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SUBSOIL STUDY
FOR FOUNDATION DESIGN
PROPOSED APARTMENT BUILDING
104 AND 110 CAPITOL AND 103 HOWARD STREETS
EAGLE, COLORADO

PROJECT NO. 23-7-498.01

FEBRUARY 12, 2024

PREPARED FOR:

PRECISION CONSTRUCTION WEST
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PURPOSE AND SCOPE OF STUDY

This report presents the results of a subsoil study for a proposed apartment building to be located at 104 and 110 Capitol Street and 103 Howard Street, Eagle, Colorado. The project site is shown on Figure 1. The purpose of the study was to develop recommendations for the foundation design. The study is supplemental to our agreement for geotechnical engineering services to Precision West Construction, LLC dated August 21, 2023. We previously performed a preliminary subsoil study at the site under our Project No. 23-7-498, report dated October 4, 2023.

A field exploration program consisting of exploratory borings was conducted to obtain information on the subsurface conditions. Samples of the subsoils obtained during the field exploration were tested in the laboratory to determine their classification and other engineering characteristics. The results of the field exploration and laboratory testing were analyzed to develop recommendations for foundation types, depths and allowable pressures for the proposed building foundation. This report summarizes the data obtained during this study and presents our conclusions, design recommendations and other geotechnical engineering considerations based on the proposed construction and the subsurface conditions encountered.

PROPOSED CONSTRUCTION

The development as currently planned will consist of a 4 story apartment building over a two level below ground parking structure occupying most of the property shown on Figure 1. The building may include the adjacent lots to the south. Ground floor of the parking structure will be slab-on-grade. We expect cut depths may be up to about 20 to 25 feet below the existing ground surface. We assume relatively heavy foundation loadings carried by isolated columns and continuous walls. There may also be some shallow foundations for support of site walls for access into the parking garage.

When building location, grading and foundation loading information have been developed, we should be notified to re-evaluate the recommendations presented in this report.

SITE CONDITIONS

The property, shown on Figure 1, is vacant and about ⅔ of an acre in size. The site is bordered by US Highway 6 to the north, Capitol Street to the west and Howard Street to the east. To the south are existing residences and outbuildings.

The terrain is relatively flat with a gentle slope down to the northwest. Elevation difference across the site is about 6 feet. The site has apparently undergone some grading for previous development on the site. Vegetation is limited to grass and weeds with scattered deciduous trees. The concrete slab shown on Figure 1 as "Ex. Concrete Ruins" had been removed at the time of our field exploration.

SUBSIDENCE POTENTIAL

Bedrock of the Pennsylvanian age Eagle Valley Evaporite underlies the site and downtown area of Eagle. These rocks are a sequence of gypsiferous shale, fine-grained sandstone and siltstone with some massive beds of gypsum and limestone. There is a possibility that massive gypsum deposits associated with the Eagle Valley Evaporite underlie portions of the site. Dissolution of the gypsum under certain conditions can cause sinkholes to develop and can produce areas of localized subsidence. During previous work in the area, several sinkholes were observed scattered in the Eagle area. These sinkholes appear similar to others associated with the Eagle Valley Evaporite in other areas of Brush Creek and Eagle River Valleys underlain by the Evaporite.

Sinkholes were not observed on the ground surface of the subject site, however overlot grading may have covered any previous surface depressions. No evidence of cavities was encountered in the subsurface materials and the coarse granular soils were dense and extended to below expected excavation depths. Based on our present knowledge of the subsurface conditions at the site, it cannot be said for certain that sinkholes will not develop. The risk of future ground subsidence throughout the service life of the proposed apartment building, in our opinion, is low.

FIELD EXPLORATION

The field exploration for the project was conducted on January 30 and 31, 2024. Six exploratory borings were drilled at the locations shown on Figure 1 to evaluate the subsurface conditions. Borings 1 through 4 were advanced with 4-inch diameter continuous flight augers powered by a truck-mounted CME-55 drill rig. Borings 5 and 6 were drilled with 6-inch diameter ODEX downhole hammer and casing method with a truck-mounted CME-55 drill rig to evaluate the subsurface conditions below auger refusal depth. The borings were logged by a representative of Kumar & Associates. The locations of the shallow backhoe pits excavated at the site for our preliminary study are also shown on Figure 1.

Samples of the subsoils were taken with 1⅜ inch and 2-inch I.D. spoon samplers. The samplers were driven into the subsurface materials at various depths with blows from a 140-pound hammer falling 30 inches. This test is similar to the standard penetration test described by ASTM Method D-1586. The penetration resistance values are an indication of the relative density or consistency of the subsoils. Depths at which the samples were taken and the penetration resistance values are shown on the Logs of Exploratory Borings, Figure 2. The samples were returned to our laboratory for review by the project engineer and testing.

SUBSURFACE CONDITIONS

Graphic logs of the subsurface conditions encountered at the site are shown on Figure 2 with Legend and Notes shown on Figure 3. The subsoils encountered, below about ½ foot of topsoil, consisted of about 2 to 5½ feet of medium stiff to very stiff, sandy silty clay overlying dense to very dense, silty sandy gravel and cobbles with boulders (coarse granular soils) that, in general, extended down to the maximum depth drilled of 31 feet at Boring 5. At Boring 6, a layer of dense slightly silty sand was encountered within the coarse granular soil deposit at a depth of about 23 to 27 feet. Drilling in the dense coarse granular soils with auger equipment was difficult due to the cobbles and boulders and drilling refusal was encountered at Borings 1 through 4 in the deposit after shallow penetration. Boring 6 was terminated in a boulder at 30 feet depth.

Laboratory testing performed on samples obtained from the borings included natural moisture content and density, gradation analyses, Atterberg limits and unconfined compressive strength. Results of swell-consolidation testing performed on relatively undisturbed drive samples of the fine-grained natural soils, presented on Figure 4, indicate moderate compressibility under conditions of loading and wetting. Results of gradation analyses performed on small diameter drive samples (minus 1½-inch fraction) of the natural granular subsoils are shown on Figure 5. Results of unconfined compressive strength testing indicate a sample of the fine-grained soils to have stiff consistency. The laboratory testing is summarized in Table 1.

No groundwater was encountered in the borings at the time of drilling and the subsoils were slightly moist to moist with depth.

ENGINEERING ANALYSIS

The dense coarse granular soils encountered at relatively shallow depth at the site possess moderately high bearing capacity and relatively low settlement potential and are suitable for spread footings to support the proposed building foundation. A seismic Site Class C for very dense soil can be used for structural design unless site specific shear wave analysis is performed to show a different IBC Site Class should be used.

The coarse granular soils contain boulders which could be large and could make excavations at the site difficult. The perimeter excavation cut slopes will likely need to be shored to maintain stability. The dense coarse sand soils, if encountered at excavation subgrade, should be feasible for foundation support but should be further evaluated at the time of excavation. If needed, subexcavated areas below footings can be replaced with structural fill such as CDOT Class 2, 5 or 6 aggregate base course, or the onsite granular soils devoid of topsoil, debris and rocks larger than about 4 inches.

The near surface natural silty clay soils possess low bearing capacity and moderate settlement potential but should be suitable to support lightly loaded ancillary structures separate from the building (such as landscape walls) that can tolerate differential settlement as well as pavement and walkway areas.

DESIGN RECOMMENDATIONS

FOUNDATIONS

Considering the subsurface conditions encountered in the exploratory borings and the nature of the proposed construction, we recommend the building be founded with spread footings bearing on the natural coarse granular soils, or on compacted structural fill placed on the natural coarse granular soils after complete removal of any fill, fine-grained soils and loose sand soils.

The design and construction criteria presented below should be observed for a spread footing foundation system.

1) Footings placed on the undisturbed natural coarse granular soils should be designed for an allowable bearing pressure of 5,000 psf. Based on experience, we expect settlement of footings designed and constructed as discussed in this section

will be up to about 1 inch depending on the loadings and essentially occur during the construction phase as the loading is applied.

2) For lightly loaded ancillary structures separate from the main building, footings placed on the undisturbed natural soils or compacted structural fill should be designed for an allowable bearing pressure of 1,500 psf. Based on experience, we expect settlement of footings designed and constructed as discussed in this section will be about 1 to 1½ inches depending on the soil bearing and foundation loading conditions.

3) The footings should have a minimum width of 18 inches for continuous walls and 2 feet for isolated pads.

4) Exterior footings and footings beneath unheated areas should be provided with adequate soil cover above their bearing elevation for frost protection. Placement of foundations at least 48 inches below exterior grade is typically used in this area.

5) Continuous foundation walls should be reinforced top and bottom to span local anomalies such as by assuming an unsupported length of at least 10 feet. Foundation walls acting as retaining structures should also be designed to resist lateral earth pressures as discussed in the "Foundation and Retaining Walls" section of this report.

6) Existing fill, topsoil and any loose disturbed soils should be removed, and the footing bearing level extended down to the respective natural bearing soils. The exposed subgrade should then be moistened and compacted. For the building foundation footings, all overburden soils should also be removed down to the dense coarse granular soils.

7) A shallow depth of structural fill (up to about 5 feet) can be used to reestablish design footing bearing level if needed. The suitability of structural fill as foundation bearing material should be evaluated at the time of construction. The structural fill should consist of relatively well graded granular soils placed in uniform lifts of about 8 inches and compacted to at least 100% of standard Proctor density at a moisture content within about 2% of optimum for 5,000 psf bearing pressure and 95% of standard Proctor density for 1,500 psf bearing pressure.

8) A representative of the geotechnical engineer should observe all foundation to evaluate bearing conditions and test structural fill for compaction on a regular basis prior to the concrete placement.

FOUNDATION AND RETAINING WALLS

Foundation walls and retaining structures up to about 15 feet high which are laterally supported and can be expected to undergo only a slight amount of deflection should be designed for a lateral earth pressure computed on the basis of an equivalent fluid unit weight of at least 50 pcf for backfill consisting of the on-site granular soils. Building foundation walls taller than 15 feet should be designed for a uniform lateral earth pressure of 25H in psf where H is the retained wall height in feet. Cantilevered retaining structures which are separate from the building and can be expected to deflect sufficiently to mobilize the full active earth pressure condition should be designed for a lateral earth pressure computed on the basis of an equivalent fluid unit weight of at least 45 pcf for backfill consisting of the on-site granular soils. The granular backfill material should meet the recommendations provided below and not contain topsoil, debris or rocks larger than 6 inches. Permanent type shoring systems could reduce the lateral earth pressure values and we can review our lateral earth pressure recommendations if permanent shoring is planned.

All foundation and retaining structures should be designed for appropriate hydrostatic and surcharge pressures such as adjacent footings, traffic, construction materials and equipment. The pressures recommended above assume drained conditions behind the walls and a horizontal backfill surface. The buildup of water behind a wall or an upward sloping backfill surface will increase the lateral pressure imposed on a foundation wall or retaining structure. An underdrain should be provided to prevent hydrostatic pressure buildup behind walls.

Backfill should be placed in uniform lifts and compacted to at least 90% of the maximum standard Proctor density at near optimum moisture content. Backfill placed in pavement and walkway areas should be compacted to at least 95% of the maximum standard Proctor density. Care should be taken not to overcompact the backfill or use large equipment near the wall, since this could cause excessive lateral pressure on the wall. Some settlement of deep foundation wall backfill should be expected, even if the material is placed correctly, and could result in distress to facilities constructed on the backfill. A relatively well graded granular soil such as base course and compaction to at least 98% of standard Proctor density can be used to reduce settlements.

We recommend granular soils for backfilling foundation walls and retaining structures because their use results in lower lateral earth pressures and lower ground settlement potential, and the backfill can be incorporated into the underdrain system. Subsurface drainage recommendations are discussed in more detail in the "Underdrain System" section of this report. Granular wall backfill should contain less than about 25% passing the No. 200 sieve and have a maximum size of 6 inches. The onsite coarse granular soils should be suitable as backfill material with processing. We should evaluate the backfill material for suitability prior to placement.

The lateral resistance of foundation or retaining wall footings will be a combination of the sliding resistance of the footing on the foundation materials and passive earth pressure against the side of the footing. Resistance to sliding at the bottoms of the footings can be calculated based on a coefficient of friction of 0.50. Passive pressure of compacted backfill against the sides of the footings can be calculated using an equivalent fluid unit weight of 450 pcf. The coefficient of friction and passive pressure values recommended above assume ultimate soil strength. Suitable factors of safety should be included in the design to limit the strain which will occur at the ultimate strength, particularly in the case of passive resistance. Fill placed against the sides of the footings to resist lateral loads should be a well graded granular material such as the on-site sand and gravel soils, or imported base course, compacted to at least 95% of the maximum standard Proctor density at a moisture content near optimum.

FLOOR SLABS

The natural on-site soils or compacted structural fill are suitable to support lightly loaded slab-on-grade construction. Existing fill below slab areas should be removed and replaced with compacted structural fill. We should evaluate the need for subexcavation and replacement of existing fill and fine-grained soils at the time of construction.

To reduce the effects of some differential movement, floor slabs should be separated from all bearing walls and columns with expansion joints which allow unrestrained vertical movement. Floor slab control joints should be used to reduce damage due to shrinkage cracking. The requirements for joint spacing and slab reinforcement should be established by the designer based on experience and the intended slab use. A minimum 4-inch layer of free-draining gravel should be placed immediately beneath basement level slabs to facilitate drainage. This material should consist of minus 2-inch aggregate with at least 50% retained on the No. 4 sieve and less than 2% passing the No. 200 sieve.

All fill materials for support of floor slabs should be compacted to at least 95% of maximum standard Proctor density at a moisture content near optimum. Required fill can consist of the on-site granular soils or a suitable imported gravel soils devoid of topsoil and oversized (plus 4-inch) rocks.

UNDERDRAIN SYSTEM

Although groundwater was not encountered during our exploration, it has been our experience in the area that local perched groundwater can develop during times of heavy precipitation or seasonal runoff. Frozen ground during spring runoff can also create a perched condition. We recommend below-grade construction, such as retaining walls, crawlspace and basement areas, be protected from wetting and hydrostatic pressure buildup by an underdrain system.

The drains should consist of minimum 4-inch diameter perforated PVC drainpipe placed in the bottom of the wall backfill surrounded above the invert level with free-draining granular material. The drain should be placed at each level of excavation and at least 1 foot below lowest adjacent finish grade and sloped at a minimum ½% to a suitable gravity outlet or to a properly designed and constructed drywell based in the coarse granular soils. Free-draining granular material used in the underdrain system should contain less than 2% passing the No. 200 sieve, less than 50% passing the No. 4 sieve and have a maximum size of 2 inches. The drain gravel backfill should be at least 1½ feet deep and be covered by filter fabric such as Mirafi 140N or 160N.

SITE GRADING

There is a risk of construction-induced slope instability at the site due to the relatively deep excavation planned for the building. Due to the nearby facilities, most of the cut slopes will probably need to be shored if the cut slopes cannot be laid back to a stable grade. Care should be taken not to undermine adjacent buildings, roadways and utilities with the excavation.

Based on our experience in the area, temporary cut slopes up to about 20 feet high graded no steeper than 1 horizontal to 1 vertical should be feasible for dry slope conditions. If seepage is encountered in cuts, flatter temporary slopes may be needed. We should review the excavation and grading plans for the project prior to construction, especially if temporary cut slopes are planned to be used and additional recommendations made at that time.

Permanent unretained cut and fill slopes should be graded at 2 horizontal to 1 vertical or flatter and protected against erosion by revegetation or other means.

SURFACE DRAINAGE

The following drainage precautions should be observed during construction and maintained at all times after the building has been completed:

1) Inundation of the foundation excavations and underslab areas should be avoided during construction.
2) Exterior backfill should be adjusted to near optimum moisture and compacted to at least 95% of the maximum standard Proctor density in pavement and slab areas and to at least 90% of the maximum standard Proctor density in landscape areas.
3) The ground surface surrounding the exterior of the building should be sloped to drain away from the foundation in all directions. We recommend a minimum slope of 6 inches in the first 10 feet in unpaved areas and a minimum slope of 2½ inches in the first 10 feet in paved areas. Free-draining wall backfill should be covered with filter fabric and capped with about 2 feet of the on-site finer graded soils to reduce surface water infiltration.
4) Roof downspouts and drains should discharge well beyond the limits of all backfill.

PAVEMENT SECTION THICKNESS

The subgrade soils encountered at the site are generally low plasticity silty clay which is considered poor support for pavement sections. We expect the only new pavement area will be the access drive into the parking garage. Based on our experience, an assumed 18 kip EDLA of 20, a Regional Factor of 2.0 and a serviceability index of 2.0, we recommend the minimum pavement section thickness at the site consist of 4 inches of asphalt on 8 inches of base course or 6 inches of Portland cement concrete on 4 inches of base course.

The asphalt should be a batched hot mix, approved by the engineer and placed and compacted to the project specifications. The base course should meet CDOT Class 6 specifications. All base course and any subbase or required subgrade fill should be compacted to at least 95% of the maximum standard Proctor density at a moisture content within about 2% of optimum.

Required fill to establish design subgrade level can consist of the on-site soils or suitable imported granular soils approved by the geotechnical engineer. Prior to fill placement the subgrade should be scarified to a depth of 8 inches, adjusted to near optimum moisture and compacted to at least 95% of standard Proctor density. The subgrade should be proofrolled. Areas that deflect excessively should be corrected before placing pavement materials. The subgrade improvements and placement and compaction of base and asphalt materials should be monitored on a regular basis by a representative of the geotechnical engineer. Once traffic loadings are better known, we should review our pavement section recommendations.

LIMITATIONS

This study has been conducted in accordance with generally accepted geotechnical engineering principles and practices in this area at this time. We make no warranty either express or implied. The conclusions and recommendations submitted in this report are based upon the data obtained from the exploratory borings drilled at the locations indicated on Figure 1, the proposed type of construction and our experience in the area. Our services do not include determining the presence, prevention or possibility of mold or other biological contaminants (MOBC) developing in the future. If the client is concerned about MOBC, then a professional in this special field of practice should be consulted. Our findings include interpolation and extrapolation of the subsurface conditions identified at the exploratory borings and variations in the subsurface conditions may not become evident until excavation is performed. If conditions encountered during construction appear different from those described in this report, we should be notified so that re-evaluation of the recommendations may be made.

This report has been prepared for the exclusive use by our client for design purposes. We are not responsible for technical interpretations by others of our information. As the project evolves, we should provide continued consultation and field services during construction to review and monitor the implementation of our recommendations, and to verify that the recommendations have been appropriately interpreted. Significant design changes may require additional analysis or modifications to the recommendations presented herein. We recommend on-site observation of excavations and foundation bearing strata and testing of structural fill by a representative of the geotechnical engineer.

Respectfully Submitted,

Kumar & Associates, Inc.

COLORADO REGISTERED DAVID A. YOUNG 32216 2-14-24 PROFESSIONAL ENGINEER

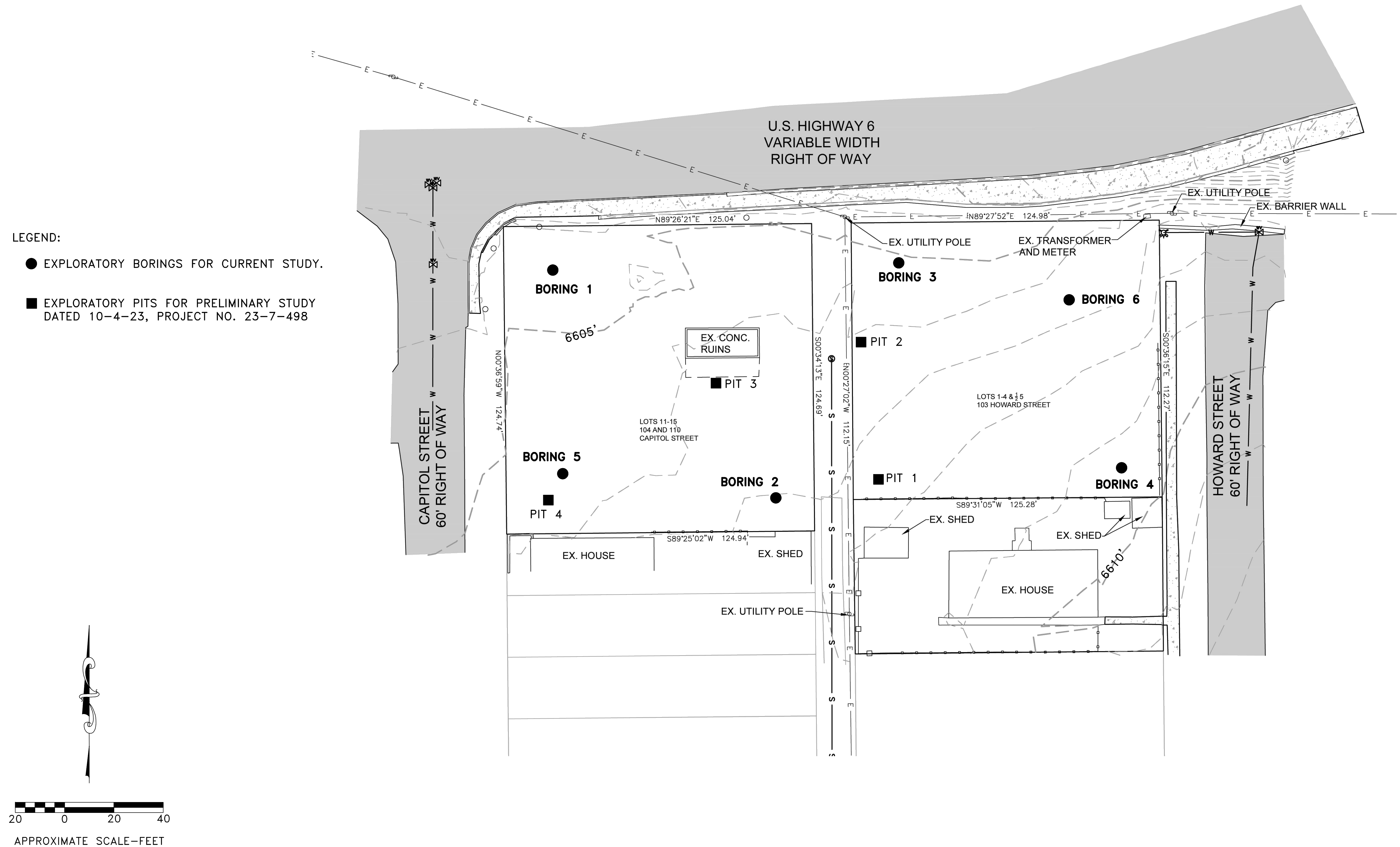
David A. Young, P.E.

Reviewed By:

Steven L. Pawlak, P.E.

DAY/ljf

cc Vail Land Planning - Alison Perry (perry@vailland.com)



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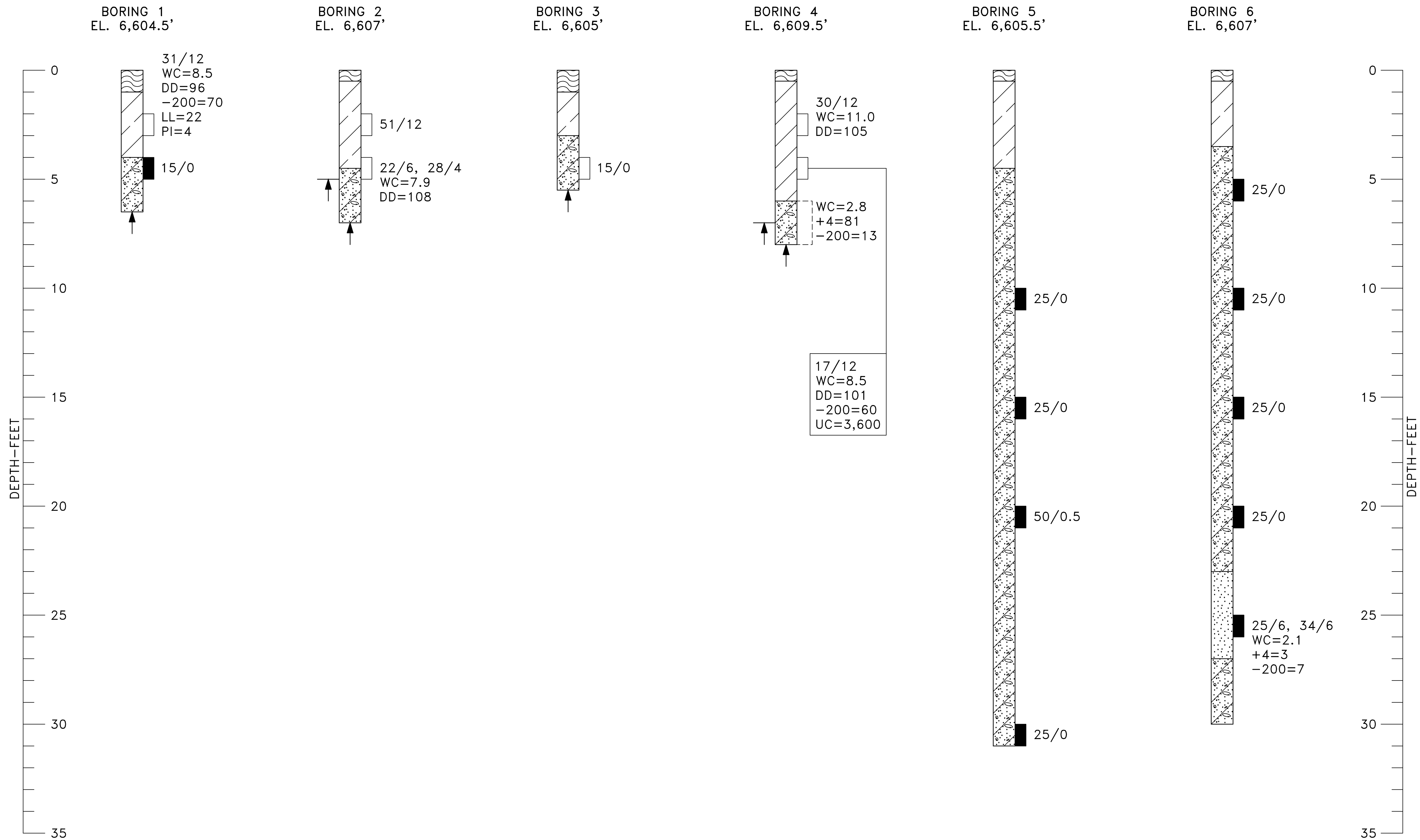
23-7-498.01	Kumar & Associates	104 AND 110 CAPITOL STREET AND 103 HOWARD STREET	LOCATION OF EXPLORATORY BORINGS	Fig. 1



23–7–498.01	Kumar & Associates	104 AND 110 CAPITOL STREET AND 103 HOWARD STREET	LOGS OF EXPLORATORY BORINGS	Fig. 2

LEGEND

TOPSOIL; ORGANIC SANDY, SILTY CLAY, MOIST, BROWN, ROOT ZONE, FROZEN.

CLAY (CL); SILTY TO OCCASIONALLY SANDY (ML–CL), MEDIUM STIFF TO VERY STIFF, SLIGHTLY MOIST TO MOIST, BROWN, LOW PLASTICITY, HIGHLY CALCAREOUS AND/OR GYPSIFEROUS, FROZEN NEAR SURFACE.

GRAVEL AND COBBLES (GM); WITH BOULDERS, SANDY, SILTY, DENSE TO VERY DENSE, SLIGHTLY MOIST, LIGHT BROWN, ROCKS ARE ROUNDED TO SUBROUNDED.

SAND (SM–SP); SLIGHTLY SILTY, SCATTERED GRAVEL, DENSE, SLIGHTLY MOIST, BROWN.

DRIVE SAMPLE; 2–INCH I.D. CALIFORNIA LINER SAMPLE.

DRIVE SAMPLE; 1 3/8–INCH I.D. SPLIT SPOON STANDARD PENETRATION TEST.

DISTURBED BULK SAMPLE.

31/12 DRIVE SAMPLE BLOW COUNT. INDICATES THAT 31 BLOWS OF A 140–POUND HAMMER FALLING 30 INCHES WERE REQUIRED TO DRIVE THE SAMPLER 12 INCHES.

PRACTICAL AUGER DRILLING REFUSAL. WHERE SHOWN ABOVE BOTTOM OF BORING, INDICATES THAT MULTIPLE ATTEMPTS WHERE MADE TO ADVANCE THE HOLE.

NOTES

1. EXPLORATORY BORINGS 1 THROUGH 4 WERE DRILLED ON JANUARY 30, 2024 WITH A 4–INCH–DIAMETER CONTINUOUS–FLIGHT POWER AUGER. BORINGS 5 AND 6 WERE DRILLED ON JANUARY 30 AND 31, 2024 WITH 6–INCH–DIAMETER DOWNHOLE ODEX HAMMER METHOD.

2. THE LOCATIONS OF THE EXPLORATORY BORINGS WERE MEASURED APPROXIMATELY BY PACING FROM FEATURES SHOWN ON THE SITE PLAN PROVIDED.

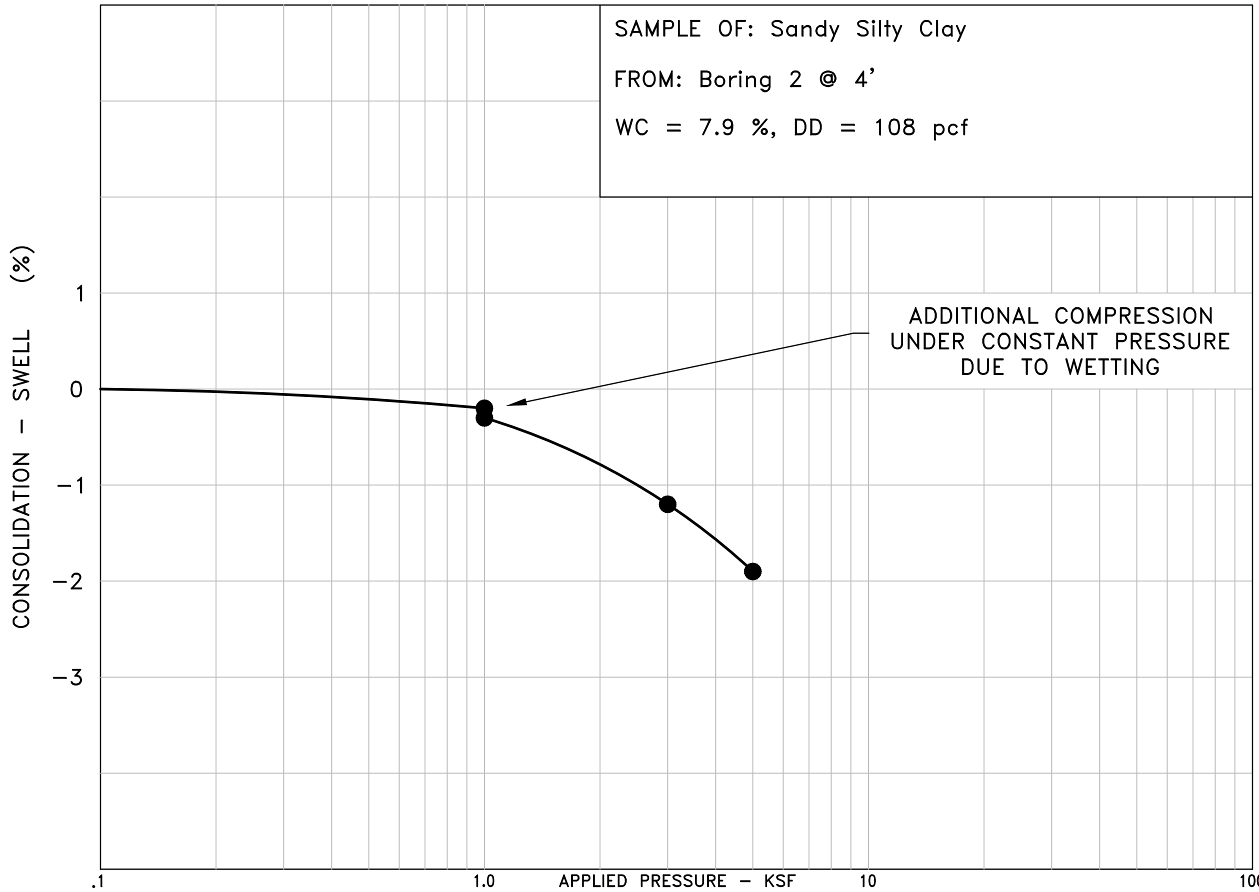
3. THE ELEVATIONS OF THE EXPLORATORY BORINGS WERE APPROXIMATED BY INTERPOLATION BETWEEN CONTOURS ON THE SITE PLAN PROVIDED.

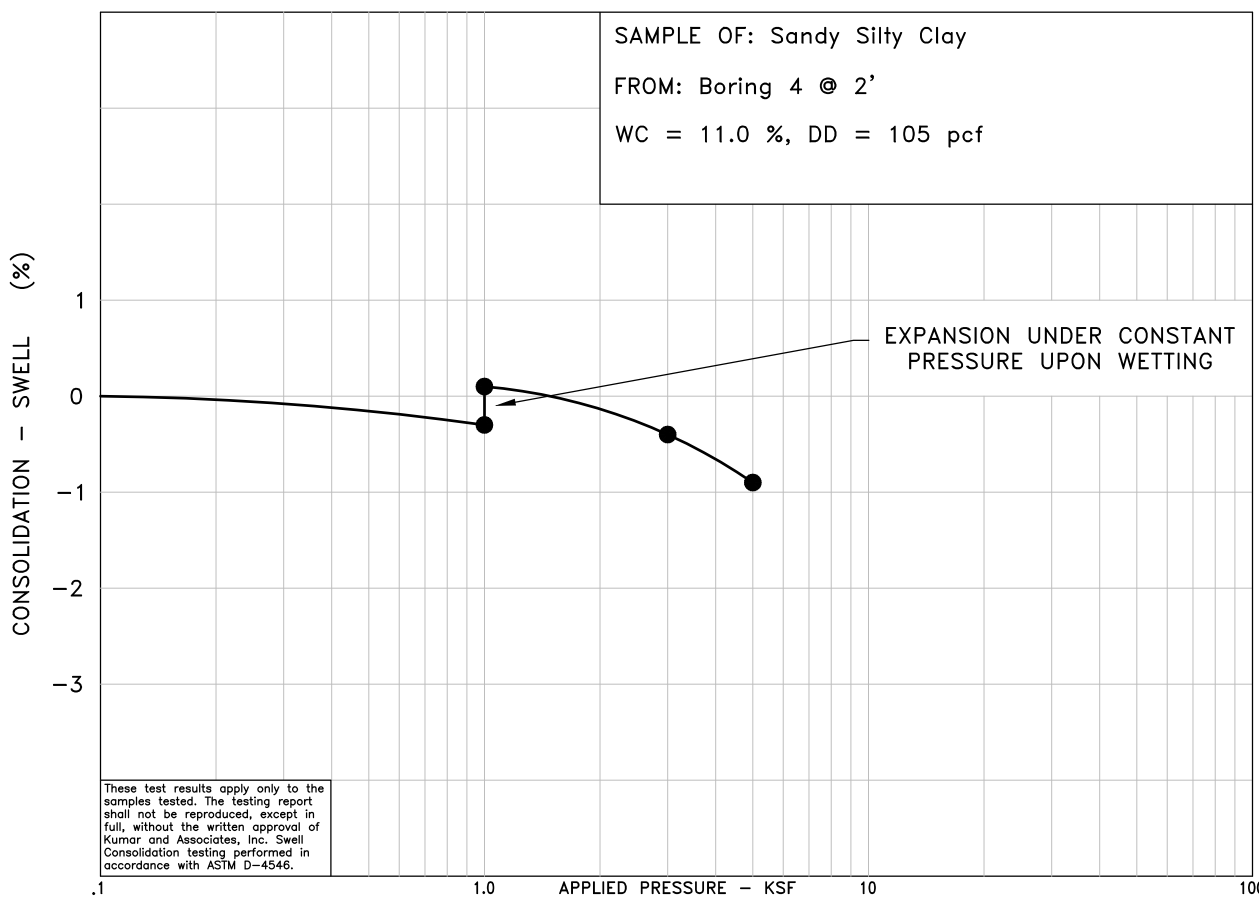
4. THE EXPLORATORY BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

5. THE LINES BETWEEN MATERIALS SHOWN ON THE EXPLORATORY BORING LOGS REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN MATERIAL TYPES AND THE TRANSITIONS MAY BE GRADUAL.

6. GROUNDWATER WAS NOT ENCOUNTERED IN THE BORINGS AT THE TIME OF DRILLING.

7. LABORATORY TEST RESULTS:
   WC = WATER CONTENT (%) (ASTM D2216);
   DD = DRY DENSITY (pcf) (ASTM D2216);
   +4 = PERCENTAGE RETAINED ON NO. 4 SIEVE (ASTM D6913);
   –200= PERCENTAGE PASSING NO. 200 SIEVE (ASTM D1140);
   LL = LIQUID LIMIT (ASTM D4318);
   PI = PLASTICITY INDEX (ASTM D4318);
   UC = UNCONFINED COMPRESSIVE STRENGTH (psf) (ASTM D 2166).





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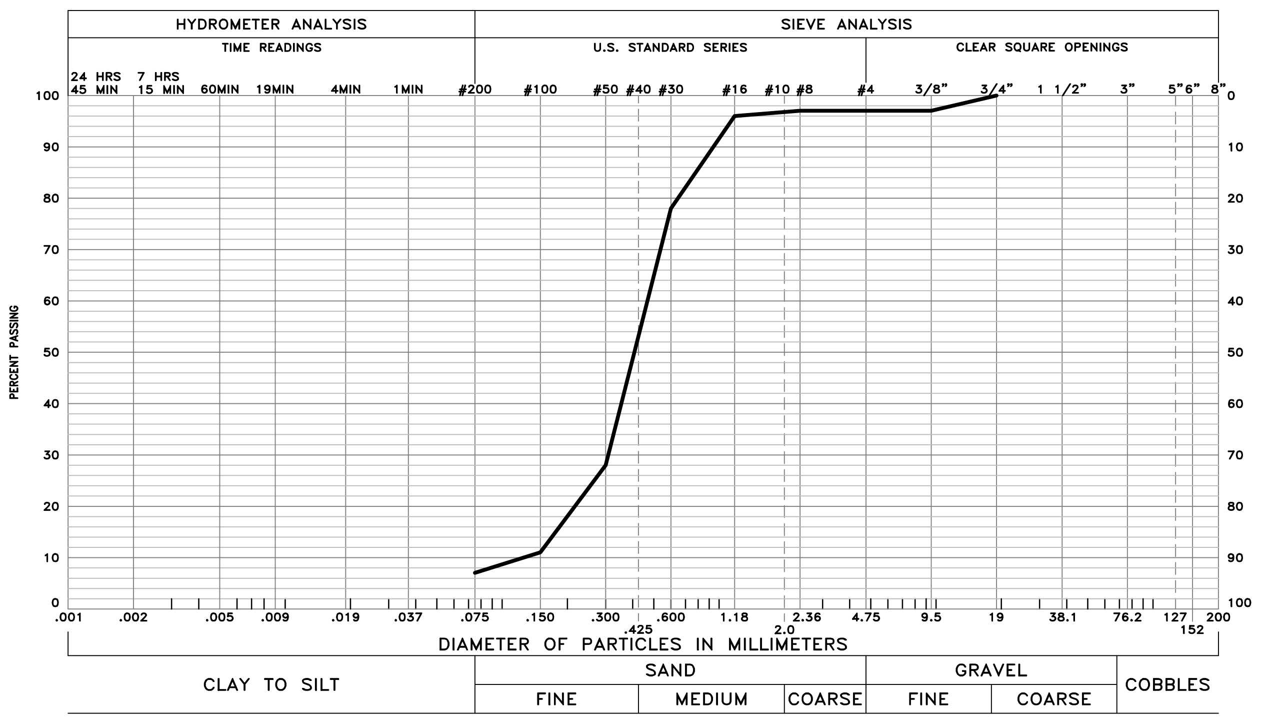
23-7-498.01	Kumar & Associates	SWELL-CONSOLIDATION TEST RESULTS	Fig. 4

GRAVEL 81 % SAND 6 % SILT AND CLAY 13 %

LIQUID LIMIT – PLASTICITY INDEX –

SAMPLE OF: Silty Sandy Gravel FROM: Boring 4 @ 6'–8'



GRAVEL 3 % SAND 90 % SILT AND CLAY 7 %

LIQUID LIMIT – PLASTICITY INDEX –

SAMPLE OF: Slightly Silty Sand FROM: Boring 6 @ 25'

These test results apply only to the samples which were tested. The testing report shall not be reproduced, except in full, without the written approval of Kumar & Associates, Inc. Sieve analysis testing is performed in accordance with ASTM D6913, ASTM D7928, ASTM C136 and/or ASTM D1140.

23–7–498.01	Kumar & Associates	GRADATION TEST RESULTS	Fig. 5

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TABLE 1
SUMMARY OF LABORATORY TEST RESULTS

Project No. 23-7-498.01

SAMPLE LOCATION		NATURAL MOISTURE CONTENT	NATURAL DRY DENSITY	GRADATION		PERCENT PASSING NO. 200 SIEVE	ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH		SOIL TYPE
BORING	DEPTH (ft)	(%)	(pcf)	GRAVEL (%)	SAND (%)		LIQUID LIMIT (%)	PLASTIC INDEX (%)	(psf)		
1	2	8.5	96			70	22	4			Sandy Silt and Clay
2	4	7.9	108								Sandy Silty Clay
4	2	11.0	105								Sandy Silty Clay
	4	8.5	101			60			3,600		Sandy Silty Clay
	6-8	2.8		81	6	13					Silty Sandy Gravel
6	25	2.1		3	90	7					Slightly Silty Sand