapped within the northern portion of the proposed site. The typical soil profile (as reported in the survey) consists of silt loam to a depth of 15 inches; silty clay loam to a depth of 40 inches; underlain by silt loam to a depth of 60 inches below the natural ground surface (limit of the report). The depth to the groundwater table is reported to range between six to 18 inches below the natural ground surface (limit of report).

Biddeford Silt Loam, zero to two percent slopes, frequently flooded (BhdAt): Biddeford silt loam, zero to two percent slopes, frequently flooded is mapped within the central portion of the proposed site. The typical soil profile (as reported in the survey) consists of muck to a depth of 8 inches; silt loam to a depth of 22 inches; silty clay loam to a depth of 44 inches; underlain by silt loam to a depth of 60 inches below the natural ground surface (limit of the report). The depth to the groundwater table is reported to be at the natural ground surface (limit of report).

Parsippany Silt Loam, zero to three percent slopes, frequently flooded (PbpAt): Parsippany silt loam, zero to three percent slopes, frequently flooded is mapped within the southern portion of the proposed site. The typical soil profile (as reported in the survey) consist of silt loam to a depth of seven inches; silty clay loam to a depth of 22 inches; silty clay to a depth of 36 inches, fine sandy loam to a depth of 41 inches, loamy fine sand to a depth of 53 inches; underlain by loamy sand to a depth of 64 inches (limit of the report). The depth to the groundwater table is reported to range between the ground surface and six inches below the natural ground surface (limit of the report).

4.0 RESULTS

Detailed descriptions of the subsurface conditions encountered at each location are provided on the *Records of Subsurface Exploration* included herein and were generally consisted with mapped soil series for the site. A summary of the subsurface conditions encountered is included below.

4.1 Subsurface Soil Profile

The soil profile pits were performed within existing grass covered areas and encountered approximately six to 14 inches of topsoil at the surface. Existing fill material was encountered below the surface cover at several locations. The existing fill material generally consisted of loamy sand, sandy loam, and loam with variable amounts of cobbles, gravel and debris. The debris encountered included concrete. The existing fill material was encountered to depths ranging between approximately two feet to five feet below the ground surface; corresponding to elevations ranging between 217.0 feet and 214.2 feet. Beneath the surface cover and/or existing fill material, natural glacial deposits were encountered that generally consisted of loam, silt loam, and silty clay with variable amounts of gravel and cobbles. The natural glacial deposits were encountered to depths ranging between approximately two feet and 13 feet below the ground surface, corresponding to elevations ranging between 218.8 feet and 205.2 feet. Beneath the surface cover and/or natural glacial deposits, weathered rock was encountered to refusal depths ranging between six feet and 11 feet below the ground surface, corresponding to elevations ranging between 216.0 feet above mse and 211.0 feet above mse.

4.2 Seasonal High Groundwater and Groundwater

Evidence of seasonal high groundwater was encountered during this investigation at depths ranging between 0.8 feet and 4.6 feet below the ground surface; corresponding to elevations ranging between 218.8 feet and 214 feet. Groundwater was encountered at SPP-3 at a depth of 4.7 feet below the ground surface; corresponding to an elevation of 213.8 feet. Groundwater levels are expected to fluctuate seasonally and following significant periods of precipitation. A summary of the conditions encountered is presented in the following table:

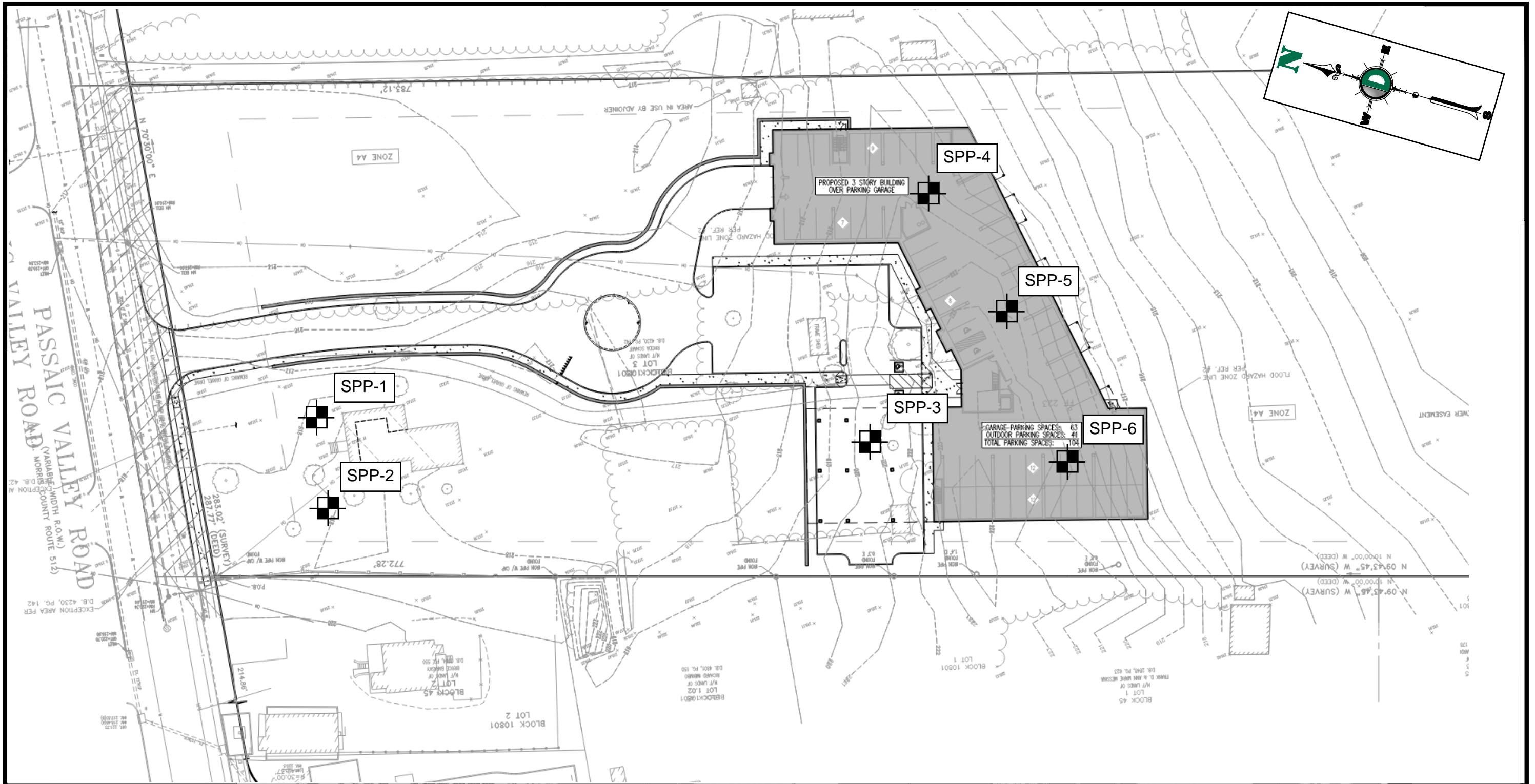
SEASONAL HIGH GROUNDWATER, GROUNDWATER AND TOP OF WEATHERED ROCK SUMMARY							
Location	Surface Elevation (mse)	Estimated Seasonal High Groundwater		Groundwater		Top of Weathered Rock	
		Depth (Feet)	Elevation (mse)	Depth (Feet)	Elevation (mse)	Depth (feet)	Elevation (mse)
SPP-1	218.2	2.0	216.0	Not Encountered		Not Encountered	
SPP-2	218.8	0.8	218.0	Not Encountered		Not Encountered	

SEASONAL HIGH GROUNDWATER, GROUNDWATER AND TOP OF WEATHERED ROCK SUMMARY							
Location	Surface Elevation (mse)	Estimated Seasonal High Groundwater		Groundwater		Top of Weathered Rock	
		Depth (Feet)	Elevation (mse)	Depth (Feet)	Elevation (mse)	Depth (feet)	Elevation (mse)
SPP-3	220.5	4.6	215.9	6.7	213.8	6.7	213.8
SPP-4	220.8	2.0	218.8	Not Encountered		2.0	218.8
SPP-5	222.0	Not encountered		Not Encountered		5.0	217.0
SPP-6	222.0	Not encountered		Not Encountered		1.2	220.9

4.3 Supplemental Investigation

Relatively shallow mottling was encountered within soil profile pits SPP-1 through SPP-4. The mottling encountered could be due to seasonal high groundwater levels or a potentially perched groundwater condition above the underlying weathered rock/rock stratum. As such, we would recommend installing a temporary wells at the site in an attempt to determine if the mottling was due to a perched groundwater condition. Due to relatively shallow rock encountered during our investigation, in-situ basin flood testing is recommended to evaluate the potential permeability of the underlying weathered rock/rock material.

Soil Profile Pit Location Plan



SCALE: N.T.S.

JOB No:
0555-99-010E

SHEET No:
1
OF 1

DRAWN BY:
SH
DESIGNED BY:
-
CHECKED BY:
PG
DATE:
3/27/2020

TITLE:
SOIL PROFILE PIT LOCATION PLAN

PROJECT: **ELITE PROPERTIES**
PROPOSED RESIDENTIAL DEVELOPMENT
621 VALLEY ROAD
BLOCK 10801, LOT 3
TOWNSHIP OF LONG HILL, MORRIS COUNTY, NEW JERSEY

Rev. # 0 DEC Client Code: 0555

LEGEND:



- NOTES:
1. THIS PLAN IS NOT FOR CONSTRUCTION AND WAS PREPARED TO ILLUSTRATE TEST LOCATIONS ONLY AND MAY NOT REFLECT THE MOST CURRENT REVISION OF THE BASE PLAN.
 2. THIS PLAN HAS BEEN PREPARED BASED ON A MARCH 16, 2020 GRADING PLAN PREPARED BY DYNAMIC ENGINEERING.



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SCALE: N.T.S.

JOB No:
0555-99-010E

SHEET No:
1
OF 1

DRAWN BY:
SH
DESIGNED BY:
-
CHECKED BY:
PG
DATE:
4/14/2020

TITLE:
SOIL SURVEY MAP

PROJECT: **ELITE PROPERTIES**
PROPOSED RESIDENTIAL DEVELOPMENT
621 VALLEY ROAD
BLOCK 10801, LOT 3
TOWNSHIP OF LONG HILL, MORRIS COUNTY, NEW JERSEY

Rev. # 0 DEC Client Code: 0555

LEGEND:

 APPROXIMATE SITE BOUNDARY

NOTES:
1. THIS PLAN IS NOT FOR CONSTRUCTION AND WAS PREPARED TO ILLUSTRATE MAPPED SOIL CONDITIONS ONLY AND MAY NOT REFLECT THE MOST CURRENT REVISION OF THE BASE PLAN.
2. THIS PLAN HAS BEEN PREPARED BASED ON THE MAPPED WEB SOIL SURVEY FOR THE SITE.



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Records of Subsurface Exploration



SOIL PROFILE PIT LOG

Soil Profile Pit: SPP-1

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Project: Proposed Residential Development				Project No.: 0555-99-010E			
Location: 621 Passaic Valley Road, Township of Long Hills, New Jersey				Client: Elite Properties			
Surface Elevation (ft): 218.2	Date Started: 3/10/20	Groundwater Data		Depth (ft): 3/10/20	El. (msl)		Groundwater Comments
Termination Depth (ft): 13.0	Date Completed: 3/10/20	Seepage		NE	--		
Proposed Location: SWM	Logged by: S. Hume	Groundwater		NE	--		
Excavation / Test Method: Visual Observation	Contractor: Client Provided	Seasonal High Groundwater		2.0	216.2		

DEPTH (IN)	COLOR	SOIL TEXTURE	COARSE FRAGMENTS (%)				STRUCTURE			WATER CONTENT	CONSISTENCY			BOUNDARY		ROOTS		MOTTLING			SAMPLING			LAB RESULTS
			GRAVEL	COBBLES	STONES	BOULDERS	Shape	Grade	Size		Resistance to Rupture	Stickiness	Plasticity	Distinctness	Topography	Quantity	Size	Contrast	Type	Depth (in)	No.			
0-6	TOPSOIL Brown (7.5YR 4/2)	LOAMY SAND	5	0	0	0	SUBANGULAR BLOCKY	WEAK	MEDIUM	MOIST	FRIABLE	NONSTICKY	NONPLASTIC	GRADUAL <5"	WAVY	CMN (20% MAX)	MEDIUM	NONE						
6-24	Yellowish Brown (10YR 5/6)	LOAMY SAND	20	0	0	0	SUBANGULAR BLOCKY	WEAK	FINE	MOIST	FRIABLE	NONSTICKY	NONPLASTIC	GRADUAL <5"	WAVY	NONE		NONE						
24-48	Grayish Brown (10YR 5/2)	LOAM	5	0	0	0	SUBANGULAR BLOCKY	WEAK	MEDIUM	MOIST	FRIABLE	SLIGHTLY STICKY	NONPLASTIC	GRADUAL <5"	WAVY	FEW (5% MAX)	FINE	MNY >20%	FINE <5MM	FAINT	BAG	36	S-1	
48-72	Dark Grayish Brown (10YR 4/2)	SILTY CLAY LOAM	10	5	0	0	SUBANGULAR BLOCKY	MODERATE	MEDIUM	MOIST	FRIABLE	MODERATELY STICKY	MODERATELY PLASTIC	GRADUAL <5"	WAVY	FEW (5% MAX)	VERY FINE	MNY >20%	FINE <5MM	FAINT	BAG	60	S-2	
72-156	Dark Reddish Brown (5YR 3/4)	SILTY CLAY	5	0	0	0	SUBANGULAR BLOCKY	MODERATE	COARSE	MOIST	FRIABLE	MODERATELY STICKY	MODERATELY PLASTIC			NONE		MNY >20%	FINE <5MM	FAINT	BAG TUBE	84	S-3/ T-1	

Additional Remarks: Fill to 48 inches. Debris included concrete.



SOIL PROFILE PIT LOG

Soil Profile Pit: SPP-2

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Project: Proposed Residential Development Project No.: 0555-99-010E

Location: 621 Passaic Valley Road, Township of Long Hills, New Jersey Client: Elite Properties

Surface Elevation (ft): 218.8	Date Started: 3/10/20	Groundwater Data	Depth (ft): 0.0	EL. (msl): 218.8	Groundwater Comments
Termination Depth (ft): 13.0	Date Completed: 3/10/20	Seepage	0.0	218.8	
Proposed Location: SWM	Logged by: S. Hume	Groundwater	NE	--	
Excavation / Test Method: Visual Observation	Contractor: Client Provided	Seasonal High Groundwater	0.8	218.0	

Ponded Water at surface. Perched water from zero to 10 inches below the ground surface.

DEPTH (IN)	COLOR	SOIL TEXTURE	COARSE FRAGMENTS (%)				STRUCTURE			WATER CONTENT	CONSISTENCY			BOUNDARY		ROOTS		MOTTLING			SAMPLING		LAB RESULTS	
							Shape	Grade	Size		Resistance to Rupture	Stickiness	Plasticity	Distinctness	Topography			Quantity	Size	Contrast	Type	Depth (in)		No.
0-10	TOPSOIL Brown (7.5YR 4/2)	SANDY LOAM	GRAVEL	COBBLES	STONES	BOULDERS	SUBANGULAR BLOCKY	WEAK	FINE	MOIST	FRIABLE	NONSTICKY	NONPLASTIC	CLEAR <2.5"	WAVY	CMN (20% MAX)	MEDIUM	NONE						
10-24	Grayish Brown (10YR 5/2)	LOAM	GRAVEL	COBBLES	STONES	BOULDERS	SUBANGULAR BLOCKY	WEAK	MEDIUM	MOIST	FRIABLE	SLIGHTLY STICKY	SLIGHTLY PLASTIC	GRADUAL <5"	IRREGULAR	FEW (5% MAX)	MEDIUM	CMN 2%-20%	MEDIUM 5MM-15MM	DISTINCT	BAG	16	S-1	
24-60	Brown (7.5YR 5/4)	SILT LOAM	GRAVEL	COBBLES	STONES	BOULDERS	SUBANGULAR BLOCKY	MODERATE	MEDIUM	MOIST	FRIABLE	SLIGHTLY STICKY	SLIGHTLY PLASTIC	CLEAR <2.5"	WAVY	NONE		CMN 2%-20%	FINE <5MM	FAINT	BAG	48	S-2	
60-112	Reddish Brown (5YR 4/3)	SILTY CLAY	GRAVEL	COBBLES	STONES	BOULDERS	SUBANGULAR BLOCKY	MODERATE	COARSE	MOIST	FIRM	SLIGHTLY STICKY	SLIGHTLY PLASTIC	CLEAR <2.5"	WAVY	NONE		FEW 2%	FINE <5MM	FAINT	BAG TUBE	90	S-3/ T-1	
112-156	Dark Reddish Brown (5YR 3/4)	SILTY CLAY	GRAVEL	COBBLES	STONES	BOULDERS	SUBANGULAR BLOCKY	MODERATE	MEDIUM	MOIST	VERY FIRM	SLIGHTLY STICKY	SLIGHTLY PLASTIC			NONE		FEW 2%	FINE <5MM	FAINT	BAG	132	S-4	

Additional Remarks: Fill to 24 inches.



SOIL PROFILE PIT LOG

Soil Profile Pit: SPP-3

Page 1 of 1

Project: Proposed Residential Development Project No.: 0555-99-010E
 Location: 621 Passaic Valley Road, Township of Long Hills, New Jersey Client: Elite Properties

Surface Elevation (ft): 220.5	Date Started: 3/10/20	Groundwater Data	Depth (ft): 4.6	EL. (msl): 215.9	Groundwater Comments
Termination Depth (ft): 9.0	Date Completed: 3/10/20	Seepage	4.6	215.9	
Proposed Location: SWM	Logged by: S. Hume	Groundwater	6.7	213.8	
Excavation / Test Method: Visual Observation	Contractor: Client Provided	Seasonal High Groundwater	4.6	215.9	
	Rig Type: Deere 160G				

DEPTH (IN)	COLOR	SOIL TEXTURE	COARSE FRAGMENTS (%)				STRUCTURE			WATER CONTENT	CONSISTENCY			BOUNDARY		ROOTS		MOTTLING			SAMPLING		LAB RESULTS	
							Shape	Grade	Size		Resistance to Rupture	Stickiness	Plasticity	Distinctness	Topography			Quantity	Size	Contrast	Type	Depth (in)		No.
0-8	TOPSOIL Brown (7.5YR 4/2)	LOAM	GRAVEL	COBBLES	STONES	BOULDERS	SUBANGULAR BLOCKY	WEAK	MEDIUM	MOIST	FRIABLE	NONSTICKY	NONPLASTIC	CLEAR <2.5"	WAVY	CMN (20% MAX)	MEDIUM	NONE						
8-24	Brown (7.5YR 4/2)	LOAM	GRAVEL	COBBLES	STONES	BOULDERS	ANGULAR BLOCKY	MODERATE	MEDIUM	MOIST	FRIABLE	NONSTICKY	NONPLASTIC	CLEAR <2.5"	WAVY	FEW (5% MAX)	FINE	NONE			BAG	12	S-1	
24-55	Strong Brown (7.5YR 4/2)	SILT LOAM	GRAVEL	COBBLES	STONES	BOULDERS	SUBANGULAR BLOCKY	MODERATE	MEDIUM	MOIST	FRIABLE	SLIGHTLY STICKY	NONPLASTIC	CLEAR <2.5"	WAVY	NONE		NONE			BAG	48	S-2	
55-80	Very Dark Grayish Brown (10YR 3/2)	GRAVELLY CLAY LOAM	GRAVEL	COBBLES	STONES	BOULDERS	SUBANGULAR BLOCKY	MODERATE	FINE	WET	FIRM	MODERATELY STICKY	MODERATELY PLASTIC	CLEAR <2.5"	WAVY	NONE		CMN 2%-20%	MEDIUM 5MM-15MM	DISTINCT	BAG	66	S-3	
80-108	Dark Reddish Brown (5YR 3/4)	EXTREMELY CHANNERY SILTY CLAY LOAM	CHANNERS	FLAGSTONES	STONES	BOULDERS	SUBANGULAR BLOCKY	WEAK	FINE	WET	HARD	NONSTICKY	NONPLASTIC			NONE		NONE						

Additional Remarks: Weathered rock (shale) encountered from 80 to 108 inches below the ground surface. Soil profile pit SPP-3 encountered refusal at approximately 108 inches below the ground surface on apparent rock.



SOIL PROFILE PIT LOG

Soil Profile Pit: SPP-4

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Project: Proposed Residential Development				Project No.: 0555-99-010E			
Location: 621 Passaic Valley Road, Township of Long Hills, New Jersey				Client: Elite Properties			
Surface Elevation (ft): 220.8	Date Started: 3/10/20	Groundwater Data		Depth (ft): 1.5	EL. (msl): 219.3		Groundwater Comments
Termination Depth (ft): 9.0	Date Completed: 3/10/20	Seepage		Groundwater: NE	--		
Proposed Location: SWM	Logged by: S. Hume	Seasonal High Groundwater		2.0	218.8		
Excavation / Test Method: Visual Observation	Contractor: Client Provided					Seepage at 1.5 feet is anticipated to be due to a perched condition	
	Rig Type: Deere 160G						

DEPTH (IN)	COLOR	SOIL TEXTURE	COARSE FRAGMENTS (%)				STRUCTURE			WATER CONTENT	CONSISTENCY			BOUNDARY		ROOTS		MOTTLING			SAMPLING		LAB RESULTS
			GRAVEL	COBBLES	STONES	BOULDERS	Shape	Grade	Size		Resistance to Rupture	Stickiness	Plasticity	Distinctness	Topography	Quantity	Size	Contrast	Type	Depth (in)	No.		
0-10	TOPSOIL Brown (7.5YR 4/2)	LOAM	5	0	0	0	SUBANGULAR BLOCKY	WEAK	MEDIUM	MOIST	FRIABLE	NONSTICKY	NONPLASTIC	CLEAR <2.5"	WAVY	CMN (20% MAX)	MEDIUM	NONE					
10-24	Brown (7.5YR 4/4)	SILT LOAM	5	0	0	0	SUBANGULAR BLOCKY	MODERATE	MEDIUM	MOIST	FRIABLE	NONSTICKY	NONPLASTIC	CLEAR <2.5"	WAVY	FEW (5% MAX)	FINE	NONE			BAG	12	S-1
24-108	Dark Reddish Brown (5YR 3/4)	EXTREMELY CHANNERY SANDY CLAY LOAM	45	45	0	0	SUBANGULAR BLOCKY	WEAK	FINE	MOIST	HARD	NONSTICKY	NONPLASTIC			NONE		FEW 2%	FINE <5MM	FAINT			

Additional Remarks: Weathered rock (shale) encountered from 24 to 108 inches below the ground surface. Soil profile pit SPP-4 encountered refusal at approximately 108 inches below the ground surface on apparent rock.



SOIL PROFILE PIT LOG

Soil Profile Pit: SPP-5

Page 1 of 1

Project: Proposed Residential Development				Project No.: 0555-99-010E			
Location: 621 Passaic Valley Road, Township of Long Hills, New Jersey				Client: Elite Properties			
Surface Elevation (ft): 222.0	Date Started: 3/10/20	Groundwater Data		Depth (ft): --	El. (msl): --		Groundwater Comments
Termination Depth (ft): 11.0	Date Completed: 3/10/20	Seepage: --	Groundwater: NE				
Excavation / Test Method: SWM / Visual Observation	Logged by: S. Hume	Contractor: Client Provided	Seasonal High Groundwater: NE				
	Rig Type: Deere 160G						

DEPTH (IN)	COLOR	SOIL TEXTURE	COARSE FRAGMENTS (%)				STRUCTURE			WATER CONTENT	CONSISTENCY			BOUNDARY		ROOTS		MOTTLING			SAMPLING			LAB RESULTS
			GRAVEL	COBBLES	STONES	BOULDERS	Shape	Grade	Size		Resistance to Rupture	Stickiness	Plasticity	Distinctness	Topography	Quantity	Size	Contrast	Type	Depth (in)	No.			
0-12	TOPSOIL Brown (7.5YR 4/2)	LOAMY SAND	15	5	0	0	SUBANGULAR BLOCKY	WEAK	FINE	MOIST	FRIABLE	NONSTICKY	NONPLASTIC	CLEAR <2.5"	WAVY	CMN (20% MAX)	MEDIUM	NONE						
12-48	Brown (7.5YR 5/3)	SANDY LOAM	5	0	0	0	SUBANGULAR BLOCKY	MODERATE	MEDIUM	MOIST	FRIABLE	NONSTICKY	NONPLASTIC	GRADUAL <5"	IRREGULAR	FEW (5% MAX)	FINE	NONE				BAG	24	S-1
48-60	Dark Brown (7.5YR 3/3)	LOAM	10	0	0	0	SUBANGULAR BLOCKY	MODERATE	MEDIUM	MOIST	FRIABLE	SLIGHTLY STICKY	NONPLASTIC	CLEAR <2.5"	WAVY	NONE		NONE				BAG	52	S-2
60-132	Dark Reddish Brown (5YR 3/4)	EXTREMELY CHANNERY SILTY CLAY	45	45	0	0	SUBANGULAR BLOCKY	WEAK	FINE	MOIST	HARD	NONSTICKY	NONPLASTIC			NONE		NONE						

Additional Remarks: Fill to 60 inches below the ground surface. Debris was approximately 20% by volume and included metal, plastic, and glass. Weathered rock (shale) was encountered from approximately 60 to 132 inches below the ground surface. Soil profile pit SPP-5 encountered refusal at approximately 132 inches below the ground surface on apparant rock.



SOIL PROFILE PIT LOG

Soil Profile Pit: SPP-6

Project: Proposed Residential Development			Project No.: 0555-99-010E		
Location: 621 Passaic Valley Road, Township of Long Hills, New Jersey			Client: Elite Properties		
Surface Elevation (ft): 222.0	Date Started: 3/10/20	Groundwater Data	Depth (ft)		EL. (msl)
Termination Depth (ft): 13.0	Date Completed: 3/10/20		Seepage		--
Proposed Location: SWM	Logged by: S. Hume		Groundwater		--
Excavation / Test Method: Visual Observation	Contractor: Client Provided		Seasonal High Groundwater		--
	Rig Type: Deere 160G				

DEPTH (IN)	COLOR	SOIL TEXTURE	COARSE FRAGMENTS (%)				STRUCTURE			WATER CONTENT	CONSISTENCY			BOUNDARY		ROOTS		MOTTLING			SAMPLING			LAB RESULTS	
			GRAVEL	COBBLES	STONES	BOULDERS	Shape	Grade	Size		Resistance to Rupture	Stickiness	Plasticity	Distinctness	Topography	CMN (20% MAX)	MEDIUM	Quantity	Size	Contrast	Type	Depth (in)	No.		
0-14	TOPSOIL Brown (7.5YR 4/2)	SANDY LOAM	5	0	0	0	SUBANGULAR BLOCKY	WEAK	MEDIUM	MOIST	FRIABLE	NONSTICKY	NONPLASTIC	CLEAR <2.5"	WAVY	CMN (20% MAX)	MEDIUM	NONE			BAG	6	S-1		
14-72	Dark Reddish Brown (5YR 3/4)	EXTREMELY SILTY CHANNERY CLAY					SUBANGULAR BLOCKY	WEAK	FINE	MOIST	HARD	NONSTICKY	NONPLASTIC			NONE		NONE							

Additional Remarks: Weathered rock (shale) encountered from 14 to 72 inches below the ground surface. Soil profile pit SPP-4 encountered refusal at approximately 72 inches below the ground surface on apparent rock.