REPORT
SUBSURFACE INVESTIGATION

PROPOSED NYSDOT ROUTE 17 INTERCHANGE IMPROVEMENTS
TOWN OF THOMPSON, SULLIVAN COUNTY, NEW YORK
EPT CONCORD RESORT

November 11, 2013

Prepared By:
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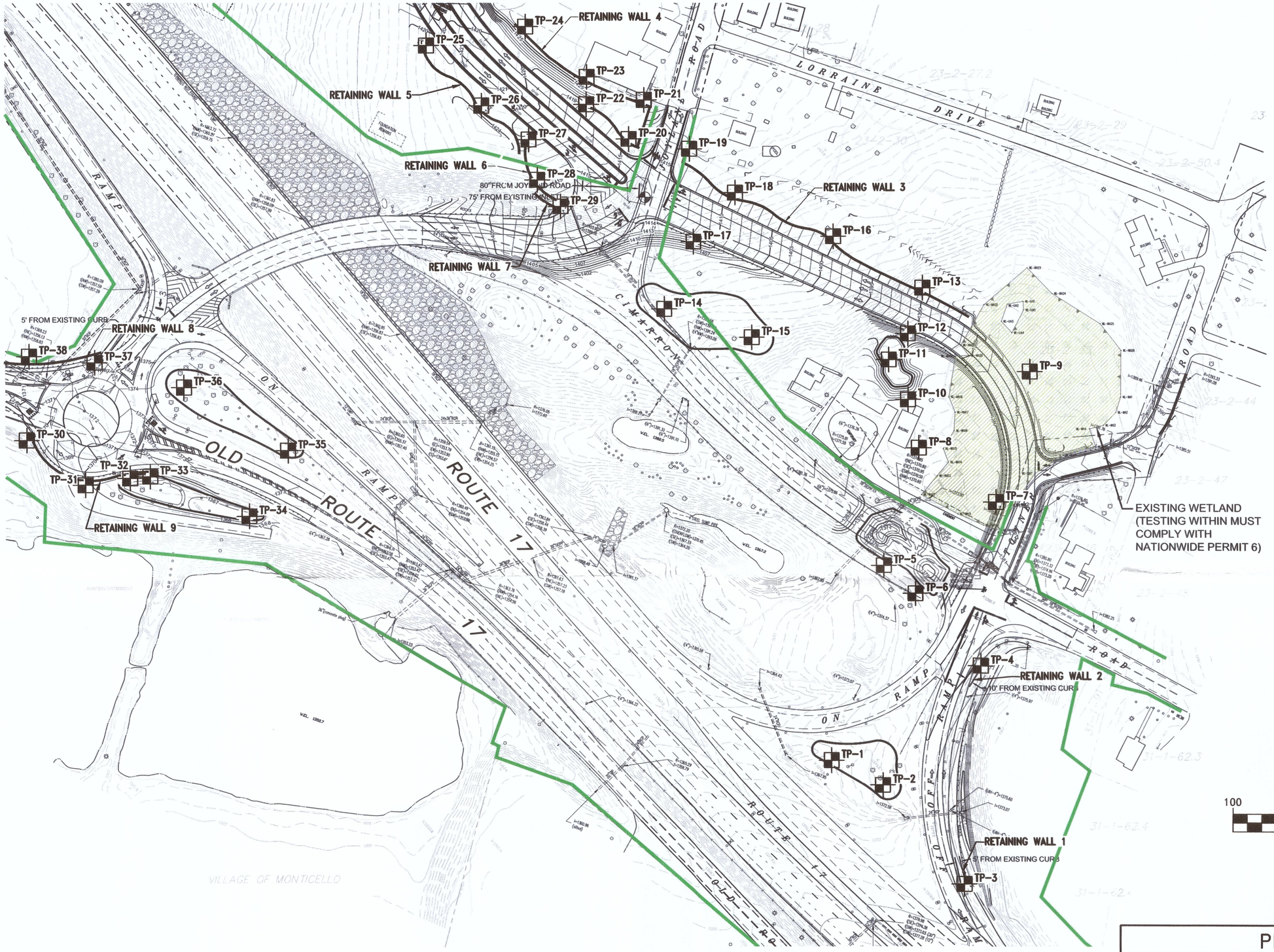
MTA Project No.: 8979-006*1D



GRAPHIC SCALE

100 0 50 100 200

1 inch = 100ft.

KEY:

TP-1 NUMBER AND APPROXIMATE LOCATION OF TEST PITS PERFORMED FOR THIS STUDY

NOTES:

1. This drawing is part of Melick–Tully and Associates, P.C. Report No. 8979–006*1D and should be read together with the report for complete evaluation.
2. General layout was obtained from a drawing prepared by AKRF Eng., entitled "Geotechnical Soil Investigation Plan", dated 5/8/13 (revised 12/19/12), scale 1"= 50'.

PLOT PLAN

PROPOSED INTERCHANGE IMPROVEMENTS
THOMPSON, NEW YORK
CONCORD RESORT DEVELOPMENT

MELICK–TULLY AND ASSOCIATES, P.C.
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JOB NO.	FILE NO.
8979–006*1D	25847

DR. BY	CHK. BY	DATE	SCALE	PLATE
VJD	JHB	9–25–13	1"=100'	2

MELICK-TULLY AND ASSOCIATES, P.C.
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November 11, 2013

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Attention: Mr. Justin Seeney
Project Engineer

Report
Subsurface Investigation
Proposed NYSDOT Route 17 Interchange Improvements
Town of Thompson, Sullivan County, New York
EPT Concord Resort

Introduction

This report presents the results of a subsurface investigation performed by Melick-Tully and Associates, P.C. (MTA) for the proposed NYSDOT Route 17, Exit 106 interchange improvements. The location of the interchange is shown on the Site Location Map, Plate 1. This report was prepared in general accordance with our revised proposal dated May 6, 2013.

Proposed Construction

Based on information provided to us by AKRF Engineering, P.C. (AKRF), the roadway improvements would include widening the off-ramp leading from Route 17 West to Towner Road, relocating the cross-over road which is currently part of Cimmeron Road to the north between Towner Road and Joyland Road, and reconstruction of the interchange between the on and off-ramps from Route 17 East by constructing a traffic circle which manages the traffic flow from the on/off-ramps and the cross-over road to Bridgeville Road on the south side of Route 17.

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Cuts and fills on the order of approximately five feet or less will be required to construct the majority of the new roadway alignments; however, fills of up to ten feet are indicated where Joyland Road meets the new entrance roadway and cross-over road.

Nine retaining walls are planned to be constructed to accommodate the roadway improvements. The walls will vary from approximately 30 to 470 feet in length and provide grade separation of up to approximately six feet. Two additional walls were shown as part of the improvements to Towner Road; however, these walls were beyond the areas investigated as part of this study. The nine walls included in our investigation have been numbered by MTA as Walls No. 1 through 9 on the Plot Plan, Plate 1, for discussion purposes. As planning is in the preliminary stages, the wall types were not identified to us, however, we understand that the walls could be reinforced concrete walls, mechanically stabilized earth retaining walls, or segmental block walls.

The plans used to complete our current study indicated the construction of six stormwater infiltration basins as part of the improvements for the new interchange. Three of the basins did not indicate the bottom levels; however, the three that identified the proposed grading indicated cuts and fills of up to approximately ten feet and five feet, respectively, would be required to establish the stormwater basin bottoms and embankments.

Purpose and Scope of Work

The purpose of our services was to:

1) explore the subsurface soil, rock and groundwater conditions at 38 locations in the areas where the new roadway alignment, retaining walls, and stormwater management basins would be constructed;

2) estimate the relevant geotechnical engineering properties of the encountered materials;

3) initiate field permeability tests at or near locations identified to us by AKRF;

4) recommend an appropriate type of foundation for support of the proposed retaining walls, and provide geotechnical related foundation design and installation criteria;

5) provide estimated lateral earth pressure and drainage criteria for use in the design of the proposed retaining walls;

6) provide geotechnical related parameters for use in pavement design; and

7) discuss appropriate earthwork considerations consistent with the proposed construction and encountered subsurface conditions.

To accomplish these purposes, a subsurface exploration program consisting of 36 test pit explorations was performed. Two of the proposed explorations, Test Pit 9 and Test Pit 32, could not be completed due to standing water at Test Pit 9 and the presence of underground utilities at Test Pit 32. The explorations were advanced using a rubber-tire backhoe (John Deere Model 410) and extended to depths of approximately four to twelve feet below the existing surface grades. The approximate locations of the explorations performed for this study are shown on the Plot Plan, Plate 2.

All work was performed under the direct technical observation of geologists from MTA. Our representatives located the explorations in the field by tape measurement from the existing site features, maintained continuous logs of the explorations as the work proceeded, and obtained bulk samples of the materials encountered in the test pits.

All soil samples obtained from the explorations were brought to our office where they were further examined in our soil mechanics laboratory. Detailed descriptions of the materials encountered in the test pits are shown on the individual Logs of Test Pits, Plates 3-1 through 3-38. The soils were visually classified in general accordance with the Unified Soil Classification System presented on Plate 4.

Fifteen of the samples were subjected to laboratory testing consisting of grain-size analyses and moisture content determinations. The results of the grain-size tests are presented on Plates 5A through 5C, Gradation Curves. The results of the moisture content determinations are presented on Plates 5A through 5C and on the appropriate exploration logs.

The results of our subsurface exploration program, our visual examination of the soil samples, and a review of the laboratory test results have provided the basis for our engineering analysis and findings. The following discussions of our findings are subject to the limitations attached as an Appendix to this report.

Site Conditions

Surface Features: The area of the investigation is currently an active interchange. Our explorations were performed in accessible landscaped areas adjacent to the existing roadways where the new improvements consisting of realigned roadways, stormwater management basins, and retaining walls will be constructed. These areas were located within or adjacent to the NYSDOT right-of-way. Several occupied wood frame residences and out buildings are within or adjacent to the proposed construction and will be impacted by the new improvements.

Topographic information shown on plans provided to us indicates that surface elevations vary across the existing interchange; however, surface grades generally range from approximately Elevation +1,360 feet to Elevation +1,430 feet across the area of the improvements.

Subsurface Conditions: The following generalized strata were encountered in the explorations and are listed in order of increasing depth:

1) Topsoil: A surficial layer of topsoil was encountered in 15 of the explorations. In general, the topsoil was found to be approximately two to seven inches in thickness, where encountered.

2) Fill: Fill materials were encountered below the topsoil in seven of the explorations and beginning at the ground surface in 16 of the 38 test pits. In general, the fill materials consisted primarily of native sandy soils used in grading and constructing the existing roadways and access ramp embankments. In several of the explorations, inclusions of demolition rubble, wood and miscellaneous construction debris were encountered. In Test Pits No. 31 and 34, the original topsoil layer was encountered at a depth of approximately six and one-half to eight feet below grade, respectively.

3) Silty Sand: Below the surficial topsoil and fill and beginning at the ground surface in five of the explorations, the natural soils typically consisted of sands and silty sands containing varying amounts of gravel, cobbles and boulders. The sandy soils are believed to be glacial in nature and extended to the completion depths in the majority of the explorations. In general, the natural silty sands were observed to be medium dense to very dense in relative density. In Test Pits No. 2 and 27, the sandy materials were in turn underlain by sandy gravel which extended to the completion depths in those two explorations of eleven and ten feet, respectively.

Groundwater seepage was encountered in 13 of the explorations, and perched groundwater seepage was encountered in five of the test pits upon their completion. The observed groundwater seepage levels varied from approximately two to eleven feet below grade.

In addition, mottling, which is indicative of seasonal groundwater conditions or seasonally saturated soils, was observed in the majority of the test pit explorations at shallower levels.

Findings and Recommendations

General: Based on the results of our study, it is our opinion that:

1) Following the site preparation and earthwork procedures described in subsequent sections of this report, the undisturbed natural soils or controlled compacted fill will provide adequate support for the proposed retaining walls and roadways.

2) The moisture levels observed in the materials subjected to laboratory testing indicate that the majority of the natural glacial soils appear to be at or slightly above the moisture levels which would allow compaction to 95 percent of their maximum dry density. Consequently, it should be assumed some moisture conditioning of these materials will be required to enable their reuse as controlled compacted fill and backfill.

3) Groundwater was encountered in 13 of the 36 explorations and perched groundwater seepage in five of the test pits at depths of two to eleven feet below grade, and mottling was observed in the majority of the explorations at shallower levels. Consequently, some construction dewatering will be required.

4) Test pits generally extended below the proposed grades without encountering bedrock. Cobbles and boulders were encountered in a number of the explorations, and refusal to further excavation with the backhoe atop boulders was encountered in four of the explorations at depths of approximately eight to ten feet. We believe that the majority of the excavations could be completed using relatively large excavation equipment equipped with rock removal features. Relatively large boulders could require some jackhammering.

5) The permeability rates observed in the explorations were somewhat variable. Details of that testing are shown on the appropriate individual Logs of Test Pits, and are summarized on Plate 6.

Further discussions of these items and others considered relevant to the proposed development are presented in subsequent sections of this report.

Site Preparation and Earthwork: Areas where the new access roadways, ramp alignments, and retaining walls are required should be cleared and grubbed of all vegetation. After clearing and grubbing, the topsoil should be stripped for its full depth from within and at least five feet beyond the proposed construction limits. The topsoil would not be suitable for reuse as controlled compacted fill or backfill in structural areas. Any existing structures within the area to be improved should be demolished and the demolition rubble legally disposed of off-site. Any existing subsurface utilities should be located and removed and any septic systems and wells present should be abandoned in accordance with NYSDEC procedures. Any excavations resulting from demolition and utility removal should be backfilled with controlled compacted fill as described in subsequent sections of this report.

After clearing, stripping, and demolition, the existing in-place fill materials should be removed for their full depth. It may be possible to compact some of the fill in-place sufficiently to support the new road. This would be in areas where the fill consists of silty sand materials free of inclusions of construction debris and/or rubble, where these materials do not overlay an original topsoil layer, and where the fill is two feet or less in thickness. The determination of the suitability of the fill to remain in-place should be made at the time of construction by the inspecting geotechnical engineer. Any fill materials should be removed for their full depth from below proposed retaining walls for concrete retaining wall footings and from below and within the entire reinforced zone for MSE and segmented block walls. Fill materials generated which consist of deleterious materials such as wood, roots and/or construction debris should be removed and legally disposed of off-site. The area where the deeper, debris laden fill was most

prevalent was on the west side of the highway in Test Pits No. 30, 31, 33, 34, 35 and 37 which would impact Retaining Walls No. 8 and 9.

After clearing, stripping and fill removal, the exposed subgrade materials should be proofrolled and compacted to a dense and unyielding consistency with several passes of a heavy, self-propelled, vibrating drum compactor with a minimum static drum weight of ten tons under the observation of a qualified geotechnical engineer. Any subgrade materials which appear to be soft or unstable should be excavated to the surface of competent soils and backfilled with controlled compacted fill. About 300 feet of the new westbound off-ramp will traverse through wetlands. Test Pit No. 9 planned in that area could not be excavated due to standing water. It should be expected that localized soft surficial soils, and greater topsoil, or organic soil thickness will be present in this location.

We believe that the majority of the soils exposed after stripping and fill removal will consist of glacial silty sand materials. For the most part, these materials are anticipated to be relatively dense; however, due to their high silt content, these surficial materials are highly susceptible to softening and disturbance from slight changes in moisture content and construction equipment traffic. Therefore, it should be anticipated that some aeration and drying or overexcavation and replacement of the surficial soils may be necessary.

In general, the plans provided to us indicate that the new realigned access roads will require cuts and fills of ten feet or less, and five feet or less throughout most areas. The majority of the on-site soils in the cut areas were observed to consist of silty sands with varying amounts of cobbles and boulders. We believe that these materials would meet NYSDOT standards, although some removal of larger boulders would be necessary. The moisture contents performed

on selected samples obtained in the explorations indicated that the materials were at or slightly above moisture contents that will permit compaction to the required degree in their existing condition. Consequently, some aeration and drying should be anticipated. If the earthwork operations are performed during or following periods of wet or freezing weather, compaction of the on-site soils to the required degree may be difficult or impossible.

Any imported fill required to complete the proposed grading should consist of uncontaminated, relatively well-graded granular soils containing less than 15 percent by weight of material passing a U.S. Standard No. 200 sieve and a maximum particle size of six inches. Fill materials installed in the NYSDOT right-of-way should meet the requirements of the New York State Department of Transportation Construction Standards, 2008 Edition. The fill supplier should provide documentation of the environmental quality of all imported fill.

All fill materials placed in roadways, below retaining walls, or as wall backfill should be spread in layers on the order of twelve inches or less in loose thickness and uniformly compacted to at least 95 percent of their maximum dry density as determined by the ASTM D-1557 test procedure. Backfill placed in confined areas such as foundation or utility trench excavations should be spread in thinner layers and uniformly compacted to similar densities using manually operated compaction equipment.

Frequent cobbles and boulders were encountered in a number of the explorations, and refusal to further excavation with the backhoe atop boulders was encountered in four of the explorations at depths of approximately eight to ten feet. We believe that the majority of the excavations could be completed using relatively large excavation equipment equipped with rock removal features. Relatively large boulders could require some jackhammering.

Groundwater was encountered in the majority of the explorations at depths ranging from approximately two to eleven feet below grade. Shallow perched water atop less pervious zones and in portions of the fill materials should be anticipated. In addition, mottling was observed at shallower levels which generally indicate seasonal groundwater conditions or seasonally saturated soils. Standing water was observed in the area identified as wetlands where Test Pit No. 9 was located. The variable nature of the groundwater infiltration levels observed while the explorations were being performed indicates that groundwater could be encountered at various levels due to seepage through more pervious materials and from surface water runoff. We believe that groundwater could be controlled by pumping from sumps located within or adjacent to any required excavations throughout the majority of the area of new improvements. More extensive dewatering operations could be required where the new entrance roadway alignment crosses the existing wetlands west of Towner Road. Test Pit No. 9 located in the wetland area could not be excavated due to standing water in that area.

Retaining Wall Design Criteria: We believe that foundations for cast-in-place concrete retaining walls or concrete and/or stone leveling pads for MSE and segmental block retaining walls could be designed assuming a bearing capacity of 4,000 pounds per square foot for the competent natural soils or controlled compacted fill installed to raise grades or replace any existing uncontrolled fill materials. We recommend that a qualified geotechnical engineer familiar with the site conditions observe the foundation excavations and/or leveling pad support soils at the time of construction to determine that adequate bearing soils are reached.

The retaining walls should be designed to resist lateral earth pressures imposed by the adjacent soils, as well as surcharge loads due to traffic, as well as temporary construction traffic, material stockpiles, sloping backfills, etc. Walls which are free to rotate slightly during backfilling may be designed to resist lateral earth pressures assuming an active earth pressure condition. If the walls are restrained, they should be designed assuming an at-rest earth pressure condition. If the natural glacial sands are used as backfill, a total unit weight of 145 pounds per cubic foot and a friction angle of 34 degrees may be used which would result in equivalent fluid pressures of 41 pcf for the active condition and 64 pcf for the at-rest condition. We estimate that a friction factor between mass concrete and the on-site soils would be 0.40.

Pavement Design Criteria: We recommend that the roadway areas be prepared in accordance with our recommendations outlined in previous sections of this report. Immediately prior to pavement construction, the exposed subgrade soils should be recompacted to a firm and unyielding consistency, and the upper two feet of the subgrade soils compacted to at least 95 percent of their maximum dry density as determined by the ASTM D-1557 test procedure. For our previous studies performed in other portions of the project, California Bearing Ratio (CBR) tests were performed on the glacial soils similar to those encountered for this study. Based on the results of our previous testing, we believe that pavements supported by materials installed in accordance with our recommendations could be designed assuming a "fair" subgrade support condition with an estimated CBR of six percent.

Proposed Stormwater Management: Infiltration tests were performed at the locations identified to us by AKRF. The infiltration rates are provided on the individual exploration logs and are summarized on Plate 6. In general, all infiltration tests were performed in accordance

with NYSDEC Appendix "D" at levels identified in the field, in order to satisfy New York State Requirements.

Please feel free to contact us if you have any questions regarding this report.

The following Plates and Appendix are attached and complete this report:

Plate 1 – Site Location Map
Plate 2 – Plot Plan
Plates 3-1 through 3-38 – Logs of Test Pits
Plate 4 – Unified Soil Classification System
Plates 5A through 5C – Gradation Curves
Plate 6 – Infiltration Test Results
Appendix – Limitations

Respectfully submitted,

MELICK-TULLY and ASSOCIATES, P.C.

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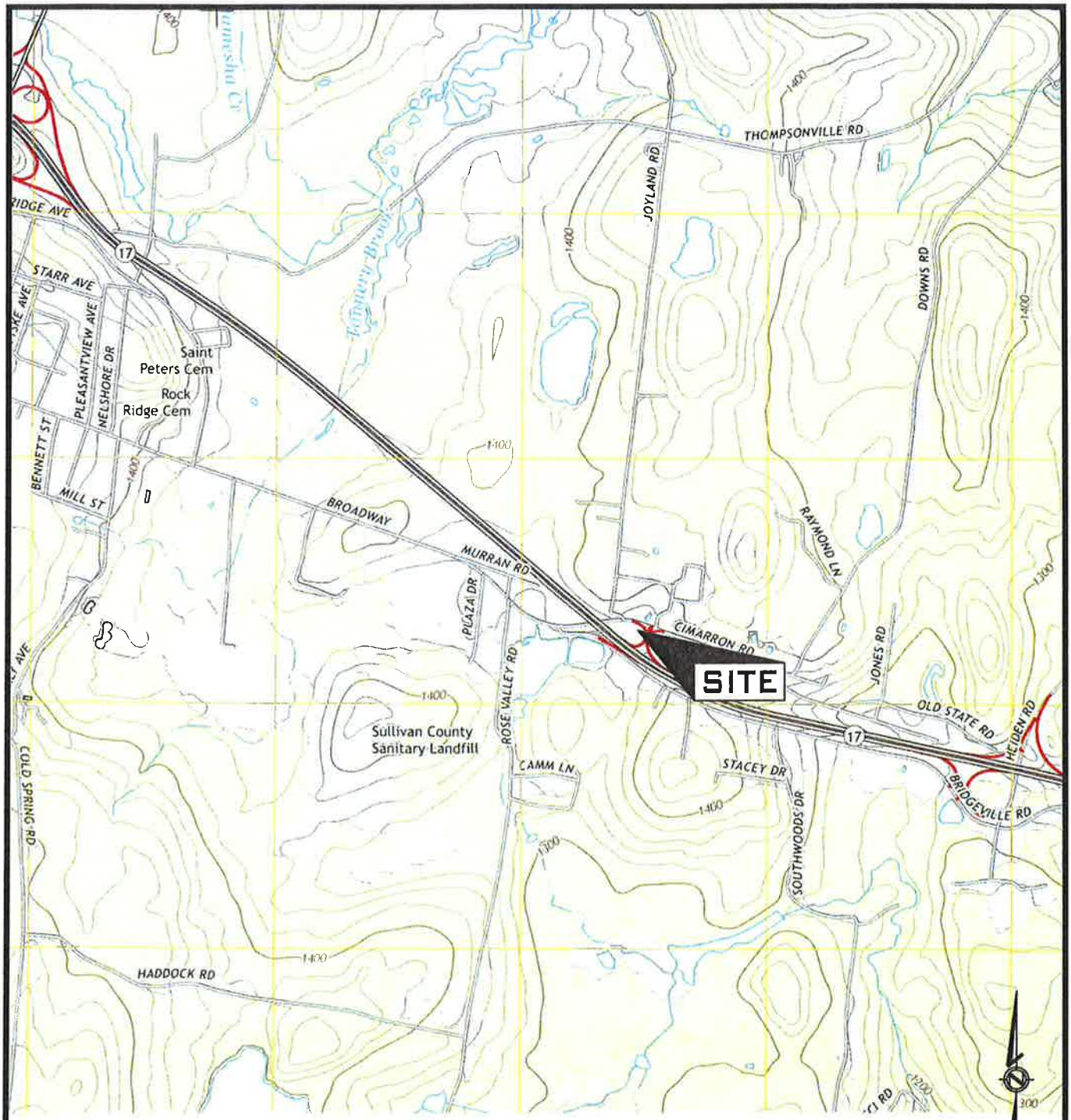
Vice President

JHB:TEH/mh
8979-006*1D
(3 copies submitted)



FROM: "Monticello Quadrangle, NY, 7.5 Minute Series (Topographic)," USGS, 2013.

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SITE LOCATION MAP

PROPOSED INTERCHANGE IMPROVEMENTS
THOMPSON, NEW YORK
CONCORD RESORT DEVELOPMENT

JOB NO.	FILE NO.	DR. BY	CHK. BY	DATE	SCALE	PLATE
8979–006*1D	25847	VJD	JHB	9–25–13	1"=2,000'	1

LOG OF TEST PIT

TEST PIT NO: 1

COMPLETION DATE: 9/04/13 | SURFACE ELEVATION: +1,374 ft (±) | WATER LEVEL: 2'

JOB NUMBER: 8979-006*1D | READING DATE: 9/04/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1			FILL - Red-brown fine to coarse sand, some silt, little fine to coarse gravel (moist)(medium dense)	
	S2	11.6	SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel (moist to wet)(medium dense)	
5	S3				5
	S4		SM	Red-brown fine to coarse sand, little silt, some fine to coarse gravel, occasional cobbles and boulders (wet)(dense)	
10				Test pit completed @ 10' Mottling observed @ 1.5' Slight groundwater seepage encountered @ 2' Rapid groundwater seepage encountered @ 6' Infiltration Test Performed @ 2' Measured Infiltration Rate = 0.5 in/hr	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-1

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 2

COMPLETION DATE: 9/04/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,376 ft (±)

WATER LEVEL: 4'
READING DATE: 9/04/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				7" Topsoil	
	S1	9.3		FILL - Red-brown fine to coarse sand, some silt, some fine to coarse gravel (moist)(medium dense)	
5	S2	8.2	SM	Red-brown fine to coarse sand, some silt, little fine to coarse gravel (moist)(medium dense)	5
	S3	5.5	GP	Red-brown fine to coarse gravel, little fine to coarse sand, trace silt, occasional cobbles (moist)(medium dense)	
10					10
				Test pit completed @ 11' Mottling observed @ 3'-6" Moderate groundwater seepage encountered @ 4' Infiltration Test Performed @ 2.5' Measured Infiltration Rate = 18 in/hr Infiltration Test Performed @ 3.5' Measured Infiltration Rate = 8 in/hr	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-2

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 3

COMPLETION DATE: 9/04/13 | SURFACE ELEVATION: +1,376 ft (±) | WATER LEVEL: *

JOB NUMBER: 8979-006*1D | READING DATE: 9/04/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				FILL - 2" Clean stone	
	S1			FILL - Red-brown fine to coarse sand, and silt, little fine to coarse gravel (moist)(medium dense)	
	S2		SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel, occasional cobbles and boulders (moist to wet)(medium dense)	
5	S3	9.1			5
				- backhoe refusal encountered @ 8' atop boulders	
10				Test pit completed @ 8'	10
				Mottling observed at 2'-6"	
				*Slight perched groundwater seepage encountered @ 1'	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-3

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 4

COMPLETION DATE: 9/04/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,377 ft (±)

WATER LEVEL: 6'-6"
READING DATE: 9/04/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				FILL - 2" Clean stone over 10" processed stone	
	S1	8.1	SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel (moist)(medium dense)	
	S2				
5	S3	12.0	SM	Red-brown fine to coarse sand, some silt, little fine to coarse gravel (moist)(medium dense)	5
				- test pit terminated @ 9' due to sidewall collapse	
10				Test pit completed @ 9' Mottling observed at 1'-6" Moderate groundwater seepage encountered @ 6'-6"	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-4

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 5

COMPLETION DATE: 9/11/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,379 ft (±)

WATER LEVEL: 4'
READING DATE: 9/11/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				4" Topsoil	
				FILL - Red-brown silt, some fine to coarse sand, some fine to coarse gravel (moist)(stiff)	
	S1			FILL - Concrete and asphalt construction rubble (wet)(loose)	
5	S2			FILL - Red-brown fine to coarse sand, some silt, little fine to coarse gravel, with asphalt fragments (wet)(loose)	5
	S3		SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel (moist to wet)(medium dense)	
10					10
				Test pit completed @ 11' Mottling observed @ 7' Perched groundwater seepage encountered @ 4' Slight groundwater seepage encountered @ 11' Perched groundwater seepage too rapid to initiate infiltration test	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-5

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 6

COMPLETION DATE: 9/12/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,379 ft (±)

WATER LEVEL: 4'
READING DATE: 9/12/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				4" Topsoil	
	S1			FILL - Red-brown fine to coarse sand, some silt, some fine to coarse gravel, with concrete fragments (moist)(loose)	
	S2				
5					5
	S3	7.5	SM	Red-brown fine to coarse sand, some silt, little fine gravel (moist)(dense)	
10				Test pit completed @ 9' Slight perched groundwater seepage encountered @ 4' Infiltration Test Inititiated @ 7' Presoak did not drain	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-6

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 7

COMPLETION DATE: 9/13/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,377 ft (±)

WATER LEVEL: 2'
READING DATE: 9/13/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				2" Topsoil	
	S1			FILL - Gray-brown fine to coarse sand, and silt (moist to wet)(medium dense)	
				- broke 1" copper line @ 4'	
5				- repaired line and abandoned test pit @ 5'	5
				Test pit completed @ 5'	
10				Perched groundwater seepage encountered @ 2'	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-7

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Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 8

COMPLETION DATE: 9/12/13 | SURFACE ELEVATION: +1,378.5 ft (±) | WATER LEVEL: 3'

JOB NUMBER: 8979-006*1D | READING DATE: 9/12/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1			FILL - Gray fine to coarse sand, little silt (moist to wet)(loose)	
5			SM	Brown fine to coarse sand, and silt, little fine to coarse gravel (moist)(medium dense) - test pit completed @ 6' due to rapid groundwater infiltration and sidewall collapse	5
10				Test pit completed @ 6' Mottling observed @ 4' Rapid groundwater seepage encountered @ 3' and 6' Infiltration Test Initiated @ 2' Presoak did not drain	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-8

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 9

COMPLETION DATE: 9/13/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,383 ft (±)

WATER LEVEL: 3'
READING DATE: 9/13/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
5				Test pit not advanced due to standing water	5
10					10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-9

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 10

COMPLETION DATE: 9/12/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,380 ft (±)

WATER LEVEL: 2'
READING DATE: 9/12/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				2" Topsoil	
	S1		SM	Gray fine to coarse sand, little silt (moist)(medium dense)	
	S2		SM	Gray-brown fine to coarse sand, some silt; little fine to coarse gravel, occasional cobbles and boulders (moist to wet)(dense)	
5					5
10				Test pit completed @ 10'-6" Mottling observed @ 4" Moderate groundwater seepage encountered @ 2'	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-10

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 11

COMPLETION DATE: 9/12/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,382.5 ft (±)

WATER LEVEL: 3'
READING DATE: 9/12/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1			FILL - Red-brown silt, and fine to coarse sand, trace fine gravel, trace cobbles (moist to wet)(medium dense)	
				FILL - Soil intermixed with asphalt fragments and metal debris	
5	S2	8.9	SM	Red-brown fine to coarse sand, and silt, little fine gravel (moist to wet)(dense)	5
10				Test pit completed @ 10' Moderate groundwater seepage encountered @ 3' Infiltration Test Initiated @ 2' Presoak did not drain	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-11

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 12

COMPLETION DATE: 9/13/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,384 ft (±)

WATER LEVEL: 3'
READING DATE: 9/13/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				4" Topsoil	
	S1			FILL - Red-brown fine to coarse sand, some silt, trace fine gravel (moist)(medium dense)	
	S2				
				Gray fine to coarse sand, and silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(medium dense)	
5			SM		5
	S3				
10					10
				Test pit completed @ 10'-6"	
				Slight groundwater seepage encountered @ 3'	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-12

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 13

COMPLETION DATE: 9/13/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,389 ft (±)

WATER LEVEL: *
READING DATE: 9/13/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				FILL - Organic mulch, tree limbs, wood, glass, and roots	
5	S1	8.6	SM	Red-brown fine to coarse sand, some silt, little fine gravel (moist)(medium dense)	5
10			SM	Red-brown fine to coarse sand, and silt (wet)(medium dense)	10
15				Test pit completed @ 11' Mottling observed @ 3' *Groundwater not encountered	15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-13

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 14

COMPLETION DATE: 9/11/13 | SURFACE ELEVATION: +1,390 ft (±) | WATER LEVEL: 8'-6"

JOB NUMBER: 8979-006*1D | READING DATE: 9/11/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1			FILL - Red-brown fine to coarse sand, and silt, trace fine to coarse gravel, intermixed with wood and roots (moist)(medium dense)	
	S2		SM	Red-brown fine to coarse sand, some silt, little to some fine to coarse gravel, occasional cobbles and boulders (moist)(medium dense to dense)	
5					5
10	S3				10
15				Test pit completed @ 12' Motting observed @ 2' Slight groundwater seepage encountered @ 8'-6" Moderate groundwater seepage encountered @ 11'-6" Infiltration Test Initiated @ 5' Presoak did not drain	15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-14

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 15

COMPLETION DATE: 9/11/13 | SURFACE ELEVATION: +1,395 ft (±) | WATER LEVEL: 5'

JOB NUMBER: 8979-006*1D | READING DATE: 9/11/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1		SM	Red-brown fine to medium sand, and silt (moist)(medium dense)	
	S2		SM	Red-brown fine to coarse sand, some to and silt, some fine to coarse gravel, occasional cobbles (moist to wet)(medium dense to dense)	
5	S3		SM		5
10	S4				10
				Test pit completed @ 11' Mottling observed @ 1'-6" Slight groundwater seepage encountered @ 5' Infiltration Test Initiated @ 2' Presoak did not drain	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-15

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 16

COMPLETION DATE: 9/12/13 | SURFACE ELEVATION: +1,404.5 ft (±) | WATER LEVEL: *

JOB NUMBER: 8979-006*1D | READING DATE: 9/12/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1		SM	Red-brown fine to coarse sand, and silt, trace fine to coarse gravel, occasional cobbles (moist)(medium dense)	
5	S2		SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(medium dense to dense)	5
10				Test pit completed @ 11' Mottling observed @ 2' *Groundwater not encountered	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-16

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 17

COMPLETION DATE: 9/11/13 | SURFACE ELEVATION: +1,409 ft (±) | WATER LEVEL: 11'

JOB NUMBER: 8979-006*1D | READING DATE: 9/11/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1		SM	Red-brown fine to medium sand, and silt (moist)(medium dense)	
	S2		SM	Gray fine to coarse sand, some silt, little to some fine to coarse gravel, occasional cobbles and boulders (moist)(medium dense to dense)	
5					5
10	S3				10
				Test pit completed @ 11'-6" Mottling observed @ 2' Moderate groundwater seepage encountered @ 11'	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-17

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 18

COMPLETION DATE: 9/11/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,413.5 ft (±)

WATER LEVEL: 11'
READING DATE: 9/11/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				6" Topsoil	
			SM	Red-brown fine to medium sand, and silt (moist)(medium dense)	
5	S1		SM	Red-brown fine to coarse sand, some silt, some to and fine to coarse gravel, occasional cobbles and boulders (moist)(medium dense to dense)	5
	S2				
10					10
				Test pit completed @ 10'-6"	
				Mottling observed @ 3'	
				*Groundwater not encountered	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-18

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 19

COMPLETION DATE: 9/11/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,418.5 ft (±)

WATER LEVEL: *
READING DATE: 9/11/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				FILL - Silty sand intermixed with tree limbs, stumps, roots and debris	
				FILL - Red-brown fine to coarse sand, and silt (moist)(loose to medium dense)	
	S1		SM	Red-brown fine to coarse sand, little silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(dense)	
5					5
10	S2				10
				Test pit completed @ 10'-6"	
				Mottling observed @ 9'	
				*Groundwater not encountered	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-19

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 20

COMPLETION DATE: 9/11/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,421.5 ft (±)

WATER LEVEL: *
READING DATE: 9/11/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				2" Topsoil	
	S1		SM	Red-brown fine to medium sand, and silt (wet)(medium dense)	
	S2			Red-brown fine to coarse sand, some to and silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(medium dense to dense)	
5			SM		5
	S3				
10					10
				Test pit completed @ 11'	
				*Groundwater not encountered	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-20

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 21

COMPLETION DATE: 9/10/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,423 ft (±)

WATER LEVEL: *
READING DATE: 9/10/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				4" Topsoil	
	S1		SM	Red-brown fine to coarse sand, and silt, little fine to coarse gravel (moist)(medium dense)	
	S2				
5	S3		SM	Red-brown fine to coarse sand, and silt, some fine to coarse gravel, occasional cobbles and boulders (moist to wet)(medium dense to dense)	5
10				Test pit completed @ 11' Mottling observed @ 3' Moderate groundwater seepage encountered @ 7'-6"	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-21

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 22

COMPLETION DATE: 9/4/13 | SURFACE ELEVATION: +1,425.5 ft (±) | WATER LEVEL: *

JOB NUMBER: 8979-006*1D | READING DATE: 9/4/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1		SM	Red-brown fine to coarse sand, and silt, trace fine gravel (moist)(medium dense)	
	S2			Red-brown fine to coarse sand, and silt, some fine to coarse gravel, occasional to frequent cobbles and boulders (moist)(medium dense to very dense)	
	S3				
5			SM		5
10				Test pit completed @ 9'	10
				Mottling observed @ 2'-6"	
				*Groundwater not encountered	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-22

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 23

COMPLETION DATE: 9/10/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,427 ft (±)

WATER LEVEL: 4'
READING DATE: 9/10/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				4" Topsoil	
			SM	Red-brown fine to coarse sand, and silt (moist)(medium dense)	
				Red-brown fine to coarse sand, some silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(dense)	
	S1				
5			SM		5
10	S2				10
				Test pit completed @ 10'	
				Mottling observed @ 1'-6"	
				Moderate groundwater seepage encountered @ 4'	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-23

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 24

COMPLETION DATE: 9/11/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,429 ft (±)

WATER LEVEL: *
READING DATE: 9/11/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				3" Concrete slab	
	S1			FILL - Red-brown fine to coarse sand, some silt, some fine to coarse gravel (moist)(medium dense)	
	S2				
5					5
			SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel, frequent cobbles and boulders (moist)(dense)	
10					10
				Test pit completed @ 11'	
				*Groundwater not encountered	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-24

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 25

COMPLETION DATE: 9/12/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,422 ft (±)

WATER LEVEL: *
READING DATE: 9/12/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				2" Topsoil	
	S1		SM	Red-brown fine to medium sand, some silt (moist)(medium dense)	
	S2		SM	Red-brown fine to coarse sand, little to some silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(medium dense to dense)	
5	S3			- backhoe refusal encountered @ 9' atop nested boulders	5
10				Test pit completed @ 9' Mottling observed @ 3' *Groundwater not encountered	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-25

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 26

COMPLETION DATE: 9/11/13 | SURFACE ELEVATION: +1,426.5 ft (±), | WATER LEVEL: *

JOB NUMBER: 8979-006*1D | READING DATE: 9/11/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				3" Topsoil	
	S1			FILL - Red-brown fine sand, and silt, little fine to coarse gravel (moist)(medium dense)	
	S2		SM	Red-brown fine to coarse sand, little to some silt, little fine to coarse gravel, occasional cobbles (moist)(medium dense)(possible fill)	
5					5
	S3		SM	Red-brown fine to coarse sand, little silt, some fine to coarse gravel, occasional cobbles (moist)(medium dense)	
10					10
				Test pit completed @ 10'-6" Mottling observed @ 2' *Groundwater not encountered	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-26

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 27

COMPLETION DATE: 9/4/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,425 ft (±)

WATER LEVEL: *
READING DATE: 9/4/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				7" Topsoil	
			SM	Red-brown fine to medium sand, some silt, little fine to coarse gravel (moist)(medium dense)	
	S1	5.3	SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(medium dense)	
5	S2	6.2	GM	Red-brown fine to coarse gravel, and fine to coarse sand, little silt (moist)(dense)	5
10				Test pit completed @ 10' Mottling observed @ 3' *Groundwater not encountered	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-27

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 28

COMPLETION DATE: 9/12/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,421 ft (±)

WATER LEVEL: *
READING DATE: 9/12/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				2" Topsoil	
	S1			FILL - Red-brown fine to coarse sand, some silt, some fine to coarse gravel (moist)(loose)	
				Red-brown fine to coarse sand, little to some silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(medium dense)	
5	S2		SM		5
				- backhoe refusal encountered @ 10' atop nested boulders	
10	S3				10
				Test pit completed @ 10'	
				Mottling observed @ 2'-6"	
				*Groundwater not encountered	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

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MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 29

COMPLETION DATE: 9/12/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,412.5 ft (±)

WATER LEVEL: *
READING DATE: 9/12/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				FILL - Red-brown fine to coarse sand, some silt, some fine to coarse gravel, occasional cobbles (moist)(dense)	
5	S1		SM	Red-brown fine to coarse sand, little to some silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(dense)	5
10				Test pit completed @ 10' Mottling observed @ 4' *Groundwater not encountered	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-29

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF TEST PIT

TEST PIT NO: 30

COMPLETION DATE: 9/13/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,364 ft (±)

WATER LEVEL: *
READING DATE: 9/13/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1			FILL - Red-brown fine to coarse sand, and silt, some fine to coarse gravel, some cobbles, boulders and asphalt fragments (moist)(medium dense)	
5	S2		SM	Red-brown fine to coarse sand, and silt, little fine to coarse gravel, occasional cobbles (moist)(medium dense to dense)	5
10				Test pit completed @ 7'-6" Mottling observed @ 2'-6" *Groundwater not encountered	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-30

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 31

COMPLETION DATE: 9/10/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,369 ft (±)

WATER LEVEL: *
READING DATE: 9/10/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1			FILL - Gray-brown fine to coarse sand, some silt, little fine to coarse gravel, some concrete debris (moist)(dense)	
	S2				
5					5
				FILL - Brown silty sand, with roots (original topsoil)	
	S3		SM	Red-brown fine to coarse sand, and silt, little fine to coarse gravel, occasional cobbles and boulders (moist)(dense)	
				- backhoe refusal encountered @ 10' atop boulder	
10					10
				Test pit completed @ 10'	
				*Groundwater not encountered	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-31

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 32

COMPLETION DATE:
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: N/A

WATER LEVEL:
READING DATE:

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
5				Test pit No. 32 not advanced Proposed location had numerous utilities which were not clearly marked	5
10					10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-32

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 33

COMPLETION DATE: 9/10/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,368 ft (±)

WATER LEVEL: 8'
READING DATE: 9/10/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				FILL - Silty sand, intermixed with concrete rubble and boulders (moist)(loose)	
5	S1			FILL - Gray-brown fine to medium sand, some silt, trace fine to coarse gravel (moist)(medium dense)	5
			SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel, occasional cobbles (moist)(dense)	
10				Test pit completed @ 10'-6" Rapid perched seepage encountered @ 2' Moderate groundwater seepage encountered @ 8' Test pit relocated twice to penetrate concrete rubble Infiltration Test Attempted @ 8' Perched groundwater seepage too rapid to initiate test	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-33

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 34

COMPLETION DATE: 9/10/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: 1,367 ft (±)

WATER LEVEL: *
READING DATE: 9/10/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1			FILL - Brown fine to coarse sand, and silt, some fine to coarse gravel, with cobbles and boulders (moist)(medium dense)	
5	S2				5
	S3				
				FILL - Brown silty sand, with roots (original topsoil)	
	S4	23.0	SM	Red-brown fine to coarse sand, and silt, little fine gravel (very moist)(medium dense)	
10					10
	S5				
				Test pit completed @ 12' Mottling observed @ 9' *Groundwater not encountered Infiltration Test Performed @ 11' Measured Infiltration Rate = 3.8 in/hr	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-34

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 35

COMPLETION DATE: 9/10/13 | SURFACE ELEVATION: +1,372 ft (±) | WATER LEVEL: *

JOB NUMBER: 8979-006*1D | READING DATE: 9/10/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1			FILL - Red-brown fine sand, some silt, little fine to coarse gravel (moist)(medium dense)	
5	S2		SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel, occasional cobbles (moist)(medium dense to dense)	5
	S3	9.1	SM	Red-brown fine to coarse sand, and silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(dense)	
10	S4				10
				Test pit completed @ 11' Mottling observed @ 5' *Groundwater not encountered Infiltration Test Performed @ 6' Measured Infiltration Rate = 2 in/hr	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-35

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 36

COMPLETION DATE: 9/10/13 | SURFACE ELEVATION: +1,373 ft (±) | WATER LEVEL: *

JOB NUMBER: 8979-006*1D | READING DATE: 9/10/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1		SM	Red-brown fine to coarse sand, little silt, little fine to coarse gravel (moist)(dense)	
	S2	6.7	SM	Gray fine to coarse sand, some silt, trace fine gravel (moist)(dense)	
5					5
	S3		SM	Gray-brown fine to medium sand, and silt, little fine gravel, occasional cobbles and boulders (moist)(dense to very dense)	
10	S4				10
				Test pit completed @ 10'-6" *Groundwater not encountered Infiltration Test Performed @ 4' Measured Infiltration Rate = 4 in/hr	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-36

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 37

COMPLETION DATE: 9/13/13
JOB NUMBER: 8979-006*1D

SURFACE ELEVATION: +1,372 ft (±)

WATER LEVEL: *
READING DATE: 9/13/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1			FILL - Red-brown fine to coarse sand, little silt, with gravel, roots, plastic and metal debris (moist)(loose)	
5					5
	S2		SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(medium dense)	
10	S3				10
				Test pit completed @ 11' Mottling observed @ 4' *Groundwater not encountered	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-37

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 38

COMPLETION DATE: 9/10/13 | SURFACE ELEVATION: +1,364 ft (±) | WATER LEVEL: 10'-6"

JOB NUMBER: 8979-006*1D | READING DATE: 9/10/13

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
0				2" Topsoil	0
	S1		SM	Red-brown fine sand, and silt, trace fine to coarse gravel (moist)(medium dense)	
5					5
	S2		SM	Red-brown fine to coarse sand, some silt, some fine to coarse gravel, occasional cobbles and boulders (moist)(very dense)	
10					10
				Test pit completed @ 11' Moderate groundwater seepage encountered @ 10'-6"	
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/13

Sheet: 1 of 1 PLATE: 3-38

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS More than 50% of material is LARGER than No. 200 Sieve	GRAVEL & GRAVELLY SOILS More than 50% of coarse fraction RETAINED on No. 4 Sieve	CLEAN GRAVELS (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES (Appreciable amount of fines)	GM	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures.
	SAND AND SANDY SOILS More than 50% of coarse fraction PASSING a No. 4 Sieve	CLEAN SAND (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines.
			SP	Poorly-graded sands, gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS More than 50% of material is SMALLER than No. 200 Sieve.	SILTS AND CLAYS	Liquid limit LESS than 50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS	Liquid limit GREATER than 50	MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			PT	Peat, humus, swamp soils with high organic contents

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

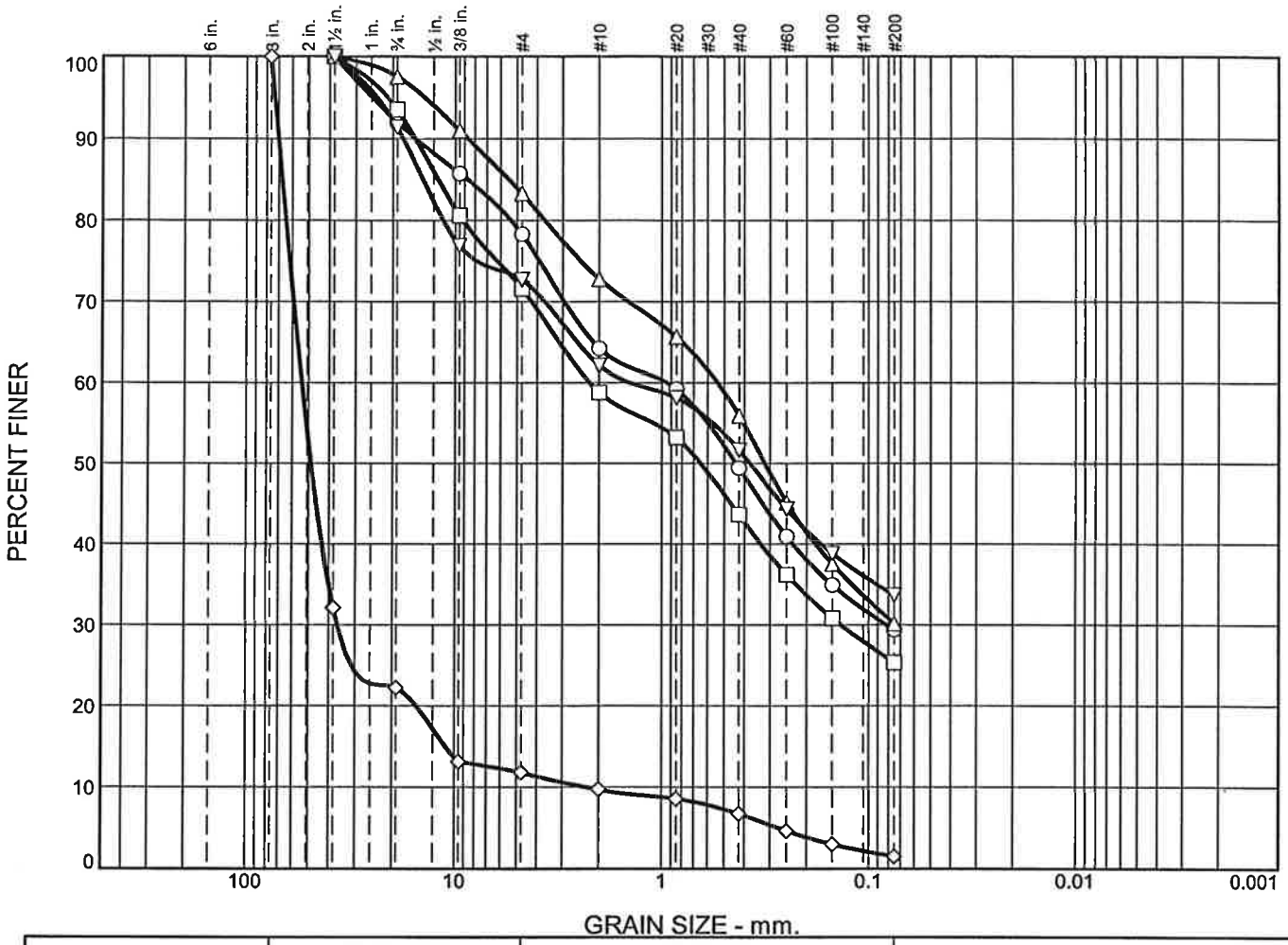
GRADATION*		COMPACTNESS* sand and/or gravel		CONSISTENCY* clay and/or silt	
% Finer by Weight		Relative Density		Range of Shearing Strength in Pounds per Square Foot	
Trace	0% to 10%	Loose	0% to 40%	Very Soft	less than 250
Little	10% to 20%	Medium Dense	40% to 70%	Soft	250 to 500
Some	20% to 35%	Dense	70% to 90%	Medium	500 to 1000
And	35% to 50%	Very Dense	90% to 100%	Stiff	1000 to 2000
				Very Stiff	2000 to 4000
				Hard	Greater than 4000

**Values are from laboratory or field test data, where applicable. When no testing was performed, values are estimated.*

UNIFIED SOIL CLASSIFICATION SYSTEM

SOIL CLASSIFICATION CHART

Gradation Curve(s)



	% Cobbles	% Gravel		% Sand			% Fines
		Coarse	Fine	Coarse	Medium	Fine	
○	0.0	8.0	13.7	14.1	14.8	20.0	29.4
□	0.0	6.5	21.9	12.8	15.2	18.2	25.4
△	0.0	2.5	14.2	10.6	16.8	25.8	30.1
◇	0.0	77.8	10.4	2.1	3.0	5.2	1.5
▽	0.0	8.6	18.7	10.6	10.5	17.9	33.7

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	TP-1	S-2	2	Fine to coarse Sand, some Silt, some f-c Gravel. (MC=11.6%)	SM
□	TP-2	S-1	3	Fine to coarse Sand, some Silt, some f-c Gravel. (MC=9.3%)	Fill
△	TP-2	S-2	5	Fine to coarse Sand, some Silt, little f-c Gravel. (MC=8.2%)	SM
◇	TP-2	S-3	9	Fine to coarse Gravel, little f-c Sand, trace Silt. (MC=5.5%)	GP
▽	TP-3	S-3	8	Fine to coarse Sand, some Silt, some f-c Gravel. (MC=9.1%)	SM

Melick-Tully & Associates, P.C.

South Bound Brook, NJ

Client: Concord Resort Development

Project: Proposed Interchange Improvements, Thompson, NY

Project No.: 8979-006 **Plate** 5A

Gradation Curve(s)

	% Cobbles	% Gravel		% Sand			% Fines
		Coarse	Fine	Coarse	Medium	Fine	
○	0.0	4.7	19.5	10.0	16.4	20.4	29.0
□	0.0	3.9	12.2	4.8	16.9	34.7	27.5
△	0.0	0.0	17.1	14.9	16.2	21.0	30.8
◇	0.0	0.0	15.6	10.2	14.1	22.9	37.2
▽	0.0	0.0	13.0	13.8	17.6	23.6	32.0

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	TP-4	S-1	2	Fine to coarse Sand, some Silt, some f-c Gravel. (MC=8.1%)	SM
□	TP-4	S-2	6	Fine to coarse Sand, some Silt, little f-c Gravel. (MC=12.0%)	SM
△	TP-6	S-3	7	Fine to coarse Sand, some Silt, little fine Gravel. (MC=7.5%)	SM
◇	TP-11	S-2	6	Fine to coarse Sand, and Silt, little fine Gravel. (MC=8.9%)	SM
▽	TP-13	S-1	4	Fine to coarse Sand, some Silt, little fine Gravel. (MC=8.6%)	SM

Melick-Tully & Associates, P.C.

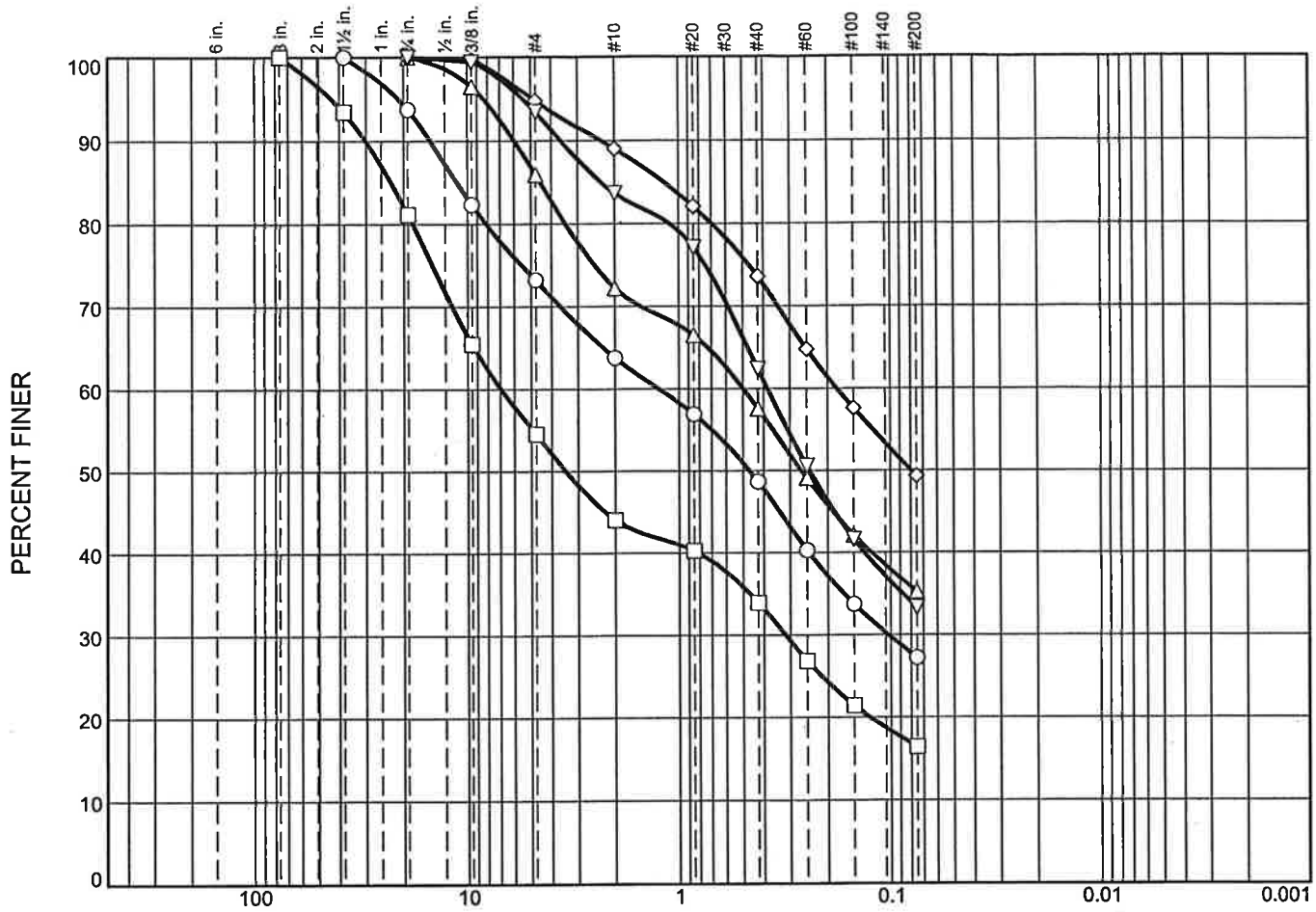
South Bound Brook, NJ

Client: Concord Resort Development

Project: Proposed Interchange Improvements, Thompson, NY

Project No.: 8979-006 **Plate** 5B

Gradation Curve(s)



	% Cobbles	% Gravel		% Sand			% Fines
		Coarse	Fine	Coarse	Medium	Fine	
○	0.0	6.3	20.5	9.4	15.1	21.5	27.2
□	0.0	18.9	26.5	10.6	10.1	17.5	16.4
△	0.0	0.0	14.0	13.8	14.7	22.3	35.2
◇	0.0	0.0	5.2	5.8	15.4	24.3	49.3
▽	0.0	0.0	6.5	9.8	21.3	29.1	33.3

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	TP-27	S-1	3	Fine to coarse Sand, some Silt, some f-c Gravel. (MC=5.3%)	SM
□	TP-27	S-2	6	Fine to coarse Gravel, and f-c Sand, little Silt. (MC=6.2%)	GM
△	TP-34	S-4	9.5	Fine to coarse Sand, and Silt, little fine Gravel. (MC=23.0%)	SM
◇	TP-35	S-3	7	Fine to coarse Sand, and Silt, trace fine Gravel. (MC=9.1%)	SM
▽	TP-36	S-2	3	Fine to coarse Sand, some Silt, trace fine Gravel. (MC=6.7%)	SM

Melick-Tully & Associates, P.C.

South Bound Brook, NJ

Client: Concord Resort Development

Project: Proposed Interchange Improvements, Thompson, NY

Project No.: 8979-006 **Plate** 5C

SUMMARY OF INFILTRATION TEST RESULTS
Thompson, New York
Proposed Route 17 Interchange Improvements

Test No.	Approximate Surface Elevation *(ft.)*	Approximate Test Depth *(ft)*	Observed Infiltration Rate *(in/hr)*
1	+1,374	2.0	0.5
2	+1,376	2.5	18.0
2	+1,376	3.5	9.0
5	+1,379	7.0	*(2)*
6	+1,379	7.0	*(1)*
8	+1,378.5	2.0	*(1)*
11	+1,382.5	2.0	*(1)*
14	+1,390	5.0	(1)
14	+1,390	8.0	*(3)*
15	+1,395	2.0	*(1)*
33	+1,368	8.0	*(2)*
34	+1,367	11.0	3.8
35	+1,372	6.0	2.0
36	+1,373	4.0	4.0

Notes:

(1) *Presoak did not drain*
(2) *Perched groundwater seepage too rapid to initiate test*
(3) *Test hole filled with water*

APPENDIX

Limitations

A. Subsurface Information

Locations: The locations of the explorations were approximately determined by tape measurement from a plan entitled "Geotechnical Soil Investigation Plan" prepared by AKRF dated May 8, 2013. Elevations of the explorations were approximately determined by interpolation between contours shown on topographic plans provided to us by the site engineer. The locations and elevations of the explorations should be considered accurate only to the degree implied by the method used.

Interface of Strata: The stratification lines shown on the individual logs of the subsurface explorations represent the approximate boundaries between soil types, and the transitions may be gradual.

Field Logs/Final Logs: A field log was prepared for each exploration by a member of our staff. The field log contains factual information and interpretation of the soil conditions between samples. Our recommendations are based on the final logs as shown in this report and the information contained therein, and not on the field logs. The final logs represent our interpretation of the contents of the field logs, and the results of the laboratory observations and/or tests of the field samples.

Water Levels: Water level readings have been made in the explorations at times and under conditions stated on the individual logs. These data have been reviewed and interpretations made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater will occur due to variations in rainfall, temperature, and other factors.

Pollution/Contamination: Unless specifically indicated to the contrary in this report, the scope of our services was limited only to investigation and evaluation of the geotechnical engineering aspects of the site conditions, and did not include any consideration of potential site pollution or contamination resulting from the presence of chemicals, metals, radioactive elements, etc. This report offers no facts or opinions related to potential pollution/contamination of the site.

Environmental Considerations: Unless specifically indicated to the contrary in this report, this report does not address environmental considerations which may affect the site development, e.g., wetlands determinations, flora and fauna, wildlife, etc. The conclusions and recommendations of this report are not intended to supersede any environmental conditions which should be reflected in the site planning.

B. Applicability of Report

This report has been prepared in accordance with generally accepted soils and foundation engineering practices for the exclusive use of AKRF for specific application to the design of the proposed interchange improvements. No other warranty, expressed or implied, is made.

This report may be referred to in the project specifications for general information purposes only, but should not be used as the technical specifications for the work, as it was prepared for design purposes exclusively.

C. Reinterpretation of Recommendations

Change in Location or Nature of Facilities: In the event that any changes in the nature, design or location of the facilities are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing.

Changed Conditions During Construction: The analyses and recommendations submitted in this report are based in part upon the data obtained from 38 widely-spaced test pit excavations performed for this study. The nature and extent of variations between the explorations may not become evident until construction. If variations then appear evident, it will be necessary to reevaluate the recommendations of this report.

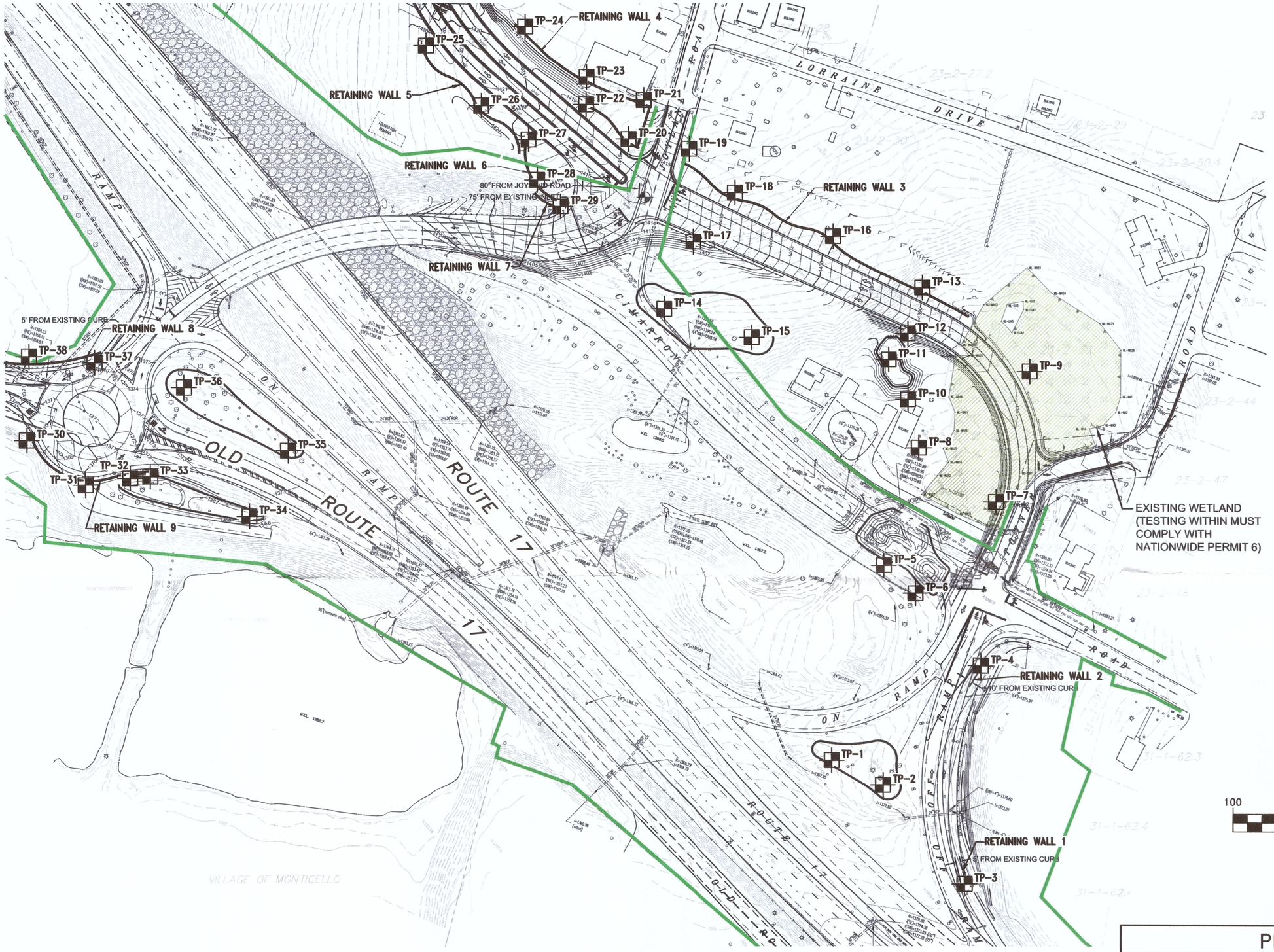
Changes in State-of-the-Art: The conclusions and recommendations contained in this report are based upon the applicable standards of our profession at the time this report was prepared.

D. Use of Report by Prospective Bidders

This soil and foundation engineering report was prepared for the project by Melick-Tully and Associates, P.C. for design purposes and may not be sufficient to prepare an accurate bid. Contractors utilizing the information in the report should do so with the express understanding that its scope was developed to address design considerations. Prospective bidders should obtain the owner's permission to perform whatever additional explorations or data gathering they deem necessary to prepare their bid accurately.

E. Construction Observation

We recommend that Melick-Tully and Associates, P.C. be retained to provide on-site soils engineering services during the earthwork construction and foundation phases of the work. This is to observe compliance with the design concepts and to allow changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.



GRAPHIC SCALE

100 0 50 100 200

1 inch = 100ft.

KEY:

TP-1 NUMBER AND APPROXIMATE LOCATION OF TEST PITS PERFORMED FOR THIS STUDY

NOTES:

1. This drawing is part of Melick–Tully and Associates, P.C. Report No. 8979–006*1D and should be read together with the report for complete evaluation.
2. General layout was obtained from a drawing prepared by AKRF Eng., entitled "Geotechnical Soil Investigation Plan", dated 5/8/13 (revised 12/19/12), scale 1"= 50'.

PLOT PLAN

PROPOSED INTERCHANGE IMPROVEMENTS
THOMPSON, NEW YORK
CONCORD RESORT DEVELOPMENT

MELICK–TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers
& Environmental Consultants
117 Canal Road
South Bound Brook, New Jersey 08880
(732) 356–3400

JOB NO.	FILE NO.
8979–006*1D	25847

DR. BY	CHK. BY	DATE	SCALE	PLATE
VJD	JHB	9–25–13	1"=100'	2