GEOTECHNICAL
CONSULTANTS INC.

MAIN OFFICE
720 Green Crest Drive
Westerville, OH 43081
614.895.1400 **phone**
614.895.1171 **fax**

YOUNGSTOWN OFFICE
8433 South Avenue
Building 1, Suite 1
Boardman, OH 44514
330.965.1400 **phone**
330.965.1410 **fax**

DAYTON OFFICE
2155 Bellbrook Avenue
Xenia, OH 45385
937.736.2053 **phone**

www.gci2000.com

GEOTECHNICAL
CONSULTANTS INC.

GCI PROJECT No. 25-G-30344

Subsurface Exploration and Geotechnical Engineering Report

Friendship Park Improvements
150 Oklahoma Avenue
Gahanna, OH

Prepared for:
City of Gahanna

July 24, 2025

MAIN OFFICE
720 Green Crest Drive
Westerville, OH 43081
614.895.1400 **phone**
614.895.1171 **fax**

YOUNGSTOWN OFFICE
8433 South Avenue
Building 1, Suite 1
Boardman, OH 44514
330.965.1400 **phone**
330.965.1410 **fax**

DAYTON OFFICE
2155 Bellbrook Avenue
Xenia, OH 45385
937.736.2053 **phone**

GEOTECHNICAL
CONSULTANTS INC.

www.gci2000.com

July 24, 2025

Ms. Catherine Eichel , PM
Department of Parks & Recreation
City of Gahanna
200 S. Hamilton Road
Gahanna, OH 43230

email: catherine.eichel@gahanna.gov

Reference: Subsurface Exploration and Geotechnical Engineering Report
Friendship Park Improvements
150 Oklahoma Avenue - Gahanna, Ohio
GCI Project No. 25-G-30344

Dear Ms. Eichel:

Geotechnical Consultants, Inc. has performed a subsurface exploration and prepared a geotechnical engineering report for the above referenced project. Our borings encountered a surface cover consisting of 5 and 6 inches of asphalt over 8 and 3 inches of aggregate base in the parking lot area and topsoil in the remaining area overlying a variable depth of fill (in six borings). Below the surface cover, our borings encountered natural soils consisting of clay-based soil including glacial till, and granular deposits. We did not encounter bedrock within the maximum drilled depth of 10 feet. Groundwater seepage was encountered in three (3) of our borings at depths of 3 to 4 feet below existing grades.

It is our opinion that the site soils are suitable for the proposed pavement/structures remediation and new construction, with proper site preparation. Site geotechnical considerations include surface stripping, addressing the existing fill, subgrade stabilization, and pavement support. We discuss geotechnical considerations and provide foundation and site preparation recommendations in the report.

After you have reviewed the report, feel free to contact us with any questions you may have. We appreciate the opportunity to provide our services for this project and hope to continue our services through construction.

Respectfully submitted,
Geotechnical Consultants, Inc.

Farouk Benmammar
Project Manager

Kevin M. O'Connor, P.E.
In-House Reviewer

Distribution: Ms. Catherine Eichel @ Dept of Parks & Recreation – pdf email
GCI File: 25-G-30344

TABLE OF CONTENTS

INTRODUCTION

As requested by Ms. Catherine Eichel and authorized by Ms. Laurie Jadwin Mayor of the City of Gahana, Geotechnical Consultants, Inc. (GCI) performed a subsurface exploration and prepared this geotechnical engineering report for the proposed Friendship Park improvements in Gahanna, Ohio. Prior to drilling, GCI was provided a site aerial photo showing the proposed improvements.

Our subsurface study consisted of ten (10) standard penetration test borings drilled in improvement areas. GCI field located the borings using the site layout plan, GIS coordinates, and handheld GPS equipment; locations should be considered approximate. We did not determine ground elevations at the boring locations within our scope of services. We attach a plan showing the approximate boring locations and the test boring logs in the appendix.

The intent of this study was to evaluate subsurface conditions and offer geotechnical recommendations relative to site preparation, foundations, floor slabs, and pavements for the proposed Improvement. This report is issued prior to the receipt of final site layout and grading plans. GCI should review these plans when available, and provide additional recommendations, if necessary.

This report was prepared for the exclusive use of City of Gahanna and their consultants for specific application to the proposed development in Groveport, Ohio, in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

SITE AND PROJECT DESCRIPTIONS

The project site consists of an existing recreation facility area located at 100 Oklahoma Ave in Gahanna, Ohio. A site location map is attached in the appendix. The site is mostly open grass-covered field and isolated trees with an asphalt parking lot in the northwest portion, basketball court and tennis courts in the east portion, trails, shelter house, playground, and garden in the south portion. The site parcel is generally flat with elevations ranging from ±785 to ±794 feet, per publicly available topographic information. The aerial photograph below shows site conditions similar to those at the time of our study.

Aerial Photo (Courtesy of Google Earth; Julay 2025)

We have reviewed the information you provided, and we understand that the project will include improvements to several areas of the park facility. Possible improvements include replacement or rehab of the parking lot, replacement or rehab of paved trails, extension of tennis courts or adding a small shelter or shade structure, repair of settling footings at shelterhouse, replacement of playground, and extension of sidewalks.

SUBSURFACE CONDITIONS

GCI mobilized a truck-mounted, rotary drill rig with automatic sampling hammer, to the site on July 3, 2025. We drilled ten standard penetration test borings (B-1 to B-10) to a depth of 10 feet below existing grade at the approximate requested locations.

- Borings B-1 and B-2 were performed in the pavement area.
- Boring B-3 was performed in the possible pathway/hardscape areas.
- Boring B-4 was performed in the proposed playground replacement area.
- Borings B-5 and B-6 were performed in the area of the proposed repair/rehab of existing Shelter house.
- Boring B-7 was performed in the area of the proposed courts extension or shelter/ shade structure.
- Borings B-8 and B-9 were performed the area of the proposed rehab of existing paved trails.
- Boring B-10 was performed in the area of the proposed paved trail to court entrance area.

Boring logs, a boring location plan, and a summary table of the encountered subsurface conditions are attached in the appendix. We summarize the subsurface findings below. Refer to the individual boring logs and summary table for more detailed subsurface information at specific boring locations.

Surface Cover

Borings B-1 and B-2 encountered 5 and 6 inches of asphalt over 8 and 3 inches of aggregate base, respectively. The remaining borings encountered topsoil surface cover with a thickness of approximately 0.2 feet to 1 foot.

Below the aggregate base in boring B-1 to a depth of 6 feet, and below the topsoil in borings B-4, B-5, B-6, B-9 and B-10 to depths of 1 to 2.5 feet below existing grades, we encountered existing fill. The encountered fill contained variable moderate plasticity lean clay (classified as CL under the Unified Soil Classification System) with lesser amounts of sand and gravel and dark brown of low plasticity silty clay (CL-ML). Standard penetration testing N-values indicated the material was very soft to stiff in cohesive consistency.

Natural Soils

Below the aggregate base in boring B-2, below the topsoil in borings B-3, B-7, and B-8, and below the fill in borings B-4, B-5, B-6, B-9, and B-10, we encountered natural soil visually classified as moderate plasticity brown to brown mottled gray lean clay, lean clay to sandy lean clay with gravel (CL) and low plasticity silty clay, sandy silty clay, and gravelly silty clay (CL-ML). Standard penetration testing indicated the lean clay/ silty clay was generally soft to very stiff in cohesive consistency. This layer extends to depths of 3 to 7 feet below existing grade.

Below the fill in boring B-1, and below the lean clay in borings B-2 to B-9, at a depth of 4 to 7 feet, we encountered brown granular deposit soil classified as either poorly-graded sand with gravel (SP), silty sand (SM), poorly-graded sand with silt and gravel (SP-SM),

poorly-graded gravel with silt and sand (GP-GM), or sandy silt with gravel (ML). These alluvial soils are common to flood-plain sites. Standard penetration N-values indicated the material was loose to dense in cohesionless density. Borings B-1 to B-9 (except B-5) were terminated in the granular soil at a depth of 10 feet below existing grade.

Below the granular soil deposit in boring B-5 and below the silty clay (CL-ML) in boring B-10, at depth of 8 and 5 feet, we encountered moderately plastic gray glacial till classified as sandy lean clay (CL). Standard penetration testing indicated the glacial till was very stiff in cohesive consistency. These borings were terminated in glacial till at a depth of 10 feet below the existing grade.

Bedrock

We did not encounter bedrock within the maximum drilled depth of 10 feet.

Groundwater and Soil Moisture Conditions

Groundwater seepage was encountered during drilling in borings B-1, B-7 and B-10 at depths of 3 to 4 feet. Upon drilling completion, water levels were measured in the boreholes at depths ranging from 4 to 6 feet. The remaining seven borings were dry during drilling and immediately following completion of drilling.

Soil samples obtained during the drilling process were typically noted to be moist and very moist. Wet samples were encountered in the granular soils below depth where seepage was encountered. Note that soil moisture conditions and groundwater levels fluctuate in response to precipitation events, seasonal climate changes, stabilization time and other factors that may differ from the time the measurements were made.

ANALYSES AND CONCLUSIONS

GEOTECHNICAL EVALUATION

Based on the information obtained from our borings. It is GCI's opinion that the site is suitable for the proposed improvement with proper site preparation. The following sections discuss the impact of subsurface conditions on site development.

Site Preparation

Vegetation, topsoil, root matter, stumps, and any other unsuitable organic materials should be removed in their entirety from the proposed development area, plus 5 feet laterally. Topsoil is not suitable for use as structural fill and should be stockpiled for redistribution in proposed green space areas, landscaping mounds, or to backfill any on-site borrow pits. After site stripping, we anticipate the exposed surface will mostly consist of fill or natural lean clay.

Existing Fill

We encountered 6 feet depth of existing fill in in boring B-1, and 1 to 2.5 feet depth of existing fill below the topsoil in borings B-4, B-5, B-6, B-9 and B-10. Based on standard penetration test results, the fill materials were variably very soft to stiff in cohesive consistency.

We do not have any information on the time(s) and method (s) of fill placement and compaction. Without documentation that the fill was placed and compacted in a controlled manner (i.e. uniform lifts, at optimum moisture content, minimum required percent compaction, etc.) we cannot comment on the suitability of the fill to support the

structures, but we address this issue with regard to recommendation of the shelterhouse.

In our opinion, the fill can remain to support the pavements, slab-on-grade, or any proposed light duty courts, pathways, trails, and playground. provided they are non-organic and are firm and stable below a thorough proof-roll. We note that with this procedure there is some risk of slab settlement due to the existing fill that would remain in place. However, in our opinion, this risk is low, provided the subgrade is brought to a firm and stable condition, as judged by a proof-roll and provided fill with organic content is removed. The owner must assume the risk of possible settlement and slab cracking when constructing over the existing fill materials. The alternative would be to completely remove all existing fill, to expose stable, non-organic, natural soils then backfilling the resulting excavations in a controlled manner.

Subgrade Stabilization

Prior to the placement of new fills and slab/pavement/pathway aggregate base, the earthwork contractor should proof-roll the exposed subgrades using a fully-loaded tandem-axle dump truck (or equivalent) to identify potential soft, yielding subgrade areas. Soft spots identified during the proof-roll should be undercut to firm, stable conditions, or otherwise stabilized.

The stabilization of soft subgrades by disking, aerating/drying, and re-compaction may be feasible during traditionally drier times of the year. Depending on the project schedule, and especially during wet seasons, partial undercutting and replacing of wet soils with structural fill, drying with soil additives such as lime, or use of geosynthetics

may be needed to create a stable subgrade before placing controlled fills. The use of soil additives, such as lime and fly-ash, or installation of geosynthetics should be reviewed by GCI prior to use in the field.

The severity of soft, very moist subgrade conditions will depend on the time of year earthwork is performed, and the amount of moisture within the subgrade soils. We expect fewer problems with soft and wet subgrades if earthwork and mass grading operations are performed during traditionally drier times of the year (i.e. late spring, summer, and early fall).

Fill Placement and Compaction

Structural fill should be placed to design grade once the subgrades are brought to firm and stable conditions. Non-organic site soils can be used as structural fill provided proper moisture control is maintained. Non-organic removed fills may also be used as new structural fill with proper moisture conditioning. Depending on the time of year of earthwork, the fill may require drying to achieve proper compaction. The contractor should place and compact controlled fills in accordance with the information presented in the *Site Preparation and Earthwork* section of this report.

FOUNDATIONS

Provided the site is properly prepared as stated above, it is GCI's opinion that the shelter/ shade structures can be constructed using conventional shallow spread footings and continuous wall foundations. All footings should bear on firm and stable natural soils (extended through existing fill as needed). Extend footings to local frost depth (32")

or to acceptable soils, whichever is deeper. Footings bearing on acceptable soils can be designed using a maximum allowable bearing capacity of 2,000 pounds per square foot.

Regardless of the calculated values, we recommend minimum dimensions of 16 inches wide for wall footings and 30 inches square for isolated column pads. We also recommend completing the structural fill placement for the building pad prior to excavating for and constructing foundations. If soft, unstable or unsuitable soils are encountered at footing subgrade, undercut to stable soils. Undercut areas can be backfilled to footing subgrade using a controlled density fill (CDF), such as K-Krete®, to allow footing construction at design grade. *Soft unstable footing subgrades should be reviewed by the soils engineer prior to undercut.* **We note that the soils were soft in boring B-7 to a depth of 3.5 feet, and we encountered seepage at depth of 3 feet.**

We note that the above has assumed relatively lightly loaded foundations. If more-heavily loaded foundations are planned, contact GCI for additional recommendations

SLABS AND TENNIS COORT EXTENSION

A conventional concrete slab-on-grade is feasible for the proposed building. As noted earlier, thoroughly proof-roll subgrades prior to base aggregate placement; stabilize as needed. GCI recommends placing a minimum of 4 inches of granular fill (such as ODOT Item 304 or #57 gravel) under lightly-loaded slabs to serve as a capillary cut-off and to provide a uniform, firm sub-base. Increase the under-slab aggregate to 6 inches under heavily-loaded slabs (if needed). Placement of a vapor retarder is recommended in areas where moisture could cause problems with floor finishes. Design slabs as

"floating slabs" with no connection to the structure or foundations to avoid cracking related to differential settlement.

The court extension should be constructed as recommended by the designer. We note that the subgrades should be properly graded to shed drainage.

SEISMIC FACTOR

Our borings encountered soft to stiff existing fill over soft to very stiff natural lean clay and loose to dense granular soils. In accordance with the Ohio Building Code, we estimate the site has a Site Class D – stiff soil profile.

EXCAVATIONS

The existing fill and natural soils can be excavated with conventional track hoe equipment. Note that excavations that encounter any granular layers may require layback or shoring to maintain stability in particular where these soils are saturated. **Excavations should comply with current OSHA regulations**.

GROUNDWATER

Groundwater seepage was encountered during drilling in borings B-1, B-7 and B-10 at depths of 3 to 4 feet. Upon drilling completion, water levels were measured in the boreholes at depths ranging from 4 to 6 feet. The remaining seven borings were dry during drilling and immediately following completion of drilling. Based upon our boring observations, we anticipate groundwater may have a significant impact on some shallow excavations in particular in the area of proposes shelter/shade structure . We expect

that groundwater flows (above the seepage levels encountered in our borings), can be handled with portable sump pumps, with layers of aggregate stone to protect the bottom of the excavation (if needed).

However, excavations deeper than 3 feet may encounter significant seepage. Contact GCI for additional recommendations if excessive water flows are encountered.

EXISTING SHELTER HOUSE REMEDIATION

We encountered 1.5 to 2.5 feet depth of existing fill in borings B-5 and B-6 (fill could be deeper), over stiff to very stiff natural clay-based soil and loose to medium dense granular soil.

It is our opinion that the noted building settlement is principally due to consolidation of the existing fill and possible consolidation of the natural clays that have occurred below the building weight and fill.

While this movement could continue with time, we suspect that the bulk of the movement has occurred. We recommend that the existing pavers should be removed and the exposed subgrades should be proof-rolled and stabilized as recommended in the subgrade stabilization section of this report.

If it is desired to mitigate continued settlement of the structure foundations we recommend underpinning with elements such as helical piers.

PAVEMENT REMEDIATION

We understand the existing parking lot is planned for paving improvement. Borings B-1 and B-2 encountered a surface cover consist of 5 and 6 inches of asphalt over 8 and 3 inches of aggregate base, respectively, overlying very soft to very stiff clay-based fill and medium stiff natural clay-based soils overlying loose to dense granular soils. In review of the existing parking lot conditions, the pavement section thicknesses, and the underlying soils, we make the comments below. Photos of the existing parking lot on the following page, were taken on July 22, 2025, and we provide the following comments:

a) Extensive pavement cracking (Alligator cracking) is visible throughout the lot. Potholes was noted in the northwest section (See Photos below).

b) In our opinion, surface drainage of the lot is not happening in an effective manner. No catch basin or other drainage features are noted within the lot. Many of the areas of cracking appear to be flat or low spots, where drainage most likely goes directly into the underlying stone and soils. The soil samples were noted to be very moist to a depth of 5 feet.

c) Photo 1 shows a catch basin southwest of the lot (entrance) where some runoff from the lot likely goes.

d) Our soil borings indicate portions of the lot have very soft soils below the pavement stone. See logs for B-1 at 3 feet and B-2 below the aggregate base, indicating parking lot runoff going directly into the underlying soils which soften such soils and lead to pavement settlement and cracking.

e) This indicating that the existing aggregate base is note effectively draining.

f) For light duty pavement, we recommend a minimum of 8 inches of stone overlain by a minimum of 4 inches of asphalt

Photo 1. Taken at NW Entrence, Facing North

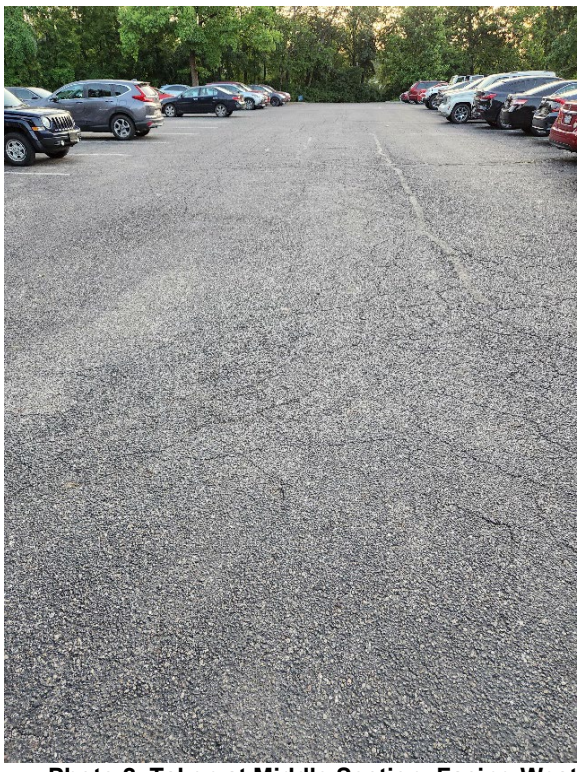


Photo 2. Taken at Middle Section, Facing West

Photo 3. Taken at Mid-North Section, Facing West

Below are three approaches to remediating the existing lot.

Approach 1– Selectively Replace Aggregate and Mill Asphalt

- In areas of extensive damage remove aggregate base.
- Stabilize subgrade as recommended in this report.
- Place ODOT 304 aggregate
- Place asphalt.
- Mail the remaining asphalt and install new asphalt.
- We note that this approach will not improve drainage of the aggregate base course.

Approach 2– Asphalt Removal, Stone Addition, Drainage

- Remove all existing asphalt,
- Thoroughly proof-roll the exposed stone.
- Undercut/stabilize soft zones of stone and underlying soils.
- Install figure drains tied into catch basins.
- Place new ODOT 304 aggregate to design grade, the existing stone should not be included in the new aggregate base course.
- Place asphalt.

Approach 3 – Full Depth Replacement and Grading;

- Remove all existing asphalt and subbase stone.
- Thoroughly proof-roll the exposed clayey subgrade.
- Undercut/stabilized soft zones of the subgrade.
- Pavement subgrade surfaces should graded/constructed to effectively shed water to trenches / drain pipes under the new pavement.
- Install figure drains tied into catch basins.
- Add stone over subgrade surface. A minimum of 8 inches of stone should be in place throughout the lot.
- Place asphalt.

Additional Comments

- Consideration should be given to producing thicker pavement sections within drive lanes. We typically recommend 4 inches of asphalt over 10 inches of stone for such “heavy

duty"sections. The pavement designer should factor this additional thickness into their overall design and how the drainage lines will be constructed.

- Providing adequate subbase drainage is important to future pavement performance. The drainage system should consist of perforated underdrain pipes that effectively drains away from the parking lot. The drain invert should be placed 4 inches below subgrade, and the drain should be surrounded on each side by at least 4 inches of No. 57 stone. Additional finger drains may be needed if specific areas of seepage are observed during construction. We recommend placement of a drain pipe below pavements constructed adjacent to irrigated areas.
- While no testing has been performed, it is our opinion that a CBR value of 3 would be appropriate for design. This value is based on our review of the soils and experience on similar projects and the assumption that adequate proof-rolling and subgrade stabilization measures will be implemented prior to new pavement construction.

SITE PREPARATION AND EARTHWORK

We provide below general guidelines for site preparation and earthwork operations.

1. Remove any existing structures/ elements from prior construction and any subsurface utilities from within the construction limits plus 5 feet laterally. Existing subsurface utilities located outside of the proposed building footprint can be abandoned in place, provided the demolition contractor caps the ends of the abandoned lines to prevent soil loss.

2. Remove any unsuitable materials (topsoil, organics, trees, vegetation, and root mats) as recommended in this report from the proposed development area, plus a minimum of 5 feet laterally beyond the proposed construction limits.

3. Thoroughly and carefully proof-roll the exposed soil subgrades with a fully-loaded, tandem-axle dump truck (or equivalent) to identify potential soft subgrade areas. Undercut soft areas or otherwise stabilize soft spots identified during the proof-roll prior to placing controlled fill to design grade.

4. Place controlled fills to design grade within proposed building and pavement areas, as required. Non-organic natural soils are suitable for reuse in new controlled fills provided soil moisture is properly controlled. **Off-site borrow materials should be reviewed by our office prior to use.**

5. Place controlled fills in maximum 8-inch thick loose lifts and compact each lift to a minimum of 98% of the maximum Standard Proctor dry density (ASTM D-698). The moisture in the fill soils should be controlled to within ±3% of the optimum Standard Proctor moisture content. **Depending on the time of year of earthwork, moisture adjustment of the existing fill and site soils may be required to achieve proper compaction.** Cohesive soils will compact best with a sheepsfoot roller and granular soils with a vibratory roller.

6. Slab-on-grade, court areas, and pavement areas should be steel-wheel rolled to a smooth surface prior to placement of base aggregate. Subgrade preparation during

wet seasons may require the use of engineering fabric or geo-grid.

7. It is recommended that GCI be retained to observe proof-rolling operations, cut and fill operations, and footing excavations.

8. If work is performed during the winter (e.g., when freezing temperatures occur), special protective measures will be required during filling and footing construction procedures. Contact GCI for additional cold weather recommendations, as needed.

CONSTRUCTION MATERIALS ENGINEERING AND TESTING

GCI provides construction materials engineering and testing services. For project continuity throughout construction, we recommend that GCI be retained to observe, test, and document:

- earthwork procedures (stripping, fill placement, compaction, utility trench backfill, etc.),
- foundation subgrade observation,
- concrete placement and compressive strength testing (footings, slabs, etc.), and
- masonry wall construction observation and grout testing (if applicable).

The purpose of this work is to assess that the intent of our recommendations is being followed and to make timely changes to our recommendations (as needed) in the event site conditions vary from those encountered in our borings. Please contact our field department to initiate these services.

FINAL

We recommend that GCI review final site layout and grading plans. Recommendations contained in this report may be changed based on review of final site plans. If any changes in the nature, design or locations of the construction are planned, conclusions and recommendations should not be considered valid unless verified in writing by GCI.

The recommendations contained in this report are the opinion of GCI based on the subsurface conditions found in the borings and available development information. It should be noted that the nature and extent of variations between borings might not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report. This report has been prepared for design purposes only and should not be considered sufficient to prepare an accurate bid document.

If you have any questions or need for any additional information, please contact our office. It has been a pleasure to be of service to you on this project, and we hope to continue our services through construction.

GEOTECHNICAL
CONSULTANTS INC.

APPENDIX – Friendship Park Improvements – Gahanna, Ohio

General Notes for Soil Sampling and Classifications
Site Location Map and Boring Location Plan
Summary of Encountered Subsurface Conditions
Test Boring Logs (B-1 to B-10)

GEOTECHNICAL CONSULTANTS INC.

MAIN OFFICE
720 Green Crest Drive
Westerville, OH 43081
614.895.1400 **phone**
614.895.1171 **fax**

YOUNGSTOWN OFFICE
8433 South Avenue
Building 1, Suite 1
Boardman, OH 44514
330.965.1400 **phone**
330.965.1410 **fax**

DAYTON OFFICE
2155 Bellbrook Avenue
Xenia, OH 45385
937.736.2053 **phone**

www.gci2000.com

GENERAL NOTES FOR SOIL SAMPLING AND CLASSIFICATIONS

BORINGS, SAMPLING AND GROUNDWATER OBSERVATIONS:

Drilling and sampling were conducted in accordance with procedures generally recognized and accepted as standard methods of exploration of subsurface conditions. The borings were drilled using a truck-mounted drill rig using auger boring methods with standard penetration testing performed in each boring at intervals ranging from 1.5 to 5.0 feet. The stratification lines on the logs represent the approximate boundary between soil types at that specific location and the transition may be gradual.

Water levels were measured at drill locations under conditions stated on the logs. This data has been reviewed and interpretations made in the text of the report. Fluctuations in the level of the groundwater may occur due to other factors than those present at the time the measurements were made.

The Standard Penetration Test (ASTM-D-1586) is performed by driving a 2.0 inch O.D. split barrel sampler a distance of 18 inches utilizing a 140 pound hammer free falling 30 inches. The number of blows required to drive the sampler each 6 inches of penetration are recorded. The summation of the blows required to drive the sampler for the final 12 inches of penetration is termed the Standard Penetration Resistance (N). Soil density/consistency in terms of the N-value is as follows:

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-10	Loose	0-4	Soft
10-30	Medium Dense	4-8	Medium Stiff
30-50	Dense	8-15	Stiff
50 +	Very Dense	15-30	Very Stiff
		30 +	Hard

SOIL MOISTURE TERMS

Soil Samples obtained during the drilling process are visually characterized for moisture content as follows:

MOISTURE CONTENT	DESCRIPTION
Damp	Soil moisture is much drier than the Atterberg plastic limit (where soils are cohesive) and generally more than 3% below Standard Proctor “optimum” moisture conditions. Soils of this moisture generally require added moisture to achieve proper compaction.
Moist	Soil moisture is near the Atterberg plastic limit (cohesive soils) and generally within ±3% of the Standard Proctor “optimum” moisture content. Little to no moisture conditioning is anticipated to be required to achieve proper compaction and stable subgrades.
Very Moist	Soil moisture conditions are above the Atterberg plastic limit (cohesive soils) and generally greater than 3% above Standard Proctor “optimum” moisture conditions. Drying of the soils to near “optimum” conditions is anticipated to achieve proper compaction and stable subgrades.
Wet	Soils are saturated. Significant drying of soils is anticipated to achieve proper compaction and stable subgrades.

SOIL CLASSIFICATION PROCEDURE:

Soil samples obtained during the drilling process are preserved in plastic bags and visually classified in the laboratory. Select soil samples may be subjected to laboratory testing to determine natural moisture content, gradation, Atterberg limits and unit weight. Soil classifications on logs may be adjusted based on results of laboratory testing.

Soils are classified in accordance with the ASTM version of the Unified Soil Classification System. ASTM D-2487 “Classification of Soils for Engineering Purposes (Unified Soil Classification System) describes a system for classifying soils based on laboratory testing. ASTM D-2488 “Description and Identification of Soil (Visual-Manual Procedure) describes a system for classifying soils based on visual examination and manual tests.

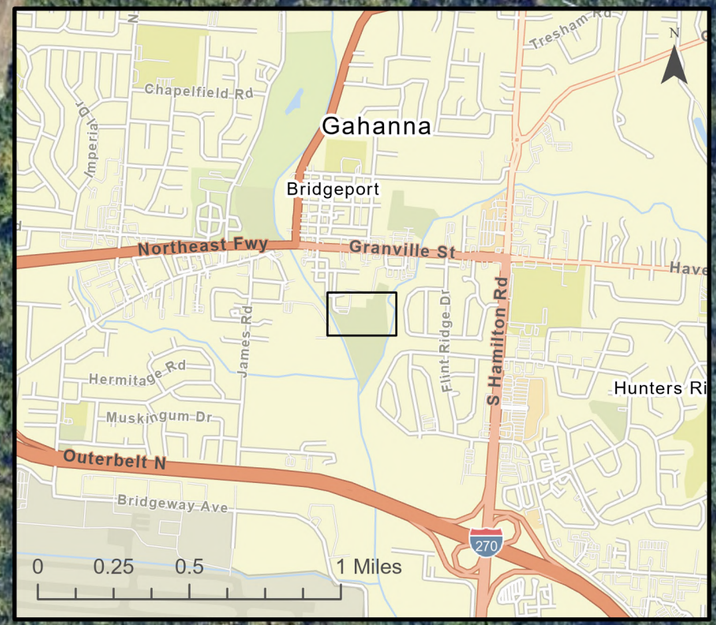
Soil classifications are based on the following tables (see reverse side):

GENERAL NOTES FOR SOIL SAMPLING AND CLASSIFICATIONS

PARTICLE SIZE DEFINITION		
Boulders:		>12"
Cobbles:		3" to 12"
Gravel:	Coarse:	3/4" to 3"
	Fine:	No. 4 (3/16") to 3/4"
Sand:	Coarse	No. 10 (2.0mm) to No. 4 (4.75mm)
	Medium	No. 40 (0.425mm) to No. 10 (2.0mm)
	Fine	No. 200 (0.074mm) to No. 40 (0.425mm)
Silt & Clay		<0.074mm; classification based on overall plasticity; in general clay particles <0.005mm.

CONSTITUENT MODIFIERS	
Trace	Less than 5%
Few	5-10%
Little	15-25%
Some	30-45%
Mostly	50-100%

ASTM/UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART		
COARSE-GRAINED SOILS (more than 50% of materials is larger than No. 200 sieve size)		
GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size	*Clean Gravel (less than 5% fines)*	
	GW	Well-graded gravel, gravel-sand mixtures, little or no fines
	GP	Poorly-graded gravels, gravel sand mixtures, little or no fines
	Gravels with fines (more than 12% fines)	
	GM	Silty gravels, gravel-sand-silt mixtures
	GC	Clayey gravels, gravel-sand-clay mixtures
SANDS More than 50% of coarse fraction smaller than No. 4 sieve size	*Clean Sands (Less than 5% fines)*	
	SW	Well-graded sands, gravelly sands, little or no fines
	SP	Poorly-graded sands, gravelly sands, little or no fines
	Sands with fines (More than 12% fines)	
	SM	Silty sands, sand-silt mixtures
	SC	Clayey sands, sand-clay mixtures
Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 percent ……GW, GP, SW, SP Greater than 12 percent ……GM, GC, SM, SC 5 to 12 percent ……Borderline cases requiring dual symbols: SP-SM, GP-GM, etc.		
FINE-GRAINED SOILS (50% or more of material is smaller than No. 200 sieve size)		
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 or low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	CL-ML	Inorganic silty clay of slight plasticity, P.I. between 4 and 7
	OL	Organic silts and organic silty clays of low plasticity
SILTS AND CLAYS Liquid Limit 50% or greater	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
	CH	Inorganic clays of high plasticity, fat clays
	OH	Organic clays or medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS	PT	Peat and other highly organic soils



Approximate Boring Locations

GCI Borings

Scale: 1 inch = 75 feet (11 x 17 Layout)

0 37.5 75 150 US Feet

Site Location Map and Boring Location Plan

Friendship Park Improvements -
150 Oklahoma Avenue, Gahanna, OH 43230

Basemap: Google. Site plan provided by client. Site plan georeferenced to basemap. NOT FOR CONSTRUCTION. Plans are subject to change.

GCI Project No.: 25-G-30344

Date: 7/2/2025
Time: 10:23 AM

Drawn by: Jimmy Fisher

Summary of Encountered Subsurface Conditions

Friendship Park Improvement
150 Oklahoma Ave - Gahanna, OH
GCI Job Number: 25-G-30344

Borehole	Topsoil Thickness (ft.)	Pavement Thickness (inches)		Bottom of Fill Cover (feet)	Groundwater: Level Encountered (ft)	Groundwater: Level at Completion (ft)	Depth to Top of Lean Clay (ft)	Depth to Top of Low plasticity Silty Clay (ft)	Depth to Top of Silt (ft)	Depth to Top of Sand/Gravel (ft)	Depth to Top of Gray Till (ft)	Bottom of Boring Depth (ft)
		Asphalt	Stone		Depth	Depth						
B-1	--	5	8	6.0	3	5	--	--	--	6.0	--	10.0
B-2	--	6	3	--	--	--	0.8	--	--	3.0	--	10.0
B-3	0.3	--	--	--	--	--	0.3	4.0	--	7.0	--	10.0
B-4	0.2	--	--	1.0	--	--	1.0	--	--	4.0	--	10.0
B-5	1.0	--	--	2.5	--	--	2.5	--	--	4.0	8.0	10.0
B-6	0.8	--	--	1.5	--	--	1.5	--	--	4.0	--	10.0
B-7	1.0	--	--	--	3	4	1.0	1.5	--	6.0	--	10.0
B-8	0.5	--	--	--	--	--	3.0	0.5	--	6.0	--	10.0
B-9	0.3	--	--	1.0	--	--	1.0	--	4.0	7.0	--	10.0
B-10	0.3	--	--	2.0	4	6	--	2.0	--		5.0	10.0

Average Topsoil Depth at boring locations: 0.5 feet

Boring Location	**Boring Location**
Asphalt Depths	**Stone Base Depths**
Avg: 5.5 inches	Avg: 5.5 inches
Max: 6.0 inches	Max: 8.0 inches
Min: 5.0 inches	Min: 3.0 inches

TEST BORING LOG

PROJECT NAME **Friendship Park Improvement - 150 Oklahoma Ave - Gahanna, OH** BORING NO. **B-1**

PROJ. SURF. ELEV.

CLIENT **City of Gahanna** NO. **25-G-30344** DATE DRILLED **7/3/2025**

GROUND WATER OBSERVATION

5.0 FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT ____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
								0.4	5" Asphalt ove 8" Aggregate Base
								1.1	
	2.0	1.0-3.0	SS	12	24	6	Moist		Fill: Brown Gravelly Lean Clay (CL) - moderate plasticity, some gravel, few sand
				9					
	LR	3.0-5.0	SS	1	1	0	Very Moist		**Water Seepage at 3 feet**
				0					
5								6.0	
									Brown Poorly Graded Sand with Gravel (SP) - mostly coarse sand
	--	8.5-10.0	SS	11	5	6	Wet		
								10.0	BOTTOM OF BORING: 100.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

720 Green Crest Drive • Westerville, Ohio 43081 • 614-895-1400

TEST BORING LOG

PROJECT NAME **Friendship Park Improvement - 150 Oklahoma Ave - Gahanna, OH** BORING NO. **B-2**

PROJ. SURF. ELEV.

CLIENT **City of Gahanna** NO. **25-G-30344** DATE DRILLED **7/3/2025**

GROUND WATER OBSERVATION

None FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT ____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
								0.5	6" Asphalt ove 3" Aggregate Base
								0.8	
	2.0	1.0-3.0	SS	1	1	2	Very Moist		Brown Sandy Lean Clay (CL) - moderate plasticity, some fine sand
				3					
								3.0	
	--	3.0-5.0	SS	2	2	1	Very Moist		Brown Silty Sand (SM) - mostly f/m sand
				4					
5								7.0	
									Brown Poorly Graded Sand with Silt and Gravel (SP- SM) - mostly coarse sand, little gravel
	--	8.5-10.0	SS	29	17	17	Moist		
								10.0	BOTTOM OF BORING: 10.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

720 Green Crest Drive • Westerville, Ohio 43081 • 614-895-1400

TEST BORING LOG

PROJECT NAME **Friendship Park Improvement - 150 Oklahoma Ave - Gahanna, OH** BORING NO. **B-3**

PROJ. SURF. ELEV.

CLIENT **City of Gahanna** NO. **25-G-30344** DATE DRILLED **7/3/2025**

GROUND WATER OBSERVATION

None FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT ____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	3.0	0.0-1.5	SS	2	1	2	Moist	0.3	Topsoil
									Brown Lean Clay (CL) - moderate plasticity, few sand
	2.0	2.0-3.5	SS	4	3	2	Moist	4.0	Brown Sandy Lean Clay (CL) - moderate plasticity, some sand
	1.5	4.0-5.5	SS	2	1	2	Moist to Very Moist	7.0	Brown Silty Clay (CL-ML) - low plasticity, few sand
5									
	--	8.5-10.0	SS	15	11	14	Moist	10.0	Brown Poorly Graded Gravel with Silt and Sand (GP- GM) - mostly gravel, little sand BOTTOM OF BORING: 10.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

720 Green Crest Drive • Westerville, Ohio 43081 • 614-895-1400

TEST BORING LOG

PROJECT NAME **Friendship Park Improvement - 150 Oklahoma Ave - Gahanna, OH** BORING NO. **B-4**

PROJ. SURF. ELEV.

CLIENT **City of Gahanna** NO. **25-G-30344** DATE DRILLED **7/3/2025**

GROUND WATER OBSERVATION

None FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT ____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	4.0	0.0-1.5	SS	2	2	2	Moist	0.2	Topsoil
								1.0	Fill: Brown Lean Clay (CL) - moderate plasticity, few sand; with trace of fill
	NR	2.0-3.5	SS	4	4	4	Moist	4.0	Brown Sandy Lean Clay with Gravel (CL) - moderate plasticity, some sand, little gravel
	--	4.0-5.5	SS	3	1	2	Moist	6.0	Brown Silty Sand (SM) - mostly fine sand
5									
	--	8.5-10.0	SS	7	4	2	Moist	10.0	Brown Poorly Graded Gravel with Silt and Sand (GP- GM) - mostly gravel, little sand
									BOTTOM OF BORING: 10.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

720 Green Crest Drive • Westerville, Ohio 43081 • 614-895-1400

TEST BORING LOG

PROJECT NAME **Friendship Park Improvement - 150 Oklahoma Ave - Gahanna, OH** BORING NO. **B-5**

PROJ. SURF. ELEV.

CLIENT **City of Gahanna** NO. **25-G-30344** DATE DRILLED **7/3/2025**

GROUND WATER OBSERVATION

None FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT _____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	4.0	0.0-1.5	SS	1	1	3	Moist	1.0	Topsoil
	3.0	2.0-3.5	SS	3	6	12	Moist	2.5	Fill: Brown Lean Clay with Gravel (CL) - moderate plasticity, little gravel, few sand
								4.0	Brown Lean Clay with Sand (CL) - moderate plasticity, little sand
5	--	4.0-5.5	SS	6	5	3	Moist	8.0	Brown Poorly Graded Gravel with Silt and Sand (GP- GM) - mostly gravel, little sand
	4.5	8.5-10.0	SS	5	9	11	Moist	10.0	Gray Sandy Lean Clay (CL); glacial till - moderate plasticity, some sand, few gravel BOTTOM OF BORING: 10.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

720 Green Crest Drive • Westerville, Ohio 43081 • 614-895-1400

TEST BORING LOG

PROJECT NAME **Friendship Park Improvement - 150 Oklahoma Ave - Gahanna, OH** BORING NO. **B-6**

PROJ. SURF. ELEV.

CLIENT **City of Gahanna** NO. **25-G-30344** DATE DRILLED **7/3/2025**

GROUND WATER OBSERVATION

None FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT _____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	2.0	0.0-1.5	SS	1	2	3	Moist	0.8	Topsoil
								1.5	Fill: Brown Lean Clay with Sand (CL) - moderate plasticity, little sand
	NR	2.0-3.5	SS	4	5	5	Moist	4.0	Brown Lean Clay with Sand (CL) - moderate plasticity, little sand
5	--	4.0-5.5	SS	8	9	13	Moist		Brown Poorly Graded Gravel with Silt and Sand (GP- GM) - mostly gravel, little sand
	--	8.5-10.0	SS	9	11	9	Moist	10.0	BOTTOM OF BORING: 10.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

TEST BORING LOG

PROJECT NAME **Friendship Park Improvement - 150 Oklahoma Ave - Gahanna, OH** BORING NO. **B-7**

PROJ. SURF. ELEV.

CLIENT **City of Gahanna** NO. **25-G-30344** DATE DRILLED **7/3/2025**

GROUND WATER OBSERVATION

4.0 FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT ____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	2.5	0.0-1.5	SS	1	1	2	Moist		Topsoil
								1.0	
								1.5	Dark Brown Lean Clay (CL) - moderate plasticity, few sand
	1.0	2.0-3.5	SS	1	1	3	Very Moist to Wet		Brown Mottled Gray Silty Clay (CL-ML) - low plasticity, few sand
									Water Seepage at 3 feet
	--	4.0-5.5	SS	6	7	7	Wet		Brown Gravelly Silty Clay (CL-ML) - low plasticity, some gravel
5								6.0	
									Brown Poorly Graded Sand with Silt and Gravel (SP- SM) - mostly sand, little gravel
	--	8.5-10.0	SS	9	8	11	Wet		
								10.0	BOTTOM OF BORING: 10.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

720 Green Crest Drive • Westerville, Ohio 43081 • 614-895-1400

TEST BORING LOG

PROJECT NAME **Friendship Park Improvement - 150 Oklahoma Ave - Gahanna, OH** BORING NO. **B-8**

PROJ. SURF. ELEV.

CLIENT **City of Gahanna** NO. **25-G-30344** DATE DRILLED **7/3/2025**

GROUND WATER OBSERVATION

None FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT ____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	3.0	0.0-1.5	SS	1	2	1	Moist	0.5	Topsoil
									Dark Brown Silty Clay (CL-ML) - low plasticity, few sand
	2.0	2.0-3.5	SS	3	4	4	Moist	3.0	
									Brown Sandy Lean Clay (CL) - moderate plasticity, some sand
	NR	4.0-5.5	SS	3	2	2	Moist		
5								6.0	
									Brown Poorly Graded Gravel with Silt and Sand (GP- GM) - mostly gravel, little sand
	--	8.5-10.0	SS	17	16	17	Moist		
								10.0	BOTTOM OF BORING: 10.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

720 Green Crest Drive • Westerville, Ohio 43081 • 614-895-1400

TEST BORING LOG

PROJECT NAME **Friendship Park Improvement - 150 Oklahoma Ave - Gahanna, OH** BORING NO. **B-9**

PROJ. SURF. ELEV.

CLIENT **City of Gahanna** NO. **25-G-30344** DATE DRILLED **7/3/2025**

GROUND WATER OBSERVATION

None FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT _____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	4.5	0.0-1.5	SS	4	5	5	Moist	0.3	Topsoil
								1.0	Fill: Dark Brown Silty Clay (CL-ML) - low plasticity, few sand
	4.5	2.0-3.5	SS	5	5	4	Moist	4.0	Brown Lean Clay with Sand (CL) - moderate plasticity, little sand
5	--	4.0-5.5	SS	4	3	3	Moist	7.0	Brown Sandy Silt with Gravel (ML) - low plasticity, some sand, little gravel
	--	8.5-10.0	SS	9	10	11	Moist	10.0	Brown Poorly Graded Gravel with Silt and Sand (GP- GM) - mostly gravel, little sand BOTTOM OF BORING: 10.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

720 Green Crest Drive • Westerville, Ohio 43081 • 614-895-1400

TEST BORING LOG

PROJECT NAME **Friendship Park Improvement - 150 Oklahoma Ave - Gahanna, OH** BORING NO. **B-10**

PROJ. SURF. ELEV.

CLIENT **City of Gahanna** NO. **25-G-30344** DATE DRILLED **7/3/2025**

GROUND WATER OBSERVATION

6.0 FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT _____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	4.0	0.0-1.5	SS	4	4	6	Moist	0.3	Topsoil
									Fill: Dark Brown Silty Clay (CL-ML) - low plasticity, few sand
								2.0	
	4.0	2.0-3.5	SS	3	3	3	Moist		Brown Sandy Silty Clay (CL-ML) - moderate plasticity, some sand
	4.5	4.0-5.5	SS	1	1	3	Moist		**Water Seepage at 4 feet**
								5.0	
5									Gray Sandy Lean Clay (CL); glacial till - moderate plasticity, some sand, few gravel
	4.5	8.5-10.0	SS	7	8	10	Moist		
								10.0	BOTTOM OF BORING: 10.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

720 Green Crest Drive • Westerville, Ohio 43081 • 614-895-1400