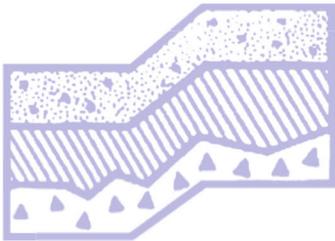


DRAFT

GEOTECHNICAL REPORT

**NWC 212 Street. NE Medical Office Facility
Snohomish County Tax Parcel 3105120020-0400
Arlington, Washington**

Project No. T-9205

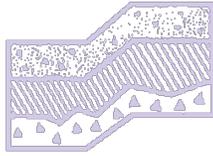


Terra Associates, Inc.

Prepared for:

**Visconsi Companies Ltd.
Pepper Pike, Ohio**

August 19, 2025



TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

August 19, 2025
Project No. T-9205

DRAFT

Mr. Shawn A. Jurisch, P.E.
Visconsi Companies Ltd.
30050 Chagrin Blvd., Suite 360
Pepper Pike, Ohio 44124

Subject: Geotechnical Report
NWC 212 Street NE Medical Office Facility
Snohomish County Tax Parcel 3105120020-0400
Arlington, Washington

Dear Mr. Jurisch:

As requested, we conducted a geotechnical engineering study for the subject project. The attached report presents our findings and recommendations for the geotechnical aspects of project design and construction.

Our field exploration indicates soil conditions observed in the test borings underlying several inches of organic topsoil and sod, consists of approximately 4.5 feet to 20 feet of loose to very dense silty sand with gravel overlying medium dense to very dense silty sand with gravel with interbedded sands up to several inches thick to the termination of the test borings. The soil formation is till-like in nature. In Test Borings B-2, B-4 and B-7 we observed approximately seven to ten feet of fill consisting of loose to dense silty sand with gravel overlying the native site soils. We observed light groundwater seepage in Test Borings B-5 and B-7 at depths of approximately 50 and 35 feet, respectively. The seepage was typically observed within interbedded sands in the lower till like deposits.

In our opinion, the soil and groundwater conditions are suitable for the planned development provided the recommendations presented in this report are incorporated into project design and construction.

We trust the information presented in this report is sufficient for your current needs. If you have any questions or require additional information, please call.

Sincerely yours,
TERRA ASSOCIATES, INC.

Maxwell E. Price, L.G.
Staff Geologist

DRAFT

Theodore J. Schepper, P.E.
Senior Principal Engineer

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**Geotechnical Report
NWC 212 Street NE Medical Office Facility
Snohomish County Tax Parcel 3105120020-0400
Snohomish, Washington**

1.0 PROJECT DESCRIPTION

The project consists of redeveloping the site with a 30,000 square foot medical office facility and associated infrastructure improvements. Based on a preliminary grading and drainage plan prepared by Barghausen Consulting Engineers, the building will be located in the southeastern portion of the site with access and paved parking to the north, west and south. Final design grades will require cuts on the order of one to five feet to the north and west with similar fill depths to the south and east. Up to 8 feet of fill will be required to achieve the finished floor elevation along the south side of the building. The preliminary grading and drainage plan also proposed using infiltration galleries installed below the western paved parking area for control of development stormwater.

We expect that the building will be a three-story, steel-framed structure, with the main floor constructed at grade. Foundation loads are expected to be moderate, with interior columns carrying 300 to 400 kips and bearing walls carrying 6 to 8 kips per foot.

The recommendations contained in the following sections of this report are preliminary and based on our understanding of the above design features. We should review design drawings as they become available to verify that our recommendations have been properly interpreted and incorporated into project design and to amend or supplement our recommendations, if required.

2.0 SCOPE OF WORK

Our scope of work was completed in accordance with our authorized proposal dated April 2, 2025. Accordingly, on August 4th, 5th and 6th, 2025, nine test borings were advanced to depths of 10 to approximately 50 feet below existing grades. At completion, three of the test borings located in the proposed infiltration gallery area were converted into groundwater monitoring wells to allow for monitoring groundwater levels over the winter season.

Using the results of our field study and laboratory testing, analyses were undertaken to develop geotechnical recommendations for project design and construction. Specifically, this report addresses the following:

- Soil and groundwater conditions.
- Geologic hazards per the City of Arlington Municipal Code (AMC).
- Seismic site class per the 2021 International Building Code (IBC).
- Site preparation and grading.
- Excavations.
- Foundations.

- Slab-on-Grade floors.
- Stormwater facilities/infiltration feasibility.
- Utilities.
- Pavements.

It should be noted that recommendations outlined in this report regarding drainage are associated with soil strength, design earth pressures, erosion, and stability. Design and performance issues with respect to moisture as it relates to the structure environment are beyond Terra Associates' purview. A building envelope specialist or contractor should be consulted to address these issues, as needed.

3.0 SITE CONDITIONS

3.1 Surface

The project site consists of an approximately 2.3-acre parcel (Snohomish County tax parcel 3105120020-0400) located northwest of the intersection of 212th Street Northeast and Medical Center Drive in Arlington, Washington. The approximate location of the site is shown on Figure 1.

The site is currently undeveloped and covered with grass and several scattered small- to medium- sized trees. Site topography slopes gently to the south – southeast with about 20 feet of elevation relief carried over a gradient of about 5 percent. There is a ridge of higher elevation along the east side of the property with slopes off the ridge descending to the west and south.

3.2 Soils

In general, soil conditions observed in the test borings underlying several inches of organic topsoil and sod, consist of approximately 4.5 feet to 20 feet of loose to very dense silty sand with gravel overlying medium dense to very dense silty sand with gravel with interbedded sands to the termination of the test borings. Sand interbeds were observed to be several inches thick. There were two exceptions to this general condition. In Test Borings B-2, B-4 and B-7 we observed approximately seven to ten feet of fill soil, consisting of loose to dense silty sand with gravel overlying the native site soils. In Test Boring B-5 we observed very dense silt with sand and gravel near the 50-foot termination depth of the boring.

The *Geologic map of the Arlington East quadrangle, Snohomish County, Washington* by J.P. Minard (1985) maps the site as Vashon recessional outwash known locally as Arlington Gravel Member (Qvra). Vashon recessional outwash is described as well-drained, stratified outwash sand and gravel deposited by meltwater from the stagnating and receding Vashon Glacier. The area immediately to the north and northwest of the subject site is mapped as Vashon till (Qvt). Vashon till is described as consisting of a non-sorted mixture of clay-silt, sand, pebbles, cobbles and boulders. The soil conditions observed in the test borings are generally more consistent with the description of the Qvt geologic map unit.

The preceding discussion is intended to be a general review of the soil conditions encountered. For more detailed descriptions, please refer to the Test Boring Logs in Appendix A. The approximate locations of the Test Borings are shown on Figure 2.

3.3 Groundwater

We observed light groundwater seepage in Test Borings B-5 and B-7 at depths of approximately 50 and 35 feet, respectively. The seepage was typically observed within interbedded sands in the lower dense silty sand deposits. In addition, mottled soils were observed in all of the test borings within the upper weathered soil zone. Mottled soils typically indicate the presence of perched groundwater seepage throughout much of the site. The occurrence of shallow perched groundwater is typical for sites underlain by fine-grained soils. We expect perched groundwater levels and flow rates will fluctuate seasonally and will typically reach their highest levels during and shortly following the wet winter months (November through May). To evaluate the seasonal weather influence, three of the test borings were converted to observation wells.

3.4 Geologic Hazards

Chapter 20.93.600.a of the City of Arlington Municipal Code (AMC) defines geologically hazardous areas as "...areas susceptible to erosion, sliding, earthquakes, liquefaction, or other geological events. Geologically hazardous areas shall be classified based upon the history or existence of landslides, unstable soils, steep slopes, high erosion potential or seismic hazards." Discussions related to erosion, landslide, mine, and seismic hazards are presented below.

3.4.1 Erosion Hazard Areas

Chapter 20.93.600.b.1 of the AMC defines erosion hazard areas as areas that are "... as defined by the USDA Soil Conservation Service, United States Geologic Survey, or by the Department of Ecology Coastal Zone Atlas. The following classes are high erosion hazard areas:

- a) Class 3, class U (unstable) includes severe erosion hazards and rapid surface runoff areas;
- b) Class 4, class UOS (unstable old slides) includes areas having severe limitations due to slope; and,
- c) Class 5, class URS (unstable recent slides)."

We did not observe any indication of erosion or sediment deposition at the site. The vast majority of the site soils are mapped as Alderwood gravelly sandy loam, 0 to 8 percent slopes by the United States Department of Agriculture Natural Resources Conservation Service (NRCS). A small portion at the southeast corner of the site is mapped as Ragnar fine sandy loam, 0 to 8 percent slopes. Over the site with existing slope gradients, both of these soils will have a slight potential for erosion when exposed. Therefore, the site is not an erosion hazard as defined by the AMC.

Regardless, the site soils will be susceptible to erosion when exposed during construction. In our opinion, proper installation and maintenance of Best Management Practices (BMPs) for erosion prevention and sedimentation control would adequately mitigate the erosion potential in the proposed development areas. All BMPs for erosion prevention and sedimentation control should conform to the Snohomish County requirements.

3.4.2 *Landslide Hazard Areas*

Chapter 20.93.600.b.2 of the AMC defines landslide hazard areas as "...areas subject to severe risk of landslide based on a combination of geologic, topographic and hydrologic factors. Some of these areas may be identified in the Department of Ecology Coastal Zone Atlas, or through site-specific criteria. Landslide hazard areas include any of the following:

- a) Areas characterized by slopes greater than fifteen percent and impermeable soils (typically silt and clay) frequently interbedded with permeable granular soils (predominantly sand and gravel) or impermeable soils overlain with permeable soils or springs or groundwater seepage;
- b) Any area that has exhibited movement during the Holocene epoch (from ten thousand years ago to present) or which is underlain by mass wastage debris of that epoch;
- c) Any area potentially unstable due to rapid stream incision, stream bank erosion or undercutting by wave action;
- d) Any area located on an alluvial fan presently subject to or potentially subject to inundation by debris flows or deposition of stream-transported sediments;
- e) Any area with a slope of thirty-three percent or greater and with a vertical relief of ten or more feet except areas composed of consolidated rock;
- f) Any area with slope defined by the United States Department of Agriculture Soil Conservation Service as having a severe limitation for building site development; and
- g) Any shoreline designated or mapped as class U, UOS, or URS by the Department of Ecology Coastal Zone Atlas."

Site topography, as shown on the Snohomish County PDS Map Portal, slopes gently to the south – southeast with about 20 feet of elevation relief carried over a gradient of about 5 percent. There is a ridge of higher elevation along the east side of the property with slopes off the ridge descending to the west and south. None of the criteria listed above apply to the site, therefore, it is our opinion that slopes on the site show little to no risk of mass movement due to geologic, topography, or hydrologic factors and that a landslide hazard does not exist at the site.

3.4.3 *Seismic Hazard Areas*

Chapter 20.93.600.b.4 of the AMC defines seismic hazard areas as "... areas subject to severe risk of earthquake damage as a result of seismic induced settlement, shaking, slope failure or soil liquefaction. These conditions occur in areas underlain by cohesion less soils of low density usually in association with a shallow groundwater table."

A review of a map titled *Faults and Earthquakes in Washington State*, dated 2014 by Jessica L. Czajkowski and Jeffrey D. Bowman shows the site does not reside within any active fault zone. The nearest fault, which is a spur of the Darrington-Devils Mountain Fault, is categorized as "Class B" and is located approximately 5.8 miles north of the site. Accordingly, during a seismic event, the risk of ground rupture along a fault line at the site is low.

Liquefaction is a phenomenon where there is a reduction or complete loss of soil strength due to an increase in water pressure induced by vibrations. Liquefaction mainly affects geologically recent deposits of fine-grained sands underlying the groundwater table. Soils of this nature derive their strength from intergranular friction. The generated water pressure or pore pressure essentially separates the soil grains and eliminates this intergranular friction; thus, eliminating the soil's strength.

Based on the soil and groundwater conditions observed, in our opinion, the potential for soil liquefaction and settlement within the native soils is negligible. Groundwater seepage was typically perched with minimal flow. Additionally, the site is rated as having very low potential for liquefaction on the Washington State Department of Natural Resources *Natural Hazards Single-Topic Map*. Therefore, the site would not meet the seismic hazard area criteria, as described above.

3.5 Seismic Site Class

Based on soil conditions observed in the test pits, and our knowledge of the area geology, per Chapter 20 of the 2021 International Building Code (IBC), Site Class "D" should be used in structural design.

4.0 DISCUSSION AND RECOMMENDATIONS

4.1 General

In our opinion, there are no geotechnical conditions that would preclude the planned development. The medical office building can be supported on conventional spread footings bearing on competent native soils below the organic topsoil layer or on structural fill placed above the competent native soils. Existing fill soils observed in the eastern ridge at test borings B-2, B-4 and B-7 are not suitable for building support in their current condition. Over excavation and structurally recompacting these existing fills will be required. Floor slabs and pavements can be similarly supported.

The native and existing fill soils encountered at the site contain a significant amount of fines and will be difficult to compact as structural fill when too wet. The ability to use the existing fill and native soils from site excavations as structural fill will depend upon its moisture content and the prevailing weather conditions at the time of construction. If grading activities take place during winter, the owner should be prepared to import clean granular material for use as structural fill and backfill.

The following sections provide detailed recommendations regarding the preceding issues and other geotechnical design and construction considerations. These recommendations should be incorporated into the final design drawings and construction specifications.

4.2 Site Preparation and Grading

To prepare the site for construction, all vegetation, organic surface soils, and other deleterious material should be stripped and removed from the site. Surface stripping depths of approximately two to four inches should be expected to remove the organic surface soils and vegetation. Organic topsoil will not be suitable for use as structural fill but may be used for limited depths in nonstructural areas.

The existing fill soils observed in the upper ten feet in Test Borings B-4 and B-7 are currently in a very loose to loose condition and will need to be over excavated and recompacted structurally below all building elements. We recommend removing the existing fill to a depth that leaves two feet of the fill in place. At that depth the fill should be compacted structurally with the soils then replaced in uniform lifts and compacted structurally as recommended below.

Once clearing and stripping operations are complete, cut and fill operations can be initiated to establish desired building grades. Prior to placing fill, all exposed bearing surfaces should be observed by a representative of Terra Associates, Inc. to verify soil conditions are as expected and suitable for support of new fill or building elements. Our representative may request a proofroll using heavy rubber-tired equipment to determine if any isolated soft and yielding areas are present. If excessively yielding areas are observed and they cannot be stabilized in place by compaction, the affected soils should be excavated and removed to firm bearing and grade restored with new structural fill. If the depth of excavation to remove unstable soils is excessive, the use of geotextile fabrics such as, Mirafi 500X or an equivalent fabric can be used in conjunction with clean granular structural fill. Our experience has shown, in general, a minimum of 18 inches of a clean, granular structural fill placed and compacted over the geotextile fabric should establish a stable bearing surface.

Our study indicates that both the existing fill soils and native soils at the site contain a sufficient amount of soil fines that will make them difficult to compact as structural fill when too wet or too dry. The ability to use these soils from site excavations as structural fill will depend upon its moisture content, the prevailing weather conditions at the time of construction and the contractor's ability to compact the native silt soils. If wet soils are encountered, the contractor will need to dry the soils by aeration during dry weather conditions. Alternatively, the use of an additive, such as Portland cement or lime to stabilize the soil moisture can be considered. If the soil is amended, additional Best Management Practices (BMPs) addressing the potential for elevated pH levels will need to be included in the Stormwater Pollution Prevention Program (SWPPP) prepared with the Temporary Erosion and Sedimentation Control (TESC) plan. The relatively clean sand and gravels observed throughout the site, should be suitable to reuse as structural fill in most weather conditions.

If grading activities are planned during the wet winter months, or if they are initiated during the summer and extend into fall and winter, the owner should be prepared to import wet-weather structural fill.

For this purpose, we recommend importing a granular soil that meets the following grading requirements:

| U.S. Sieve Size | Percent Passing |
|------------------------|------------------------|
| 6 inches | 100 |
| No. 4 | 75 maximum |
| No. 200 | 5 maximum* |

*Based on the 3/4-inch fraction.

Prior to use, Terra Associates, Inc. should examine and test all materials imported to the site for use as structural fill.

Structural fill should be placed in uniform loose layers not exceeding 12 inches and compacted to a minimum of 95 percent of the soil's maximum dry density, as determined by American Society for Testing and Materials (ASTM) Test Designation D-1557 (Modified Proctor). The moisture content of the soil at the time of compaction should be within two percent of its optimum, as determined by this ASTM standard. In nonstructural areas, the degree of compaction can be reduced to 90 percent.

4.3 Excavations

All excavations at the site associated with confined spaces, such as lower-building level retaining walls, must be completed in accordance with local, state, and federal requirements. Based on the Washington State Safety and Health Administration (WSHA) regulations, the loose to dense fill and native weathered till soils would typically be classified as Type "C" soils. The native dense to very dense unweathered till would be classified as Type "A" soils.

Accordingly, temporary excavations in Type C soils should have their slopes laid back at an inclination of 1.5:1 (Horizontal: Vertical) or flatter, from the toe to the crest of the slope. Side slopes in Type A soils can be laid back at a slope inclination of 0.75:1 or flatter. For temporary excavation slopes less than 8 feet in height in Type A soils, the lower 3.5 feet can be cut to a vertical condition, with a 0.75:1 slope graded above. For temporary excavation slopes greater than 8 feet in height up to a maximum height of 12 feet, the slope above the 3.5-foot vertical portion will need to be laid back at a minimum slope inclination of 1:1. No vertical cut with a backslope immediately above is allowed for excavation depths that exceed 12 feet. In this case, a four-foot vertical cut with an equivalent horizontal bench to the cut slope toe is required.

All exposed temporary slope faces that will remain open for an extended period of time should be covered with a durable reinforced plastic membrane during construction to prevent slope raveling and rutting during periods of precipitation.

Groundwater seepage may be encountered within excavations during the wet winter season. We anticipate that the volume of water and rate of flow into the excavation will be relatively minor and is not expected to impact the stability of the excavations when completed, as described. Conventional sump pumping procedures, along with a system of collection trenches, if necessary, should be capable of maintaining a relatively dry excavation for construction purposes.

This information is provided solely for the benefit of the owner and other design consultants and should not be construed to imply that Terra Associates, Inc. assumes responsibility for job site safety. It is understood that job site safety is the sole responsibility of the project contractor.

4.4 Foundations

The building may be supported on conventional spread footing foundations bearing on competent native soils or on structural fill placed above competent soils. Foundation subgrades should be prepared as recommended in Section 4.2 of this report. Foundations exposed to the weather should bear at a minimum depth of one and one-half feet below adjacent exterior grades for frost protection. Interior foundations should be supported at a minimum depth of one foot below the finished floor elevation.

The existing fill soils and native soils will be easily disturbed by normal construction activity particularly when wet. Care will need to be exercised during construction to avoid excessively disturbing the subgrade. If disturbed, the material should be removed, and footings lowered to undisturbed material or grade restored with structural fill. During wet-weather conditions, to avoid disturbance, consideration should be given to protecting the fill foundation subgrade with a four-inch layer of crushed rock or lean mix concrete.

We recommend designing foundations bearing on competent structural fill soils for a net allowable bearing capacity of 3,000 pounds per square foot (psf). Foundations that are supported on competent native soils below the fills can be designed for an allowable bearing capacity of 5,000 psf. For short-term loads, such as wind and seismic, a one-third increase in this allowable capacity can be used. With the expected building loads and this bearing stress applied, in general, total, and differential settlements should not exceed one inch and one-half inch, respectively. Settlements will occur in an immediate nature as building loads are applied. The one-half inch differential settlement would be expected to occur between isolated interior columns and perimeter continuous footings.

For designing foundations to resist lateral loads, a base friction coefficient of 0.35 can be used. Passive earth pressures acting on the sides of the footings should be considered. We recommend calculating this lateral resistance using an equivalent fluid weight of 350 pounds per cubic foot (pcf). We do not recommend including the upper 12 inches of soil in this computation because it can be affected by weather or disturbed by future grading activity. This value assumes the foundation will be backfilled with structural fill, as described in Section 4.2 of this report. The values recommended include a safety factor of 1.5.

4.5 Slab-on-Grade Floors

Slab-on-grade floors may be supported on a subgrade prepared as recommended in Section 4.2 of this report. Immediately below the floor slab, we recommend placing a four-inch-thick capillary break layer composed of clean, coarse sand or fine gravel that has less than five percent passing the No. 200 sieve. This material will reduce the potential for upward capillary movement of water through the underlying soil and subsequent wetting of the floor slab.

The capillary break layer will not prevent moisture intrusion through the slab caused by water vapor transmission. Where moisture by vapor transmission is undesirable, such as covered floor areas, a common practice is to place a durable plastic membrane on the capillary break layer and then cover the membrane with a layer of clean sand or fine gravel to protect it from damage during construction, and aid in uniform curing of the concrete slab. It should be noted that if the sand or gravel layer overlying the membrane is saturated prior to pouring the slab, it will be ineffective in assisting uniform curing of the slab and can actually serve as a water supply for moisture seeping through the slab and affecting floor coverings. Therefore, in our opinion, covering the membrane with a layer of sand or gravel should be avoided if floor slab construction occurs during the wet winter months and the layer cannot be effectively drained. We recommend floor designers and contractors refer to the current American Concrete Institute (ACI) Manual of Concrete Practice for further information regarding vapor barrier installation below slab-on-grade floors.

4.6 Lateral Earth Pressures for Retaining Walls

The magnitude of earth pressures developing on below-grade walls will depend upon the quality and compaction of the wall backfill. We recommend placing and compacting wall backfill as structural fill, as described in Section 4.2 of this report. To prevent overstressing the walls during backfilling, heavy construction machinery should not be operated within five feet of the wall. Wall backfill in this zone should be compacted with hand-operated equipment. To prevent hydrostatic pressure development, wall drainage must also be installed. A typical wall drainage detail is shown on Figure 3.

With wall backfill placed and compacted as recommended, and drainage properly installed, we recommend designing unrestrained walls for an active earth pressure equivalent to a fluid weighing 35 pounds per cubic foot (pcf). For restrained walls, an additional uniform load of 100 psf should be added to the 35 pcf. To account for typical traffic surcharge loading, the walls can be designed for an additional imaginary height of two feet (two-foot soil surcharge). For evaluation of wall performance under seismic loading, a uniform pressure equivalent to $8H$ psf, where H is the height of the below-grade portion of the wall, should be applied in addition to the static lateral earth pressure. These values assume a horizontal backfill condition and that no other surcharge loading, sloping embankments, or adjacent buildings will act on the wall. If such conditions exist, then the imposed loading must be included in the wall design. Friction at the base of foundations and passive earth pressure will provide resistance to these lateral loads. The values for these parameters are provided in Section 4.4 of this report.

4.7 Stormwater Facilities/Infiltration Feasibility

Based on the preliminary grading and drainage plan by Barghausen Consulting Engineers, development stormwater will be routed to infiltration galleries located below the western pavement areas. In our subsurface exploration, we observed predominantly dense till like soils composed of silty sand with gravel to the termination of the test borings. The native weathered and unweathered till like deposits at the site contain a significant amount of soil fines and is a poorly drained soil unit. These soil conditions are not suitable for discharge of development stormwater using infiltration facilities. Conventional stormwater detention with controlled release to existing stormwater infrastructure should be used to manage development stormwater.

Detention Vault

If onsite detention is provided by a buried vault, we expect the bottom of the excavation would likely expose native, dense to very dense silty sand with gravel or very stiff to hard silt with sand and gravel. Vault foundations supported by these native soils may be designed for an allowable bearing capacity of 5,000 psf provided that the foundation subgrade is at least eight feet below current site grades. For short-term loads, such as seismic, a one-third increase in this allowable capacity can be used. Wet subgrade conditions that are easily disturbed by construction traffic will be exposed at the bottom of the vault excavation.

Vault walls should be designed as below-grade retaining walls following the parameters outline in Section 4.6 of this report. Any portion of the wall for which drainage cannot be provided should be designed for an earth pressure equivalent to a fluid weighing 85 pcf. Where applicable, a uniform horizontal traffic value of 75 psf should be included in the design of vault walls.

Detention Pond

If fill berms are constructed, the berm locations should be stripped of topsoil, duff, and soils containing organic material prior to the placement of fill. The fill berms should be constructed by placing structural fill in accordance with recommendations outlined in Section 4.2 of this report. Material used to construct pond berms should consist predominately of granular soils with a maximum size of 3 inches and a minimum of 20 percent fines. Terra Associates, Inc. should examine and test all onsite or imported materials proposed for use as a fill berm prior to their use.

In our opinion, establishing the interior pond slopes at a 3:1 (Horizontal: Vertical) gradient will significantly reduce or eliminate the risk of periodic shallow instability or sloughing of the exposed soils due to fluctuating stored water levels. Finished slope faces should be thoroughly compacted and vegetated to guard against erosion.

We should review the stormwater plans when they are completed and revise our recommendations, if required.

4.8 Drainage

Surface

Final exterior grades should promote free and positive drainage away from the building areas. We recommend providing a positive drainage gradient away from the building perimeters. If a positive gradient cannot be provided, provisions for collection and disposal of surface water adjacent to the structures should be provided.

Subsurface

We recommend installing a continuous drain along the outside lower edge of the perimeter building foundations. The drains can be laid to grade at an invert elevation equivalent to the bottom of footing grade. The drains can consist of four-inch diameter perforated PVC pipe that is enveloped in washed one half- to three-quarter-inch gravel-sized drainage aggregate. The aggregate should extend six inches above and to the sides of the pipe. The foundation drains and roof downspouts should be tightlined separately to an approved point of controlled discharge. All drains should be provided with cleanouts at easily accessible locations. These cleanouts should be serviced at least once each year.

4.9 Utilities

Utility pipes should be bedded and backfilled in accordance with American Public Works Association (APWA) or City of Arlington specifications. At minimum, trench backfill should be placed and compacted as structural fill as described in Section 4.2 of this report. As noted, soils excavated onsite should generally be suitable for use as backfill material provided, they are near optimum moisture when excavated and are placed during dry weather conditions. However, the site soils are fine grained and moisture sensitive; therefore, moisture conditioning may be necessary to facilitate proper compaction. If utility construction takes place during the winter, it may be necessary to import suitable wet-weather fill for utility trench backfilling.

4.10 Pavements

Pavements should be constructed on subgrades prepared as recommended in Section 4.2 of this report. Regardless of the degree of relative compaction achieved, the subgrade must be firm and relatively unyielding before paving. Proof-rolling the subgrade with heavy construction equipment should be completed to verify this condition.

The pavement design section is dependent upon the supporting capability of the subgrade soils and the traffic conditions to which it will be subjected.

For traffic consisting mainly of light passenger vehicles with only occasional heavy traffic, and with a stable subgrade prepared as recommended, we recommend the following pavement sections:

- Two inches of hot mix asphalt (HMA) over six inches of crushed rock base (CRB).
- Four inches full depth HMA over prepared subgrade.

The paving materials used should conform to the Washington State Department of Transportation (WSDOT) specifications for ½-inch class HMA and CRB.

Long-term pavement performance will depend upon surface drainage. A poorly drained pavement section will be subject to premature failure as a result of surface water infiltrating into the subgrade soils and reducing their supporting capability. For optimum pavement performance, we recommend surface drainage gradients of at least two percent. Some degree of longitudinal and transverse cracking of the pavement surface should be expected over time. Regular maintenance should be planned to seal cracks when they occur.

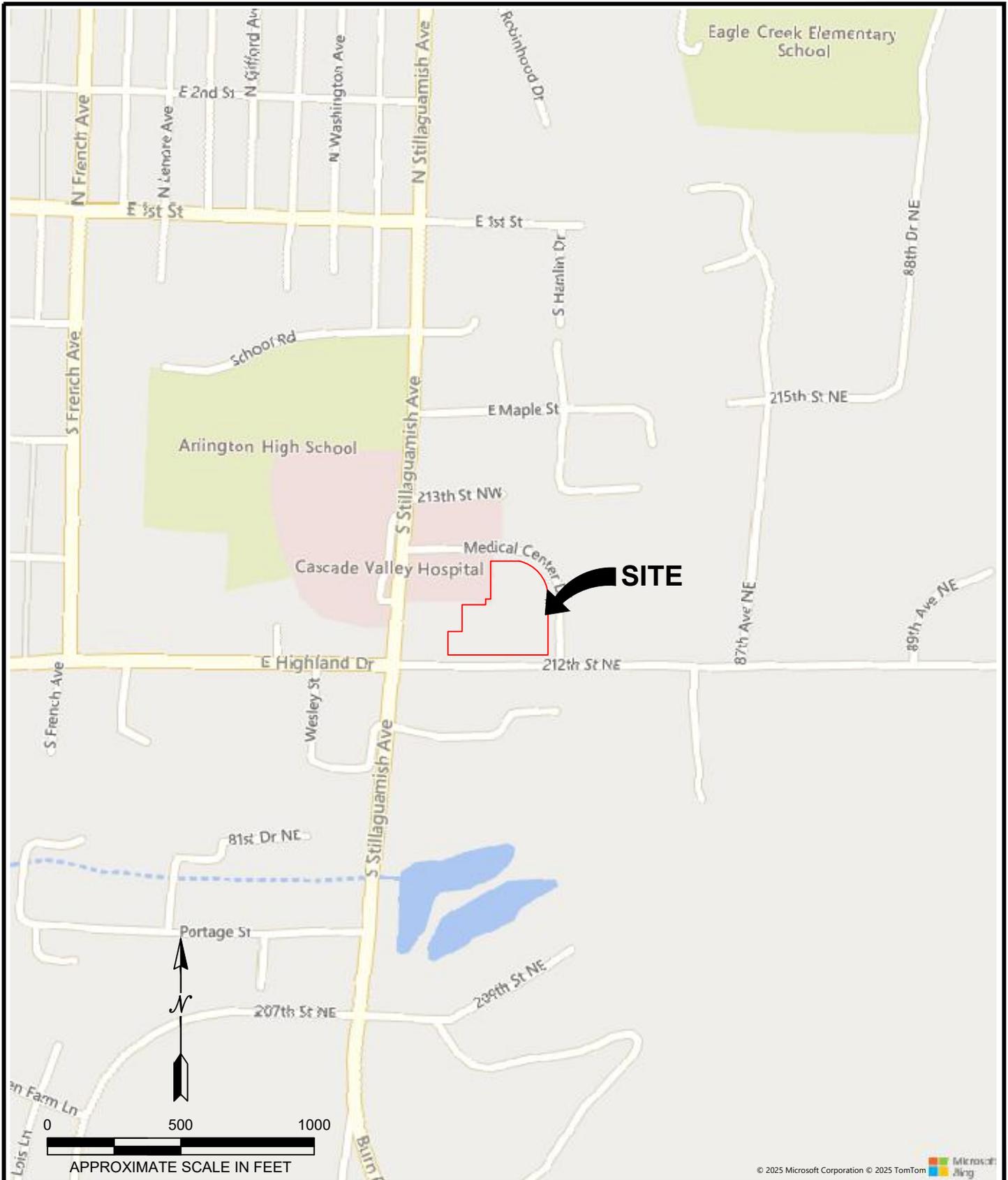
5.0 ADDITIONAL SERVICES

Terra Associates, Inc., should review the final designs and specifications in order to verify that earthwork and foundation recommendations have been properly interpreted and implemented in project design. We should also provide geotechnical services during construction in order to observe compliance with our design concepts, specifications, and recommendations. This will allow for design changes if subsurface conditions differ from those anticipated prior to the start of construction.

6.0 LIMITATIONS

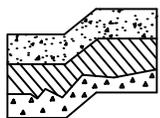
We prepared this report in accordance with generally accepted geotechnical engineering practices. No other warranty, expressed or implied, is made. This report is the copyrighted property of Terra Associates, Inc. and is intended for specific application to the NWC 212th St. NE Medical Office Facility project in Arlington, Washington. This report is for the exclusive use of Visconsi Companies, Ltd and their authorized representatives. No other warranty, expressed or implied, is made.

The analyses and recommendations presented in this report are based on data obtained from our onsite test pits. Variations in soil conditions can occur, the nature and extent of which may not become evident until construction. If variations appear evident, Terra Associates, Inc. should be requested to reevaluate the recommendations in this report prior to proceeding with construction.



REFERENCE: <https://www.bing.com/maps>

ACCESSED 2025



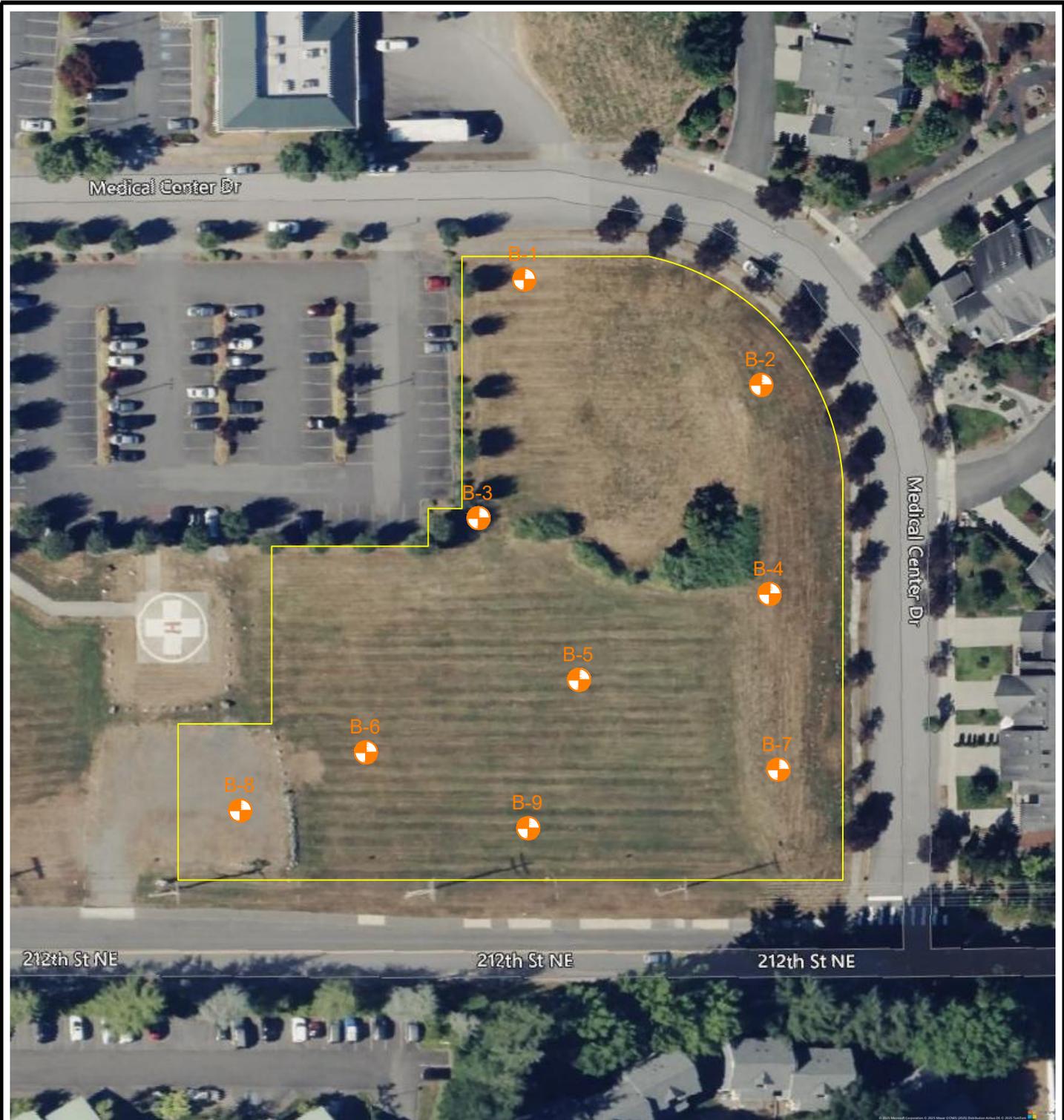
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VICINITY MAP
 NWC 212 ST. NE MEDICAL OFFICE FACILITY
 ARLINGTON, WASHINGTON

Proj.No. T-9205

Date: AUG 2025

Figure 1

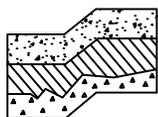
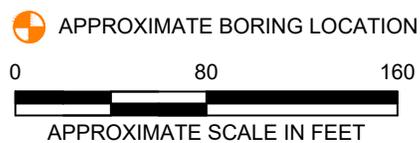


NOTE:

THIS SITE PLAN IS SCHEMATIC. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE. IT IS INTENDED FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR DESIGN OR CONSTRUCTION PURPOSES.

REFERENCE: SITE PLAN PROVIDED BY BING MAPS.

LEGEND:



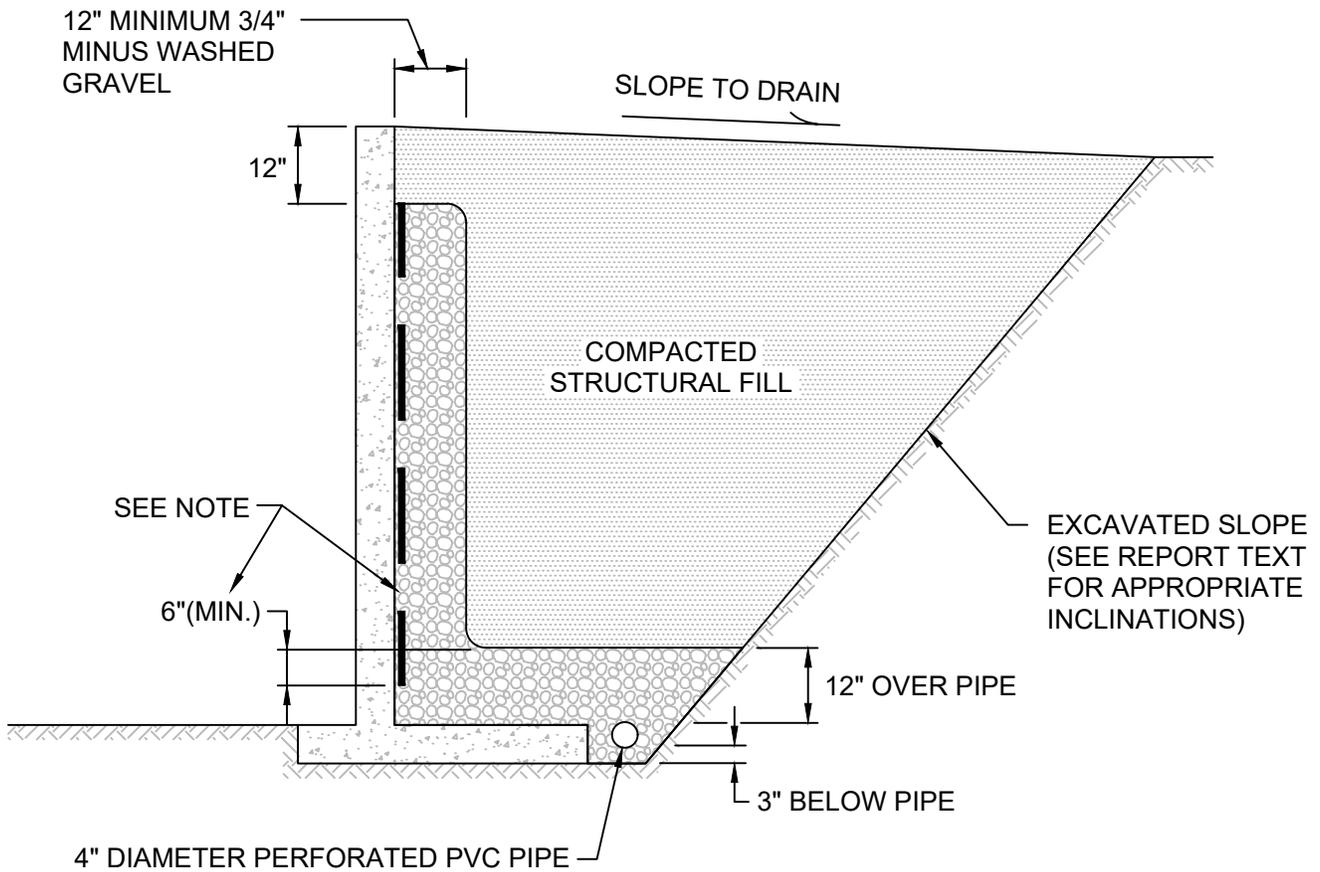
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EXPLORATION LOCATION PLAN
 NWC 212 ST. NE MEDICAL OFFICE FACILITY
 ARLINGTON, WASHINGTON

Proj.No. T-9205

Date: AUG 2025

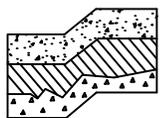
Figure 2



NOT TO SCALE

NOTE:

MIRADRAIN G100N PREFABRICATED DRAINAGE PANELS OR SIMILAR PRODUCT CAN BE SUBSTITUTED FOR THE 12-INCH WIDE GRAVEL DRAIN BEHIND WALL. DRAINAGE PANELS SHOULD EXTEND A MINIMUM OF SIX INCHES INTO 12-INCH THICK DRAINAGE GRAVEL LAYER OVER PERFORATED DRAIN PIPE.



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TYPICAL WALL DRAINAGE DETAIL
 NWC 212 ST. NE MEDICAL OFFICE FACILITY
 ARLINGTON, WASHINGTON

Proj.No. T-9205

Date: AUG 2025

Figure 3

APPENDIX A
FIELD EXPLORATION AND LABORATORY TESTING

NWC 212 Street NE Medical Office Building
Arlington, Washington

On August 4, 5, and 6, 2025, we observed soil and groundwater conditions in nine test borings advanced with a hollow-stem auger to maximum depths of approximately 50 feet below existing site grades. The test boring locations were approximately determined in the field using GPS coordinates and by sighting and pacing from existing surface features. The approximate test boring locations are shown on Figure 2. The Test Boring Logs are presented as Figures A-2 through A-10.

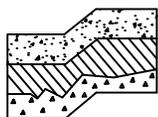
A geologist from our office conducted the field exploration. Our representative classified the soil conditions encountered, maintained a log of each test boring, obtained representative soil samples, and recorded water levels observed during drilling. During drilling, soil samples were obtained in general accordance with ASTM Test Designation D-1586. Using this procedure, a 2-inch (outside diameter) split barrel sampler is driven into the ground 18 inches using a 140-pound hammer free falling from a height of 30 inches. The number of blows required to drive the sampler 12 inches after an initial 6-inch set is referred to as the Standard Penetration Resistance value or N value. This is an index related to the consistency of cohesive soils and relative density of cohesionless materials. N values obtained for each sampling interval are recorded on the Test Boring Logs, Figures A-2 through A-10. All soil samples were visually classified in accordance with the Unified Soil Classification System (USCS) described on Figure A-1.

Representative soil samples obtained from the test borings were placed in sealed plastic bags and taken to our laboratory for further examination and testing. The moisture content of each sample was measured and is reported on the individual Boring Logs. Grain size analyses were performed on select soil samples. The results are shown on Figures A-11 and A-12.

| MAJOR DIVISIONS | | | LETTER SYMBOL | TYPICAL DESCRIPTION | |
|-----------------------------|--|---|------------------------------------|---|--|
| COARSE GRAINED SOILS | More than 50% material larger than No. 200 sieve size | GRAVELS More than 50% of coarse fraction is larger than No. 4 sieve | Clean Gravels (less than 5% fines) | GW | Well-graded gravels, gravel-sand mixtures, little or no fines. |
| | | | | GP | Poorly-graded gravels, gravel-sand mixtures, little or no fines. |
| | | | Gravels with fines | GM | Silty gravels, gravel-sand-silt mixtures, non-plastic fines. |
| | | | | GC | Clayey gravels, gravel-sand-clay mixtures, plastic fines. |
| | More than 50% of coarse fraction is smaller than No. 4 sieve | SANDS More than 50% of coarse fraction is smaller than No. 4 sieve | Clean Sands (less than 5% fines) | SW | Well-graded sands, sands with gravel, little or no fines. |
| | | | | SP | Poorly-graded sands, sands with gravel, little or no fines. |
| | | | Sands with fines | SM | Silty sands, sand-silt mixtures, non-plastic fines. |
| | | | | SC | Clayey sands, sand-clay mixtures, plastic fines. |
| FINE GRAINED SOILS | More than 50% material smaller than No. 200 sieve size | SILTS AND CLAYS Liquid Limit is less than 50% | ML | Inorganic silts, rock flour, clayey silts with slight plasticity. | |
| | | | CL | Inorganic clays of low to medium plasticity. (Lean clay) | |
| | | | OL | Organic silts and organic clays of low plasticity. | |
| | | SILTS AND CLAYS Liquid Limit is greater than 50% | MH | Inorganic silts, elastic. | |
| | | | CH | Inorganic clays of high plasticity. (Fat clay) | |
| | | | OH | Organic clays of high plasticity. | |
| HIGHLY ORGANIC SOILS | | | PT | Peat. | |

DEFINITION OF TERMS AND SYMBOLS

| | | | | |
|---------------------|--|--|---|--|
| COHESIONLESS | <u>Density</u> | <u>Standard Penetration Resistance in Blows/Foot</u> |  | 2" OUTSIDE DIAMETER SPILT SPOON SAMPLER |
| | Very Loose Loose Medium Dense Dense Very Dense | 0-4 4-10 10-30 30-50 >50 |  | 2.4" INSIDE DIAMETER RING SAMPLER OR SHELBY TUBE SAMPLER |
| COHESIVE | <u>Consistency</u> | <u>Standard Penetration Resistance in Blows/Foot</u> |  | WATER LEVEL (Date) |
| | Very Soft Soft Medium Stiff Stiff Very Stiff Hard | 0-2 2-4 4-8 8-16 16-32 >32 | Tr | TORVANE READINGS, tsf |
| | | | Pp | PENETROMETER READING, tsf |
| | | | DD | DRY DENSITY, pounds per cubic foot |
| | | | LL | LIQUID LIMIT, percent |
| | | | PI | PLASTIC INDEX |
| | | | N | STANDARD PENETRATION, blows per foot |



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UNIFIED SOIL CLASSIFICATION SYSTEM
 NWC 212 ST. NE MEDICAL OFFICE FACILITY
 ARLINGTON, WASHINGTON

Proj.No. T-9205

Date: AUG 2025

Figure A-1

LOG OF BORING NO. B-1

Figure No. A-2

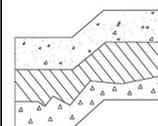
Project: NWC 212 St. NE Medical Office Facility Project No: T-9205 Date Drilled: August 5, 2025

Client: Visconsi Companies Ltd. Driller: BoreTec1 Logged By: MEP

Location: Arlington, Washington Depth to Groundwater: N/A Approx. Elev: NA

| Depth (ft) | Sample Interval | Soil Description | Consistency/ Relative Density | SPT (N) Blows / foot | | | Moisture Content (%) | |
|------------|-----------------|--|----------------------------------|-------------------------|----|----|-------------------------|------|
| | | | | 10 | 30 | 50 | | |
| 0 | | Grayish-brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, mottled. (SM) *Became wet at 7.5 feet. | Medium Dense | | | | | |
| | | | | | | | | |
| 5 | | | | | | | | 15.0 |
| | | | | | | | | 13.2 |
| 10 | | | | | | | 9.5 | |
| | | Boring terminated at 10 feet. Minor perched seepage observed at approximately 10 feet. | | | | | | |
| 15 | | | | | | | | |

NOTE: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpreted as being indicative of other areas of the site



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LOG OF BORING NO. B-2

Figure No. A-3

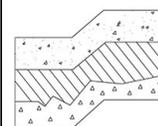
Project: NWC 212 St. NE Medical Office Facility Project No: T-9205 Date Drilled: August 5, 2025

Client: Visconsi Companies Ltd. Driller: BoreTec1 Logged By: MEP

Location: Arlington, Washington Depth to Groundwater: N/A Approx. Elev: NA

| Depth (ft) | Sample Interval | Soil Description | Consistency/ Relative Density | SPT (N) Blows / foot | | | Moisture Content (%) | |
|------------|-----------------|---|----------------------------------|-------------------------|----|----|-------------------------|------|
| | | | | 10 | 30 | 50 | | |
| 0 | | FILL?: Brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, dry to moist, scattered rootlets. (SM) | Medium Dense | | | | 13 | 20.8 |
| 5 | | | Loose | | | | 7 | 9.0 |
| | | Grayish-brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, mottled. (SM) | Medium Dense | | | | 16 | 18.5 |
| 10 | | | Dense | | | | 49 | 12.0 |
| | | Boring terminated at 10 feet. Minor seepage observed at 10.5 feet deep. | | | | | | |
| 15 | | | | | | | | |

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LOG OF BORING NO. B-3

Figure No. A-4

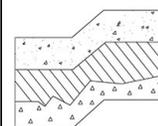
Project: NWC 212 St. NE Medical Office Facility Project No: T-9205 Date Drilled: August 5, 2025

Client: Visconsi Companies Ltd. Driller: BoreTec1 Logged By: MEP

Location: Arlington, Washington Depth to Groundwater: N/A Approx. Elev: NA

| Depth (ft) | Sample Interval | Soil Description | Consistency/ Relative Density | SPT (N) Blows / foot | | | Moisture Content (%) |
|------------|-----------------|--|----------------------------------|-------------------------|----|----|-------------------------|
| | | | | 10 | 30 | 50 | |
| 0 | | Brown silty SAND with gravel, fine to coarse sand, fine gravel, dry to moist, scattered rootlets (SM) | Loose | • | | 7 | 15.0 |
| 5 | | Grayish-brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, mottled. (SM) | Dense | | • | 42 | 12.1 |
| | | | Very Dense | | • | 53 | 10.7 |
| 10 | | | Dense | | • | 42 | 10.5 |
| | | Boring terminated at 10 feet. No groundwater seepage observed. | | | | | |
| 15 | | | | | | | |

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LOG OF BORING NO. B-4

Figure No. A-5

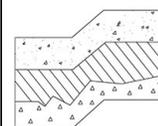
Project: NWC 212 St. NE Medical Office Facility Project No: T-9205 Date Drilled: August 5, 2025

Client: Visconsi Companies Ltd. Driller: BoreTec1 Logged By: MEP

Location: Arlington, Washington Depth to Groundwater: N/A Approx. Elev: NA

| Depth (ft) | Sample Interval | Soil Description | Consistency/ Relative Density | SPT (N) Blows / foot | | | Moisture Content (%) | |
|------------|-----------------|---|----------------------------------|-------------------------|----|----|-------------------------|------|
| | | | | 10 | 30 | 50 | | |
| 0 | | FILL?: Brown silty SAND with gravel, fine to coarse sand, fine gravel, dry to moist. (SM) *Scattered rootlets in the upper 4 feet. | Dense | | | | 31 | 10.5 |
| 5 | | | Loose | | | | 8 | 17.5 |
| 10 | | (4-inches organic TOPSOIL with scattered straw) | | | | | 5 | 20.9 |
| 15 | | Grayish-brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist to wet, mottled. (SM) | Dense | | | | 44 | 8.6 |
| 20 | | Gray silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist. (SM) | Very Dense | | | | 50/3" | 20.8 |
| 25 | | | | | | | 65 | 10.3 |
| 30 | | | Medium Dense | | | | 20 | 10.1 |
| 35 | | | Very Dense | | | | 50/6" | |
| 40 | | Boring terminated at 30 feet. No groundwater seepage observed. | | | | | | |

NOTE: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpreted as being indicative of other areas of the site



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LOG OF BORING NO. B-5

Figure No. A-6

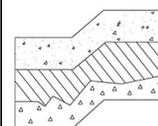
Project: NWC 212 St. NE Medical Office Facility Project No: T-9205 Date Drilled: August 4, 2025

Client: Visconsi Companies Ltd. Driller: BoreTec1 Logged By: MEP

Location: Arlington, Washington Depth to Groundwater: 50 feet Approx. Elev: NA

| Depth (ft) | Sample Interval | Soil Description | Consistency/ Relative Density | SPT (N) Blows / foot | | | Moisture Content (%) | |
|------------|-----------------|---|----------------------------------|-------------------------|----|----|-------------------------|------|
| | | | | 10 | 30 | 50 | | |
| 0 | | Grayish-brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, dry to moist, mottled. (SM) | Dense | | | | 44 | 11.0 |
| 5 | | *Scattered rootlets in the upper 4 feet. | Very Dense | | | | 55 | 10.2 |
| 10 | | *Moist to wet below 7.5 feet. | Medium Dense | | | | 25 | 11.7 |
| 15 | | | Dense | | | | 32 | 11.6 |
| 20 | | | | | | | 50 | 9.5 |
| 25 | | Gray silty SAND with gravel, fine to medium sand, fine to coarse gravel, wet. (SM) | | | | | 47 | 13.4 |
| 30 | | *1" interbeds of fine to medium sand at approximately 25 feet deep. | Medium Dense | | | | 16 | 16.7 |
| 35 | | | | | | | 14 | 12.6 |
| 40 | | | | | | | 18 | 11.7 |
| 45 | | Gray silty SAND, fine to coarse sand, wet, trace fine gravel. (SM) | | | | | 28 | 11.8 |
| 50 | | Gray SILT with sand and gravel, fine to medium sand, fine to coarse gravel, wet to saturated, 1-2-inch interbeds of medium to coarse sand. (ML) | Dense | | | | 36 | 10.4 |
| 55 | | Boring terminated at 50 feet. Groundwater seepage observed at 50 feet. | Very Dense | | | | 50/6" | 16.6 |
| 60 | | | | | | | 52 | 14.2 |

NOTE: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpreted as being indicative of other areas of the site



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LOG OF BORING NO. B-6

Figure No. A-7

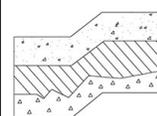
Project: NWC 212 St. NE Medical Office Facility **Project No:** T-9205 **Date Drilled:** August 6, 2025

Client: Visconsi Companies Ltd. **Driller:** BoreTec 1 **Logged By:** MEP

Location: Arlington, Washington **Depth to Groundwater:** NA **Approx. Elev:** NA

| Depth (ft) | Sample Interval | Soil Description | Consistency/ Relative Density | SPT (N) Blows / foot | | | Moisture Content (%) | Observ. Well |
|------------|-----------------|---|----------------------------------|-------------------------|----|----|-------------------------|-----------------|
| | | | | 10 | 30 | 50 | | |
| 0 | | Grayish-brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, mottled. (SM) *Scattered rootlets in the upper 4 feet. | Very Dense | | | | | |
| 5 | | | | | | | | |
| 10 | | Gray silty SAND with gravel, fine to coarse sand, fine to coarse gravel, wet. (SM) | Medium Dense | | | | | |
| 15 | | | Very Dense | | | | | |
| 20 | | *2-3" interbeds of fine to medium sand at approximately 20 feet deep. | Medium Dense | | | | | |
| 25 | | Test Boring terminated at approximately 20 feet. 2" PVC monitoring well constructed with a 0.010 slot screen from 10 to 20 feet. Samples collected by driving a 2.5 inch O.D. sampler with a 140-pound hammer. Well Tag #BQU-132 No groundwater seepage observed. | | | | | | |
| 30 | | | | | | | | |

NOTE: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpreted as being indicative of other areas of the site



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LOG OF BORING NO. B-7

Figure No. A-8

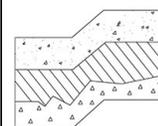
Project: NWC 212 St. NE Medical Office Facility Project No: T-9205 Date Drilled: August 4, 2025

Client: Visconsi Companies Ltd. Driller: BoreTec1 Logged By: MEP

Location: Arlington, Washington Depth to Groundwater: 35 feet Approx. Elev: NA

| Depth (ft) | Sample Interval | Soil Description | Consistency/ Relative Density | SPT (N) Blows / foot | | | Moisture Content (%) | |
|------------|-----------------|---|----------------------------------|-------------------------|----|----|-------------------------|------|
| | | | | 10 | 30 | 50 | | |
| 0 | | | | | | | | |
| 0 - 5 | | FILL: Brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, occasional charcoal fragments, scattered rootlets. (SM) | Loose | • | | | 8 | |
| 5 - 8 | | | | • | | | 6 | 14.7 |
| 8 - 10 | | FILL?: Light brown SILT, moist, mottled, scattered gravel. (ML) | | • | | | 8 | 39.4 |
| 10 - 15 | | Grayish-brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, mottled. (SM) *3-4-inch interbed of silt at 15 feet deep. | Very Dense | | | | 55 | 15.5 |
| 15 - 20 | | | Medium Dense | | • | | 23 | 14.1 |
| 20 - 25 | | | Dense | | | • | 36 | 13.8 |
| 25 - 30 | | Gray silty SAND with gravel, fine to coarse sand, fine gravel, moist to wet. (SM) | | | | | 50 | 9.6 |
| 30 - 35 | | | | | | • | 41 | 10.9 |
| 35 - 40 | | | Very Dense | | | | 72 | 9.9 |
| 40 - 45 | | | | | | | 50/6" | 12.6 |
| 45 - 50 | | | Medium Dense | | • | | 25 | 11.6 |
| 50 - 55 | | | Very Dense | | | | 52 | 10.3 |
| 55 - 60 | | | Medium Dense | | • | | 25 | 12.6 |
| 60 | | Boring terminated at 50 feet. Light seepage observed at 35 feet. | | | | | | |

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LOG OF BORING NO. B-8

Figure No. A-9

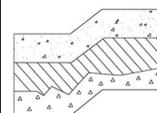
Project: NWC 212 St. NE Medical Office Facility Project No: T-9205 Date Drilled: August 5, 2025

Client: Visconsi Companies Ltd. Driller: BoreTec1 Logged By: MEP

Location: Arlington, Washington Depth to Groundwater: NA Approx. Elev: NA

| Depth (ft) | Sample Interval | Soil Description | Consistency/ Relative Density | SPT (N) Blows / foot | | | Moisture Content (%) | Observ. Well |
|------------|-----------------|---|----------------------------------|-------------------------|----|----|-------------------------|-----------------|
| | | | | 10 | 30 | 50 | | |
| 0 | | Grayish-brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, mottled. (SM) | Very Loose | | | | | |
| 5 | | | | | | | | |
| | | | Medium Dense | | | | | |
| 10 | | | | | | | | |
| | | *1-2-inch interbed of fine to medium sand at 13 feet. | Very Dense | | | | | |
| 15 | | | | | | | | |
| | | Gray silty SAND with gravel, fine to coarse sand, fine gravel, moist to wet. (SM) | Medium Dense | | | | | |
| 20 | | | | | | | | |
| 25 | | | Very Dense | | | | | |
| | | | | | | | | |
| 30 | | Test Boring terminated at approximately 25 feet. 2" PVC monitoring well constructed with a 0.010 slot screen from 15 to 25 feet. Samples collected by driving a 2.5 inch O.D. sampler with a 140-pound hammer. Well Tag #BQU-131 No groundwater seepage observed. | | | | | | |
| 35 | | | | | | | | |

NOTE: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpreted as being indicative of other areas of the site



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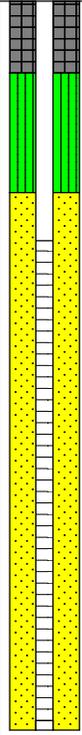
LOG OF BORING NO. B-9

Figure No. A-10

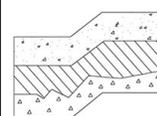
Project: NWC 212 St. NE Medical Office Facility **Project No:** T-9205 **Date Drilled:** August 6, 2025

Client: Visconsi Companies Ltd. **Driller:** BoreTec1 **Logged By:** MEP

Location: Arlington, Washington **Depth to Groundwater:** NA **Approx. Elev:** NA

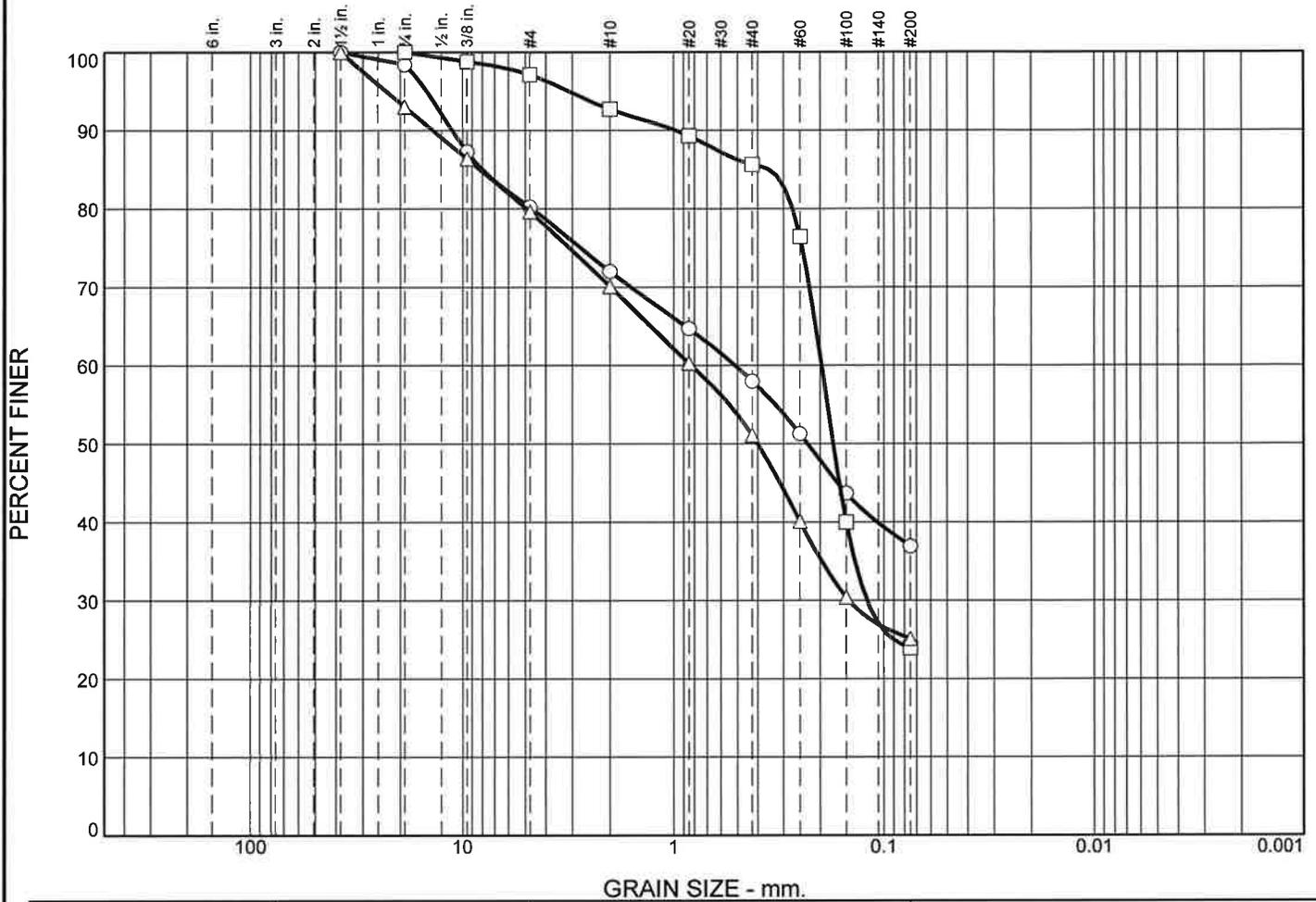
| Depth (ft) | Sample Interval | Soil Description | Consistency/ Relative Density | SPT (N) Blows / foot | | | Moisture Content (%) | Observ. Well | |
|------------|-----------------|--|----------------------------------|-------------------------|----|----|-------------------------|--|-----|
| | | | | 10 | 30 | 50 | | | |
| 0 | | Grayish-brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, mottled. (SM) | Dense | | | | 12.2 |  | |
| 5 | | | | | | 27 | | | |
| | | Gray silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist to wet. (SM) | Very Dense | | | | 11.0 | | |
| | | | | | | 65 | | | |
| | | | | | | 67 | | | 9.4 |
| 10 | | Gray silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist to wet. (SM) | Dense | | | | 10.8 | | |
| | | | | | | 45 | | | |
| | | Test Boring terminated at approximately 15 feet. 2" PVC monitoring well constructed with a 0.010 slot screen from 5 to 15 feet. Samples collected by driving a 2.5 inch O.D. sampler with a 140-pound hammer. Well Tag #BQU-133 No groundwater seepage observed. | Dense | | | | 11.8 | | |
| | | | | | | 32 | | | |
| 15 | | | | | | | 11.5 | | |
| 20 | | | | | | | | | |
| 25 | | | | | | | | | |

NOTE: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpreted as being indicative of other areas of the site



Terra Associates, Inc.
 Consultants in Geotechnical Engineering
 Geology and
 Environmental Earth Sciences

Particle Size Distribution Report



| | % +3" | | % Gravel | | % Sand | | | % Fines | | |
|---|-------|----|----------|--------|--------|--------|------|---------|------|----|
| | | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay | |
| ○ | 0.0 | | 1.6 | 18.2 | 8.2 | 14.0 | 21.1 | 36.9 | | |
| □ | 0.0 | | 0.0 | 2.9 | 4.4 | 7.1 | 61.7 | 23.9 | | |
| △ | 0.0 | | 7.0 | 13.4 | 9.5 | 19.0 | 26.0 | 25.1 | | |
| ⊗ | LL | PL | D85 | D60 | D50 | D30 | D15 | D10 | Cc | Cu |
| ○ | | | 7.9936 | 0.5135 | 0.2292 | | | | | |
| □ | | | 0.3547 | 0.1966 | 0.1731 | 0.1197 | | | | |
| △ | | | 8.2177 | 0.8276 | 0.4000 | 0.1457 | | | | |

| Material Description | USCS | AASHTO |
|--------------------------|------|--------|
| ○ silty SAND with gravel | SM | |
| □ silty SAND | SM | |
| △ silty SAND with gravel | SM | |

Project No. T-9205 **Client:** Visconsi Companies Ltd.
Project: NWC 212 St NE Medical Office Facility

○ **Location:** Test Boring B-4 **Depth:** 25 feet **Sample Number:** 8
 □ **Location:** Test Boring B-5 **Depth:** 45 feet **Sample Number:** 12
 △ **Location:** Test Boring B-6 **Depth:** 20 feet **Sample Number:** 7

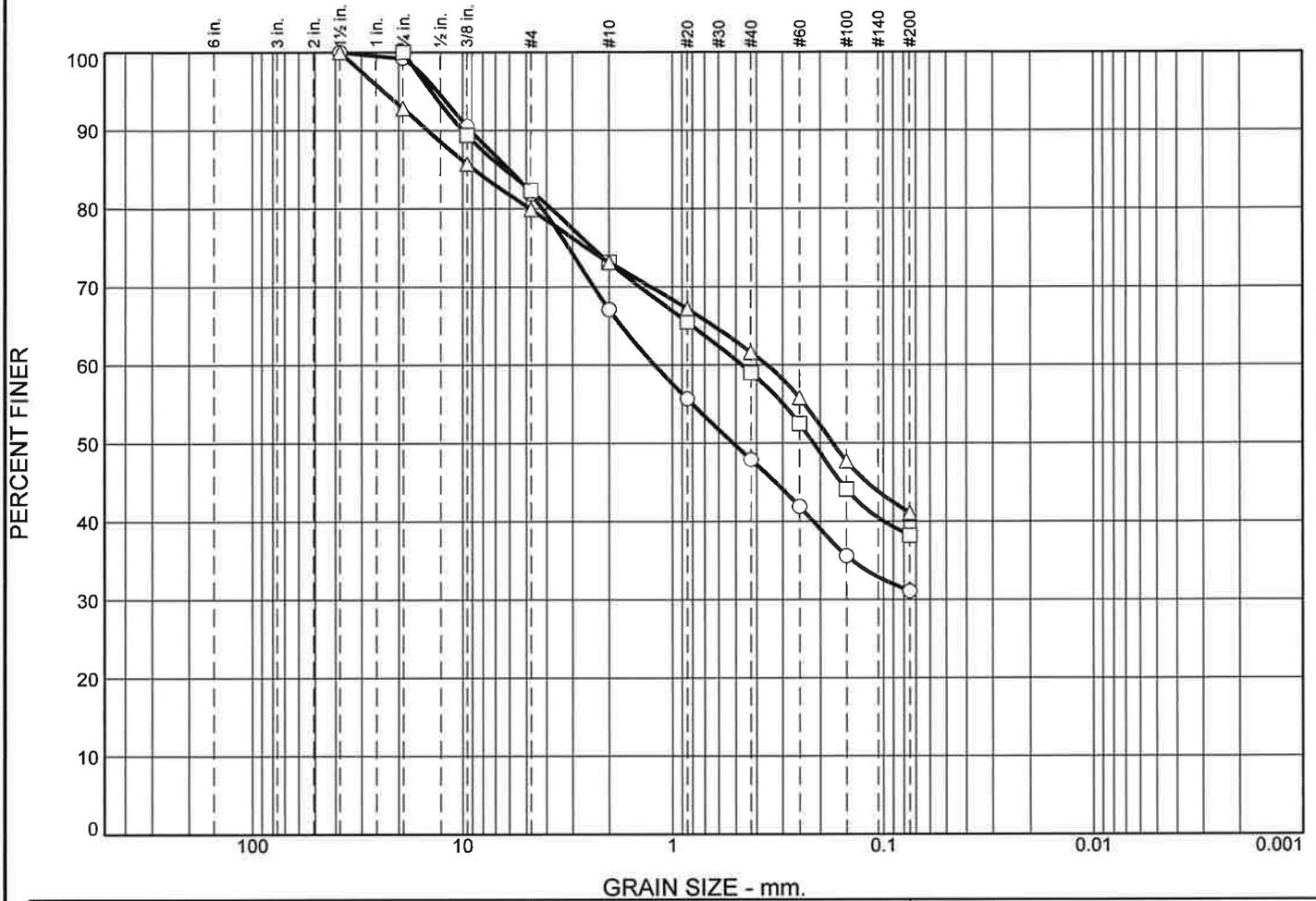
Terra Associates, Inc.
Kirkland, WA

Remarks:
 ○ Tested on August 13, 2025
 □ Tested on August 13, 2025
 △ Tested on August 13, 2025

Figure A-11

Tested By: ZA _____

Particle Size Distribution Report



| | % +3" | | % Gravel | | % Sand | | | % Fines | | |
|---|-------|----|----------|--------|--------|--------|------|---------|------|----|
| | | | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay | |
| ○ | 0.0 | | 0.8 | 17.3 | 14.8 | 19.2 | 16.8 | 31.1 | | |
| □ | 0.0 | | 0.0 | 17.7 | 9.2 | 14.1 | 20.8 | 38.2 | | |
| △ | 0.0 | | 7.2 | 12.9 | 6.8 | 11.5 | 20.5 | 41.1 | | |
| ⊗ | LL | PL | D85 | D60 | D50 | D30 | D15 | D10 | Cc | Cu |
| ○ | | | 6.0222 | 1.2156 | 0.5146 | | | | | |
| □ | | | 6.3012 | 0.4693 | 0.2149 | | | | | |
| △ | | | 8.8218 | 0.3575 | 0.1744 | | | | | |

| Material Description | USCS | AASHTO |
|--------------------------|------|--------|
| ○ silty SAND with gravel | SM | |
| □ silty SAND with gravel | SM | |
| △ silty SAND with gravel | SM | |

| | |
|---|--|
| Project No. T-9205 Client: Visconsi Companies Ltd. Project: NWC 212 St NE Medical Office Facility ○ Location: Test Boring B-7 Depth: 35 feet Sample Number: 9 □ Location: Test Boring B-8 Depth: 25 feet Sample Number: 7 △ Location: Test Boring B-9 Depth: 15 feet Sample Number: 6 | Remarks: ○ Tested on August 13, 2025 □ Tested on August 13, 2025 △ Tested on August 13, 2025 |
| Terra Associates, Inc. Kirkland, WA | |

Figure A-12

Tested By: ZA