

REQUEST FOR QUALIFICATIONS for Architectural Services

University of Idaho Tennis Courts Improvements
University of Idaho – Moscow, Idaho
UI PN: CP260022

To: Architects and Engineers

From: Kim Salisbury, Senior Associate Vice President
Finance & Planning, University of Idaho

Subject: Planning, Design, Bid and Award Phase Assistance, and Construction
Administration Services for the demolition and rebuild of the University of
Idaho Tennis Courts

Date of Issue: Monday, October 20, 2025

The University of Idaho (U of I) is seeking qualifications from interested architectural and engineering consultant firms to provide the university in planning, design, bidding and award, and construction administration phase architectural services for the improvement and reconstruction of the University's outdoor tennis courts, located adjacent to the historic Memorial Gymnasium on the main Moscow, Idaho, campus.

Qualification Statements from firms/teams interested in providing related services for this effort will be received at the office of Architectural & Engineering Services, University of Idaho, Moscow, Idaho, until close of business (COB) at **5:00PM PT, Friday, November 14, 2025.**

Questions and Contact Information

All questions related to this RFQ shall be directed to:

Céline Acord, Project Manager
Architectural and Engineering Services
University of Idaho
875 Perimeter Drive MS 2281
Moscow, Idaho 83844-2281
(208) 885-6246
celine@uidaho.edu

Program clarification and additional data may be requested. To ensure fairness and consistency of responses, please direct all communications regarding this RFQ only to the individual listed above.

Background

The University of Idaho is located in northern Idaho in the city of Moscow. As the state's land-grant institution, U of I is committed to serving Idahoans through education, research, and outreach. The University enrolls over 12,000 students, with approximately 10,000 attending the main Moscow campus. The University also operates centers in Coeur d'Alene, Boise, Idaho Falls, and Post Falls, along with research centers and county extension offices statewide.

More information regarding the university may be obtained by visiting the university website at www.uidaho.edu or by visiting the University of Idaho Architectural and Engineering Services webpage at www.uidaho.edu/leadership/finance-administration/campus-planning-development.

University of Idaho Tennis Courts

The University's outdoor tennis courts, located adjacent to Memorial Gym, were last resurfaced in 2008. The courts are the home location to both the men's and women's varsity tennis athletic teams. In addition, the courts support educational, intramural and recreational uses. Over time, the courts have since deteriorated significantly, so much so the tennis teams have held matches for the past 8 years in Lewiston, ID, 30 miles away from Moscow. Only three of the six courts remain playable for athletic matches due to subsurface movement and cracking.

Project Description

General

A new six-court facility will include a stable subgrade with proper drainage system, post tension concrete court construction, tennis court surfacing in conformance with United States Tennis Association (USTA) standards, modern exterior court lighting, new fencing, windscreens and landscape treatments. Additionally, an open-air roof structure covering the courts which would allow for use and play during inclement weather conditions is desired at some future date, and provisions for such a structure should be considered and incorporated in the design and layout of the court facilities. These features need to be contemplated into the design to ensure future construction phases can be accommodated with minimal disruption.

Facility Information

The current tennis courts are located at 1090 Rayburn Street, to the west of the Physical Education Building (PEB) and Swim Center, south of the Memorial Gymnasium. Originally built in the late 1980's, the courts sit near the base of the historic Shattuck Arboretum. This hillside area was originally a test site to determine the best trees for windbreaks for farming operations. After over 100 years of growth, the backdrop for the tennis courts is now a mature grove of conifers. The courts are nestled into the hillside, surrounded to the north

and east by parking, to the south by the Shattuck Amphitheatre and Arboretum, and to the west by steep hillside and roadway (Rayburn Street).

There are minimal utilities on/around the site. University utilities are operated and maintained by a Public Private Partnership concession agreement. Any planning, design and construction to impacted utilities is granted exclusive rights to the concessionaire. See [\[Exhibit A\]](#) for more information.

The courts have seen various upgrades and improvements over the years. Originally built as three courts in 1955 located where the parking lot exists today, the courts have been expanded, moved, and rebuilt over the decades. Today's courts were built in the late 1980's and resurfaced in 2008.

A 2024 geotechnical study [\[Exhibit B\]](#) revealed the upper section of subsurface consists of uncontrollable fill sitting atop the Palouse region's loose, moisture-sensitive soils and high-water table have caused severe heaving and settling, rendering parts of the surface unsafe. The recommended solution includes removal of the top five feet of unsuitable soil, installation of compacted structural fill, and a passive six-inch perforated pipe dewatering system.

Reconstructing the tennis complex at its current location preserves proximity to Memorial Gym locker rooms so the teams can utilize existing facilities and enhances program efficiency for shared laundry and equipment facilities with other athletic teams. However, the university's recently adopted Long Range Campus Development Plan (LRCDP) contemplates relocating the tennis complex to another location on campus, just north of the ICCU Idaho Arena and west of the Hartung Theatre. This relocation may require additional facilities (i.e. locker rooms, storage) to be built, but the location may be better suited for new development. Both sites will need to be vetted during the initial planning and programming phase.

Scope/Intent of the RFQ:

The intent of this Request for Qualifications is to identify an Architectural or Engineering Consultant best qualified to assist with the design and construction of the Tennis Courts Improvements project as described in this RFQ.

The successful selected firm/team will be expected to provide planning, design, bidding and award phase assistance, and construction administration services necessary to plan, document, bid, and construct the facility improvements in support of the Tennis Courts at the University of Idaho.

Form of Agreement

The university intends to enter a contract with the selected firm/team for the services described herein. The university typically relies on American Institute of Architects (AIA) standard forms of agreement modified by a supplemental agreement developed by the university for all of its

professional service contracts. Additional services may be required beyond these initial assumptions.

Required Services

The consultant shall be required to consider/conform with the campus Long Range Campus Development Plan (LRCDP), district master plans, current university design and construction and CAD standards, applicable building codes, universal access design guidelines and codes, applicable energy and resource codes as they may have impact upon infrastructure recommendations, and address material and maintenance concerns.

The consultant shall be required to meet as required with the university project manager and other concerned stakeholders to discuss and refine issues and inputs during the design, bid assistance and construction phases of the projects.

Services will include, but are not limited to:

- Programming and conceptual design
- Schematic design and design development
- Construction documentation and cost estimating
- Coordination with geotechnical engineer
- Bidding and procurement support
- Construction administration

The consultant shall develop appropriate economic analyses and cost estimates as required during the course of the development of the design and construction documents in order to evaluate and support planning and design decisions. The consultant may also be required to advise the owner of other cost and value analyses as required.

The university intends to identify and pursue donation opportunities in all the phases of the project which may include gifts-in-kind and donated material and/or services. The selected consultant will be expected to assist the university in navigating and integrating these opportunities into the design and construction.

Future services may or may not be required at the university's discretion. If such additional services are desired of the consultant by the university, these will be administered by the University of Idaho. The university reserves the right to award contracts for these services as the needs of the university requires during the progress of the contract.

Informational Documents

The UI Strategic Plan and Long Range Campus Development Plan and other pertinent documents are available on the UI web pages. Items of specific interest include:

- University website: uidaho.edu
- University Strategic Plan: uidaho.edu/about/thinking-big/strategic-plan

- University Long Range Campus Development Plan (LRCDP):
www.uidaho.edu/leadership/finance-administration/campus-planning-development
- University of Idaho Athletics webpage: govandals.com
- University Design and Construction Project Standards:
www.uidaho.edu/leadership/finance-administration/campus-planning-development

Proposal Content:

A. Basic Qualifications:

Provide basic data relative to the firm's size, history, personnel, special expertise and general credits and qualifications. Individual resumes, awards, associations, etc., may be included. Office brochures should be submitted separately as supplemental data.

The university reserves the right to investigate and confirm the proposer's financial responsibility. This may include financial statements, bank references, and interviews with past clients, employees, consultants and creditors. Unfavorable responses to these investigations are grounds for rejection of the proposal.

B. Specific Qualifications:

List the team anticipated to accomplish the work required by this request, including any anticipated sub-consultants. Describe who will perform the various tasks, a percentage of time for their involvement, responsibilities and their qualifications. Demonstrate the ability of the project manager and proposed team members to work collaboratively, through design and construction, to successfully deliver a project of similar size, scope and complexity.

C. Approach to Project:

Include a statement of your approach to projects of this nature and how that approach is to be applied in this specific instance. Include an understanding of the university's project as currently defined, possible alternative methods and concepts which may be considered, a preliminary schedule indicating staff and resources to be applied to the project and a preliminary outline of the projected time schedules. Experience with the State of Idaho and University of Idaho processes, procedures, specifications, etc. should be included if applicable.

D. Past Performance:

Submit two (2) letters of reference from prior clients or client representatives for this type of management consultant work. Letters from projects listed in Item E are preferred.

E. Special Requirements:

Provide information regarding specific involvement with projects of this type having similar characteristics. Specifically, the university is interested in demonstrated expertise in the planning, programming, design and construction of tennis facilities. Experience and

expertise in the design and development of similar spaces is desired. Provide a list of a minimum of three (3) similar, or related, studies and plans, with brief descriptions, demonstrating an ability to accomplish projects of this scope.

F. Additional Information:

Include additional information as applicable. For information purposes, indicate the location of the office where the contract services are to be performed and demonstrate how work will be executed if outside of a 100-mile radius.

Submittal

Submit five (5) printed copies of the submittal and an electronic PDF of the submittal. The submittal should be no larger than 8.5"x11" document size with font size no smaller than 10 points. To assist in the evaluation, format the proposal in a similar fashion to the headings listed herein and provide page numbers. Proposals should be clear and concise. Emphasis should be placed on the specific qualifications of the persons who will actually perform the work of this contract and the specific approach to the execution of said work.

Evaluation

A selection committee will consist of persons from the University of Idaho Architectural and Engineering Services, University of Idaho Athletics, and other stakeholder groups. The evaluation process is intended to evaluate the capabilities of interested firms to provide services to the university for this project within the context and confines of defined project schedule.

Submitted Evaluation:

The evaluation process evaluate submitted qualifications based on the following criteria:

- Relevant Experience (25%)
- Key Personnel (20%)
- Project Understanding and Approach (20%)
- Cost and Schedule Management (15%)
- Design Quality and Innovation (10%)
- References and Past Performance (10%)

Interview Evaluation:

At the university's discretion, it may choose to conduct interviews via a virtual meeting tool if necessary for additional information to assist with the evaluation process. The selection committee will adjust the rankings based upon interview performance. Shortlisted firms will be invited to participate in virtual interviews on December 10 or 11, 2026. All parties will be notified of the exact times and venue/application of their interview. Interested firms should hold these dates available.

Each interview will be a maximum of 60 minutes in duration. The format of the interview will be left up to the proposing firm/team; however, at least 15 minutes should be reserved for questions by the selection committee. Members of the firm/team's proposed project

management group must be present at the interview. From the perspective of the university, it is not necessary that members of sub-consulting firms be present. The presence of sub-consultants is therefore at the discretion of the proposing firm/team.

Final selection will be based on qualifications, understanding of project goals, and interview performance.

Award

Based upon the results of the evaluation committee, the selection committee will recommend a course of action to the University of Idaho executive leadership. A notice of intent to negotiate will be issued by the University of Idaho in accordance with the prescribed procedure.

The university will select one firm for the award of the Tennis Court Improvements project. Final award is contingent upon successful negotiation and approval of a professional services agreement.

Proposed Schedule

Issue RFQ:	Monday, October 20, 2025
Pre-Submittal Conference:	Monday, November 3, 2025 (Non-Mandatory) @ 10:00AM PT
Solicitation Protest Deadline:	Wednesday, November 5, 2025 @ 5:00PM PT
Qualifications Due:	Friday, November 14, 2025 @ 5:00PM PT
Virtual Interviews:	Wednesday-Thursday, December 10-11, 2026
Announce Final Selection:	Monday, December 15, 2026
Pre-Proposal Conference:	Thursday, December 18, 2026

Anticipated Performance Period

In general, University of Idaho planning desires are based on having a completed, functional and operational facility in place by **January 2027**. This date may be adjusted based upon the advice and recommendations of the selected Architectural Consultant.

Additional services and related performance periods may be awarded by the University at the discretion of the University.

Selection

The University of Idaho will attempt to select a firm/team not later than **Monday, December 15, 2026**. Upon selection of consultant firm/team, the university will issue a letter of intent to negotiate. However, final award shall be contingent upon the successful negotiation and approval of a contract. The contents of a submitted proposal may be incorporated in a legal contract or agreement. Proposers should be aware that methods and procedures proposed could be folded into contractual obligations.

Additional Information

The University of Idaho reserves the right to reject any and/or all proposing consultant firms interviewed.

The University of Idaho may also negotiate separately with any source in any manner necessary to serve its best interests.

The university reserves the right to investigate and confirm the proposer's financial responsibility. This may include review of financial statements, bank references, and interviews with past clients, employees, consultants and creditors. Unfavorable responses to these investigations may be grounds for rejection.

Idaho State law prohibits some professionals from soliciting business in the State of Idaho without proper Idaho licensure. Firms not properly licensed in Idaho, or, unsure of their licensure status, are advised to consult with the Idaho Division of Occupational and Professional Licenses (IDOPL), or an attorney licensed to practice in Idaho **before** submitting a response to this invitation.

Protests

Solicitation Protests:

If any invitee is in doubt as to the true meaning of any part of this Request for Qualifications, or detects discrepancies or omissions, such invitee may submit to the university a written request for an interpretation thereof.

If any invitee feels that a particular solicitation provision, condition, or specification limits competition, such invitee may submit to the university a written request for change, including reasons for the request and the proposed change.

Any interpretation of the invitation or approval of changes will be made only by addendum duly issued. A copy of each addendum will be mailed, faxed, or delivered to each invitee receiving an invitation to interview and becomes part thereof. Receipt of each numbered addendum shall be acknowledged by the invitee in the response to the invitation to interview. The university will not be responsible for any other explanation or interpretation of the invitation to interview.

Prospective interviewees may submit a request for change of particular solicitation provisions and specifications and conditions no later than November 5, 2025 @ 5:00PM PT. Such requests for change shall include the reasons for the request and any proposed changes to the solicitation provisions, specifications, and conditions.

Selection Protests:

Any invitee who claims to have been adversely affected or aggrieved by the selection of competing invitees to interview, or by the final selection of a candidate to recommend to the University of Idaho Executive Leadership for award, shall have five calendar days after notification of those firms who will be considered further for this award to submit a written protest of the selection to the Senior Associate Vice President, Capital Planning and Budget, University of Idaho, Moscow, Idaho 83844. This written notification is to be received by 5:00 PM PT within the identified five (5) calendar-day period.

Additional Requirements:

Any firm that accepts an interview shall represent and warrant the following:

- A. That it is financially solvent, able to pay its debts as they mature, and possessed of sufficient working capital to perform the services and work described herein;
- B. That it is capable of performing and completing the services and work described herein and has sufficient resources, experience and competence to do so; and
- C. That it is authorized to practice and to do business in Idaho, properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over it and the services and work described herein, and has or will obtain all licenses and permits required by law.

To confirm your interest in participating in the request process please contact, either by phone or email:

Céline Acord
Project Manager
Architectural and Engineering Services
University of Idaho
Moscow, Idaho 83844-2281
(208) 885-6246
celine@uidaho.edu

Lee Fleming
Contracts Specialist
Architectural and Engineering Services
University of Idaho
Moscow, Idaho 83844-2281
(208) 885-6246
lfleming@uidaho.edu

Submittal Requirements:

Interested firms should submit five (5) copies and one (1) electronic copy of the response materials as described herein plus one (1) of any additional materials that a firm may wish to submit (i.e.: sample reports, portfolios, etc.).

All submittals shall be made to:

Céline Acord, Project Manager
Architectural and Engineering Services
University of Idaho
875 Perimeter Drive MS 2281
Moscow, Idaho 83844-2281

Proposals shall be clearly labeled, reference this RFQ, and be submitted no later than:

5:00PM PT, Friday, November 14, 2025

Scope of Services

Coordination with UI Utilities Concession

Coordination with UI Utilities Concession:

In 2021, the University of Idaho entered into a Public Private Partnership (P3) concession agreement for the operations, maintenance, and capital development of the university's utilities systems with Sacyr Plenary Utilities Partners, Idaho (SPUPI). Under this concession agreement, the university retains ownership of the 8 utility systems involved in the concession, while SPUPI, and SPUPI's suboperators, provide for the daily operations and maintenance of the utility systems. In addition, SPUPI is granted the exclusive concession to the planning, design, and construction implementation of capital improvements to the utility systems up to a point of demarcation for the service delivery of the utility as defined in the concession agreement for each of the 8 utility systems. The term of the concession agreement is 50 years.

The university owned utilities covered by the concession agreement and operated by SPUPI are:

- UI Central Steam Distribution and Condensate Return
- UI Central Chilled Water Distribution and Return
- UI Electrical Energy Distribution
- UI Domestic Water Distribution
- UI Sanitary Sewer Collection
- UI Storm Water Runoff and Collection
- UI Reclaimed Water Distribution
- UI Campus Compressed Air Distribution

SPUPI, as the utilities concessionaire for the University of Idaho, is responsible for the planning, design, and construction implementation of any necessary utilities development project necessary to deliver campus utilities services to this project. SPUPI is also responsible for the selection of the design and engineering team, and the construction delivery team for the campus utilities services project required to support the project defined in this RFQ.

As part of the base scope of services, the Architectural and Engineering design team selected for this project will coordinate the design effort for this project with that of the design team selected by the concessionaire to ensure that campus and site utilities, and the building services, integrate in a unified, efficient, cohesive manner. This includes:

- 1) Develop and share building load calculations. The concessionaire may use these calculations to size service and distributions lines.
- 2) Work as a team in a coordinated and integrated fashion during the design process to develop the site and site concepts which accommodate the installation of campus level utilities to, and through, the site and provide the necessary service with the necessary capacity to the points of demarcation.
- 3) Develop and coordinate construction documents and specifications for this project and for the concessionaires' utilities project which allow the contractors and installers of both projects to be successful.
- 4) Coordination and sequencing of the construction phases of both projects.



GeoTek, Inc.

11354 N. Government Way, Hayden, ID 83835
(208) 904-2980 Office (208) 904-2981 Fax www.geotekusa.com

August 20, 2024
Project No. 3291-NI

University of Idaho AES

Attn: Guy Esser

875 Perimeter Drive
Moscow, ID 83844

Subject: **Geotechnical Evaluation** for “University of Idaho Tennis Courts” – Located on the University of Idaho Campus in Moscow, Idaho

In accordance with your request, GeoTek, Inc. (GTI) has completed a geotechnical evaluation for the University of Idaho tennis courts. The purpose of our study was to evaluate the soils underlying the site and to provide recommendations for project design and remediation based on our findings. This report outlines the geologic and geotechnical conditions of the site based on current data and provides earthwork and construction recommendations with respect to those conditions.

SCOPE OF SERVICES

The scope of our services has included the following:

1. Review of soils and geologic reports and maps for the site (Appendix A).
2. Site reconnaissance.
3. Review of aerial photographs.
4. Advancing and geologic logging of five (5) exploratory borings (Appendix B).
5. Groundwater monitoring from January of 2024 to June of 2024.
6. Obtaining samples of representative soils, as the exploratory borings were advanced.
7. Performing laboratory testing on representative soil samples (Appendix C).
8. Assessment of potential geologic constraints.
9. Engineering analysis regarding tennis court subgrade construction and site preparation.
10. Preparation of this report.

SITE DESCRIPTION

The project site consists of a rectangular shaped area containing six (6) tennis courts within the University of Idaho campus in Moscow, Idaho. The project site is bounded on the north and east by parking stalls and associated drive isles, to the south by landscaped vacant land and to the west by Nez Perce Drive. From topographic maps and Google Earth Pro Aerial Imagery, the project site's elevation ranges from approximately 2,618 to 2,622 feet above mean sea level. Topographically, surface water is generally directed to the southwest.

PROPOSED DEVELOPMENT

It is our understanding that site development will consist of demolition an of the existing tennis courts and underlying soils to attain the desired graded configuration(s) and soil support for the construction of new tennis courts with associated improvements (flatwork, fencing, etc.).

FIELD STUDIES

Subsurface conditions at the site were explored by using a track-mounted hollow stem auger. Five (5) exploratory borings (B-1 through B-5) were advanced onsite to a maximum depth of 16.5 feet below this existing ground surface. Logs of the exploratory borings are included with this report in Appendix B. The initial field studies were completed during January of 2024 by our field personnel who conducted field excavation location mapping, geologically logged the excavations, installed piezometers, and obtained samples of representative soils for laboratory testing. The approximate locations of the explorations are indicated on the enclosed Site Exploration Plan (see Figure 3). The Unified Soil Classification System (USCS) Classification was used to visually classify the subgrade soils during the field evaluation.

GeoTek conducted weekly and selective groundwater level testing in borings B-1 through B-5 using portable water level meters in the installed piezometers. The borings were installed with perforated PVC pipe, the annular was filled with gravel and the pipe was capped and sealed at the surface. Groundwater in the surrounding areas allows water to flow into the PVC standpipe until the water inside the standpipe is equivalent to the surrounding groundwater level. Readings were taken from the top of the standpipe which was roughly level to the existing ground surface. Groundwater depth readings were recorded in feet and generally to the nearest hundredth of a foot. When a reading was not able to be taken, the reasoning was documented and has been included in the Piezometer Reading table in Appendix D. Groundwater readings were conducted from January 18, 2024 to June 19, 2024. Groundwater depths observed are included in Appendix D.

REGIONAL GEOLOGY

The subject site is situated within the Palouse Region of Latah County. The Palouse lies on the eastern edge of the Columbia Plateau which boasts the characteristic feature of the Palouse, its rolling hills. The Palouse encompasses approximately 19,000 square miles across southeastern

Washington, western Idaho, and northeastern Oregon. The Palouse hills are comprised of silt, or Loess, transported to the region creating the wind-blown shapes that exist today. Though the source of this loess has been debated, it is generally considered to be blown from the fine-grained Ringold Formation on the eastern margins of the Cascades and perhaps from the Touchet Beds in the Pasco Basin. Beneath these dunelike hills and between the deep “basement” rock lies a great layer of basalt. Some of the fractured and broken basalt flows are water bearing as are the sedimentary interests of the Palouse (Breckenridge, 1984). The composition of the Palouse loess is comprised of a variety of minerals. Similar to loess throughout the world, the Palouse contains quartz and feldspar minerals. Unique to the loess in this region, mica as well as small amounts of volcanic glass and dark minerals can be found. Studies have shown that a complex series of layers have formed on the Palouse rather than a homogenous deposit of silt. A constant state of fluctuation in the formation of the loess deposits characterizes the region’s history. Used primarily as farmland, the Palouse region has seen drastic shifts in its topography due to the susceptible ability to erosion of the loess deposits (Breckenridge 1984). During the Holocene, the modern characteristics of the Palouse soil was developed in its loess. The Cascade volcanoes have repeatedly covered the Palouse with an abundance of volcanic ash, distributed in layers, and creating the moisture retaining capabilities of the soil allowing successful dryland farming in the region. At its thickest the Palouse loess is up to 246 feet thick (Busacca, 1989).

The USDA Natural Resources Conservation Service (NRCS) has mapped the soils on and around the property as predominantly Palouse silt loam. Parent material is predominantly loess.

SITE SOILS

General

All borings were positioned outside of the existing tennis courts so that the courts would not be disturbed and could remain in use. With the borings being outside of the existing tennis courts, the encountered soils may differ from those currently supporting the tennis courts. For this study, we have assumed that the soils are similar both under the soils tennis courts and in adjacent borings.

Artificial Fill

Where observed in our exploratory test borings, the upper 12 to 30 inches of the borings consisted of topsoil that has been disturbed and contains loose/soft material, deleterious material, organics, and roots. This shall be considered artificial fill. The “Artificial Fills” contain organics/roots and are not considered suitable for support of the proposed tennis courts. All artificial fill material should be removed as described in the “Removals” section of this report.

Undocumented Fill

Fill from previous grading operations was encountered across the site. In parking areas, asphalt pavement and approximately 30 inches of base rock type material was encountered in Borings B-1 and B-2. It is not expected that the base rock extends under the existing tennis courts. Borings B-3, B-4 and B-5 encountered fill to depths of 2 ½ to 7 ½ feet and is assumed to be consistent with material placed for the construction of the tennis courts.

This encountered fill is considered undocumented, due the absence of engineering documentation regarding its placement. The undocumented fill generally consisted of lean clay and silt with varying

amounts of sand. The consistency of the fill was highly variable ranging from soft to stiff. The undocumented fill is not considered suitable for support of foundations, concrete flat work, or pavement in its current condition. Refer to the "Recommendations Earthwork Construction" section of this report for specific site preparation recommendations.

Native Soils

Native soils encountered below the artificial spread fill and undocumented fill generally consisted of silt and lean clay with varying amounts of sand. The moisture content within the native materials was generally slightly moist near surface and slightly moist to moist at depth. The consistency of these soils ranged between soft to very stiff.

After artificial fill, uncontrolled fill, and organic material are removed, the native soils will require, at a minimum, some removal and/or processing efforts to be considered suitable for the support of the proposed site improvements. Locally deeper processing/removals may be necessary. Refer to the "Recommendations Earthwork Construction" section of this report for specific site preparation recommendations.

SURFACE & GROUNDWATER

Perched groundwater was encountered within borings B-2 and B-3 excavations during our site exploration at approximately 10.5 feet and 8 feet below the existing ground surface. These encountered groundwater depths are representative of where groundwater was initially encountered in the borings but not generally of static groundwater levels. Since groundwater monitoring was planned for the site, piezometers were installed in each of the borings, and monitoring wells were allowed to develop for approximately a week prior to the first static readings.

Groundwater readings were conducted on a weekly and selective basis from January 18, 2024 to June 19, 2024. Groundwater depths observed are included in Appendix D. Groundwater levels were measured from the top of the piezometer pipe to the groundwater level. The top of the piezometer pipes was consistent with adjacent existing grades. Static groundwater levels were generally observed to range from 3.66 feet to 8.84 feet below the ground surface in borings B-1 through B-4 and fluctuate based on seasonal conditions. Additionally, groundwater was observed to range from 1.05 feet to 3.66 feet below existing ground surface in boring B-5 and fluctuated based on seasonal conditions. Groundwater levels will fluctuate throughout the seasons and year-to-year due to changes in precipitation, snow melt, nearby landscape irrigation, infiltration and site development. Generally, spring thaw of winter snowfall influences groundwater levels. Highest seasonal groundwater levels are typically encountered in early spring while the lowest groundwater levels are typically encountered in late summer or early fall.

GTI assumes that the design civil engineer of record will evaluate the site for potential flooding and set grades such that the improvements are adequately protected. These observations reflect conditions at the time of this investigation and do not preclude changes in local ground water conditions in the future from natural causes, damaged structures (lines, pipes etc.), or heavy irrigation.

RESULTS OF LABORATORY TESTING

Laboratory tests were performed on representative samples of the onsite materials to evaluate their physical characteristics. The tests performed, and the results obtained are presented in Appendix C.

CONCLUSIONS

Based on our field exploration, laboratory testing, and engineering analyses, it is our opinion that the subject site is suited for the proposed development from a geotechnical engineering viewpoint. The recommendations presented herein should be incorporated into the final design, grading, and construction phases of development. The engineering analyses performed concerning site preparation and the recommendations presented below have been completed using the information provided to us regarding site development. If the information concerning proposed development is not correct or changes in the future, the conclusion and recommendations contained in this report shall not be considered valid unless the changes are reviewed, and conclusions of this report are modified or approved in writing by this office.

RECOMMENDATIONS - EARTHWORK CONSTRUCTION

General

All grading should conform to the International Building Code (IBC) and the requirements of the City of Moscow, Latah County and DPW except where specifically superseded in the text of this report. During earthwork construction all removals, drain systems, slopes, and the general grading procedures of the contractor should be observed and the fill selectively tested.

If unusual or unexpected conditions are exposed in the field, they should be reviewed by this office and if warranted, modified and/or additional recommendations will be offered. It is recommended that the contractor(s) perform their own independent reconnaissance of the site to observe field conditions firsthand. If the contractor(s) should have any questions regarding site conditions, site preparation, or the remedial recommendations provided, they should contact an engineer at GeoTek for any necessary clarifications prior to submitting earthwork bids. All applicable requirements of local and national construction and general industry safety orders, the Occupational Safety and Health Act, and the Construction Safety Act should be met.

Demolition

There were 6 existing tennis courts encountered during the field investigation. The existing tennis courts were observed to be in various states of disrepair, and it is understood that the courts will be removed and replaced in the future. The following recommendations are provided as guidelines in the event a structure is encountered that is not intended to remain.

1. All existing surface or subsurface structures (not intended to remain), within the area to be developed, should be razed and moved off site to a proper disposal facility.
2. If a septic tank (to be abandoned or below a proposed improvement) is located within the

project site, it is recommended that it be pumped out and with few exceptions likely removed. Any leach lines, seepage pits, or other pipes associated with this structure should also be removed or properly abandoned.

3. If any wells are encountered, an attempt should be made to identify the owner and purpose of the well. Well abandonment should adhere to the recommendations provided by the Idaho Department of Water Resources, the Public Health Department, or any other government agencies. If the well is around a proposed structure, these recommendations should be reviewed by GTI and if warranted, additional geotechnical recommendations will be offered.

Removals/Processing - General

Presented below are removal/processing recommendations for the various earth materials encountered on the project. Debris, vegetation, and other deleterious material should be stripped/removed from areas proposed for structural improvements.

Based on a review of the exploratory logs and our site reconnaissance, the artificial fill, undocumented fills and deleterious material should be removed across the site. Artificial fill may be reused in landscape and other non-structural areas. Uncontrolled fill consisting of silt and clay with organics was identified in multiple borings. These soils are not generally suitable for support of structures and should be removed and replaced with granular structural fill. It is recommended that the uncontrolled fill be removed to a minimum depth of 4 feet below the finished grade of the proposed tennis courts. After excavation and prior to placement of granular structural fill, the exposed subgrade shall be compacted to at least 90% of the maximum dry density, as determined by ASTM D1557. A separation geofabric (Contech C-300, Tencate Mirafi 600x, or equivalent) must be installed over the exposed, compacted subgrade prior to placement of controlled fill. Structural Fill or Coarse Structural Fill Material may be placed following placement of geotextile. Each lift must be compacted to at least 95% of the maximum dry density, as determined by ASTM D1557.

Depending on proposed site grades, groundwater will be encountered during the removal process. If saturated soils are encountered at or near groundwater elevation, it is likely that the exposed subgrade will require stabilization. Several stabilization techniques could be used including placing and rolling in to the unstable subgrade 3 to 8 inch diameter clean rock until a stable subgrade is achieved; or using a geogrid and aggregate base material to create a stabilizing layer. If conditions during construction reveal that stabilization may be required, GeoTek should be contacted to provide appropriate recommendations. Locally deeper removals/processing may be necessary based on the field conditions exposed.

Excavation Difficulty and Groundwater

We anticipate that the onsite soils can be excavated with conventional earthwork. As mentioned earlier, based on periodic monitoring, groundwater levels were generally observed to range from 3.66 feet to 8.84 feet below the ground surface in borings B-1 through B-4. Additionally, groundwater was observed to range from 1.05 feet to 3.66 feet below existing ground surface in boring B-5.

Based on the monitored groundwater levels, it is anticipated that excavations during site preparation

may encounter groundwater. Where possible, excavations into native clay and silt soils should be graded to a low point to allow for collection and discharge of accumulated groundwater through a subsurface drain system. Typical drain systems consist of a minimum 4-inch diameter perforated schedule 40 PVC pipe placed in minimum of 12 inches of 3/4 to 1-1/2 inch clean crushed rock wrapped in filter fabric. Drain systems should be designed to be daylighted where possible, discharged to a drain sump to allow for periodic pumping or discharged to other suitable location as determined by the project Civil Engineer.

In addition to expected groundwater, seasonal conditions may cause wet soil conditions to occur onsite. Wet materials should be spread out and air-dried or mixed with drier soils to reduce their moisture content to the appropriate level for fill placement. Frozen soils, if encountered, should be removed and allowed to thaw prior to any fill placement or construction. Removal bottoms should be checked by a representative of GTI to see if deeper removals are necessary.

Groundwater

As mentioned earlier, based on periodic monitoring, groundwater levels were generally observed to range from 3.66 feet to 8.84 feet below the ground surface in borings B-1 through B-4. Additionally, groundwater was observed to range from 1.05 feet to 3.66 feet below existing ground surface in boring B-5.

Based on the monitored groundwater levels, it is anticipated that excavations during site preparation may encounter groundwater. Where possible, excavations into native clay and silt soils should be graded to a low point to allow for collection and discharge of accumulated groundwater through a subsurface drain system. Typical drain systems consist of a minimum 4 inch diameter perforated schedule 40 PVC pipe placed in minimum of 12 inches of 3/4 to 1-1/2 inch clean crushed rock wrapped in filter fabric. Drain systems should be designed to be daylighted where possible, discharged to a drain sump to allow for periodic pumping or discharged to other suitable location as determined by the project Civil Engineer.

If encountered, wet materials should be spread out and air-dried or mixed with drier soils to reduce their moisture content as appropriate for fill placement. Groundwater is not anticipated to adversely affect planned development if earthwork construction methods comply with recommendations contained in this report or those made after review of the improvement plan(s).

Fill Placement

Subsequent to completing removals/processing and ground preparation, the excavated onsite and/or imported soils may be placed in relatively thin lifts (less than 8 inches thick), cleaned of vegetation and debris, brought to at least optimum moisture content, and compacted to a minimum relative compaction of 90 percent of the laboratory standard (ASTM D 1557).

Import Material/Structural Fill

Potentially, soils will be imported for earthwork construction purposes. A sample of any intended import material should first be submitted to GTI so that, if necessary, additional laboratory or chemical testing can be performed to verify that the intended import material is compatible with onsite soils. In general, import material should be within the following minimum guidelines:

- * Free of organic matter and debris.

- * Maintain less than 0.2 percent sulfate content.
- * Maintain less than 3.0 percent soluble material.
- * Maintain less than 0.02 percent soluble chlorides.
- * Maintain less than 0.2 percent sodium sulfate content.
- * Maintain a Plasticity Index less than 12 (i.e., low expansive).
- * One hundred percent passing the six-inch screen.
- * At least seventy-five percent passing a three-inch screen.
- * Maintain at least 20 percent retained on No. 4 screen.
- * Maintain between 5 and 20 percent passing the #200 screen.

Coarse Structural Fill Material

Coarse granular fill with greater than 30 percent retained above the ¾-inch sieve is too coarse for proctor compaction testing control; therefore, a “method specification” developed during construction is necessary. This material is suitable for use as Structural Fill provided the requirements of ISPWC Section 202-3 are followed. At a minimum, GTI recommends that a maximum lift thickness of 18-inches uniformly distributed and compacted with at least 3 passes of a vibratory roller with minimum 30,000 pounds per impact and at least 1,000 vibrations per minute per each 6-inch lift (i.e. for an 18-inch lift a minimum of 9 passes). Rolling requirements may be decreased as the vibratory/grid roller size is increased per the referenced ISPWC section.

Observation and Testing

During earthwork construction, all removal/processing and the general grading procedures should be observed, and the fill selectively tested for relative compaction and optimum moisture content by a representative(s) of GTI. If unusual or unexpected conditions are exposed in the field, they should be reviewed by GTI and if warranted, modified and/or additional recommendations will be offered.

Earthwork Settlements

Ground settlement should be anticipated due to primary consolidation and secondary compression. The total amount of settlement and time over which it occurs is dependent upon various factors, including material type, depth of fill, depth of removals, initial and final moisture content, and in-place density of subsurface materials. Compacted fills, to the heights anticipated, are not generally prone to excessive settlement.

OTHER RECOMMENDATIONS

Site Improvements

As is commonly known, expansive soils are problematic with respect to the design, construction, and long-term performance of concrete flatwork. Due to the nature of concrete flatwork, it is essentially impossible to totally mitigate the effects of soil expansion. Typical measures to control soil expansion for structures include low expansive soil caps, deepened foundation system, increased structural design, and soil presaturation. As they are generally not cost effective, these measures are very seldom utilized for flatwork because it is less costly to simply replace any damaged or distressed sections than to "structurally" design them. Even if "structural" design parameters are applied to flatwork construction, there would still be relative movements between adjoining types of structures

and other improvements (e.g., curb and sidewalk). This is particularly true as the level of care during construction of flatwork is often not as meticulous as that for structures. Unfortunately, it is fairly common practice for flatwork to be poured on subgrade soils, which have been allowed to dry out since site grading. Generally, after flatwork construction is completed, landscape irrigation begins, utility lines are pressurized, and drainage systems are utilized; presenting the potential for water to enter the dry subgrade soils, causing the soil to expand.

Recommendations for exterior concrete flatwork design and construction can be provided upon request. In the future if any additional improvements are planned for the site, recommendations concerning the geological or geotechnical aspects of design and construction of said improvements could be provided upon request. This office should be notified in advance of any fill placement, grading, or trench backfilling after rough grading has been completed. This includes any grading, utility trench, and retaining wall backfills.

Landscape Maintenance and Planting

Water has been shown to weaken the inherent strength of all earth materials. Slope stability is significantly reduced by overly wet conditions. Graded slopes constructed within and utilizing onsite materials would be erosive. Eroded debris may be minimized, and surficial slope stability enhanced by establishing and maintaining a suitable vegetation cover as soon as possible after construction. Compaction to the face of fill slopes would tend to minimize short-term erosion until vegetation is established. Plants selected for landscaping should be lightweight, deep-rooted types, which require little water and can survive the prevailing climate. From a geotechnical standpoint, leaching is not recommended for establishing landscaping. If the surface soils are processed for the purpose of adding amendments, they should be recompacted to 90 percent compaction. Only the amount of irrigation necessary to sustain plant life should be provided. Overwatering the landscape areas could adversely affect proposed site improvements. We recommend that any proposed open bottom planter areas adjacent to proposed structures be eliminated for a minimum distance of 5 feet and desert landscape using xeriscape technology be used outside of this buffer zone. As an alternative, closed bottom type planters could be utilized. An outlet, placed in the bottom of the planter, could be installed to direct drainage away from structures or any exterior concrete flatwork. Irrigation timers should be adjusted monthly based on seasonal conditions.

Soil Corrosion

Based on our experience in the area, the soil on-site should have a negligible corrosive potential to concrete and metal, materials selected for construction purposes should be resistant to corrosion. Where permitted by building code PVC pipe should be utilized. All concrete should be designed, mixed, placed, finished, and cured in accordance with the guidelines presented by the Portland Cement Association (PCA) and the American Concrete Institute (ACI).

Drainage

Positive site drainage should always be maintained in accordance with the IBC. Drainage should not flow uncontrolled down any descending slope. Water should be directed away from the proposed improvements and not allowed to pond and/or seep into the ground. Drainage should be directed toward the street or other approved areas. The ground immediately adjacent to the proposed improvements be sloped at a minimum of 5-percent for a minimum distance of 10 feet. If physical obstructions prohibit 10 feet of horizontal distance, a 5-percent slope shall be provided to an

approved alternate method of diverting water away from the proposed improvements. Swales used for this purpose shall be sloped a minimum of 2-percent where located within 10 feet of the proposed improvements. Impervious surfaces within 10 feet of the building site shall be sloped a minimum of 2-percent away towards a proper disposal location. Areas of seepage may develop due to irrigation or heavy rainfall. Minimizing irrigation will lessen this potential. If areas of seepage develop, recommendations for minimizing this effect could be provided upon request.

**U of I TENNIS COURTS
PROJECT NO. 3291-NI**

**AUGUST 20, 2024
PAGE 11**

PLAN REVIEW

Final grading, foundation and/or improvement plans should be submitted to this office for review and comment as they become available, to minimize any misunderstandings between the plans and recommendations presented herein. In addition, remedial excavations and earthwork construction performed on the site should be observed and tested by this office. If conditions are found to differ substantially from those stated, appropriate recommendations would be offered at that time.

LIMITATIONS

The materials encountered on the project site and utilized in our laboratory study are believed representative of the area; however, soil materials vary in character between excavations and conditions exposed during mass grading. Site conditions may vary due to seasonal changes or other factors. GeoTek, Inc. assumes no responsibility or liability for work, testing, or recommendations performed or provided by others. Since our study is based upon the site materials observed, selective laboratory testing and engineering analysis, the conclusions and recommendations are professional opinions. These opinions have been derived in accordance with current standards of practice and no warranty is expressed or implied. Standards of practice are subject to change with time.

The opportunity to be of service is greatly appreciated. If you have any questions concerning this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

Respectfully submitted,
GeoTek, Inc.

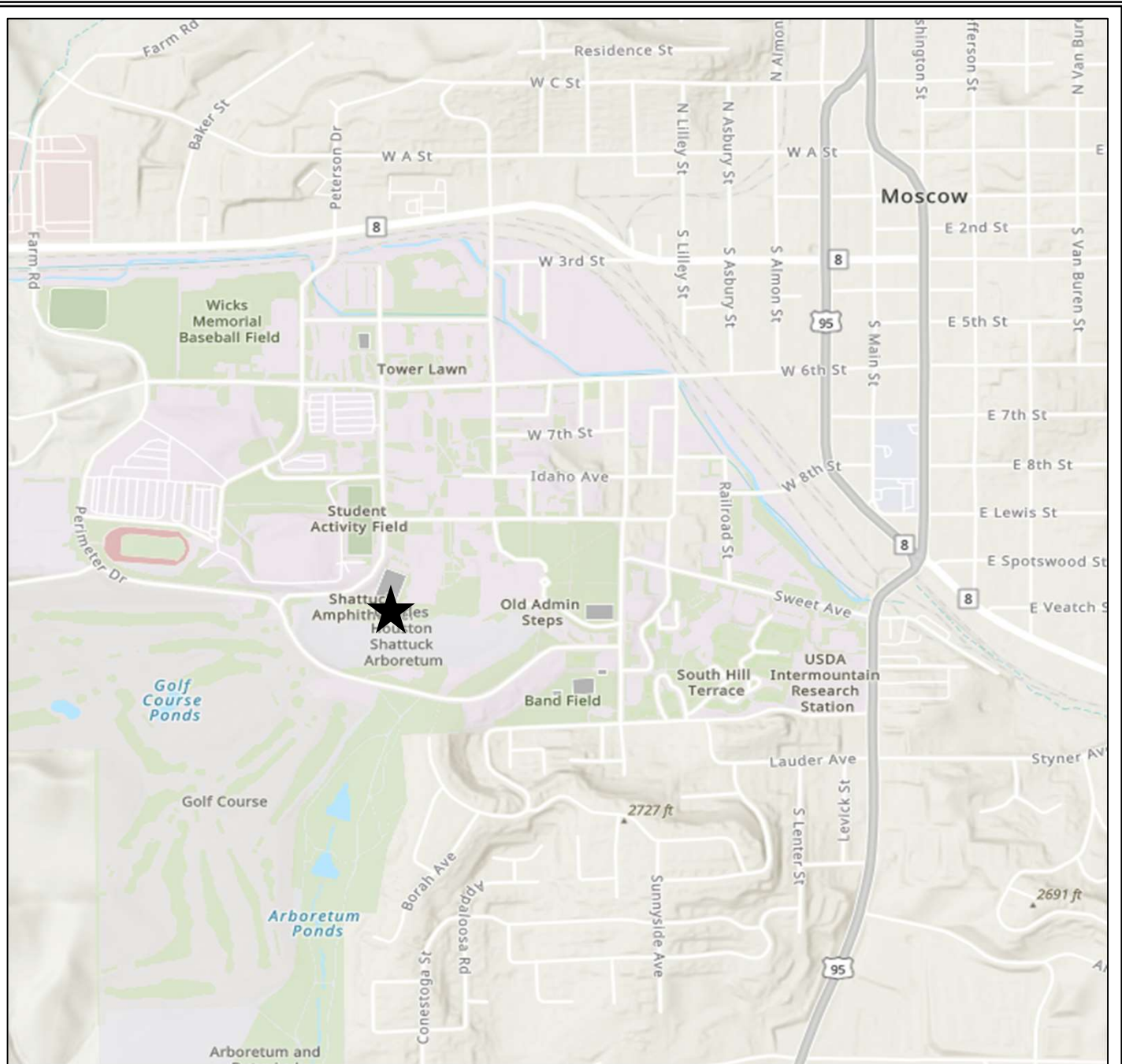


C. Scott Patterson, EIT
Staff Professional



Bryan Warden, PE
Senior Engineer

FIGURES



★ **APPROXIMATE SITE LOCATION**



Source: ESRI Maps 2024.
Not to Scale



GEOTECHNICAL | ENVIRONMENTAL | MATERIALS

11354 N Government Way, Hayden, ID 83835
(208) 904-2980 (phone) / (208) 904-2981 (FAX)

FIGURE I
SITE VICINITY MAP
University of Idaho
Tennis Courts
Moscow, Idaho
Prepared for: University of Idaho

Project No:

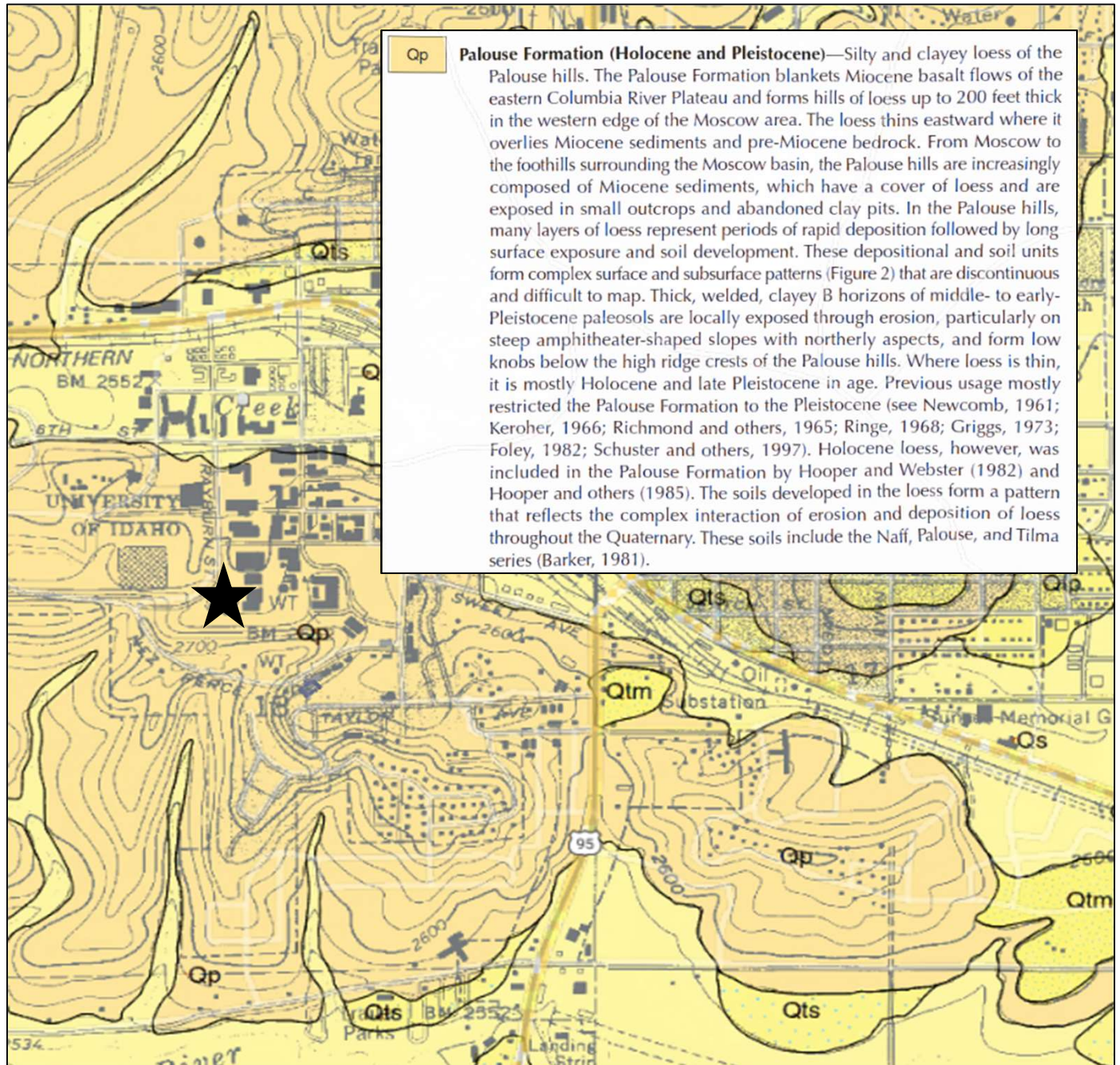
3291-NI

Report Date:

August 2024

Drawn By:

CSP



★ **APPROXIMATE SITE LOCATION**



Source: Surficial Geologic Map of the Moscow East Quadrangle and Part of the Moscow West Quadrangle, Latah County, Idaho.
Not to Scale



GEOTECHNICAL | ENVIRONMENTAL | MATERIALS

11354 N Government Way, Hayden, ID 83835
(208) 904-2980 (phone) / (208) 904-2981 (FAX)

FIGURE 2
REGIONAL GEOLOGY
University of Idaho
Tennis Courts
Moscow, Idaho

Prepared for: University of Idaho

Project No:

3291-NI

Report Date:

August 2024

Drawn By:

CSP



LEGEND

B-1  APPROXIMATE LOCATIONS OF BORINGS BY GEOTEK

Source: Google Earth 2024, GeoTek Field Observations 2024.
Not to Scale



GEOTECHNICAL | ENVIRONMENTAL | MATERIALS

11354 N Government Way, Hayden, ID 83835
(208) 904-2980 (phone) / (208) 904-2981 (FAX)

FIGURE 3
SITE EXPLORATION PLAN
University of Idaho
Tennis Courts
Moscow, Idaho
Prepared for: University of Idaho

Project No:

3291-NI

Report Date:

August 2024

Drawn By:

CSP

APPENDIX A

REFERENCES

American Geosciences Institute. 2019. North American Geology, U.S. Geological Survey, Reston, VA, United States.

ASTM, 200, "Soil and Rock: American Society for Testing and Materials," vol. 4.08 for ASTM test methods D-420 to D-4914, 153 standards, 1,026 pages; and vol. 4.09 for ASTM test method D-4943 to highest number.

Breckinridge, R.M., Lewis, R.S., Adema, G.W., Weisz, D.W., 2003, Map of Miocene and Younger Faults in Idaho, Idaho Geological Survey, University of Idaho.

Othberg, K.L., Breckenridge, R.M, 2001, Surficial Geologic Map of the Moscow East Quadrangle and Part of the Moscow West Quadrangle, Latah County, Idaho

Day, Robert W., 1999, Geotechnical and Foundation Engineering – Design and Construction

Day, Robert W., 2002, Geotechnical Earthquake Engineering Handbook

GeoTek, Inc., In-house proprietary information.

Idaho Department of Water Resources, Well Information, <https://idwr.idaho.gov/wells/find-a-well.html>

USGS, 2014, Seismic Hazard Map of Idaho, Peak Acceleration (%g) with 2% Probability of Exceedance in 50 years.

<https://seismicmaps.org/>

Guidelines for Tennis Court Construction | Nova Sports U.S.A., <https://www.novasports.com/asba-guidelines-for-tennis-court-construction>

APPENDIX B

TEST PIT LOG GENERAL NOTES

CONSISTENCY OF FINE-GRAINED SOILS

Unconfined Compressive Strength, Q_u , psf	Standard Penetration or N-Value (SS) Blows/Ft	Consistency
< 500	<2	Very Soft
500 - 1,000	2 - 3	Soft
1,001 - 2,000	4 - 7	Firm
2,001 - 4,000	8 - 16	Stiff
4,001 - 8,000	17 - 32	Very Stiff
> 8,001	32+	Hard

RELATIVE DENSITY OF COARSE-GRAINED SOILS

Standard Penetration (SPT) or N-Value (SS) Blows/Ft	Relative Density
0 - 3	Very Loose
4 - 9	Loose
10 - 29	Medium Dense
30 - 49	Dense
50+	Very Dense

SPT penetration test using 140 pound hammer, with 30 inch free fall on 2 inch outside diameter (1-3/8 ID) sampler

For ring sampler using 140 lb hammer, with a 30 inch free fall on 3 inch outside diameter (2-1/2 ID) sample,
use $N\text{-value} \times 0.636$ to get Standard N-value

For fine grained soil consistency, thumb penetration used per ASTM D-2488

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 inches
Cobbles	3 inches to 12 inches
Gravel	#4 Sieve to 3 inches
Sand	#200 Sieve to #4 Sieve
Silt or Clay	Passing #200 Sieve

RELATIVE HARDNESS OF CEMENTED SOILS (CALICHE)

Description	General Characteristics
Very Dense to Moderately Hard	Partially Cemented Granular Soil - Can be carved with a knife and broken with force by hand.
Very Stiff to Moderately Hard	Partially Cemented Fine-Grained Soil - Can be carved with a knife and broken with force by hand.
Moderately Hard	Moderate hammer blow required to break a sample
Hard	Heavy hammer blow required to break a sample
Very Hard	Repeated heavy hammer blow required to break a sample

MOISTURE CLASSIFICATION

Description*	Degree of Saturation
Dry	0%
Slightly Moist	1% - 50%
Moist	51%-75%
Wet	76% - 99%
Saturated	100%

*Defined as Condition of Sand

TEST PIT LOG LEGEND

MATERIAL DESCRIPTION		
Soil Pattern	USCS Symbol	USCS Classification
	FILL	Artificial Fill
	GP or GW	Poorly/Well graded GRAVEL
	GM	Silty GRAVEL
	GC	Clayey GRAVEL
	GP-GM or GW-GM	Poorly/Well graded GRAVEL with Silt
	GP-GC or GW-GC	Poorly/Well graded GRAVEL with Clay
	GC-GM	Silty Clayey GRAVEL
	SP or SW	Poorly/Well graded SAND
	SM	Silty SAND
	SC	Clayey SAND
	SP-SM or SW-SM	Poorly/Well graded SAND with Silt
	SP-SC or SW-SC	Poorly/Well graded SAND with Clay
	SC-SM	Silty Clayey SAND
	ML	SILT
	MH	Elastic SILT
	CL-ML	Silty CLAY
	CL	Lean CLAY
	CH	Fat CLAY
	PCEM	PARTIALLY CEMENTED
	CEM	CEMENTED
	BDR	BEDROCK

SAMPLING	
	SPT
	Ring Sample
	No Recovery
	Bulk Sample
	Water Table

CONSISTENCY							
Cohesionless Soils		Cohesive Soils		Cementation		Bedrock	
VL	Very Loose	So	Soft	MH	Mod. Hard	ES	Extremely Strong
L	Loose	F	Firm	H	Hard	VSt	Very Strong
MD	Medium Dense	S	Stiff	VH	Very Hard	St	Strong
D	Dense	VS	Very Stiff			MSt	Moderately Strong
VD	Very Dense					W	Weak
						Fr	Friable



BORING LOG

PROJECT #: 3291-UI
PROJECT: U of I Tennis Courts
CLIENT: University of Idaho
LOCATION: Moscow, ID

LOGGED BY: CSP
METHOD: HSA
OPERATOR: GeoWest
DATE: 1/10/24

Depth (ft)	SAMPLES			USCS Symbol	BORING NUMBER: B-I	Consistency	LABORATORY TESTING		
	Sample Type	Blows/Foot	Soil Pattern				Water Content (%)	Dry Density (pcf)	Plasticity Index
	MATERIAL DESCRIPTION AND COMMENTS								
1				FILL	Undocumented FILL, Black, Slightly Moist, 4" Asphalt over Apparent Aggregate Base	MD			
2									
3		23		FILL	Undocumented FILL, Gray, Dry, Concrete Debris	MD			
4		4							
5		2		CL	Light Brown, Lean CLAY with Sand, Slightly Moist	So			
6						S	21.7		25
7									
8		3							
9		5							
10		6							
11									
12									
13		3							
14		6							
15		9							
16				ML	Light Brown, SILT, Slightly Moist	S			
17		4							
18		6							
19		9							
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									
65									
66									
67									
68									
69									
70									
71									
72									
73									
74									
75									
76									
77									
78									
79									
80									
81									
82									
83									
84									
85									
86									
87									
88									
89									
90									
91									
92									
93									
94									
95									
96									
97									
98									
99									
100									
101									
102									
103									
104									
105									
106									
107									
108									
109									
110									
111									
112									
113									
114									
115									
116									
117									
118									
119									
120									
121									
122									
123									
124									
125									
126									
127									
128									
129									
130									
131									
132									
133									
134									
135									
136									
137									
138									
139									
140									
141									
142									
143									
144									
145									
146									
147									
148									
149									
150									
151									
152									
153									
154									
155									
156									
157									
158									
159									
160									
161									
162									
163									
164									
165									
166									
167									
168									
169									
170									
171									
172									
173									
174									
175									
176									
177									
178									
179									
180									
181									
182									
183									
184									
185									
186									
187									
188									
189									
190									
191									
192									
193									
194									
195									
196									
197									
198									
199									
200									
201									
202									
203									
204									
205									
206									
207									
208									
209									
210									
211									
212									
213									
214									



BORING LOG

PROJECT #: 3291-UI
PROJECT: U of I Tennis Courts
CLIENT: University of Idaho
LOCATION: Moscow, ID

LOGGED BY: CSP
METHOD: HSA
OPERATOR: GeoWest
DATE: 1/10/24

Depth (ft)	SAMPLES			USCS Symbol	BORING NUMBER: B-2 MATERIAL DESCRIPTION AND COMMENTS	Consistency	LABORATORY TESTING		
	Sample Type	Blows/Foot	Soil Pattern				Water Content (%)	Dry Density (pcf)	Plasticity Index
1				FILL	Undocumented FILL, Black, Slightly Moist, 4" Asphalt over Apparent Aggregate Base	MD			
2									
3		2		FILL	Undocumented FILL, Black, Organic Lean Clay, Slightly Moist to Moist	F			
4		3			-Organic Content = 5.7%				
5		4							
6		1		CL	Light Brown to Gray, Lean CLAY with Sand, Slightly Moist to	F			
7		2							
8		2							
9		2							
10		3							
11		4							
12				CL	Light Brown, Lean CLAY with Sand, Slightly Moist to Moist	So	30.2		20
13					Perched Groundwater Observed at 10.5 feet				
14									
15									
16						S			
17		2							
18		4							
19		6							
20									
END OF BORING @ 16.5' PERCHED GROUNDWATER ENCOUNTERED AT 10.5 FEET ----- Approximate maximum and minimum recorded groundwater levels See Table I, Appendix D for actual measurements.									



BORING LOG

PROJECT #: 3291-UI
PROJECT: U of I Tennis Courts
CLIENT: University of Idaho
LOCATION: Moscow, ID

LOGGED BY: CSP
METHOD: HSA
OPERATOR: GeoWest
DATE: 1/10/24

Depth (ft)	SAMPLES			USCS Symbol	BORING NUMBER: B-3 MATERIAL DESCRIPTION AND COMMENTS	Consistency	LABORATORY TESTING		
	Sample Type	Blows/Foot	Soil Pattern				Water Content (%)	Dry Density (pcf)	Plasticity Index
1				FILL	Artificial FILL, Dark Brown, Slightly Moist to Moist	MD			
2									
3		11		FILL	Undocumented FILL, Black, Organic Lean Clay with Sand, Slightly Moist to Moist	S			
4		8			-Trace roots				
5		4			-Organic Content = 4.6%				
6		1		FILL	Undocumented FILL, Black, Organic SILT, Slightly Moist to Moist	So			
7		1							
8		2		CL	Light Brown, Lean CLAY, Moist	F			
9		3			Perched Groundwater Observed at 8 Feet				
10		0							
11		2							
12		4							
13									
14									
15		1							
16		2							
17		2							
18	END OF BORING @ 16.5' PERCHED GROUNDWATER ENCOUNTERED AT 8 FEET								
19	----- Approximate maximum and minimum recorded groundwater levels See Table I, Appendix D for actual measurements.								
20									



BORING LOG

PROJECT #: 3291-UI
PROJECT: U of I Tennis Courts
CLIENT: University of Idaho
LOCATION: Moscow, ID

LOGGED BY: CSP
METHOD: HSA
OPERATOR: GeoWest
DATE: 1/10/24

Depth (ft)	SAMPLES			USCS Symbol	BORING NUMBER: B-4 MATERIAL DESCRIPTION AND COMMENTS	Consistency	LABORATORY TESTING		
	Sample Type	Blows/Foot	Soil Pattern				Water Content (%)	Dry Density (pcf)	Plasticity Index
1				FILL	Artificial FILL, Dark Brown, Slightly Moist to Moist	MD			
2				FILL	Undocumented FILL, Light Gray, SILT, Slightly Moist	S			
3		2							
4		4							
5		6							
6		3		CL	Light Brown, Lean CLAY, Slightly Moist to Moist	S			
7		6							
8		7							
9		2				F			
10		3							
11		4		CL	Light Brown to Orangish Brown, Lean CLAY with Sand, Slightly Moist to Moist	S	28.4		20
12		4							
13									
14									
15									
16		6				VS			
17		10							
18		11							
19									
20									

END OF BORING @ 16.5'
NO GROUNDWATER ENCOUNTERED

----- Approximate maximum and minimum recorded groundwater levels
 See Table I, Appendix D for actual measurements.



BORING LOG

PROJECT #: 3291-UI
PROJECT: U of I Tennis Courts
CLIENT: University of Idaho
LOCATION: Moscow, ID

LOGGED BY: CSP
METHOD: HSA
OPERATOR: GeoWest
DATE: 1/10/24

Depth (ft)	SAMPLES			USCS Symbol	BORING NUMBER: B-5	Consistency	LABORATORY TESTING		
	Sample Type	Blows/Foot	Soil Pattern				Water Content (%)	Dry Density (pcf)	Plasticity Index
1				FILL	Artificial FILL, Dark Brown, Silt with Sand, Slightly Moist	So			
2				FILL	Undocumented FILL, Light Brown, Lean CLAY, Slightly Moist to Moist	So			
3		3		ML	Light Brown, SILT, Slightly Moist	S			
4		6							
5		6							
6		10							
7									
8									
9									
10		5		ML	Light Brown to Orangish Brown, SILT, Slightly Moist	VS			
11		10							
12		11							
13									
14									
15		6							
16		11							
17		16							
18	END OF BORING @ 16.5' NO GROUNDWATER ENCOUNTERED								
19	----- Approximate maximum and minimum recorded groundwater levels See Table I, Appendix D for actual measurements.								
20									

APPENDIX C

LABORATORY TESTS RESULTS (329 I-NI)

ATTERBERG LIMITS

Atterberg limits were performed on representative samples in general accordance with ASTM D 4318. The results are shown in the following plates.

PARTICLE SIZE ANALYSIS

Sieve analyses were performed in general accordance with ASTM C 136 and ASTM C 117. Test results are presented in the following plates.

Report No: MAT:24-00024-S01

Material Test Report

Client: Division of Public Works-NI
502 N. 4th Street
Boise ID 83720

CC:

Project: 3291-NI
U of I Tennis Courts

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 24-00024-S01
Date Sampled 1/10/2024
Material Lean Clay with Sand (CL)
Specification General Sieve Set
Sampled By Christopher Patterson
Location B1 @ 5'

Other Test Results

Description	Method	Result	Limits
Water Content (%)	ASTM D 2216	21.7	
Method		B	
Group Symbol	ASTM D 2487	CL	
Group Name	Lean clay with sand		
Approximate maximum grain size	ASTM D 4318		
Material retained on 425µm (No. 40) (%)			
Method of Removal			
Grooving Tool Type		Metal	
Specimen preparation method		Dry	
Drying Method		Air	
Special selection process			
Rolling Method for PL		Hand	
As Received Water Content (%)		21.7	
Liquid Limit Device Type		Manual	
Liquid Limit		46	
Plastic Limit		21	
Plasticity Index		25	
Liquid Limit Procedure		Multipoint (A)	
Date Tested		1/22/2024	

Particle Size Distribution

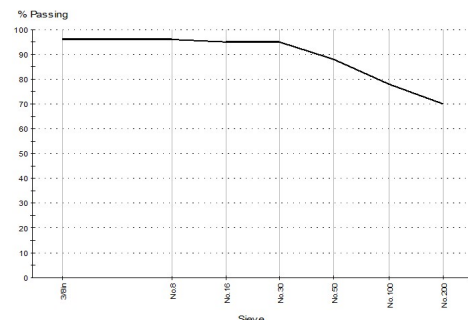
Method: ASTM C 136, ASTM C 117

Date Tested: 1/18/2024

Tested By: Wendy Brondt

Sieve Size	% Passing	Limits
3/8in	96	
No.8	96	
No.16	95	
No.30	95	
No.50	88	
No.100	78	
No.200	70	

Chart



Comments

N/A

Report No: MAT:24-00024-S02

Material Test Report

Client: Division of Public Works-NI
502 N. 4th Street
Boise ID 83720

CC:

Project: 3291-NI
U of I Tennis Courts

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 24-00024-S02
Date Sampled 1/10/2024
Material Silty Sand with Gravel (Topsoil)
Specification General Sieve Set
Sampled By Christopher Patterson
Location B2 @ 2.5'

Test Results

Description	Method	Result	Limits
Ash Content (%)	ASTM D 2974	94.3	
Organic Content (%)		5.7	
Furnace Temperature (°C)		440	
Moisture Content (%)		28	
Moisture contents are proportioned by		oven-dried mass	
Moisture Content Method (A or B)		A	
Ash Content Method (C or D)		C	
Date Tested		1/22/2024	

Comments

N/A



Report No: MAT:24-00024-S03

Material Test Report

Client: Division of Public Works-NI
502 N. 4th Street
Boise ID 83720

CC:

Project: 3291-NI
U of I Tennis Courts

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 24-00024-S03
Date Sampled 1/10/2024
Material Lean Clay with Sand (CL)
Specification General Sieve Set
Sampled By Christopher Patterson
Location B2 @ 10'

Other Test Results

Description	Method	Result	Limits
Water Content (%)	ASTM D 2216	30.2	
Method		B	
Group Symbol	ASTM D 2487	CL	
Group Name	Lean clay with sand		
Approximate maximum grain size	ASTM D 4318		
Material retained on 425µm (No. 40) (%)			
Method of Removal			
Grooving Tool Type		Metal	
Specimen preparation method		Dry	
Drying Method		Air	
Special selection process			
Rolling Method for PL			
As Received Water Content (%)		30.2	
Liquid Limit Device Type		Manual	
Liquid Limit		41	
Plastic Limit		21	
Plasticity Index		20	
Liquid Limit Procedure		Multipoint (A)	

Particle Size Distribution

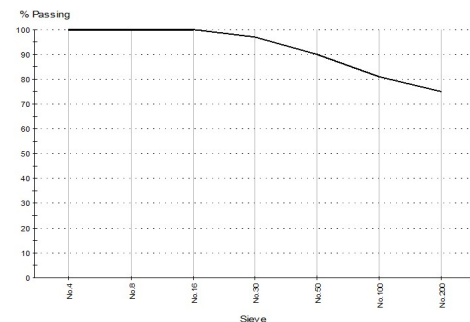
Method: ASTM C 136, ASTM C 117

Date Tested: 1/18/2024

Tested By: Wendy Brondt

Sieve Size	% Passing	Limits
No.4	100	
No.8	100	
No.16	100	
No.30	97	
No.50	90	
No.100	81	
No.200	75	

Chart



Comments

N/A

Report No: MAT:24-00024-S04

Material Test Report

Client: Division of Public Works-NI
502 N. 4th Street
Boise ID 83720

CC:

Project: 3291-NI
U of I Tennis Courts

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 24-00024-S04
Date Sampled 1/10/2024
Material Silty Sand with Gravel (Topsoil)
Specification General Sieve Set
Sampled By Christopher Patterson
Location B3 @ 2.5'

Test Results

Description	Method	Result	Limits
Ash Content (%)	ASTM D 2974	95.4	
Organic Content (%)		4.6	
Furnace Temperature (°C)		440	
Moisture Content (%)		14	
Moisture contents are proportioned by		oven-dried mass	
Moisture Content Method (A or B)		A	
Ash Content Method (C or D)		C	
Date Tested		1/22/2024	

Comments

N/A

Report No: MAT:24-00024-S05

Material Test Report

Client: Division of Public Works-NI
502 N. 4th Street
Boise ID 83720

CC:

Project: 3291-NI
U of I Tennis Courts

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 24-00024-S05
Date Sampled 1/10/2024
Material Lean Clay with Sand (CL)
Specification General Sieve Set
Sampled By Christopher Patterson
Location B4 @ 10'

Other Test Results

Description	Method	Result	Limits
Water Content (%)	ASTM D 2216	28.4	
Method		B	
Group Symbol	ASTM D 2487	CL	
Group Name	Lean clay with sand		
Approximate maximum grain size	ASTM D 4318		
Material retained on 425µm (No. 40) (%)			
Method of Removal			
Grooving Tool Type		Metal	
Specimen preparation method		Dry	
Drying Method		Air	
Special selection process			
Rolling Method for PL		Hand	
As Received Water Content (%)		28.4	
Liquid Limit Device Type		Manual	
Liquid Limit		41	
Plastic Limit		21	
Plasticity Index		20	
Liquid Limit Procedure		Multipoint (A)	

Particle Size Distribution

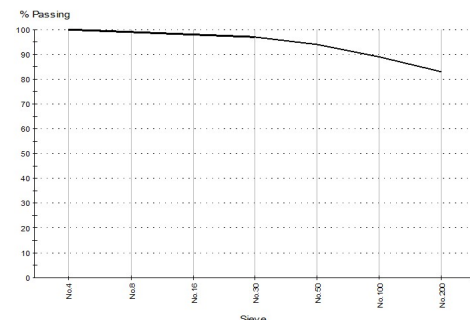
Method: ASTM C 136, ASTM C 117

Date Tested: 1/18/2024

Tested By: Wendy Brondt

Sieve Size	% Passing	Limits
No.4	100	
No.8	99	
No.16	98	
No.30	97	
No.50	94	
No.100	89	
No.200	83	

Chart



Comments

N/A

APPENDIX ☐



GeoTek, Inc.
 11354 N. Government Way, Hayden, ID 83835
 (208) 904-2980 Office (208) 904-2981 Fax www.geotekusa.com

University of Idaho - Tennis Courts Project - Piezometer Readings

GeoTek Project No. 3291-NI

Depth to groundwater was recorded from the top of the piezometer pipe (approximately equal to existing adjacent grade) using a Solinst Model 101 Water Level Meter. Where a reading was not able to be taken, the reasoning why has been included in the table below. Depth measurements were recorded in feet.

Week	Date	Air Temperature	Weather	B-1 Depth	B-2 Depth	B-3 Depth	B-4 Depth	B-5 Depth
Jan Week 3	1/18/2024	28	Snowing	N/A Frozen/Buried	N/A Frozen/Buried	N/A Frozen/Buried	N/A Frozen/Buried	N/A Frozen/Buried
Jan Week 4								
Jan Week 5/Feb Week 1	1/31/2024	47	Overcast	N/A inaccessible	Lid Stuck	5.50	3.66	3.66
Feb Week 2	2/7/2024	37	Light Rain/Fog	Lid Stuck	Lid Stuck	5.85	4.25	3.65
Feb Week 3	2/14/2024	35	Sunny	N/A inaccessible	5.75	5.70	4.20	2.15
Feb Week 4	2/21/2024	40	Sunny	N/A inaccessible	N/A inaccessible	5.80	4.37	2.10
Feb Week 5	2/28/2024	33	Rain/Snow	8.84	5.6	6.78	4.53	1.70
Mar Week 1	3/6/2024	37	Sunny	8.7	5.8	6.30	4.50	1.45
Mar Week 2	-	-	-	-	-	-	-	-
Mar Week 3	-	-	-	-	-	-	-	-
Mar Week 4	3/27/2024	46	Sunny	N/A inaccessible	N/A inaccessible	5.80	4.45	1.05
Apr Week 1	4/3/2024	45	Overcast	6.35	5.72	5.80	5.50	1.81
Apr Week 2	4/10/2024	54	Sunny	6.05	5.26	5.63	4.05	1.00
Apr Week 3	4/17/2024	45	Sunny	5.95	5.56	5.69	4.40	1.25
Apr Week 4	4/24/2024	58	Sunny	5.93	5.8	5.83	4.65	1.15
Apr Week 5/ May Week 1								
May Week 2								
May Week 3								
May Week 4								
May Week 5	5/29/2024	57	Overcast	6.05	6.1	5.95	4.90	1.30
June Week 3	6/19/2024	60	Overcast	6.2	6.3	6.05	5.10	1.55