



UNITED
CONSULTING

ADDENDUM

No. 1

**For Mr. Rip Robertson
City of Tucker**

Test Pit Exploration
Tucker Town Green
Railroad Avenue & 2nd Street
Tucker, DeKalb County, Georgia

Project No.: TUCKE-24-GA-07852-02



March 18, 2024

Mr. Rip Robertson CPRE, CPSI
City of Tucker
Parks and Recreation

Via Email: RRobertson@tuckerga.gov

RE: Addendum Report of Test Pit Exploration
Tucker Town Green
Railroad Avenue & 2nd Stret
Tucker, DeKalb County, Georgia
Project No.: TUCKE-24-GA-07852-02

Dear Mr. Robertson:

This addendum report should be read in conjunction to our Report of Geotechnical Exploration for this project (Project number TUCKE-24-GA-07852-02, dated October 23, 2023).

The purpose of the current exploration was to better evaluate the composition of existing fill materials encountered in the previous borings and to estimate the extent of the poor fill. During this round of work, ten (10) test pits (designated as TP-1 through TP-10) were excavated by our subcontracted excavator using a Takeuchi TB2150 excavator. The test pits were located in the field by our engineer using a handheld GPS device. The approximate test pit locations and the previous borings are shown on attached Figure 1 – Boring and Test Pit Location Plan.

SUBSURFACE CONDITIONS – TEST PIT EXPLORATION

Initially, a thin layer of topsoil with gravel was encountered in the majority of the test pits. Below the topsoil or at the ground surface, fill soils were encountered in the test pits to depths ranging from approximately 2 to 14 feet. The fill soils encountered generally consisted of clayey/silty sand or sandy clay with varying amounts of minor constituents including rock fragments, cobbles, boulders, and various debris such as concrete, asphalt, brick, metal wires, wood, roots, and other organics fragments. Test pits TP-3 and TP-8 were terminated on possible gravel utility backfill at depths of approximately 14 and 5.5 feet, respectively, to avoid possible damage to the utilities.

Below the fill, alluvial soils were encountered in test pits TP-1, TP-2, and TP-4 through TP-7 to depths ranging from approximately 10 to 14 feet. The alluvium encountered generally consisted of silty/clayey sand or sandy clay with varying amounts of roots, mica, and rock fragments. Alluvial soils are deposited by flowing water and are often in a soft or loose condition.

Below the fill and alluvium, typical residual soils of the Piedmont Physiographic Province of Georgia were encountered in the test pits, except TP-3 and TP-8, to the termination depths ranging from approximately 6 to 18 feet. The residual soils encountered generally consisted of silty/clayey sand or sandy clay/silt with traces of roots and rock fragments.

Groundwater was encountered at the time of excavation in test pits TP-3 and TP-8 at depths of approximately 12.5 and 5.5 feet, respectively. Moist / wet soils, which could be indicators of groundwater, were also encountered in test pits TP-1 through TP-4 and TP-6 through TP-9 at depths ranging from approximately 4 to 13 feet. Stabilized groundwater levels are often several feet shallower than those at the time of excavation. Groundwater levels will fluctuate based on yearly and seasonal rainfall variations and may rise in the future. This site is also susceptible to the formation of shallower perched water levels during periods of wet weather, especially within the fill layer.

For a more detailed description of the subsurface conditions encountered, please refer to the test pit logs in The Appendix. A test pit summary table is presented below:

Table 1: Summary of Test Pit Data

Test Pit No.	Approx. Existing Ground Elevation (ft)*	Approx. Proposed Ground Elevation (ft)*	Fill Depth (ft)	Alluvium Depth (ft.)	Termination Depth (ft)	Groundwater Depth (ft)
TP-1	1094	1091	9	14	14	9***
TP-2	1091	1090	8	10	10	8***
TP-3	1091	1090	14	NE	14**	6*** / 12.5
TP-4	1091	1090	10	14	18	6***
TP-5	1090	1089	12	14	17	NE
TP-6	1090	1090	10	13	17	13***
TP-7	1091	1091	9	12	15	9***
TP-8	1091	1091	5.5	NE	5.5**	4*** / 5.5
TP-9	1097	1097	5	NE	10	5***
TP-10	1093	1092	2	NE	6	NE

NE – Not Encountered

*Test Pit locations and elevations were not surveyed and are very approximate.

**Test pits were terminated in the fill to avoid possible damage to utilities.

***Inferred from moisture contents of the excavated soils.

EXISTING FILL

Fill soils were encountered in the test pits to depths ranging from approximately 2 to 14 feet. The fill soils encountered generally consisted of clayey/silty sand or sandy clay with varying amounts of minor constituents including rock fragments, cobbles, boulders, and various debris such as concrete, asphalt, brick, metal wires, wood, roots, and other organics fragments. Test pits TP-3 and TP-8 were terminated on possible gravel utility backfill at depths of approximately 14 and 5.5 feet, respectively, to avoid possible damage to the utilities. Based on the results of the test pits and previous borings, it appears the majority of the fill is in the eastern two-third area of the site. The presence and depth of fill were indicated on the Boring and Test Pit Location Plan by green numbers below the boring for visual estimation of the extent of the fill. As with any undocumented fill, it is possible that other areas of poor-quality fill, debris or other deleterious materials could be present intermediate of the boring and test pit locations.

Most of the existing fill, provided it is free of deleterious and organic materials, generally appears to be suitable for reuse as engineered fill. Large debris fragments and boulders should be removed as practical as possible. Some of the fill soils will be sensitive to changes in moisture content. If grading takes place

during a period of wet weather, it may not be feasible to dry them using conventional aeration. If that is the case, they will need to be removed and replaced with drier soils or dried using chemical additives such as lime or cement.

The fill soils are not suitable for direct support of shallow foundations, floor slabs, or pavements and where not excavated during mass grading they would need to be removed and recompact or replaced; therefore, we recommend that contingency funds be included in the project budget for such remediation.

Our previous recommendation to remediate the fill has been changed. Remediation of the existing fill and low consistency soils to allow for the use of conventional shallow foundations for the proposed pavilion and restroom building should include removal and re-compaction or replacement of these materials with new engineered fill, within and at least 6 feet beyond the pavilion and restroom building footprints, to the depth of firm residual or alluvial soils or to a maximum depth that allows for at least 6 feet of new engineered fill below the planned foundation bearing elevations.

Remediation of the existing fill and low consistency soils to allow for the use of conventional shallow foundations for the proposed water fountain walls should include removal and re-compaction or replacement of these materials with new engineered fill, within and at least 4 feet beyond the structure footprints, to the depth of firm residual or alluvial soils or to a maximum depth that allows for at least 4 feet of new engineered fill below the planned foundation bearing elevations.

In addition, settlement monitoring should be performed in the structure areas where more than 2 feet of new fill will be placed to reach the proposed grades.

We recommend the fill in the pavement areas be further evaluated by proofrolling with a full-loaded tandem-axle dump truck at the time of construction. Localized stabilization prior to fill placement and at pavement subgrades using crushed stone, geosynthetics, or other methods may be required if low consistency soils are encountered near those grades, and funds for such remediation should also be included.

It should be noted that in any case where the undocumented fill remains below the foundation, slab, and pavement levels, there is an inherent risk of long-term settlement that can occur in the fill and the owner must be willing to accept the risk.

SETTLEMENT MONITORING

United Consulting anticipates that the new fill soils to reach the proposed finished floor elevations will cause general area settlement due to consolidation of the underlying soils in the areas. Therefore, in areas where more than 2 feet of new fill will be placed, settlement plates or surface monuments should be considered to monitor settlement due to the new fill prior to structure and pavement construction.

Once settlement ceases, the site should be re-graded as necessary and foundation construction, curb and gutter, pavement, etc. can commence in the engineered fill. We estimate that the majority of the anticipated settlement will occur during the placement of the fill and initial construction. Based on the type of soils encountered at the Project Site, we anticipate that the delay between completion of fill placement and initiation of foundation construction would be in the 4 to 6-week range.

Settlement plates should consist of 18-inch x 18-inch steel plates having a thickness of at least $\frac{3}{8}$ inch or a 36-inch x 36-inch timber plates with a $\frac{1}{2}$ -inch diameter rod or pipe attached at a 90-degree angle at the plate's center (see detail in Appendix). A 2.0-inch diameter PVC pipe should be placed around the settlement rod to prevent skin friction from interfering with settlement of the plates. Typical surface monuments would consist of concrete "pads" at least one-foot square with the bottom of the "pad" at least one foot below the fill surface. A survey pin or a piece of rebar is embedded within the concrete "pad" for shooting elevations. A diagram of a typical settlement plate configuration is included in The Appendix. The benchmark should be at least 200 feet from the area being filled and should be protected from construction activities. Stakes and flagging should be placed around the settlement plates to protect them from construction equipment.

The following lists the procedures for documenting the rate of settlement and when the information needs to be forwarded:

1. An initial elevation (0 reading) should be taken by a Registered Surveyor to establish plate and rod elevations. These elevations should be read to the nearest one-hundredth of a foot.
2. Elevation readings should be taken immediately after the placement of all fill and any surcharge material, daily for the first week following completion, and weekly thereafter on the same day of the week until settlement ceases.
3. Settlement data should be sent to the author at ydang@unitedconsulting.com on a weekly basis for review by the Geotechnical Engineer.

GROUNDWATER CONSIDERATIONS

Groundwater was encountered at the time of excavation in test pits TP-3 and TP-8 at depths of approximately 12.5 and 5.5 feet, respectively. Moist / wet soils, which could be indicators of groundwater, were encountered in test pits TP-1 through TP-4 and TP-6 through TP-9 at depths ranging from approximately 4 to 13 feet. The groundwater and indicators of groundwater were generally at shallower depths than those encountered in the previous borings. Based on the proposed construction, groundwater-related difficulties are anticipated to be encountered during construction, especially during the remediation of the existing fill and installation of the proposed underground detention units. Some of the site soils are susceptible to the formation of shallower perched water levels during periods of wet weather, especially within the fill layer. The contractor should be prepared to manage groundwater and perched water as needed. Groundwater should be lowered to depths of at least 2 feet below construction grades. In addition, a capillary break layer consisting of free draining granular material and a layer of vapor barrier should be installed below the pavilion and restroom building slabs.

CLOSURE

The result of this exploration does not indicate any further changes with regard to discussion and recommendations outlined in report of Geotechnical Exploration, dated October 23, 2023.


We appreciate the opportunity to assist you with this project. Please contact us if you have any questions or if we can be of further assistance.

Sincerely,

UNITED CONSULTING



Nhan "Yung" Dang, P.E.
Senior Geotechnical Engineer



Chris L. Roberds, P.G.
Senior Executive Vice President

YD/CLR/nj

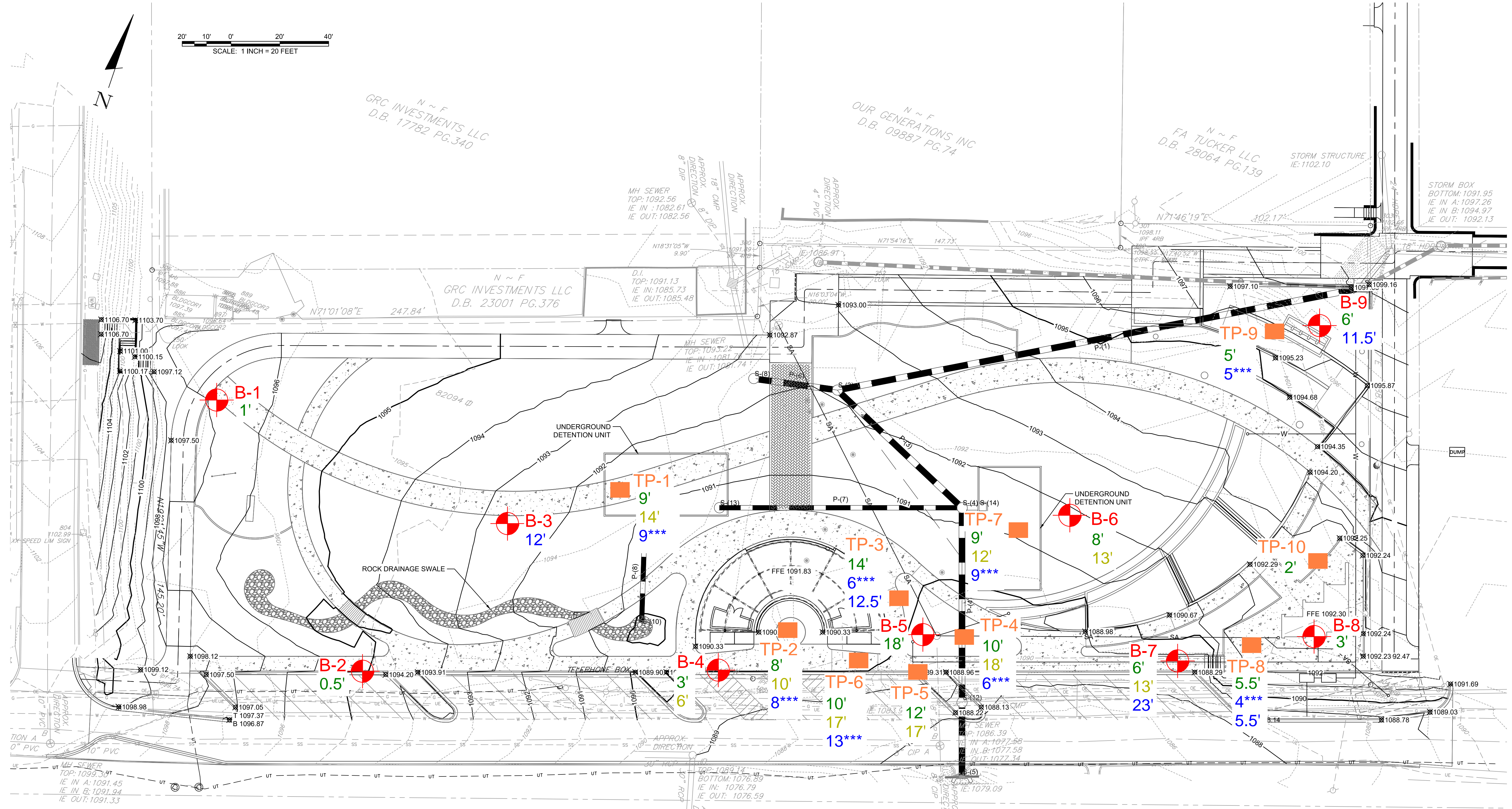
Attachments: Figure 1 –Boring and Test Pit Location Plan
Test Pit Logs (10)
Test Pit Photographs

SP: Geotechnical Services/TUCKE-24-GA-07852-02- Addendum.docx

Title:	Boring and Test Pit Location Plan
Project:	Tucker Town Green
Project No.:	TUCKE-24-GA-07852-02
Client:	City of Tucker

Prepared:	EDC
Checked:	NYD
Date:	03/14/2024
Scale:	NTS



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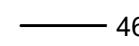
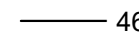
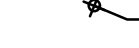


REFERENCE: Sheet C2.01 Grading & Drainage Plan (Preliminary), prepared by Barge Design Solutions, undated.

NOTES: Borings and test pits locations and elevations were not field-surveyed and are approximate. Borings and test pits were backfilled with soil cuttings.

LEGEND

-  SPT Boring
-  Test Pit Location
- 14' Approx. Depth of Existing Fill (ft.)
- 13' Approx. Depth of Alluvium (ft.)
- 5.5' Shallowest Groundwater Encountered (ft.)
***Based on saturation level of the excavated soils.

LEGEND

-  465 PROPOSED MINOR CONTOUR
-  465 PROPOSED MAJOR CONTOUR
-  464 PROPOSED SPOT ELEVATION
-  465 EXISTING MINOR CONTOUR
-  465 EXISTING MAJOR CONTOUR

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Tucker Town Green

TP-1

Railroad Avenue & 2nd Street, Tucker, Georgia

Page 1 of 1

Client Name:	City of Tucker	Project No.:	TUCKE-24-GA-07852-02	Remarks: Test pit's location and elevation were not field-surveyed and are approximate. Test pit was backfilled with soil cuttings.
Contractor:	Arc One	Date:	03/11/24	
Logged By:	Emily Casey	Surface...:	~1094'	
Checked By:	Yung Dang	Proposed...:	1091'	
Method:	Takeuchi TB2150, 4' Bucket	Water Level At Time Of Drilling:	N.E.	Delayed Water Level: Not...
		Cave-in At Time Of Drilling:	N/A	Delayed Water Observation Date: N/A

Depth (ft)	Elevation (ft)	Graphic Log	Visual Classification and Remarks	
			Topsoil - some gravel	0.2
			Sand - clayey, trace rock fragments, reddish brown with tan (fill)	
	1090			
5			Organic odor, trace lumber, trace roots, dry to moist, grayish brown to light gray	
	1085			9.0
			Sand - silty, some clay, trace rock fragments, moist, orangish tan and gray (alluvium)	
10				
	1080			14.0

Test Pit Terminated at 14 feet



Tucker Town Green

TP-2

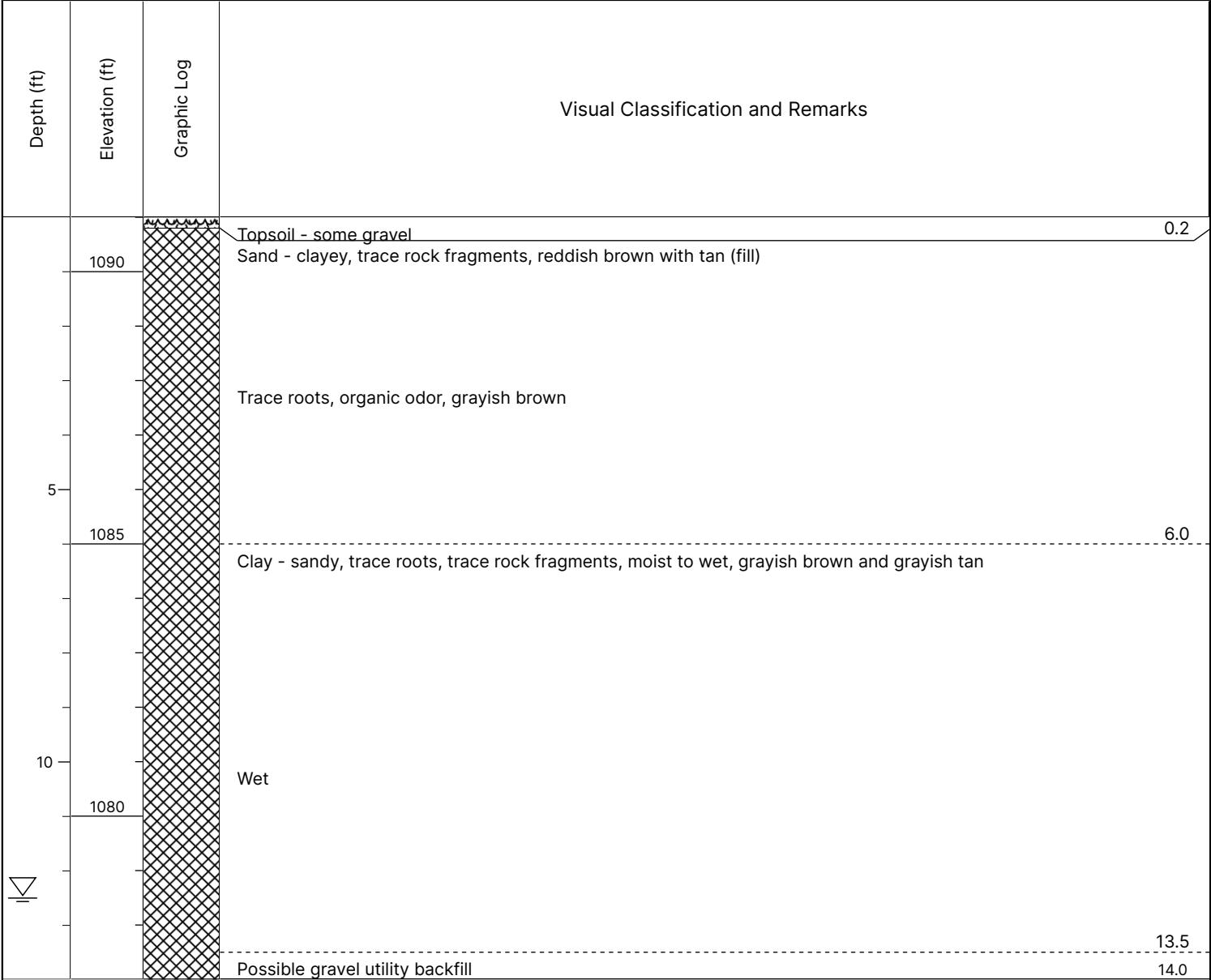
Railroad Avenue & 2nd Street, Tucker, Georgia

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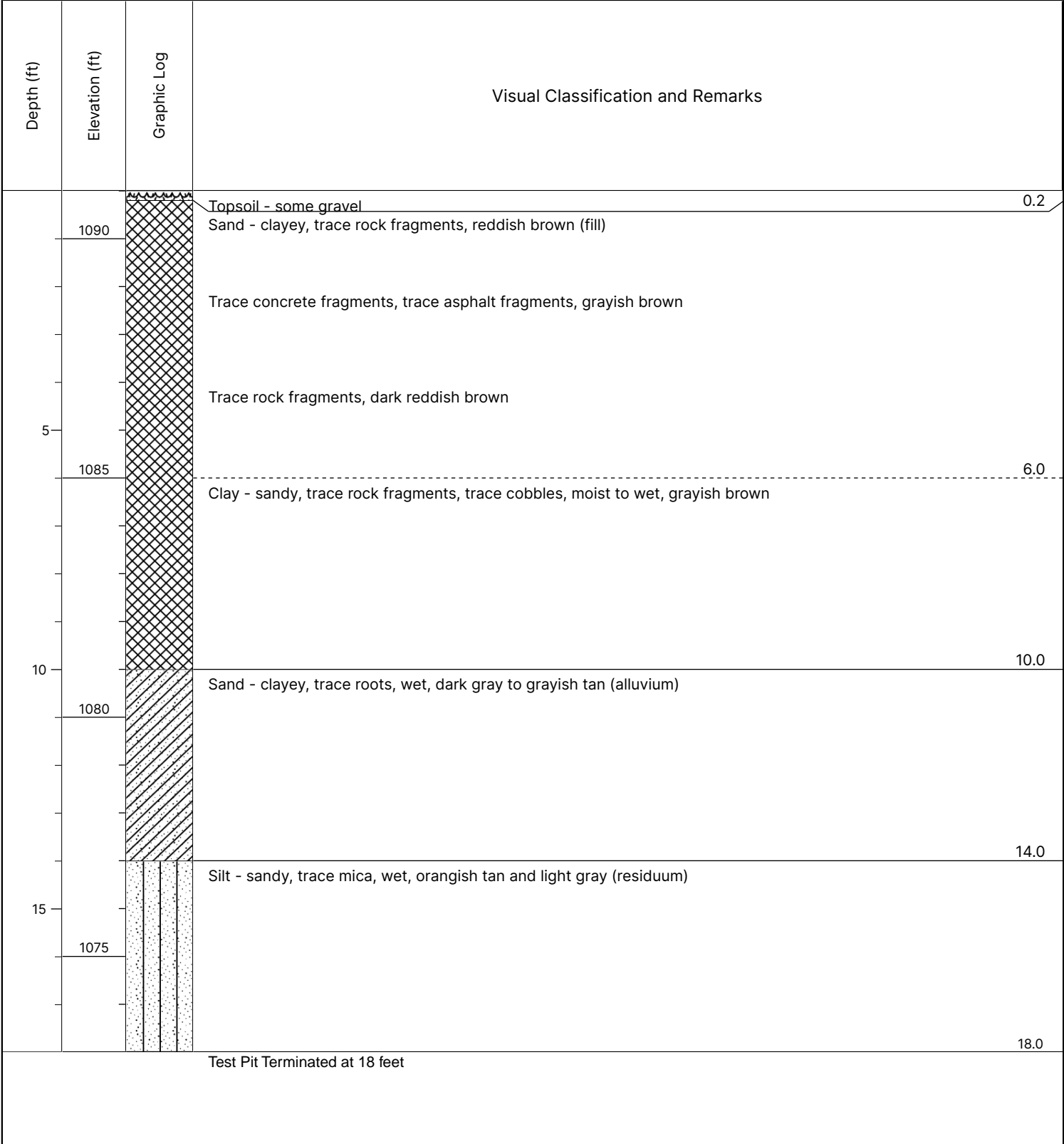
Client Name:	City of Tucker	Project No.:	TUCKE-24-GA-07852-02	Remarks: Test pit's location and elevation were not field-surveyed and are approximate. Test pit was backfilled with soil cuttings.
Contractor:	Arc One	Date:	03/11/24	
Logged By:	Emily Casey	Surface...:	~1091'	
Checked By:	Yung Dang	Proposed...:	1090'	
Method:	Takeuchi TB2150, 4' Bucket	Water Level At Time Of Drilling:	N.E.	Delayed Water Level: Not...
		Cave-in At Time Of Drilling:	N/A	Delayed Water Observation Date: N/A

Depth (ft)	Elevation (ft)	Graphic Log	Visual Classification and Remarks	
	1090		Topsoil - some gravel Sand - clayey, reddish brown with white (fill)	0.2
5	1085		Trace cobbles, trace roots, trace organics, trace brick fragments, grayish brown, organic odor	
			Clay - sandy, trace roots, moist to wet, light gray (alluvium)	8.0
10			Test Pit Terminated at 10 feet	10.0

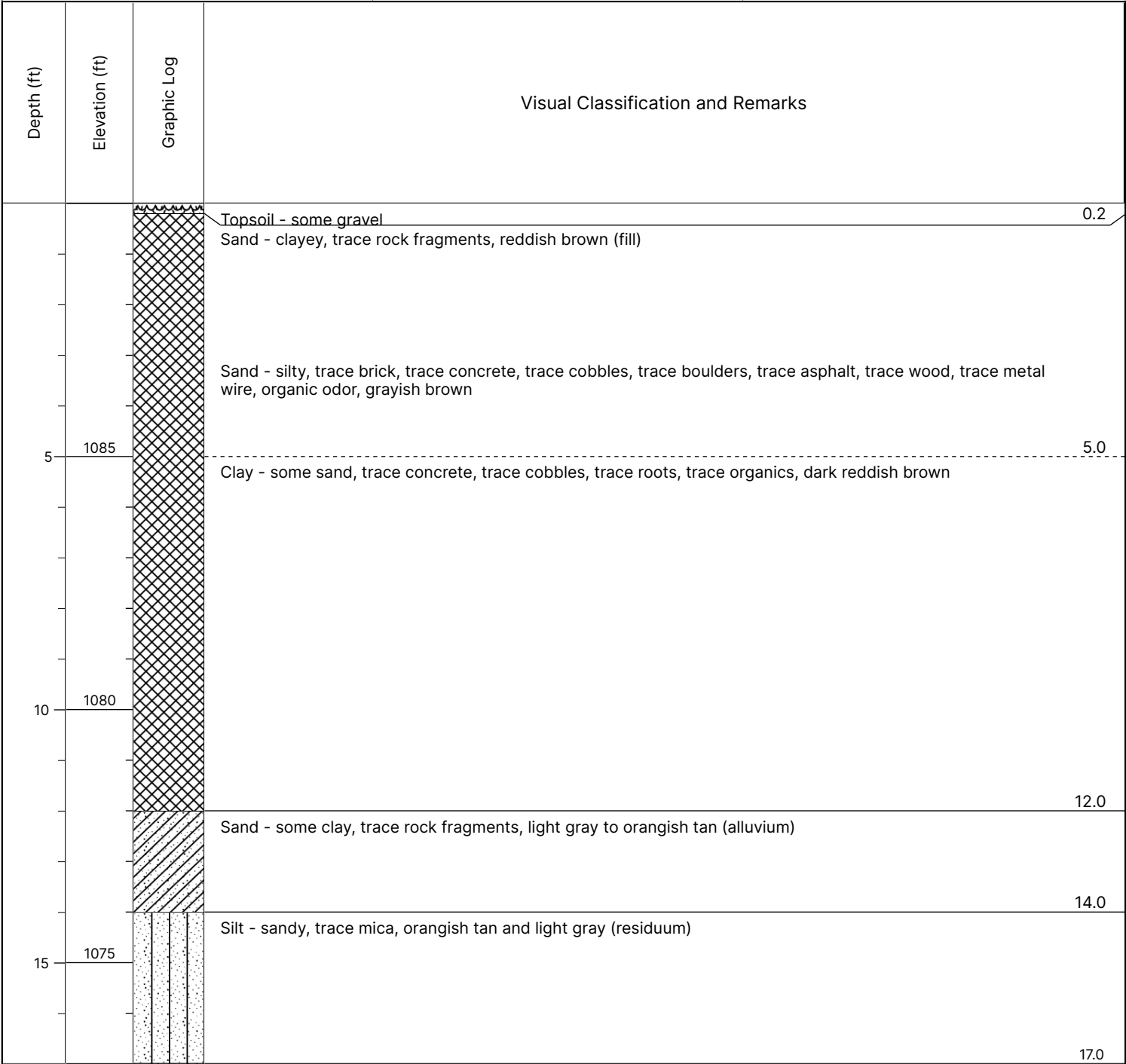
Client Name:	City of Tucker	Project No.:	TUCKE-24-GA-07852-02	Remarks: Test pit's location and elevation were not field-surveyed and are approximate. Test pit was backfilled with soil cuttings.
Contractor:	Arc One	Date:	03/11/24	
Logged By:	Emily Casey	Surface...:	~1091'	
Checked By:	Yung Dang	Proposed...:	1090'	
Method:	Takeuchi TB2150, 4' Bucket	Water Level At Time Of Drilling:	12.5'	Delayed Water Level: Not...
		Cave-in At Time Of Drilling:	N/A	Delayed Water Observation Date: N/A



Client Name:	City of Tucker	Project No.:	TUCKE-24-GA-07852-02	Remarks: Test pit's location and elevation were not field-surveyed and are approximate. Test pit was backfilled with soil cuttings.
Contractor:	Arc One	Date:	03/11/24	
Logged By:	Emily Casey	Surface...:	~1091'	
Checked By:	Yung Dang	Proposed...:	1090'	
Method:	Takeuchi TB2150, 4' Bucket	Water Level At Time Of Drilling:	N.E.	Delayed Water Level: Not...
		Cave-in At Time Of Drilling:	N/A	Delayed Water Observation Date: N/A



Client Name:	City of Tucker	Project No.:	TUCKE-24-GA-07852-02	Remarks: Test pit's location and elevation were not field-surveyed and are approximate. Test pit was backfilled with soil cuttings.
Contractor:	Arc One	Date:	03/11/24	
Logged By:	Emily Casey	Surface...:	~1090'	
Checked By:	Yung Dang	Proposed...:	1089'	
Method:	Takeuchi TB2150, 4' Bucket	Water Level At Time Of Drilling:	N.E.	Delayed Water Level: Not...
		Cave-in At Time Of Drilling:	N/A	Delayed Water Observation Date: N/A





Tucker Town Green

TP-6


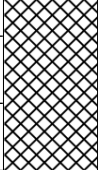
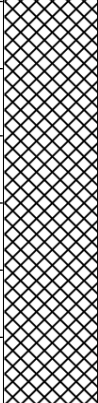
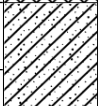
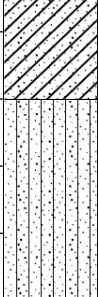
Railroad Avenue & 2nd Street, Tucker, Georgia

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Client Name:	City of Tucker	Project No.:	TUCKE-24-GA-07852-02	Remarks: Test pit's location and elevation were not field-surveyed and are approximate. Test pit was backfilled with soil cuttings.
Contractor:	Arc One	Date:	03/11/24	
Logged By:	Emily Casey	Surface...:	~1090'	
Checked By:	Yung Dang	Proposed...:	1090'	
Method:	Takeuchi TB2150, 4' Bucket	Water Level At Time Of Drilling:	N.E.	Delayed Water Level: Not...
		Cave-in At Time Of Drilling:	N/A	Delayed Water Observation Date: N/A

Depth (ft)	Elevation (ft)	Graphic Log	Visual Classification and Remarks	
			Topsoil - gravelly	1.0
			Sand - clayey, trace rock fragments, light reddish brown (fill)	
			Sand - some clay, trace rock fragments, trace concrete, trace cobbles, organic odor, grayish brown	
5	1085		Clay - sandy, trace concrete, trace boulders, trace asphalt fragments, dark reddish brown	5.0
10	1080		Sand - clayey, light gray (alluvium)	10.0
15	1075		Clay - sandy, moist, light gray and orangish tan (residuum)	13.0
			Test Pit Terminated at 17 feet	17.0

Client Name:	City of Tucker	Project No.:	TUCKE-24-GA-07852-02	Remarks: Test pit's location and elevation were not field-surveyed and are approximate. Test pit was backfilled with soil cuttings.
Contractor:	Arc One	Date:	03/11/24	
Logged By:	Emily Casey	Surface...:	~1091'	
Checked By:	Yung Dang	Proposed...:	1091'	
Method:	Takeuchi TB2150, 4' Bucket	Water Level At Time Of Drilling:	N.E.	Delayed Water Level: Not...
		Cave-in At Time Of Drilling:	N/A	Delayed Water Observation Date: N/A

Depth (ft)	Elevation (ft)	Graphic Log	Visual Classification and Remarks	
	1090		Topsoil - some gravel	0.2
			Sand - clayey, trace rock fragments, trace cobbles, reddish brown and tan (fill)	
5			Trace cobbles, trace roots, trace organics, trace wood fragments, dark reddish brown to dark grayish brown	
	1085			9.0
10			Sand - clayey, trace roots, wet, light gray (alluvium)	
	1080			12.0
			Sand - silty, trace mica, moist to wet, tan (residuum)	
15				15.0

Test Pit Terminated at 15 feet



Tucker Town Green

TP-8

Railroad Avenue & 2nd Street, Tucker, Georgia

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Client Name:	City of Tucker	Project No.:	TUCKE-24-GA-07852-02	Remarks: Test pit's location and elevation were not field-surveyed and are approximate. Test pit was backfilled with soil cuttings.
Contractor:	Arc One	Date:	03/11/24	
Logged By:	Emily Casey	Surface...:	~1091'	
Checked By:	Yung Dang	Proposed...:	1091'	
Method:	Takeuchi TB2150, 4' Bucket	Water Level At Time Of Drilling:	5.5'	Delayed Water Level: Not...
		Cave-in At Time Of Drilling:	N/A	Delayed Water Observation Date: N/A

Depth (ft)	Elevation (ft)	Graphic Log	Visual Classification and Remarks	
	1090		Topsoil - some gravel	1.0
			Sand - clayey, trace rock fragments, trace cobbles, trace roots, reddish brown and tan (fill)	4.0
			Clay - sandy, moist to wet, tannish brown	5.0
			Possible gravel utility backfill	5.5

Test Pit Terminated at 5.5 feet to Avoid Possible Damage to Utility



Tucker Town Green

TP-9

Railroad Avenue & 2nd Street, Tucker, Georgia

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Client Name:	City of Tucker	Project No.:	TUCKE-24-GA-07852-02	Remarks: Test pit's location and elevation were not field-surveyed and are approximate. Test pit was backfilled with soil cuttings.
Contractor:	Arc One	Date:	03/11/24	
Logged By:	Emily Casey	Surface...:	~1097'	
Checked By:	Yung Dang	Proposed...:	1097'	
Method:	Takeuchi TB2150, 4' Bucket	Water Level At Time Of Drilling:	N.E.	Delayed Water Level: Not...
		Cave-in At Time Of Drilling:	N/A	Delayed Water Observation Date: N/A

Depth (ft)	Elevation (ft)	Graphic Log	Visual Classification and Remarks	
	1095		Sand - clayey, trace rock fragments, trace concrete, trace cobbles, trace boulders, dark reddish brown (fill)	
5			Trace roots, trace asphalt fragments, reddish brown and tan, with lenses of dark gray gravelly sand at bottom and top of layer	5.0
	1090		Silt - some sand, trace mica, moist, orangish brown (residuum)	
			Silt - sandy, trace mica, moist, orangish brown	
10			Test Pit Terminated at 10 feet	10.0



Tucker Town Green

TP-10

Railroad Avenue & 2nd Street, Tucker, Georgia

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Client Name:	City of Tucker	Project No.:	TUCKE-24-GA-07852-02	Remarks: Test pit's location and elevation were not field-surveyed and are approximate. Test pit was backfilled with soil cuttings.
Contractor:	Arc One	Date:	03/11/24	
Logged By:	Emily Casey	Surface...:	~1093'	
Checked By:	Yung Dang	Proposed...:	1092'	
Method:	Takeuchi TB2150, 4' Bucket	Water Level At Time Of Drilling:	N.E.	Delayed Water Level: Not...
		Cave-in At Time Of Drilling:	N/A	Delayed Water Observation Date: N/A

Depth (ft)	Elevation (ft)	Graphic Log	Visual Classification and Remarks	
			Topsoil - some gravel Clay - sandy, reddish brown (fill)	0.2
	1090		Sand - clayey, some silt, trace mica, reddish brown and tan (residuum)	2.0
5			Sand - silty, trace mica, reddish brown and tan	6.0

Test Pit Terminated at 6 feet

Test Pit Photo Log – Tucker Town Green



Photo 1: Test Pit TP-1



Photo 2: Excavated soils of Test Pit TP-1



Photo 3: Side Wall of Test Pit TP-1



Photo 4: Side Wall of Test Pit TP-1

Test Pit Photo Log – Tucker Town Green



Photo 5: Test Pit TP-2



Photo 6: Excavated soils of Test Pit TP-2



Photo 7: Side Wall of Test Pit TP-2



Photo 8: Side Wall of Test Pit TP-2

Test Pit Photo Log – Tucker Town Green



Photo 9: Test Pit TP-3



Photo 10: Excavated soils of Test Pit TP-3



Photo 11: Side Wall of Test Pit TP-3



Photo 12: Side Wall of Test Pit TP-3

Test Pit Photo Log – Tucker Town Green



Photo 13: Test Pit TP-4



Photo 14: Excavated soils of Test Pit TP-4



Photo 15: Side Wall of Test Pit TP-4



Photo 16: Side Wall of Test Pit TP-4

Test Pit Photo Log – Tucker Town Green



Photo 17: Test Pit TP-5



Photo 18: Excavated soils of Test Pit TP-5



Photo 19: Side Wall of Test Pit TP-5



Photo 20: Side Wall of Test Pit TP-5

Test Pit Photo Log – Tucker Town Green



Photo 21: Test Pit TP-6



Photo 22: Excavated soils of Test Pit TP-6



Photo 23: Side Wall of Test Pit TP-6



Photo 24: Side Wall of Test Pit TP-6

Test Pit Photo Log – Tucker Town Green



Photo 25: Test Pit TP-7



Photo 26: Excavated soils of Test Pit TP-7



Photo 27: Side Wall of Test Pit TP-7



Photo 28: Side Wall of Test Pit TP-7

Test Pit Photo Log – Tucker Town Green



Photo 29: Test Pit TP-8



Photo 30: Excavated soils of Test Pit TP-8



Photo 31: Side Wall of Test Pit TP-8



Photo 32: Side Wall of Test Pit TP-8

Test Pit Photo Log – Tucker Town Green



Photo 33: Test Pit TP-9



Photo 34: Excavated soils of Test Pit TP-9



Photo 35: Side Wall of Test Pit TP-9



Photo 36: Side Wall of Test Pit TP-9

Test Pit Photo Log – Tucker Town Green



Photo 37: Test Pit TP-10



Photo 38: Excavated soils of Test Pit TP-10



Photo 39: Side Wall of Test Pit TP-10



Photo 40: Side Wall of Test Pit TP-10



United Consulting is an engineering consulting firm headquartered in Georgia, specializing in environmental services, geotechnical engineering, geophysical services, automated instrumentation, special inspections, and construction materials testing since 1990. With over 180 employees, including 30 professionally registered engineers and geologists the firm has undertaken some of the most challenging projects in the country.

GEOTECHNICAL SERVICES

- Subsurface Soil Investigations
Geologic Investigations
Foundation Investigations
Rock Stability Analysis
Rock Anchor/Bolt Design
Dam Investigations/Design
Dam Breach Analysis
Pile/Caisson/Foundation Load
Slope Stability Analysis
Tunnel Design
Soil Nailing Design
Value Engineering
Failure Investigations
Pavement Evaluation/Design
Bridge Foundation Investigations
Retaining Wall Foundation Investigations

ENVIRONMENTAL SERVICES

- Phase I Site Assessments
Phase II Contamination Assessments
Brownfield Assessment & Remediation Services
Corrective Action Plans
Asbestos, Lead-Based Paint, & Mold Consulting Services
Indoor/Outdoor Air Quality Assessment & Analysis
Groundwater/Surface Water Modeling & Analysis
Landfill Services
Health & Safety Services
Soil and Groundwater Remedial Design & Implementation
Hazardous Waste Site Assessment & Remediation Services
Regulatory Liaison Services

SUBSURFACE UTILITY ENGINEERING

- Quality Levels A, B, C, D
Ground Penetrating Radar
SUE Surveying/Surface Geophysics

AUTOMATED INSTRUMENTATION

- Vibration Monitoring
Robotic Total Stations
Inclinometers and SAAs
Tiltmeters
Piezometers
Real-Time Website Monitoring & Alarming
Pre-Post Construction Photographic Survey

GEOPHYSICAL SERVICES

- Geologic Mapping
Earth Resistivity
Geophysical Instrumentation
Review of Blasting

Programs

- Earthquake Risk Assessment
Shear Wave Analysis

INSPECTION SERVICES

- Property Condition Survey
Replacement & Reserve Analysis
Repair Cost Estimates
Visual Documentation
Plan & Spec Review
Construction Draw Inspections
Contract Administration
Pre-acquisition Survey
Construction Monitoring

MATERIALS TESTING

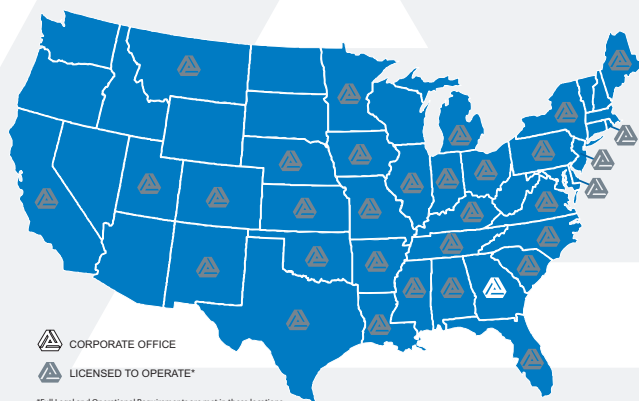
- Complete Mortar & Masonry Testing
In-place Density Testing
Foundation Testing
Asphalt/Concrete Testing & Batch Plant

Inspections

- Magnetic Particle & Radiographic Testing
Special Inspections
Failure Investigations
Monitoring Post-Tension Operations
Floor Flatness & Levelness Determinations
Moisture Testing
Fire Proofing Testing
Portland Based Cement
Gypsum Based Cementitious Spray
Cellulose Insulation

ECOLOGICAL SERVICES

- Aquatic Resource Delineation
Wetland/Stream Permitting Services
Wildlife & Protected Species Surveys
Mitigation Design, Implementation/Monitoring
NEPA Assessments



CORPORATE OFFICE
LICENSED TO OPERATE*

*Full Legal and Operational Requirements are met in these locations

UNITED CONSULTING LABORATORY

United Consulting's Geotechnical and Materials Testing Laboratory occupies approximately 10,000 SF of space in our 60,000 SF, Norcross, Georgia headquarters. Our laboratory's work and facilities meet or exceed the requirements set forth in ASTM E 329, C 1077, and D 3740. Additionally, our laboratory has been a validated U.S. Army Corp of Engineers laboratory, since 2010.

LICENSED AND REGISTERED NATIONWIDE

United Consulting licensed and registered in 35 states and continues to grow, with offices in Georgia, Alabama, Florida, Texas, and California.



UNITED CONSULTING