Appendix H

Soils Response Letter

Project No. A9382-06-02
October 28, 2021

Mr. Mark Spector
Onni Contracting (California), Inc.
315 West 9th Street, Suite 801
Los Angeles, California 90015

Subject: RESPONSE TO SOILS REPORT REVIEW LETTER
PROPOSED HIGH-RISE REDEVELOPMENT – "1360 VINE"
6254-6274 W. DE LONGPRE AVENUE, 1334 & 1348-1360 N. VINE STREET
6241 -6265 W. AFTON PLACE, LOS ANGELES, CALIFORNIA
TRACT 1210, BLOCK A, LOTS 11-23

References:
Geotechnical Investigation, prepared by Geocon West, Inc., dated Sept. 21, 2016;

City of Los Angeles Approval Review Letter, Log No. 95056, dated Oct. 18, 2016;

Geotechnical Investigation prepared by Geocon West, Inc., dated Aug. 17, 2020;

City of Los Angeles Geology and Soils Report Review Letter, Log No. 114518, dated September 30, 2020;

Geotechnical Investigation prepared by Geocon West, Inc., dated Nov. 12, 2020;

City of Los Angeles Geology and Soils Report Review Letter, Log No. 114518-01, dated April 20, 2021.

Dear Mr. Spector:

This letter has been prepared in response to the referenced Geology and Soils Report Review Letter prepared by the City of Los Angeles, consisting of one comment, dated April 20, 2021. A response to the review comment is provided at the end of this letter and a copy of the review letter is appended herein.

The project consists of a proposed high-rise structure underlain by subterranean levels which will extend to depths of about 83 feet below the ground surface. The historically highest groundwater in the area is approximately 45 feet beneath the ground surface, and groundwater was encountered at depths of 39 and 48 feet below the existing ground surface in our prior explorations. Based on these conditions, groundwater is anticipated to be encountered during construction and temporary dewatering will be required.

The review comment requests an evaluation of the drawdown curve resulting from temporary dewatering and a discussion of the anticipated impact on adjacent properties and structures, supported with settlement calculations. Our scope of work performed to address this comment consisted of additional site exploration, laboratory testing, groundwater research and engineering analyses. We also had several phone calls with the LADBS Grading Division to discuss the site conditions and the review comment.

ADDITIONAL SITE EXPLORATION

Additional site exploration was performed in two phases. The first phase was performed on August 17, 2021, by advancing two Cone Penetrometer Tests (CPTs) to depths of about 67 and 89 feet below the ground surface. The purpose of the CPTs was to obtain a continuous subsurface soil profile and to identify soil layers that would be useful for the second phase of exploration.

The second phase of the additional site exploration was performed on August 24th and 25th, 2021, and consisted of excavating 3 borings (W1, W2, and W3) using a truck-mounted hollow-stem auger drilling machine to depths of approximately 57½ to 78 feet. The approximate locations of the exploratory borings are depicted on the Site Plan (see Figure 1). Borings W1 and W2 are located in close proximity to each other and only boring W2 was sampled and logged. A detailed discussion of the field investigation, including boring and CPT logs, is presented in Appendix A. Logs of the prior three borings are also included, with some minor corrections of typographic errors.

Subsequent to the boring excavation, temporary well casing was placed in each of the three boreholes for the purpose of monitoring the groundwater level within discrete soil layers. Well diagrams are provided as Figures 2 through 4 and indicate the depth of the screen placed in each borehole. Filter pack extended at least 6 inches above the screen, and then a minimum 2-foot bentonite seal was placed. The remaining annual backfilled with cement-bentonite grout. The borings were finished at the ground surface with well covers to allow for multiple groundwater readings.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

GROUNDWATER

Following the installation of the temporary groundwater monitoring wells, readings of the groundwater depths were taken on multiple days. Table 1 below presents a summary of the observed groundwater depths:

TABLE 1

Date	Depth of Groundwater, from Ground Surface (ft)		
	W1	W2	W3
8/24/21 & 8/25/21	Not Measured	39.8	37.5
8/30/21	40.2	39.7	42.0
09/28/21	40.5	39.9	38.3

Additionally, we searched for nearby data on Geotracker (https://geotracker.waterboards.ca.gov/) and found a site located at 1310 Vine Street that has performed groundwater monitoring between 2015 and 2021. Although this address is several blocks to the South, well W-6 is located just south of the site on Afton Place. The reported depth from ground surface to water surface ranges between approximately 33 and 37 feet. The boring log for W-6 indicates that the bottom 30 feet of the borehole is screened and, therefore, does not indicate if the groundwater is perched. Copies of the relevant pages from this report are provided in Appendix C.

DRAWDOWN AND SETTLEMENT ANALYSES

Hydrogeologic Conditions

The soils encountered in our borings generally consist of artificial fill to depths between approximately 8 and 13 feet below ground surface (ft bgs), with alluvial sediments below the fill. The alluvial sediments consist of lenses and layers of sand, silt, and clay. First encountered water typically occurs in relatively fine-grained units consisting of clay with sand or sand with silt and clay. Beneath the first encountered water, the soils consist of intermixed silty and clayey sands, clay layers, and occasional clean sand lenses. In the most recent borings drilled at the project site, the static depth to groundwater equilibrated at a depth of approximately 40 ft bgs.

The hydraulic conductivity of the saturated layers beneath the site can be estimated based on empirical relationships based on material type (Freeze and Cherry, 1979; Domenico and Schwartz, 1990). Table 1 presents a range of potential hydraulic conductivity values for the saturated materials based on the empirical relationships cited above and professional judgment based on test pumping at other sites in the Los Angeles basin where similar materials have been encountered at similar depths. The low range of the hydraulic conductivities listed in Table 1 represent silts or sand with a high proportion of fines. The high range represents fine sand or more graded sands with some silt or clay present.

For the analysis discussed below, it is assumed that an impermeable barrier, such as secant piles or a sheet pile wall, would be installed around the perimeter prior to excavation. Perimeter dewatering wells would not be required, and the dewatering would occur from trenches installed within the impermeable barrier installed around the excavation. The trenches would be maintained at a depth two feet deeper than the active excavation floor. The excavation floor would extend to 83 ft bgs so the deepest extent of the trenches would be 85 ft bgs, or 45 feet below the assumed static groundwater elevation. Based on this thickness, Table 2 provides the assumed transmissivity range for the saturated materials beneath the site within the zone or depth of the excavation and dewatering trenches.

TABLE 2

Hydraulic Conductivity Estimates[1]

and Transmissivity Values

1360 Vine Project, Los Angeles, California

Hydraulic Conductivity (K)		Saturated Thickness	Transmissivity (T)
cm/sec	ft/d	ft	ft^2/d
2.50E-04	0.71	45	32
8.00E-04	2.27	45	102
5.00E-03	14.17	45	638

1 Using empirical relationships and best professional judgment based on conditions at other sites in the Los Angeles basin

Dewatering Simulations

We prepared an analytical model to simulate the drawdown that would occur due to dewatering. The drawdown simulations were prepared to provide an estimate of the drawdown cones and the total decline of the groundwater surface under the public right of away and other properties adjacent to the project site. Due to the stratigraphic layering within the soils in the interval to be dewatered, standard drawdown cones may not fully develop across the entire vertical interval of the excavation. Instead, separate smaller dewatered zones may form in individual layers or lenses, with water preferentially flowing to the dewatering system in coarser-grained deposits. Thus, our simulation approach may potentially over-estimate the amount of dewatering in finer-grained materials that are more prone to consolidation, resulting in a potential over-prediction of the amount of settlement that may occur due to dewatering. Despite that anticipated behavior in the subsurface, we simulated the potential drawdown due to dewatering assuming more uniform (i.e. isotropic and homogeneous) conditions. This is a conservative assumption in that it will over-predict the total magnitude of drawdown and the outer extent of the dewatering cone, resulting in potential over-prediction of settlement.

Dewatering is often conducted using perimeter wells to "pre-dewater" the excavation area and prevent groundwater from entering the excavation. The perimeter wells are typically located outside of the shoring and extend up to 10 feet below the maximum excavation depth. Operation of the perimeter dewatering wells creates a series of overlapping drawdown cones caused by dropping the water table to a depth lower than the bottom of the excavation. As a result, the total decrease in the water table is relatively large. However, due to the depth of the excavation below the water table at the 1360 Vine Street project site, impermeable shoring will be installed around the perimeter of the excavation area before reaching the water table. The impermeable shoring will eliminate the need to use exterior dewatering wells to pre-dewater the excavation area, and will minimize drawdown outside of the shoring.

The internal dewatering trenches will consist of French drains and will remove the water from the soils beneath the floor of the excavation. They also intercept groundwater that flows under the shoring due to the differential pressure between the water level outside of the shoring and the dewatered excavation. The volume of groundwater that flows under the shoring is much less than the volume of groundwater that is removed by perimeter dewatering wells, such that the drawdown that occurs outside of the shoring is much less in cases where only trenches can be used during excavation.

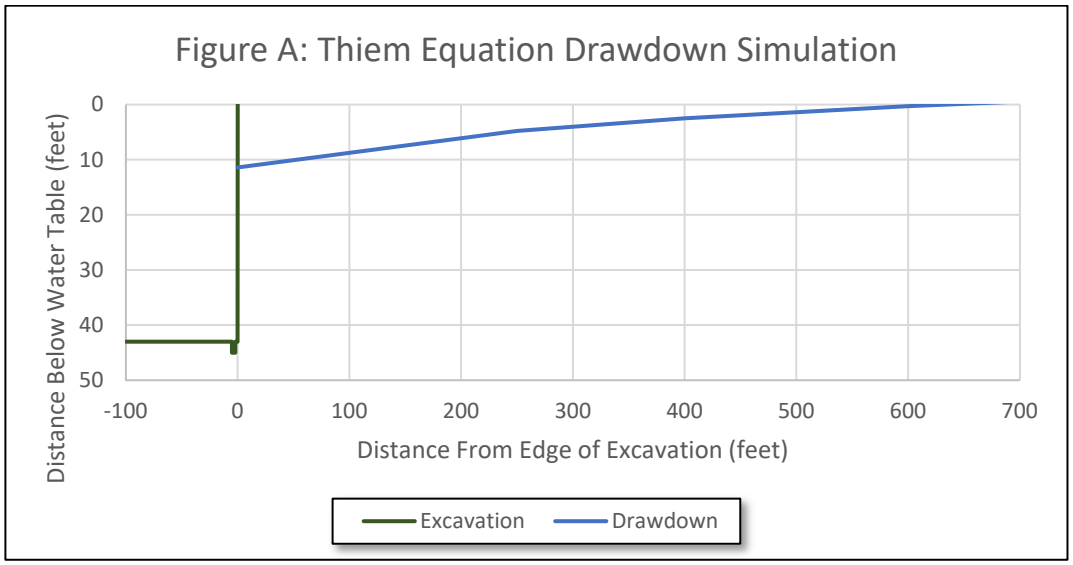
Our analytical evaluation is based on the Thiem equation (Domenico and Schwartz, 1990). If the Transmissivity of the aquifer is known, the Thiem Equation provides the difference between the drawdowns at any two specified locations away from the dewatering source. Our simulation is based on a presumed dewatering point in the center of the proposed building footprint. The proposed building has a maximum length of approximately 350 feet, so the target dewatering radius is 175 feet. The Thiem equation results are presented in Table 3 for the middle range hydraulic conductivity value shown in Table 1. As indicated in Table 3, the drawdown will be effectively zero at a distance of 600 feet from the edge of the shoring. Figure A shows the profile of the drawdown surface relative to the excavation.

TABLE 3

Projected Drawdowns at Various Distances from the Edge of the Excavation

1360 Vine Street, Los Angeles, California

Distance from Edge of Excavation	Drawdown (feet)
0	11.4
250	4.5
400	2.5
600	0.3



Settlement Analysis

Settlement analyses was performed using the computer program Settle3 by Rocscience to estimate the settlement that may be induced by temporary dewatering. The soil properties used within Settle3 are indicated in Table 4 below. These soil properties are based on the laboratory testing performed on samples collected during the additional site exploration described herein, as well as the previous laboratory testing performed by Geocon:

TABLE 4

Layer No.	Layer Name	Layer Depth	Cce	Ccr	Cv (ft_2/yr)	Total Unit Weight (pcf)
1	SM	0-41	0.037	0.006	67	120
2	CL	41-50	0.043	0.006	45	120
3	SM	50-58	0.027	0.003	63	120
4	CL	58-64	0.035	0.012	31	120
5	SC-CL	64-70	0.046	0.009	25	120
6	SP	70-130	0.04	0.01	48	120
7	Dense	130-150	0.003	0.003	48	120

The groundwater levels were modeled using the grid with interpolation between the grid points. The grid was set up based on distances from the edge of excavation of 0, 250, 400, and 600 feet. Time rate of consolidation was also considered by assuming 6 months of excavation to the excavation bottom, and 6 months of construction before the dewatering system could be terminated for a total 12-month duration.

The output plots of total settlement are provided at the ground surface at the 12-month duration. Note that the program output plots settlement at one selected elevation; therefore, the area within the excavation has no settlements to display since the soil is excavated and is at a lower elevation. An output report is also provided. The output plot and reports are provided as Figures 5 and 6.

Based on our updated settlement analyses, the temporary dewatering is estimated to induce less than ½ inch of settlement adjacent to the excavation. The settlements decrease with increased distance away from the excavation.

CONCLUSIONS AND RECOMMENDATIONS

Based on the current data and the assumption that a static groundwater table is present at the site, it is recommended that temporary shoring that can provide a relatively impermeable groundwater barrier, such as secant piles or a sheet pile wall, be used. The intent of this recommendation is to reduce the extent of the drawdown curve and, therefore, the predicted settlement associated with temporary dewatering. Provided the shoring and dewatering system is designed in a manner that aligns with the assumptions stated herein, settlements resulting from the temporary dewatering are anticipated to be less than ½ inch and is not anticipated to have an appreciable affect on the surrounding properties or structures or on the public right-of-way. Once the final shoring system is selected, Geocon should be informed and provided the opportunity to update our analyses or present additional recommendations.

It is recommended that in addition to a typical solider pile monitoring program, additional monitoring be performed during the dewatering period. This can be accomplished by installing an array of surface monitoring points offset from the shoring system and/or with monitoring points installed on adjacent buildings. Design and installation of the monitoring system will require additional coordination between the project team, as well as between the Client and the adjacent property owners.

The project is currently starting the Environmental Impact Review process, which is early in the design process to be performing the dewatering, drawdown, and associated settlement analyses. The recommendation to use a relatively impermeable shoring system is intended to demonstrate that the proposed project is feasible and can be constructed in accordance with LADBS and BOE requirements. Additional testing for the design of the dewatering system, including a large-diameter boring and pump testing, will be performed by others at a future date closer to the anticipated start of construction. During that testing, it is anticipated that additional data regarding the depth to first groundwater and the static or perched condition of the groundwater will be obtained. Those observations should be shared with Geocon so that the analyses presented herein may be reviewed and updated. The depth to first groundwater can fluctuate seasonally and may be higher or lower than what is assumed herein. If a perched groundwater condition is present or if pump testing indicates a different drawdown profile, the actual depth and lateral extent of the drawdown required to temporarily dewater the excavation may be reduced. Alternative shoring and dewatering systems, such as a soldier pile and lagging and perimeter wells, may be feasible and should be evaluated once that additional data is available.

We anticipate needing to perform supplemental analyses related to the design and construction of the dewatering and shoring systems including, but not limited to, additional recommendations for secant pile design to create a relatively impermeable barrier; recommendations for the installation of the shoring system in an urban environment, particularly if sheet piles are the desired system; and additional analyses including a seepage analysis below the shoring system.

Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

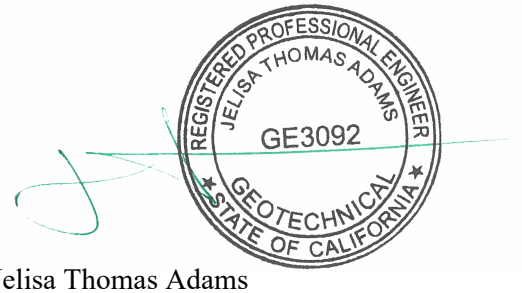
Comment 1: *Show the drawdown curve(s) on the adjacent properties and explain how was concluded that the temporary dewatering will not have any detrimental impact of the adjacent properties and structures. Support your conclusions with settlement calculations.*

Response 1: The discussion above addresses the proposed temporary dewatering, including a discussion of potential impacts on adjacent properties and structures and includes settlement calculations.

If you have any questions regarding this letter, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.



Jelisa Thomas Adams
GE 3092

Enclosures: Copy of Soils Report Correction Letter
Figure 1, Site Plan
Figures 2 through 4, Monitoring Well Detail
Figures 5 and 6, Settle3 Output

APPENDIX A
FIELD INVESTIGATION
Figures A1 through A5, Boring Logs
Figures A6 and A7, Cone Penetrometer Tests

APPENDIX B
LABORATORY TESTING
Figures B1 through B3, Grain Size Analysis
Figures B1 through B3, Consolidation Test Results

APPENDIX C
GROUNDWATER RESEARCH

DE LONGPRE AVENUE

VINE STREET

B3

B1

CPT-2

W1

W2

SFR

SFR

SFR

SFR

A

A

A

A

A

ONE- & TWO-STORY
COMMERCIAL STRUCTURE

SFR

SFR

SFR

MFR

SFR

A

W3

CPT-1

B2

AFTON PLACE

LEGEND

B3 Approximate Location of Boring

W3 Approximate Location of Monitoring Well

CPT-2 Approximate Location of CPT

N

0 50' 100'

GEOCON
W E S T, I N C.

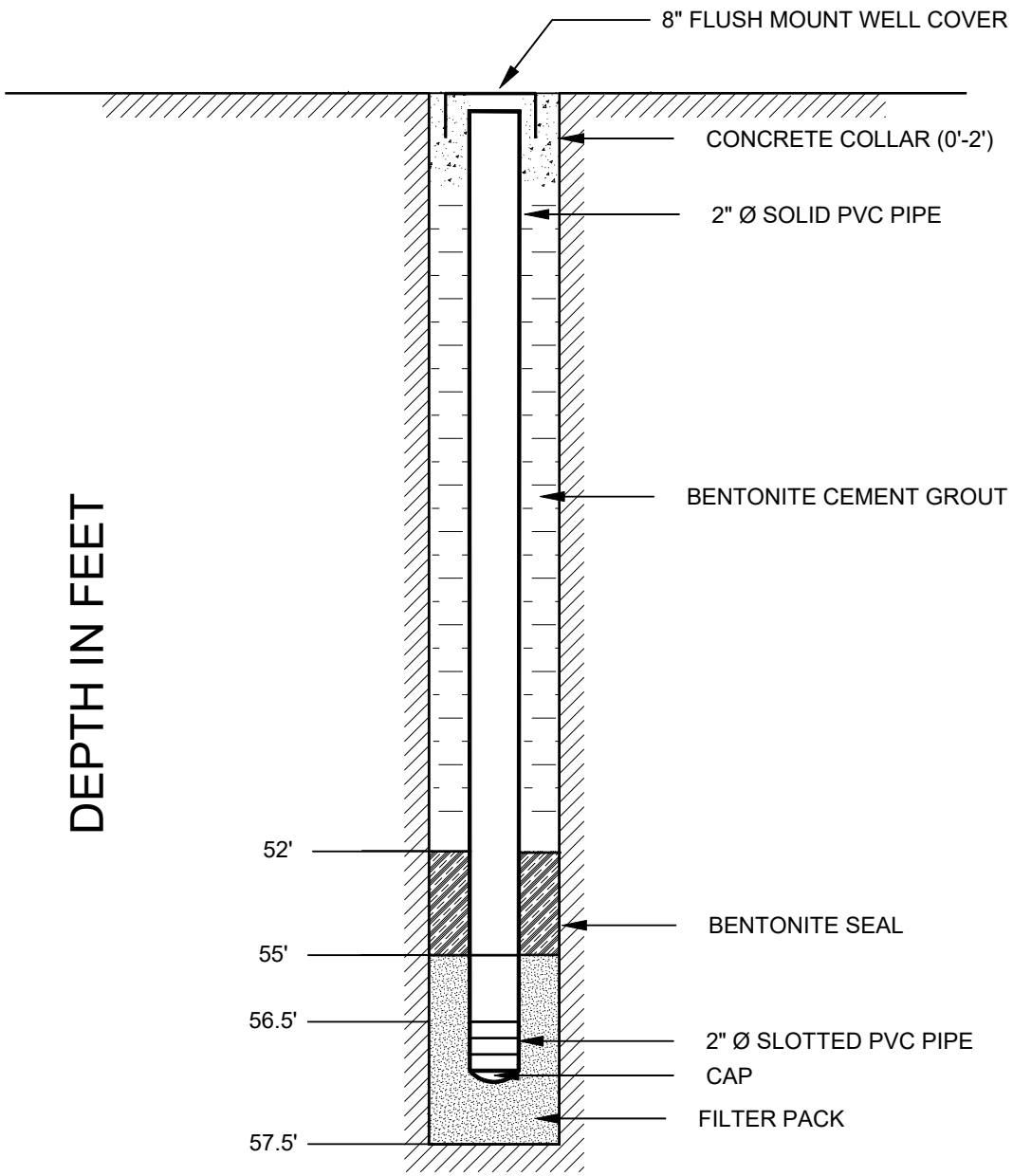
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: PZ	CHECKED BY: JTA

SITE PLAN

DE LONGPRE AVENUE & VINE STREET
LOS ANGELES, CALIFORNIA

OCT 2021	PROJECT NO. A9382-06-02	FIG. 1



MONITORING WELL 1

NOT TO SCALE

GEOCON
WEST, INC.

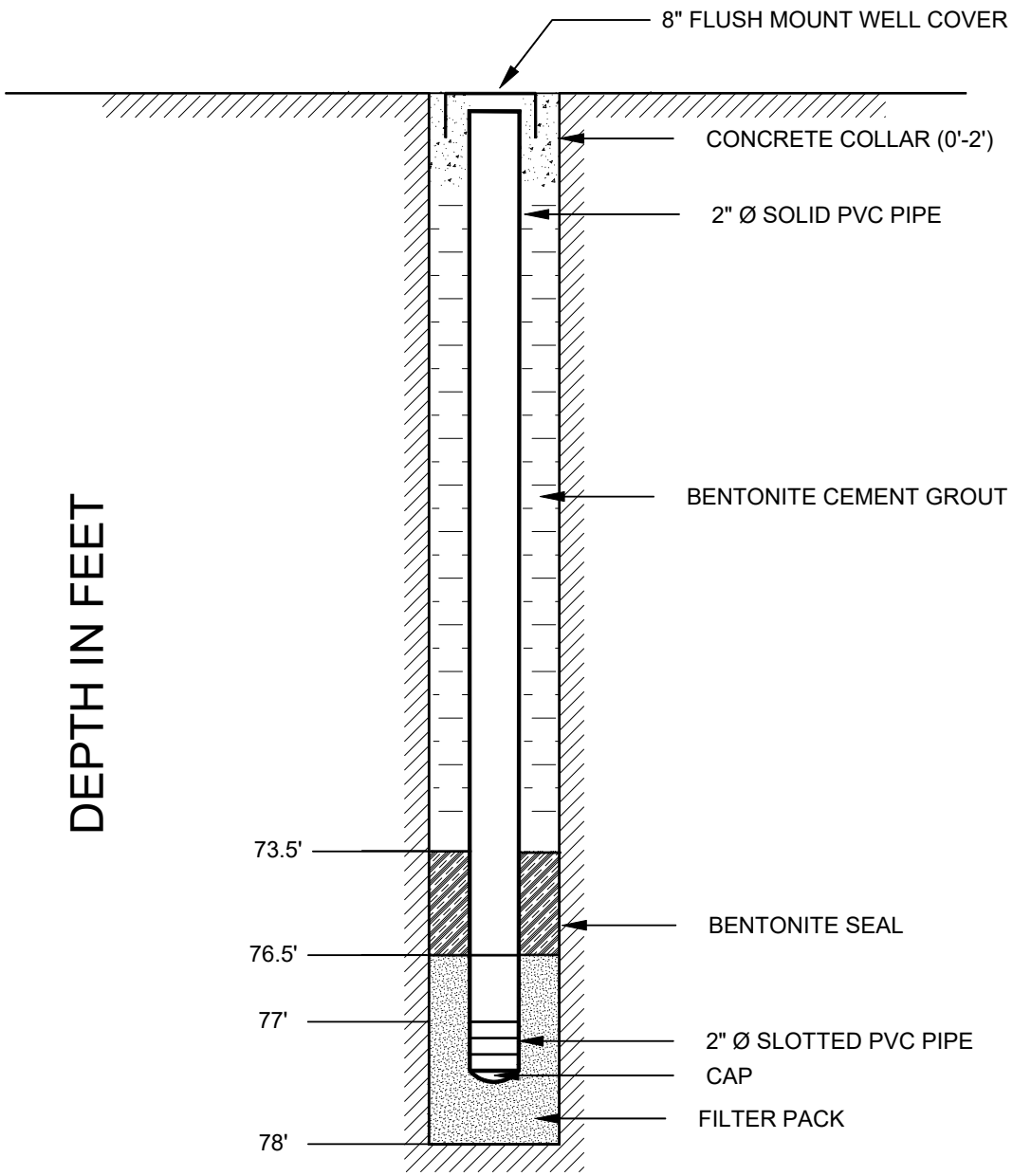
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

JTA		

MONITORING WELL DETAIL

DE LONGPRE AVENUE & VINE STREET
LOS ANGELES, CALIFORNIA

OCT 2021	PROJECT NO. A9382-06-02	FIG 2



MONITORING WELL 2

NOT TO SCALE

GEOCON
WEST, INC.

ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
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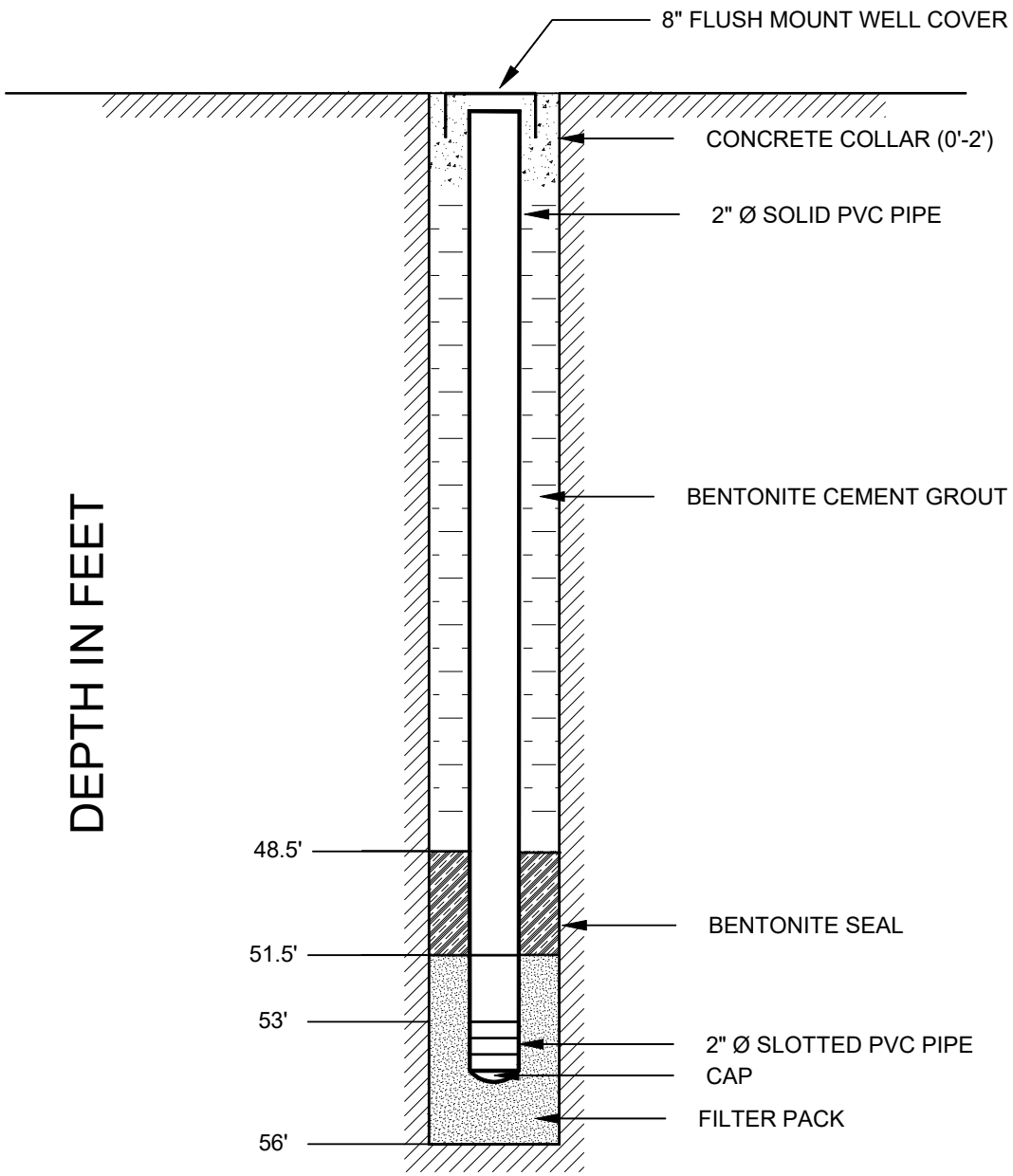
JTA		

MONITORING WELL DETAIL

DE LONGPRE AVENUE & VINE STREET
LOS ANGELES, CALIFORNIA

OCT 2021	PROJECT NO. A9382-06-02	FIG 3



MONITORING WELL 3

NOT TO SCALE

GEOCON
WEST, INC.

ENVIRONMENTAL GEOTECHNICAL MATERIALS
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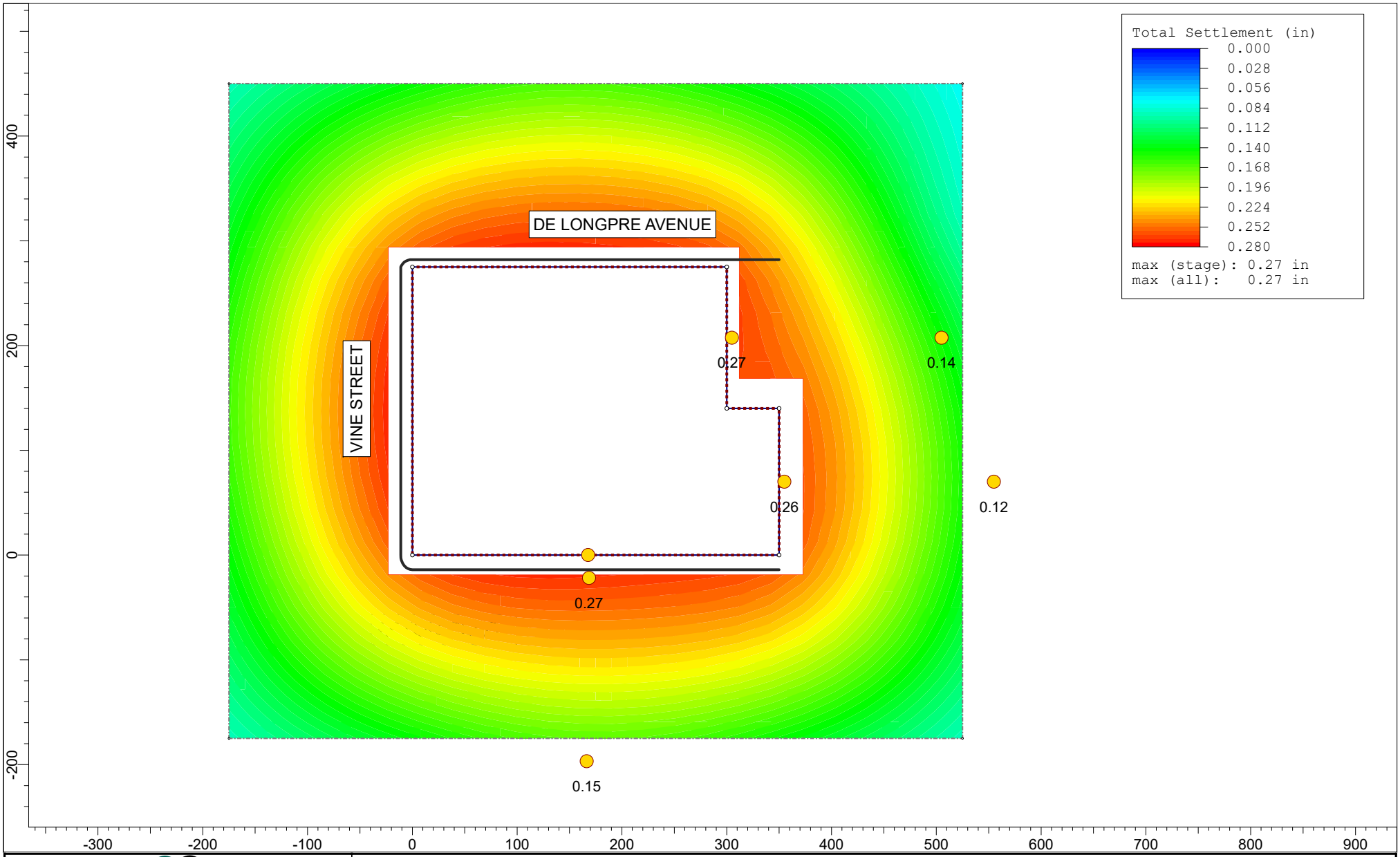
JTA		

MONITORING WELL DETAIL

DE LONGPRE AVENUE & VINE STREET
LOS ANGELES, CALIFORNIA

OCT 2021	PROJECT NO. A9382-06-02	FIG 4



GEOCON	*Project*	Onni - Vine	
	Analysis Description	Dewatering Settlement	
	Drawn By	JTA	*Company* Geocon West, Inc.
	Date	10/27/2021	*File Name* Dewatering Settlement GW Grid - trench - time rate.s3z

SETTLE3 5.012

Settle3 Analysis Information

Onni - Vine

Project Settings

Document Name	Dewatering Settlement GW Grid - trench - time rate.s3z
Project Title	Onni - Vine
Analysis	Dewatering Settlement
Author	JTA
Company	Geocon West, Inc.
Date Created	6/16/2021, 10:37:59 AM
Stress Computation Method	Boussinesq
Time-dependent Consolidation Analysis	
Time Units	months
Permeability Units	feet/year
Minimum settlement ratio for subgrade modulus	0.9
Use average properties to calculate layered stresses	
Improve consolidation accuracy	
Ignore negative effective stresses in settlement calculations	

Stage Settings

Stage #	Name	Time [months]
1	Initial	0
2	Before Dewatering	0
3	After Dewatering	6
4	Excavation	12

Results

Time taken to compute: 0.310034 seconds

Stage: Initial = 0 mon

Data Type	Minimum	Maximum
Total Settlement [in]	0	0
Total Consolidation Settlement [in]	0	0
Virgin Consolidation Settlement [in]	0	0
Recompression Consolidation Settlement [in]	0	0
Immediate Settlement [in]	0	0
Secondary Settlement [in]	0	0
Loading Stress ZZ [ksf]	0	0
Loading Stress XX [ksf]	0	0
Loading Stress YY [ksf]	0	0
Effective Stress ZZ [ksf]	0	11.136
Effective Stress XX [ksf]	0	11.136
Effective Stress YY [ksf]	0	11.136
Total Stress ZZ [ksf]	0	18
Total Stress XX [ksf]	0	18
Total Stress YY [ksf]	0	18
Modulus of Subgrade Reaction (Total) [ksf/ft]	0	0
Modulus of Subgrade Reaction (Immediate) [ksf/ft]	0	0
Modulus of Subgrade Reaction (Consolidation) [ksf/ft]	0	0
Total Strain	0	0
Pore Water Pressure [ksf]	0	6.864
Excess Pore Water Pressure [ksf]	0	0
Degree of Consolidation [%]	0	0
Pre-consolidation Stress [ksf]	0.0048	11.1245
Over-consolidation Ratio	1	1
Void Ratio	1.1	1.1
Permeability [ft/y]	0.000351188	14.0117
Coefficient of Consolidation [ft^2/y]	25	67
Hydroconsolidation Settlement [in]	0	0
Average Degree of Consolidation [%]	0	100
Undrained Shear Strength	0	0

Stage: Before Dewatering = 0 mon

Data Type	Minimum	Maximum
Total Settlement [in]	0	0
Total Consolidation Settlement [in]	0	0
Virgin Consolidation Settlement [in]	0	0
Recompression Consolidation Settlement [in]	0	0
Immediate Settlement [in]	0	0
Secondary Settlement [in]	0	0
Loading Stress ZZ [ksf]	0	0
Loading Stress XX [ksf]	0	0
Loading Stress YY [ksf]	0	0
Effective Stress ZZ [ksf]	0	11.136
Effective Stress XX [ksf]	0	11.136
Effective Stress YY [ksf]	0	11.136
Total Stress ZZ [ksf]	0	18
Total Stress XX [ksf]	0	18
Total Stress YY [ksf]	0	18
Modulus of Subgrade Reaction (Total) [ksf/ft]	0	0
Modulus of Subgrade Reaction (Immediate) [ksf/ft]	0	0
Modulus of Subgrade Reaction (Consolidation) [ksf/ft]	0	0
Total Strain	0	0
Pore Water Pressure [ksf]	0	6.864
Excess Pore Water Pressure [ksf]	0	0
Degree of Consolidation [%]	0	0
Pre-consolidation Stress [ksf]	0.0048	11.1245
Over-consolidation Ratio	1	1
Void Ratio	1.1	1.1
Permeability [ft/y]	0.000351188	14.0117
Coefficient of Consolidation [ft^2/y]	25	67
Hydroconsolidation Settlement [in]	0	0
Average Degree of Consolidation [%]	0	100
Undrained Shear Strength	0	0

Stage: After Dewatering = 6 mon

Data Type	Minimum	Maximum
Total Settlement [in]	0	0.181369
Total Consolidation Settlement [in]	0	0.181369
Virgin Consolidation Settlement [in]	0	0.181369
Recompression Consolidation Settlement [in]	0	0
Immediate Settlement [in]	0	0
Secondary Settlement [in]	0	0
Loading Stress ZZ [ksf]	0	0
Loading Stress XX [ksf]	0	0
Loading Stress YY [ksf]	0	0
Effective Stress ZZ [ksf]	0	11.136
Effective Stress XX [ksf]	0	11.9548
Effective Stress YY [ksf]	0	11.9548
Total Stress ZZ [ksf]	0	18
Total Stress XX [ksf]	0	18.8188
Total Stress YY [ksf]	0	18.8188
Modulus of Subgrade Reaction (Total) [ksf/ft]	0	0
Modulus of Subgrade Reaction (Immediate) [ksf/ft]	0	0
Modulus of Subgrade Reaction (Consolidation) [ksf/ft]	0	0
Total Strain	0	0.00189194
Pore Water Pressure [ksf]	0	6.864
Excess Pore Water Pressure [ksf]	0	0.81881
Degree of Consolidation [%]	0	10.0052
Pre-consolidation Stress [ksf]	0.0048	11.1245
Over-consolidation Ratio	1	1
Void Ratio	1.09603	1.1
Permeability [ft/y]	0.000351188	14.0117
Coefficient of Consolidation [ft^2/y]	25	67
Hydroconsolidation Settlement [in]	0	0
Average Degree of Consolidation [%]	0	0
Undrained Shear Strength	-0.0348738	0

Stage: Excavation = 12 mon

Data Type	Minimum	Maximum
Total Settlement [in]	0	0.272149
Total Consolidation Settlement [in]	0	0.272149
Virgin Consolidation Settlement [in]	0	0.272149
Recompression Consolidation Settlement [in]	0	0
Immediate Settlement [in]	0	0
Secondary Settlement [in]	0	0
Loading Stress ZZ [ksf]	-9.96	0
Loading Stress XX [ksf]	-7.87104	1.25561
Loading Stress YY [ksf]	-9.08607	1.11206
Effective Stress ZZ [ksf]	0	11.136
Effective Stress XX [ksf]	0	12.832
Effective Stress YY [ksf]	0	12.6675
Total Stress ZZ [ksf]	-0.818804	17.9932
Total Stress XX [ksf]	-5.91422	18.3554
Total Stress YY [ksf]	-7.11454	18.3206
Modulus of Subgrade Reaction (Total) [ksf/ft]	0	0
Modulus of Subgrade Reaction (Immediate) [ksf/ft]	0	0
Modulus of Subgrade Reaction (Consolidation) [ksf/ft]	0	0
Total Strain	0	0.00204615
Pore Water Pressure [ksf]	-8.09561	6.85717
Excess Pore Water Pressure [ksf]	-8.09561	0.736682
Degree of Consolidation [%]	0	100
Pre-consolidation Stress [ksf]	0.0048	11.1245
Over-consolidation Ratio	1	1
Void Ratio	1.0957	1.1
Permeability [ft/y]	0.000351188	14.0117
Coefficient of Consolidation [ft^2/y]	25	67
Hydroconsolidation Settlement [in]	0	0
Average Degree of Consolidation [%]	0	100
Undrained Shear Strength	-0.127906	0

Excavations

1. Excavation: "Excavation 1"

Depth	83 ft
Installation Stage	Excavation = 12 mon

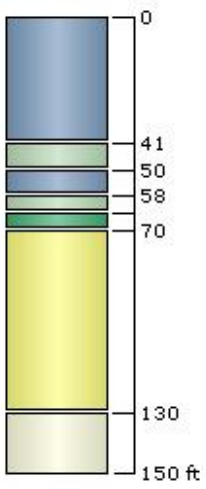
Coordinates

X [ft]	Y [ft]
0	0
350	0
350	140
300	140
300	275
0	275

Soil Layers

Ground Surface Drained: Yes

Layer #	Type	Thickness [ft]	Depth [ft]	Drained at Bottom
1	Layer 1 - SM	41	0	No
2	Layer 2 - CL	9	41	No
3	Layer 3 - SM	8	50	No
4	Layer 4 - CL	6	58	No
5	Layer 5 - SC/CL	6	64	No
6	Layer 6 - SP	60	70	No
7	Layer 7 - Dense	20	130	No



Soil Properties

Property	Layer 1 - SM	Layer 2 - CL	Layer 3 - SM	Layer 4 - CL
Color				
Unit Weight [kips/ft3]	0.12	0.12	0.12	0.12
Saturated Unit Weight [kips/ft3]	0.12	0.12	0.12	0.12
K0	1	1	1	1
Primary Consolidation	Enabled	Enabled	Enabled	Enabled
Material Type	Non-Linear	Non-Linear	Non-Linear	Non-Linear
Cce	0.037	0.043	0.027	0.035
Cre	0.006	0.006	0.003	0.012
e0	1.1	1.1	1.1	1.1
OCR	1	1	1	1
Cv [ft2/y]	67	45	63	31
Cvr [ft2/y]	67	45	63	31
B-bar	1	1	1	1
Undrained Su A [kips/ft2]	0	0	0	0
Undrained Su S	0.2	0.2	0.2	0.2
Undrained Su m	0.8	0.8	0.8	0.8
Grid Name	Staged	Staged	Staged	Staged

Property	Layer 5 - SC/CL	Layer 6 - SP	Layer 7 - Dense
Color			
Unit Weight [kips/ft3]	0.12	0.12	0.12
Saturated Unit Weight [kips/ft3]	0.12	0.12	0.12
K0	1	1	1
Primary Consolidation	Enabled	Enabled	Enabled
Material Type	Non-Linear	Non-Linear	Non-Linear
Cce	0.046	0.04	0.003
Cre	0.009	0.01	0.003
e0	1.1	1.1	1.1
OCR	1	1	1
Cv [ft2/y]	25	48	48
Cvr [ft2/y]	25	48	48
B-bar	1	1	1
Undrained Su A [kips/ft2]	0	0	0
Undrained Su S	0.2	0.2	0.2
Undrained Su m	0.8	0.8	0.8
Grid Name	Staged	Staged	Staged

Groundwater

Groundwater method	Grids
Water Unit Weight	0.0624 kips/ft3

Groundwater Grid: After Dewatering

X	Y	Depth (ft)
0	0	51.4
0	275	51.4
300	275	51.4
300	140	51.4
350	140	51.4
350	0	51.4
0	0	51.4
0	-250	44.5
-176.777	-176.777	44.5
-250	0	44.5
-176.777	451.777	44.5
-250	275	44.5
0	525	44.5
300	525	44.5
476.777	451.777	44.5
550	275	44.5
526.777	316.777	44.5
600	140	44.5
600	0	44.5
526.777	-176.777	44.5
350	-250	44.5
0	-400	42.5
-282.843	-282.843	42.5
-400	0	42.5
-282.843	557.843	42.5
-400	275	42.5
0	675	42.5
300	675	42.5
582.843	557.843	42.5
700	275	42.5
632.843	422.843	42.5
750	140	42.5
750	0	42.5
632.843	-282.843	42.5
350	-400	42.5
0	-600	40.3
-424.264	-424.264	40.3
-600	0	40.3
-424.264	699.264	40.3
-600	275	40.3
0	875	40.3
300	875	40.3
724.264	699.264	40.3
900	275	40.3
774.264	564.264	40.3
950	140	40.3
950	0	40.3
774.264	-424.264	40.3
350	-600	40.3

Groundwater Grid: Before Dewatering

X	Y	Depth (ft)
0	0	40
0	275	40
300	275	40
300	140	40
350	140	40
350	0	40
0	0	40
0	-250	40
-176.777	-176.777	40
-250	0	40
-176.777	451.777	40
-250	275	40
0	525	40
300	525	40
476.777	451.777	40
550	275	40
526.777	316.777	40
600	140	40
600	0	40
526.777	-176.777	40
350	-250	40
0	-400	40
-282.843	-282.843	40
-400	0	40
-282.843	557.843	40
-400	275	40
0	675	40
300	675	40
582.843	557.843	40
700	275	40
632.843	422.843	40
750	140	40
750	0	40
632.843	-282.843	40
350	-400	40
0	-600	40
-424.264	-424.264	40
-600	0	40
-424.264	699.264	40
-600	275	40
0	875	40
300	875	40
724.264	699.264	40
900	275	40
774.264	564.264	40
950	140	40
950	0	40
774.264	-424.264	40
350	-600	40

APPENDIX A

APPENDIX A

FIELD INVESTIGATION

Additional site exploration was performed in two phases. The first phase was performed on August 17, 2021, by advancing two Cone Penetrometer Tests (CPTs) to depths of about 67 and 89 feet below the ground surface.

The second phase of the additional site exploration was performed on August 24th and 25th, 2021, and consisted of excavating 3 borings (W1, W2, and W3) using a truck-mounted hollow-stem auger drilling machine to depths of approximately 57½ to 78 feet. Borings W1 and W2 are located in close proximity to each other and only boring W2 was sampled and logged. Representative and relatively undisturbed samples were obtained by driving a 3 inch, O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound auto-hammer falling 30 inches (auto-hammer). The California Modified Sampler was equipped with 1-inch high by 2 3/8-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). Logs of the borings are presented on Figures A1 through A5. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the logs were revised based on subsequent laboratory testing. The locations of the borings and CPTs are shown on Figure 2.

PROJECT NO. A9382-06-02

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1** ELEV. (MSL.) _____ DATE COMPLETED **2/25/16** EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS** MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**AC: 3"**			
					ARTIFICIAL FILL Silty Sand to Sandy Silt, loose to very soft, slightly moist, brown, fine-grained.			
2								
4								
6	B1@5'					15	101.8	9.5
8								
					OLDER ALLUVIUM Silty Sand, loose, slightly moist, reddish brown, fine-grained, trace medium-grained.			
10	B1@10'					15	103.5	9.8
12								
14								
16	B1@15'				- medium dense	19	112.9	12.5
18				SM				
20	B1@20'				- decrease in silt content, fine- to coarse-grained sand, trace fine gravel	24	113.6	14.8
22								
24								
26	B1@25'					21	103.5	6.6
28								

A9382-06-02 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 1 of 4

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9382-06-02

BORING 1

ELEV. (MSL.) _____ DATE COMPLETED **2/25/16**

EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B1@30'			SM	- some oxidation staining	25	111.5	8.9
32								
34								
	B1@35'				- increase in silt content, no oxidation staining	34	129.5	9.4
36								
38								
40	B1@40'			SP-SM	Sand with Silt, medium dense, slightly moist, reddish brown, fine- to coarse-grained, some gravel (to 1"), some oxidation staining, trace calcium carbonate, thin clay films.	38	118.0	8.9
42								
44								
	B1@45'			CL	Clay with Sand, stiff, slightly moist, brown, fine-grained, low plasticity.	39	117.5	16.1
46								
48			▼		- groundwater			
50	B1@50'					41	116.9	15.3
				SM	Silty Sand, dense, moist to wet, brown to yellowish brown, fine- to medium-grained.			
52								
	B1@53'				Sand with Silt, dense, wet, yellowish brown, fine- to medium-grained.	69	125.3	12.0
54								
56	B1@56'			SP-SM	- very dense	50 (5")	--	--
58								
	B1@59'			CL	Sandy Clay, stiff, moist, brown, fine-grained, low plasticity.	38	121.6	15.7

A9382-06-02 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 2 of 4

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING 1

ELEV. (MSL.) _____ DATE COMPLETED **2/25/16**

EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
60				CL				
					Silty Clay, stiff, moist, brown, low plasticity, trace fine-grained sand.			
62	B1@62'			CL		40	112.3	13.5
64								
	B1@65'				Clayey/Silty Sand, medium dense, wet, yellowish brown, fine- to coarse-grained.	39	90.6	15.9
66								
68				SM-SC				
70	B1@70'				- very dense	50 (6")	139.2	18.0
					Sand, poorly graded, medium dense to very dense, wet, yellowish brown, medium-grained.			
72								
74				SP				
	B1@75'					44	114.0	17.8
76					Silty Sand, medium dense, wet, yellowish brown, fine- to medium-grained.			
78								
80	B1@80'				- saturated	43	116.4	14.6
82				SM				
84								
86					- dense, orangish brown with light gray mottles, some oxidation staining			
	B1@87'					54	123.3	15.6
88								

A9382-06-02 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 3 of 4

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1** ELEV. (MSL.) _____ DATE COMPLETED **2/25/16** EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
90								
92								
94	B1@94'			SM	- increase in silt content	67	116.0	17.4
96								
98								
100	B1@100'				- medium dense, saturated	42	102.0	21.4
					Total depth of boring: 101.5 feet Fill to 8.5 feet. Groundwater encountered at 48 feet. Backfilled with soil cuttings and tamped. Patched with concrete. *Penetration resistance for 140-pound hammer falling 30 inches by auto hammer.			

A9382-06-02 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 4 of 4

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING 2

ELEV. (MSL.) _____ DATE COMPLETED **2/26/16**

EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
2					**ARTIFICIAL FILL** Clay, soft, slightly moist, dark brown, trace fine-grained sand.			
4								
6	B2@5'			CL	- brown, medium plasticity	7	94.6	20.4
8								
10	B2@10'				- firm	15	101.0	20.5
12								
14					**OLDER ALLUVIUM** Sandy Silt, firm, slightly moist, brown, fine-grained.			
16	B2@15'			ML		13	102.3	17.2
18					Sand with Silt, loose, slightly moist, yellowish brown, fine- to medium-grained.			
20	B2@20'			SP		11	99.6	10.3
22								
24					Silty Sand, medium dense, moist, brown, fine- to medium-grained, trace coarse-grained sand.			
26	B2@25'					22	120.6	12.1
28				SM				

A9382-06-02 BORING LOGS.GPJ

Figure A2,
Log of Boring 2, Page 1 of 4

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9382-06-02

BORING 2

ELEV. (MSL.) _____ DATE COMPLETED **2/26/16**

EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B2@30'					26	125.3	12.5
32								
34					Silty Sand with Gravel, medium dense, moist, orangish brown, fine- to medium-grained, fine gravel, some oxidation staining, thin clay films.			
36	B2@35'			SM		36	125.5	10.9
38			▼		- groundwater			
40	B2@40'				Clayey Sand, medium dense, wet, brown, fine- to medium-grained.	21	164.7	15.4
42				SC				
44					Silty Sand, medium dense, wet, yellowish brown, fine- to coarse-grained, trace clay.			
46	B2@45'					40	171.6	13.8
48								
50	B2@50'				- dense, some gravel	79	173.8	13.8
52				SM				
54								
56	B2@55'				- clay, hard, moist, brown, some silt, some fine-grained sand	62	171.4	11.5
58								

A9382-06-02 BORING LOGS.GPJ

Figure A2,
Log of Boring 2, Page 2 of 4

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING 2

ELEV. (MSL.) _____ DATE COMPLETED **2/26/16**

EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
60	B2@60'					38	117.9	14.5
62								
64					Silty Sand with Clay and Gravel, medium dense, wet, brown, fine- to coarse-grained.			
	B2@65'					42	168.8	17.4
66								
68								
70	B2@70'				- decrease in silt and clay content, dense to very dense	50 (6")	171.7	14.0
72				SM				
74								
	B2@75'				- medium dense	41	124.8	13.1
76								
78								
80	B2@80'				Sandy Silt, stiff, moist to wet, orangish brown with light gray mottles, some oxidation staining, fine-grained.	39	118.6	15.4
82				ML				
84								
	B2@85'				Silty Clay, hard, wet, orangish brown, medium plasticity.	51	105.7	26.7
86				CL				
88								

A9382-06-02 BORING LOGS.GPJ

Figure A2,
Log of Boring 2, Page 3 of 4

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING 2

ELEV. (MSL.) _____ DATE COMPLETED **2/26/16**

EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
90	B2@90'					53	108.2	22.4
92								
94				ML	Silt with Sand, stiff, orangish brown, moist, fine-grained, oxidation staining.			
96	B2@95'					25	114.8	20.9
98								
100	B2@100'			SP	Sand, poorly graded, dense, wet, yellowish brown, fine- to medium-grained.	71	127.6	8.0

Total depth of boring: 101.5 feet
Fill to 13 feet.
Groundwater encountered at 39 feet.
Backfilled with soil cuttings and tamped.
Grass divot replaced.

*Penetration resistance for 140-pound hammer falling 30 inches by auto hammer.

A9382-06-02 BORING LOGS.GPJ

Figure A2,
Log of Boring 2, Page 4 of 4

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING 3

ELEV. (MSL.) _____ DATE COMPLETED **6/22/20**

EQUIPMENT **MUD-ROTARY** BY: **JMH**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Silty Sand to Sandy Silt, loose to very soft, slightly moist, brown, fine-grained.			
4					Silty Sand, poorly graded, medium dense, dry, brown, fine-grained, trace medium-grained.			
6	B3@5'					32	96.6	8.9
10	B3@10'				- slightly moist	43	116.2	12.1
12					**OLDER ALLUVIUM** Silty Sand, medium dense, slightly moist, brown, fine- to medium-grained.			
16	B3@15'			SM		53	116.9	14.7
20	B3@20'				- reddish brown, trace coarse-grained	35	125.3	12.9
26	B3@25'				- brown, fine-grained, trace medium- to coarse-grained	33	122.5	13.5

A9382-06-02 BORING LOGS.GPJ

Figure A3,
Log of Boring 3, Page 1 of 7

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING 3

ELEV. (MSL.) _____ DATE COMPLETED **6/22/20**

EQUIPMENT **MUD-ROTARY** BY: **JMH**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B3@30'				- moist	48	126.9	8.6
32								
34								
36	B3@35'			SM		68	129.2	10.8
38								
40	B3@40'					78	128.0	12.1
42				SP-SM	Sand with Silt, poorly graded, dense, reddish brown, moist, fine-grained, trace medium-grained and fine gravel.			
44					Clay with Sand, stiff, slightly moist, reddish brown, fine-grained.			
46	B3@45'			CL		45	115.8	19.4
48								
50	B3@50'				Silty Sand, poorly graded, dense, wet, reddish brown with yellowish brown mottles, fine- to medium-grained, trace fine gravel.	65	116.5	10.8
52				SM				
54					Sand with Silt, wet, brown, fine- to medium-grained, trace fine gravel.			
56	B3@55'			SP-SM		100	129.0	13.6
58								
				CLS	Sandy Clay, hard, moist, reddish brown.			

A9382-06-02 BORING LOGS.GPJ

Figure A3,
Log of Boring 3, Page 2 of 7

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING 3

ELEV. (MSL.) _____ DATE COMPLETED **6/22/20**

EQUIPMENT **MUD-ROTARY** BY: **JMH**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
60	B3@60'			CLS		77	131.7	12.1
62								
64					Clayey Sand, poorly graded, very dense, moist, reddish brown, fine-grained, some medium-grained.			
66	B3@65'			SC		50 (4")	123.0	15.4
68								
70	B3@70'				- wet	50 (3")	125.4	12.5
72				SP	Sand, poorly graded, very dense, saturated, brown, fine- to medium-grained.			
74	B3@74.5'					50 (5")	119.1	13.9
76					Silty Sand, very dense, saturated, brown, fine- to medium-grained.			
78								
80	B3@80'			SM		50 (3")	111.4	18.1
82								
84								
86	B3@85'				- dense	80	118.0	15.3
88								

A9382-06-02 BORING LOGS.GPJ

Figure A3,
Log of Boring 3, Page 3 of 7

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9382-06-02

BORING 3

ELEV. (MSL.) _____ DATE COMPLETED **6/22/20**

EQUIPMENT **MUD-ROTARY** BY: **JMH**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
90	B3@90'				- very dense, reddish brown	50 (6")	115.2	16.6
92								
94								
	B3@94.5'					50 (5")	120.1	17.2
96				SM				
98								
100	B3@99.5'					50 (6")	121.9	14.9
102								
104								
	B3@105'				- wet, brown	93	115.0	19.7
106					Sand, poorly graded, very dense, saturated, brown, fine- to- medium-grained.			
108				SP				
110	B3@109.5				Sandy Silt, hard, moist, reddish brown.	50 (5")	127.9	13.7
112				ML				
114					Sandy Clay, hard, moist, reddish brown.			
	B3@115'					60	112.8	18.3
116				CLS				
118								

A9382-06-02 BORING LOGS.GPJ

Figure A3,
Log of Boring 3, Page 4 of 7

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING 3

ELEV. (MSL.) _____ DATE COMPLETED **6/22/20**

EQUIPMENT **MUD-ROTARY** BY: **JMH**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
120	B3@120'			CLS		50 (5")		
122								
124								
	B3@125'				- brown	50 (6")	101.9	28.0
126								
128								
					Clayey Sand, poorly graded, very dense, slightly moist, brown, fine-grained, trace medium-grained.			
130	B3@130'					50 (5")	125.0	14.2
132								
134				SC				
	B3@135'				- dark brown	50 (6")	120.3	16.7
136								
138								
140	B3@140'					50 (6")	115.6	18.2
					Sand, well-graded, very dense, brown, saturated, fine- to coarse-grained.			
142				SW				
144								
	B3@144.5				Silty Sand, poorly graded, very dense, brown, wet, fine-grained, trace medium-grained.	50 (3")	121.9	16.0
146								
				SM				
148								

A9382-06-02 BORING LOGS.GPJ

Figure A3,
Log of Boring 3, Page 5 of 7

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING 3

ELEV. (MSL.) _____ DATE COMPLETED **6/22/20**

EQUIPMENT **MUD-ROTARY** BY: **JMH**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
150	B3@150'			SM	- some medium-grained	50 (5")	121.7	15.7
152								
154								
156								
158								
160	B3@160'			CLS	Sandy Clay, hard, moist, brown.	50 (5")	113.2	23.6
162								
164								
166								
168								
170	B3@170'			SC	Clayey Sand, poorly graded, very dense, reddish brown, moist, fine-grained, trace medium-grained.	50 (5")	120.2	17.8
172								
174								
176								
178					- trace coarse-grained			

A9382-06-02 BORING LOGS.GPJ

Figure A3,
Log of Boring 3, Page 6 of 7

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING 3

ELEV. (MSL.) _____ DATE COMPLETED **6/22/20**

EQUIPMENT **MUD-ROTARY** BY: **JMH**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
180	B3@180'			SC		50 (6")	102.7	16.6
182								
184								
186								
188								
190	B3@189.5			CLS	Sandy Clay, hard, wet, reddish brown.	50 (2")		
192								
194								
196								
198								
	B3@199'				- no recovery	50 (5")	110.7	19.6

Total depth of boring: 199.5 feet
Fill to 10.5 feet.
Groundwater level not established.
Backfilled with grout.
AC patched.

*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.

A9382-06-02 BORING LOGS.GPJ

Figure A3,
Log of Boring 3, Page 7 of 7

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING W2** ELEV. (MSL.) _____ DATE COMPLETED **8/24/21** EQUIPMENT **HOLLOW STEM AUGER** BY: **RP**	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**ASPHALT: 3"**			
2					**UPPER 38 FEET NOT LOGGED**			
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								

A9382-06-02 BORING LOGS.GPJ

Figure A4,
Log of Boring W2, Page 1 of 3

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL
◧ ... STANDARD PENETRATION TEST
■ ... DRIVE SAMPLE (UNDISTURBED)
▨ ... DISTURBED OR BAG SAMPLE
◪ ... CHUNK SAMPLE
▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9382-06-02

BORING W2

ELEV. (MSL.) _____ DATE COMPLETED **8/24/21**

EQUIPMENT **HOLLOW STEM AUGER** BY: **RP**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30								
32								
34								
36								
38					Clayey Sand, medium dense, slightly moist, reddish brown, fine- to medium-grained, some fine gravel, interbedded sand layers			
40	W2@39'		▼		- fine-grained, decrease gravel - wet	40		
42								
44								
46	W2@45'			CL		39		
48								
50								
52				SP	Sand, medium dense, wet, reddish brown, fine-grained			
54	W2@53'				Silty Sand, medium dense, slightly moist, reddish brown, fine- to medium-grained, some clay - decrease in clay	44		
56	W2@55.5' W2@56'				- decrease in silt	50(6")		
58				SM				

A9382-06-02 BORING LOGS.GPJ

Figure A4,
Log of Boring W2, Page 2 of 3

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING W2

ELEV. (MSL.) _____ DATE COMPLETED **8/24/21**

EQUIPMENT **HOLLOW STEM AUGER** BY: **RP**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
60								
62					Sand and Clay, medium dense to stiff, slightly moist, reddish brown, fine- to medium-grained, trace gravel			
	W2@63'					35		
64				SC-CL				
66								
68								
	W2@69'				- hard, increase in sand	50(6")		
70	W2@69.5'				Silty Sand, very dense, moist, reddish brown, fine- to coarse-grained, some clay.			
72								
74				SM				
					- fine-grained, increase in silt			
76	W2@76'				- fine- to medium-grained	57		
78					Total depth of boring: 78 feet Temporary monitoring well installed. Groundwater measured at 39.7' on 8/30/21. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

A9382-06-02 BORING LOGS.GPJ

Figure A4,
Log of Boring W2, Page 3 of 3

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING W3** ELEV. (MSL.) _____ DATE COMPLETED **8/24/21** EQUIPMENT **HOLLOW STEM AUGER** BY: **RP** MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ASPHALT: 3"**			
2					**UPPER 14 FEET NOT LOGGED**			
4								
6								
8								
10								
12								
14	W3@15'			SM	Silty Sand, medium dense, slightly moist, brown, fine-grained with some medium-grained, trace clay.	18		
16					16 feet to 40 feet not logged			
18								
20								
22								
24								
26								
28								

A9382-06-02 BORING LOGS.GPJ

Figure A5,
Log of Boring W3, Page 1 of 3

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◹ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. A9382-06-02

BORING W3

ELEV. (MSL.) _____ DATE COMPLETED **8/24/21**

EQUIPMENT **HOLLOW STEM AUGER** BY: **RP**

DEPTH IN FEET	SAMPLE NO.	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30						
32						
34						
36						
38						
40		SM	Silty Sand, medium dense, wet, brown with gray mottles, fine- to medium-grained, trace fine gravel (1").			
	W3@41'		Sand and Clay, medium dense to firm, moist, brown to reddish brown, fine- to medium-grained.	38		
42		SC-CL				
44						
46	W3@46'		Clayey Sand, medium dense, moist, reddish brown, fine- to coarse-grained, trace gravel (1").	35		
			- increased clay			
48		SC				
50						
	W3@50.5'			50		
	W3@51'	SP	Sand, medium dense, wet, reddish brown, fine- to medium-grained, some silt/clay.			
52						
	W3@53'		Silty Sand, dense, reddish brown, fine- to medium-grained, trace coarse-grained	50(6")		
54		SM				
56						
58		CL	Sandy Clay, stiff, slightly moiste, reddish brown, fine-grained with some coarse-grained.			
	W3@58'			36		
			Total depth of boring: 58.5 feet Groundwater at 37.5 feet after 15 minute period.			

A9382-06-02 BORING LOGS.GPJ

Figure A5,
Log of Boring W3, Page 2 of 3

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

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PROJECT NO. A9382-06-02

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING W3** ELEV. (MSL.) _____ DATE COMPLETED **8/24/21** EQUIPMENT **HOLLOW STEM AUGER** BY: **RP**	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
					Temporary monitoring well installed. Groundwater measured at 36.3' on 8/30/21. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

A9382-06-02 BORING LOGS.GPJ

Figure A5,
Log of Boring W3, Page 3 of 3

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL
◧ ... STANDARD PENETRATION TEST
■ ... DRIVE SAMPLE (UNDISTURBED)
▨ ... DISTURBED OR BAG SAMPLE
◪ ... CHUNK SAMPLE
▼ ... WATER TABLE OR SEEPAGE

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GEOCON

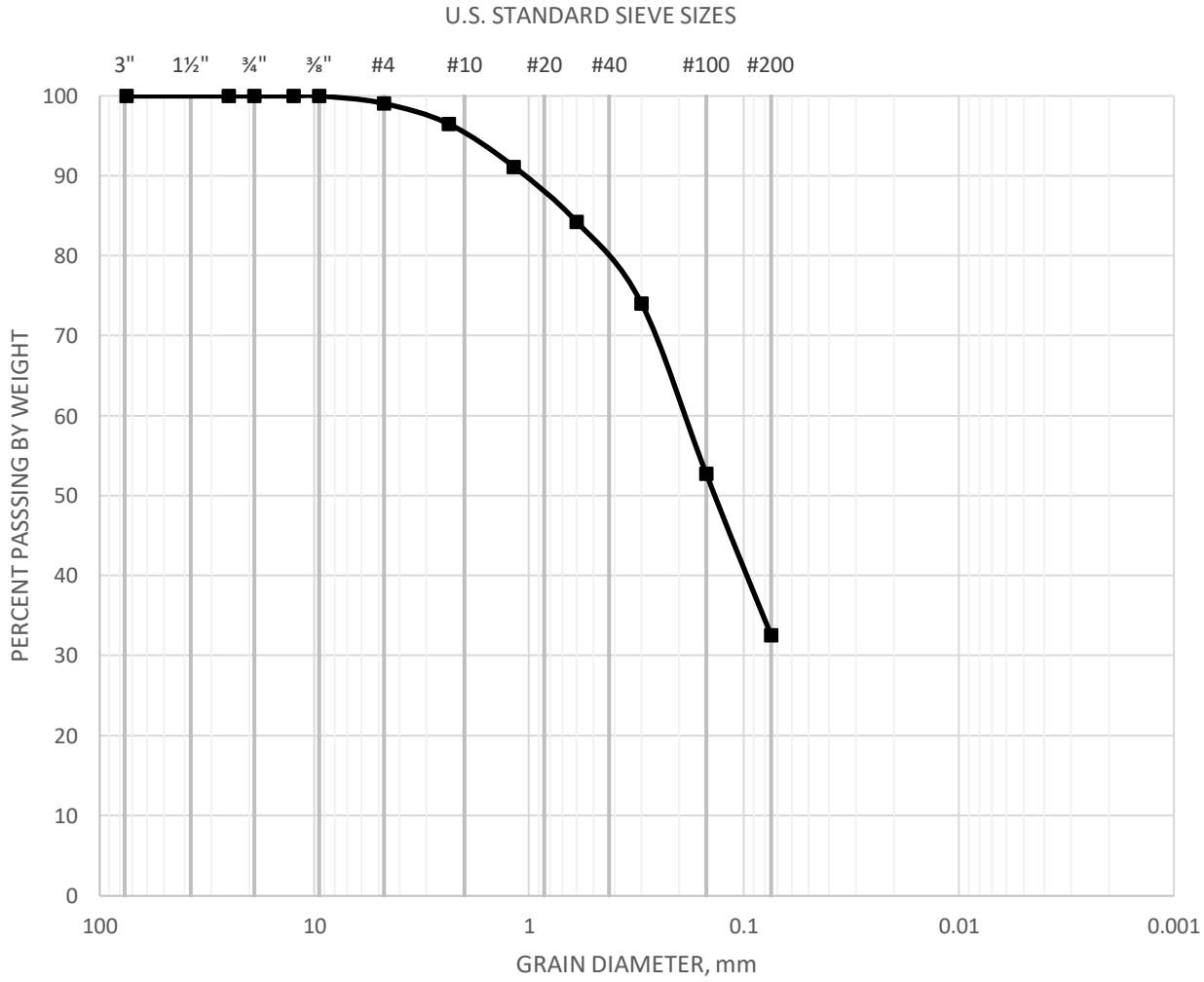
APPENDIX B

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the "American Society for Testing and Materials (ASTM)", or other suggested procedures. Selected samples were tested for grain size distribution and consolidation characteristics. The results of the laboratory tests are summarized in Figures B1 through B38.

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W2 @ 39.5'	Light Brown Silty Sand (SM)	0.19	0.075	0.075

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D-422

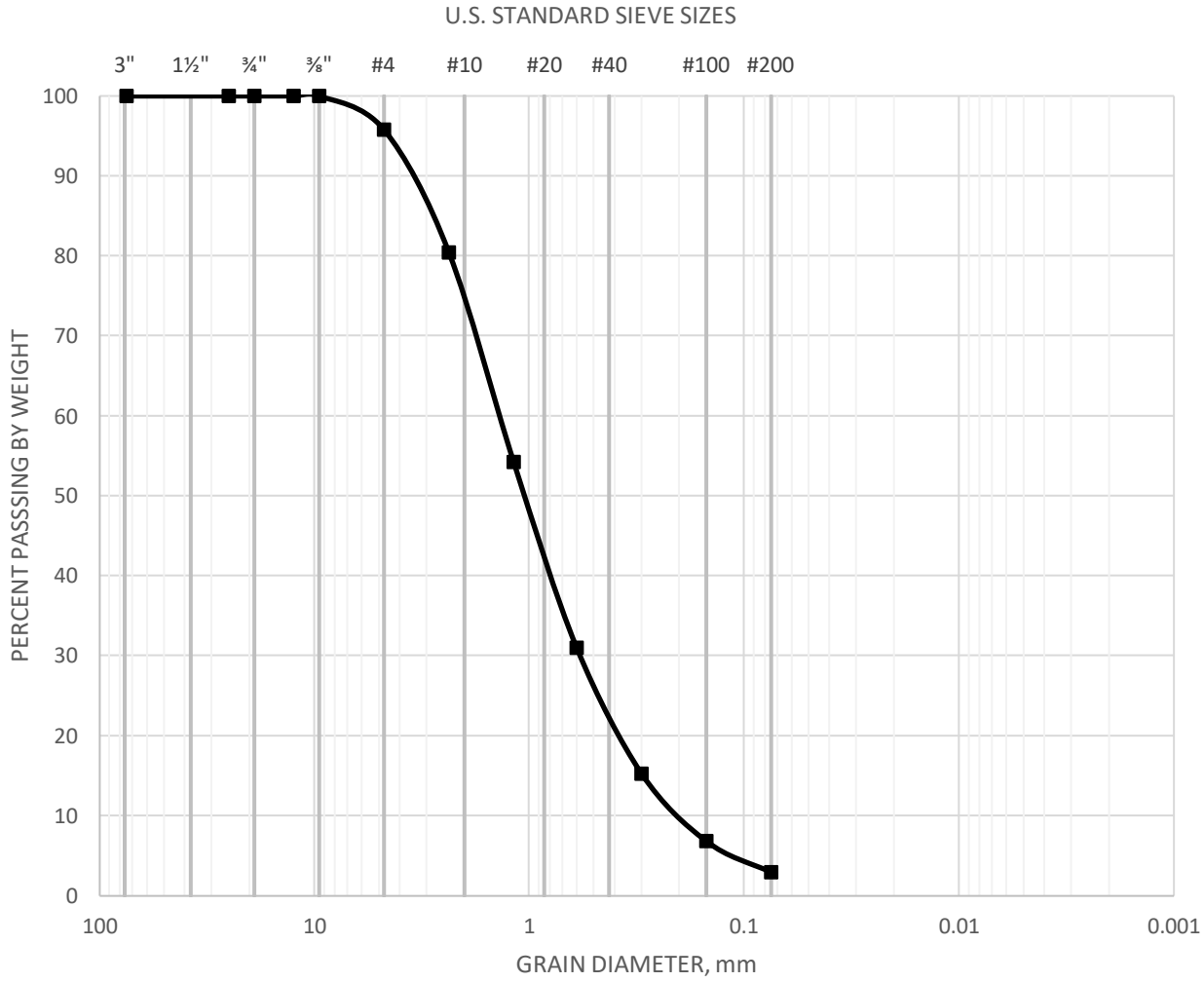
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure B1

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W2 @45'	Light Brown Poorly Graded Sand (SP)	1.5	0.6	0.2

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D-422

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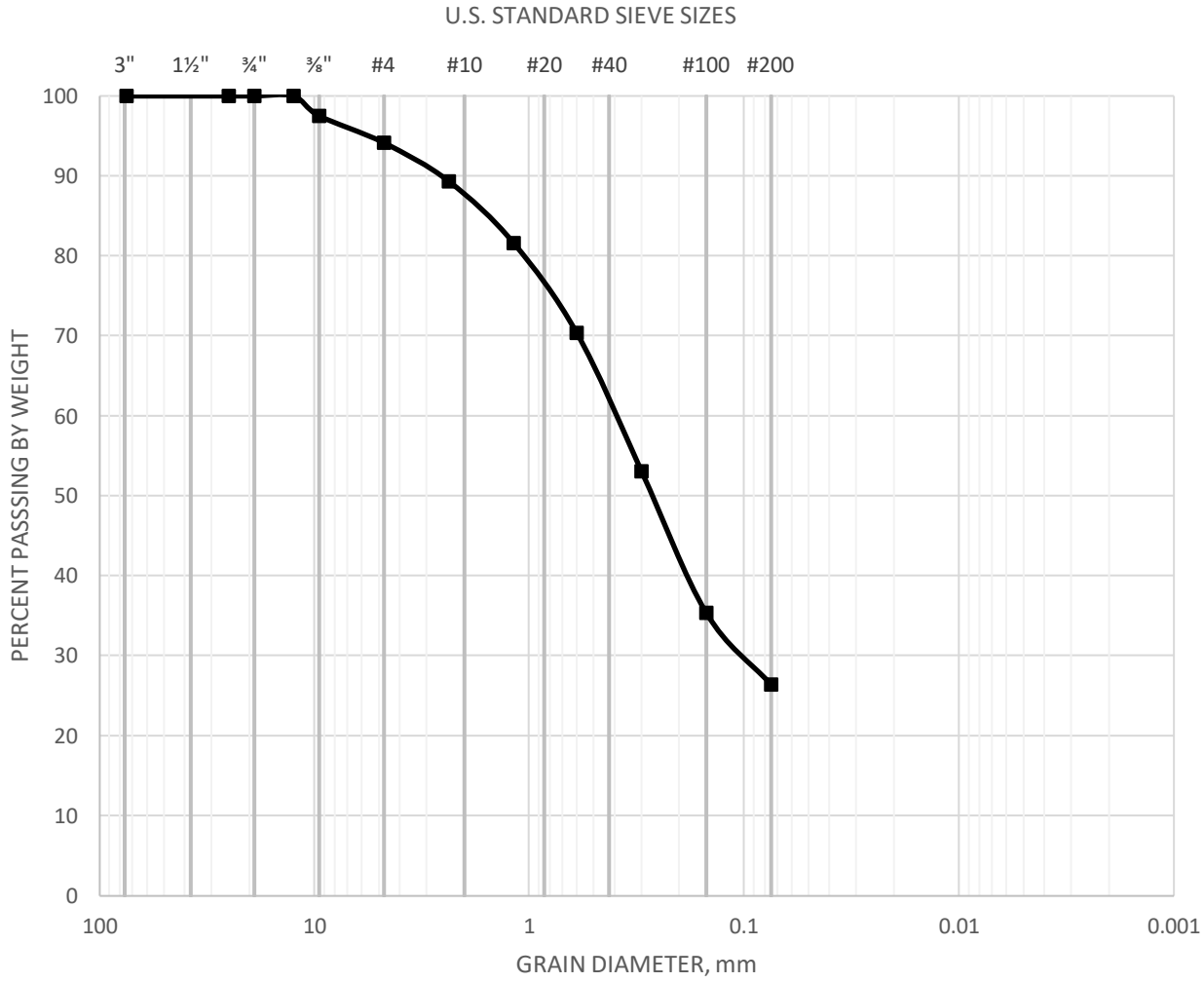
Los Angeles, California

Oct 21 Figure B2

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W2 @53.5'	Light Brown Silty Sand (SM)	0.4	0.1	0.075

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GRAIN SIZE DISTRIBUTION

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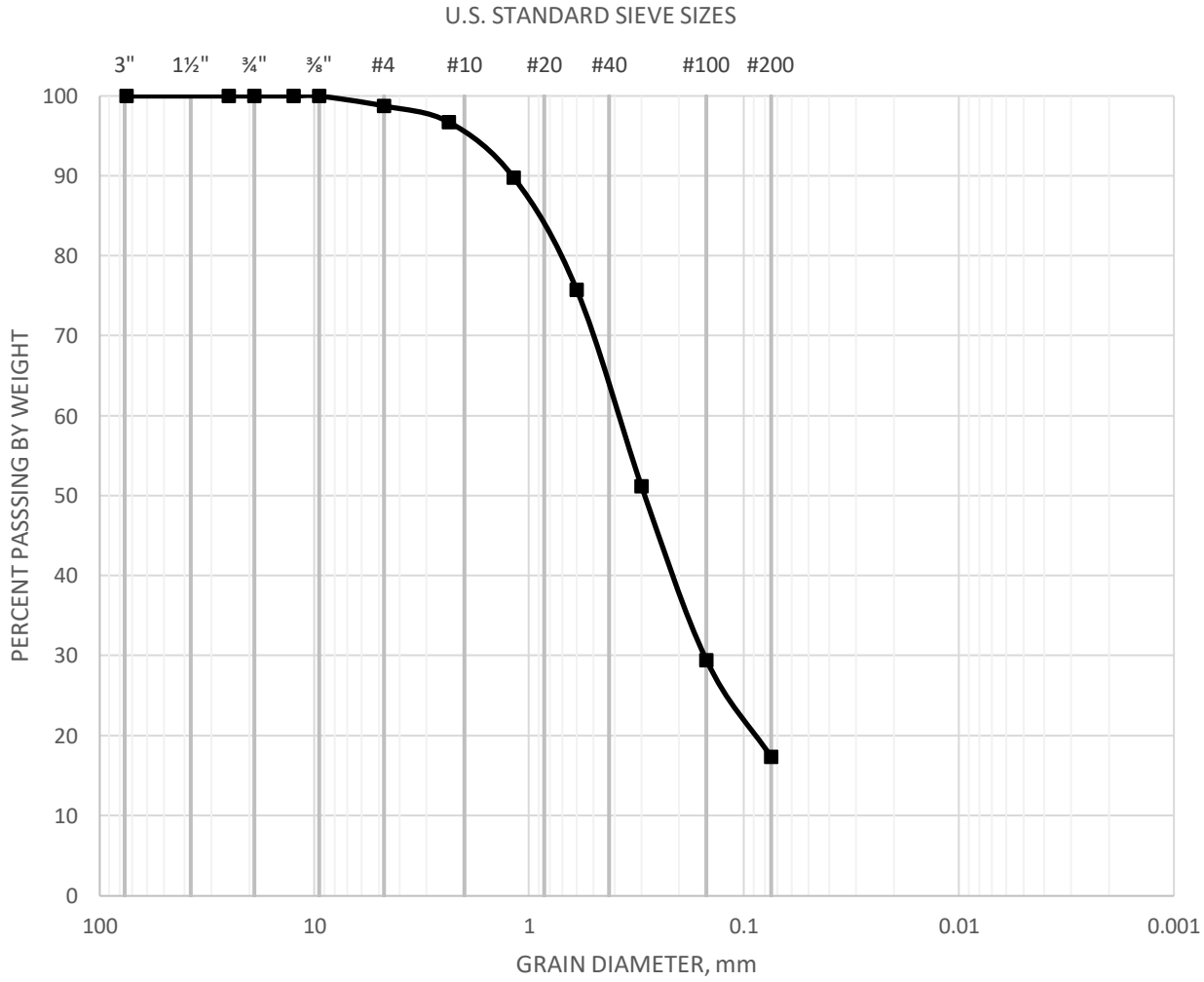
Los Angeles, California

Oct 21 Figure B3

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W2 @ 56'	Light Brown Silty Sand (SM)	0.4	0.16	0.075

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D-422

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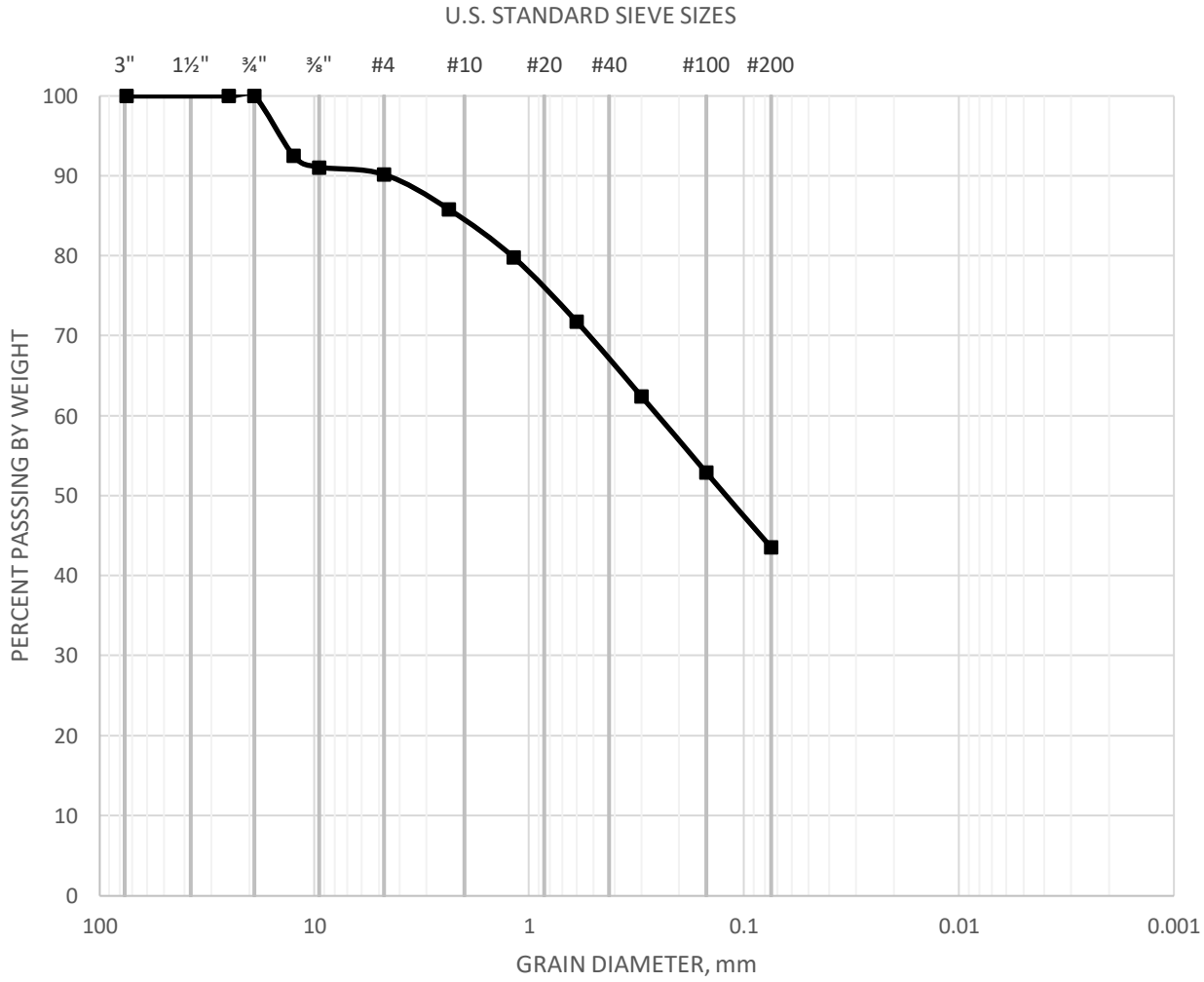
De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure B4

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W2 @63.5'	Light Brown Silty Sand (SM)	0.25	0.075	0.075

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GRAIN SIZE DISTRIBUTION

ASTM D-422

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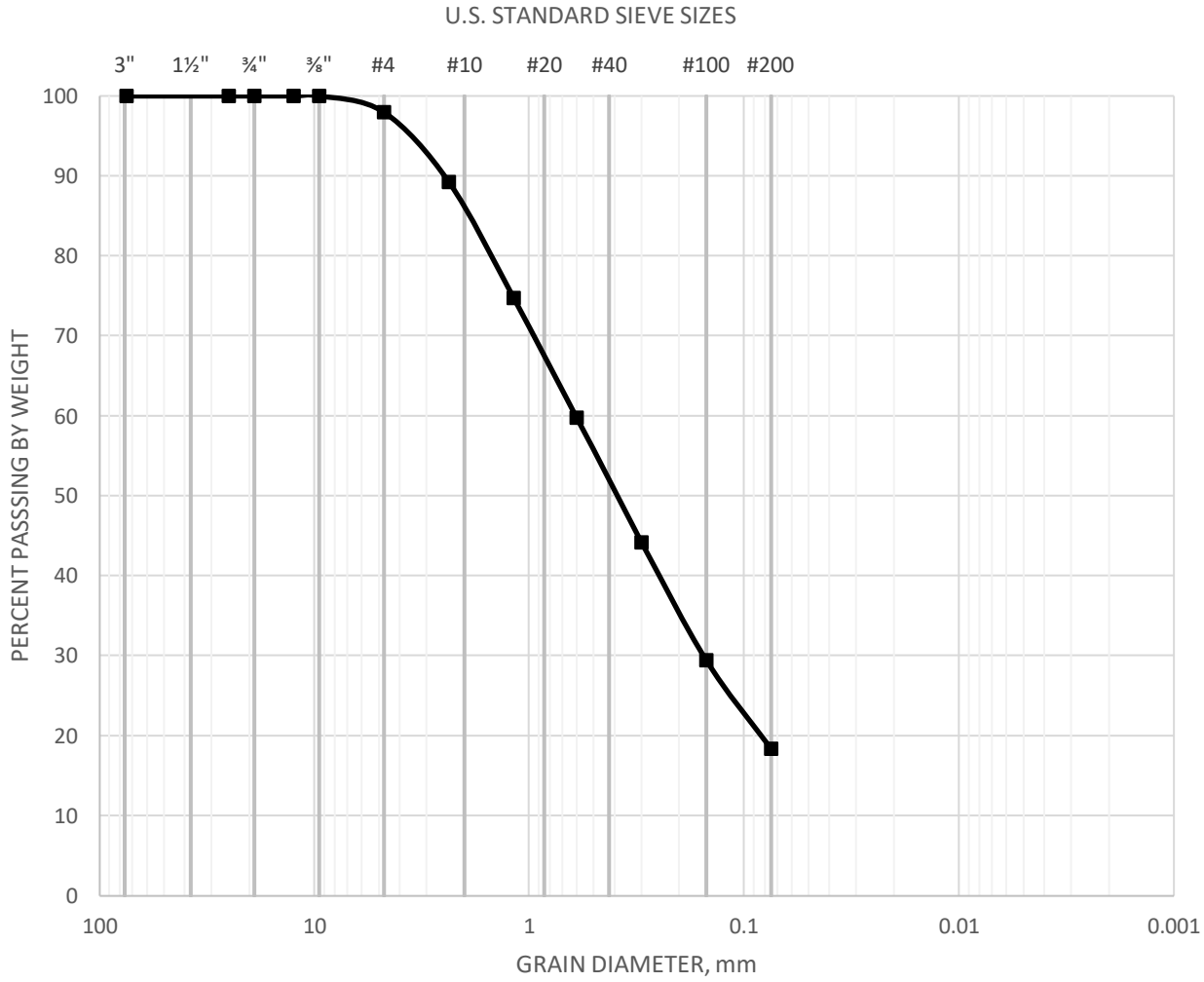
Los Angeles, California

Oct 21 Figure B5

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W2 @ 69.5'	Light Brown Silty Sand (SM)	0.6	0.16	0.075

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D-422

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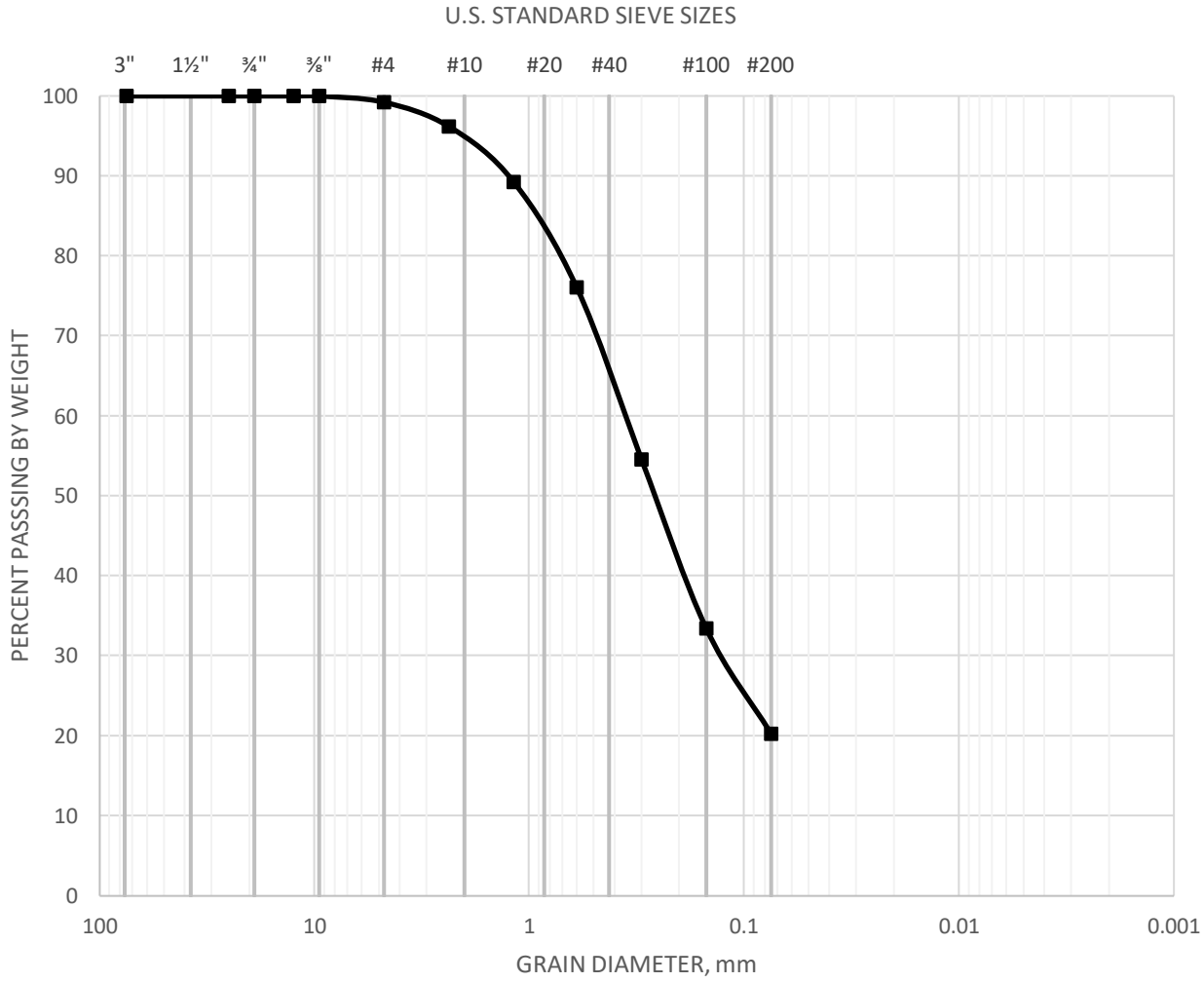
Oct 21 Figure B6

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W2 @ 76.5'	Light Brown Silty Sand (SM)	0.36	0.13	0.075

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D-422

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Project No.: A9382-06-02

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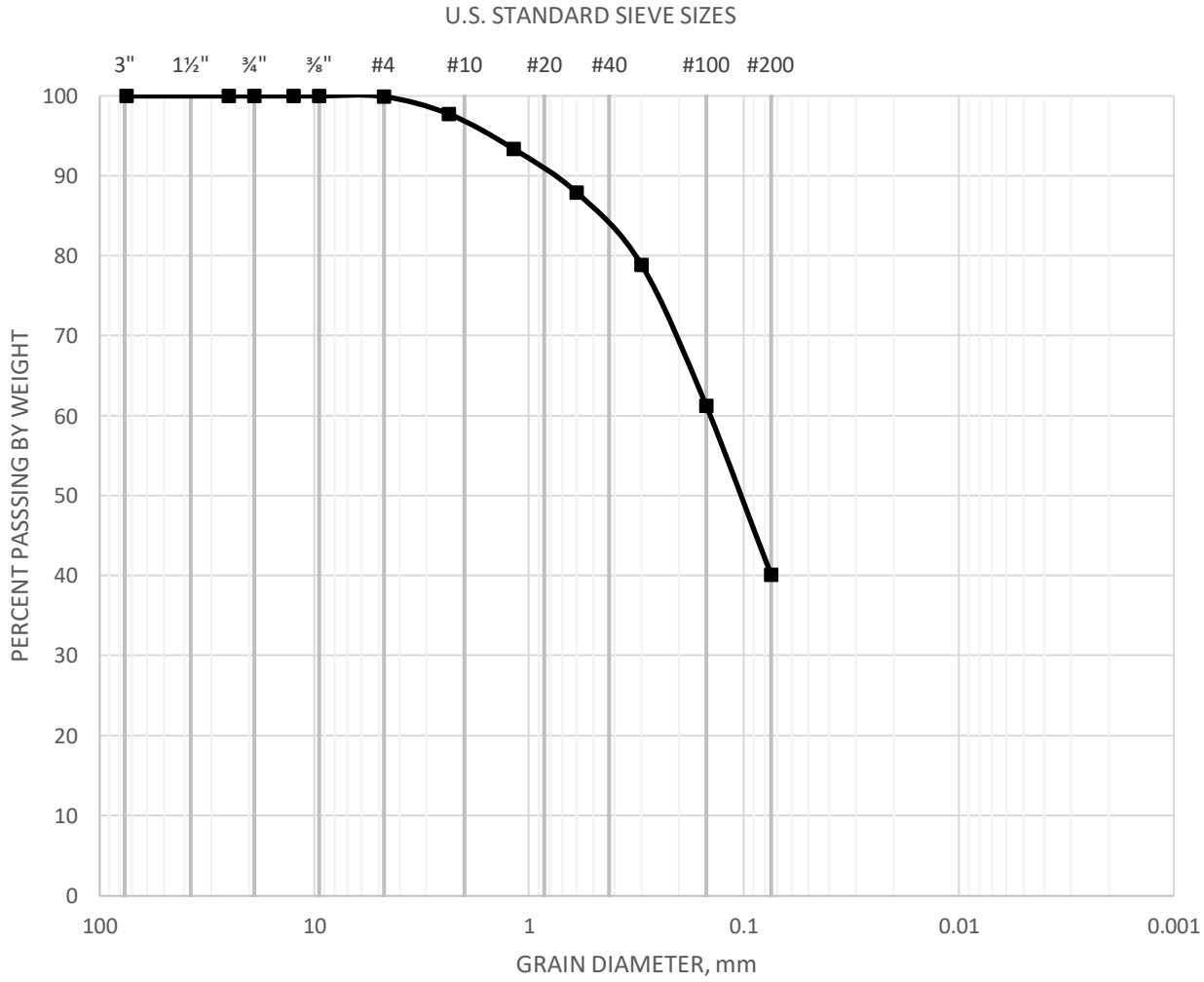
Oct 21 Figure B7

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W3 @ 15.5'	Light Brown Silty Sand (SM)	0.15	0.075	0.075

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GRAIN SIZE DISTRIBUTION

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Project No.: A9382-06-02

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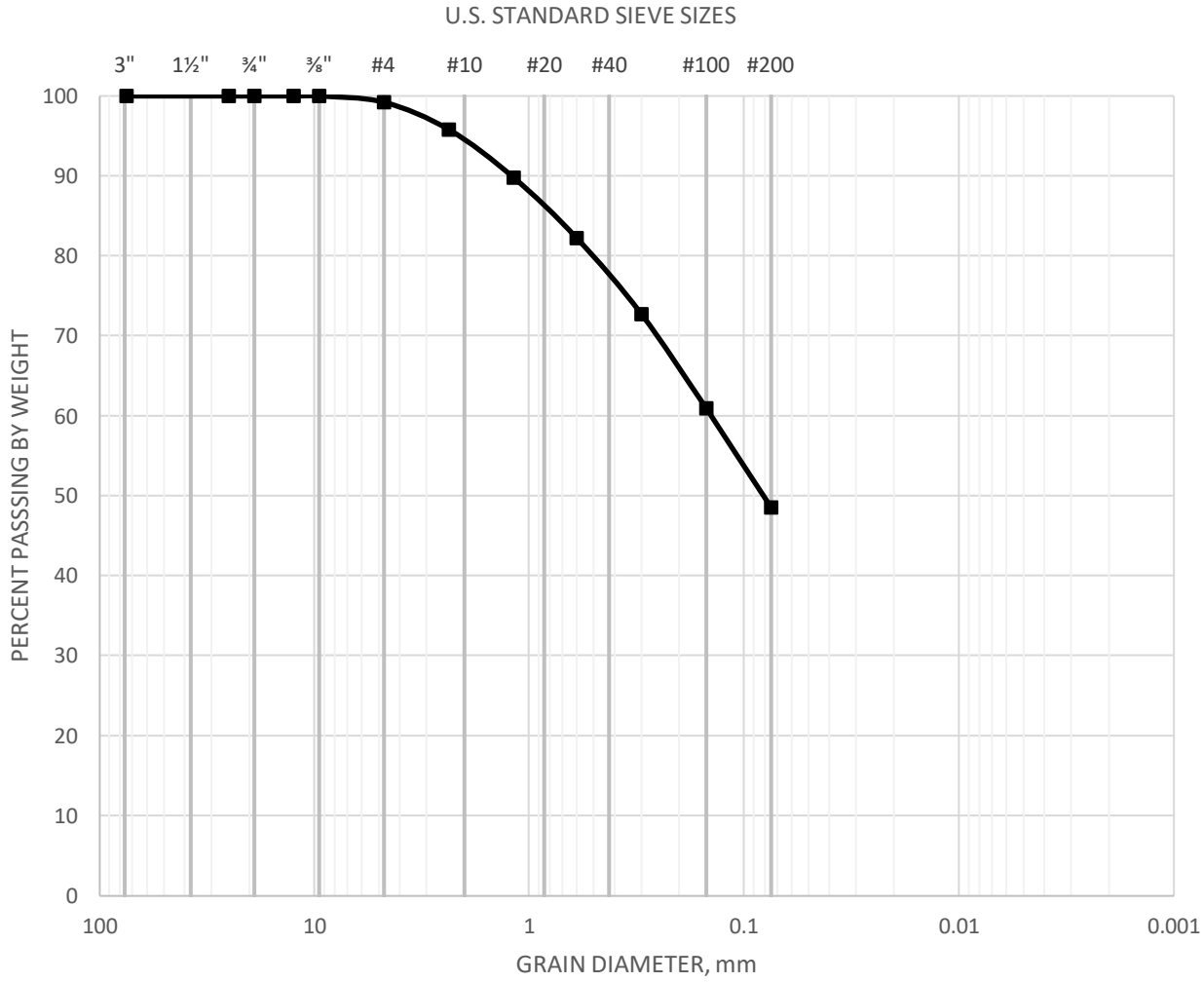
Los Angeles, California

Oct 21 Figure B8

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W3 @ 41'	Light Brown Silty Sand (SM)	0.15	0.075	0.075

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D-422

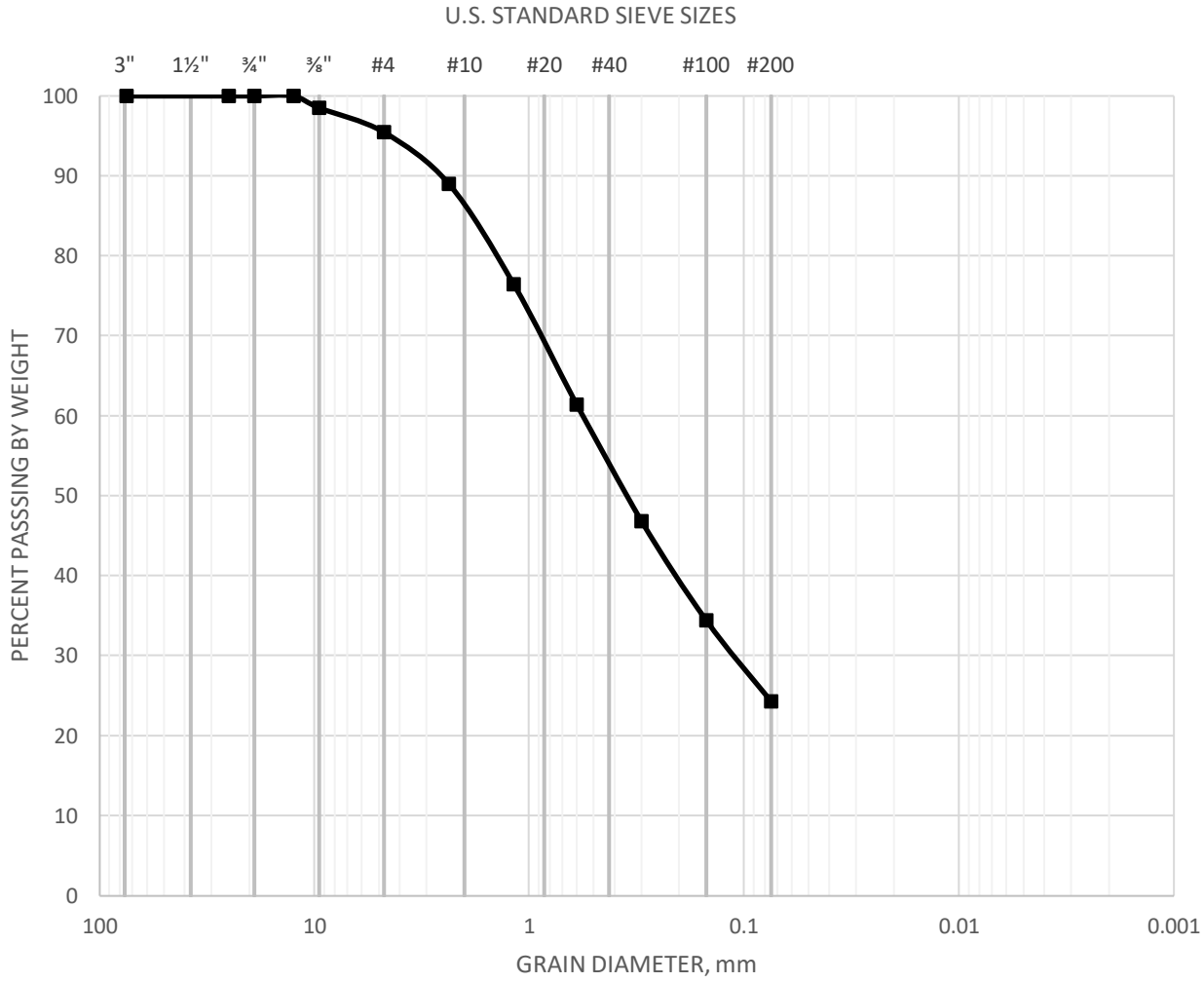
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure B9

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W3 @ 46'	Light Brown Silty Sand (SM)	0.55	0.12	0.075

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D-422

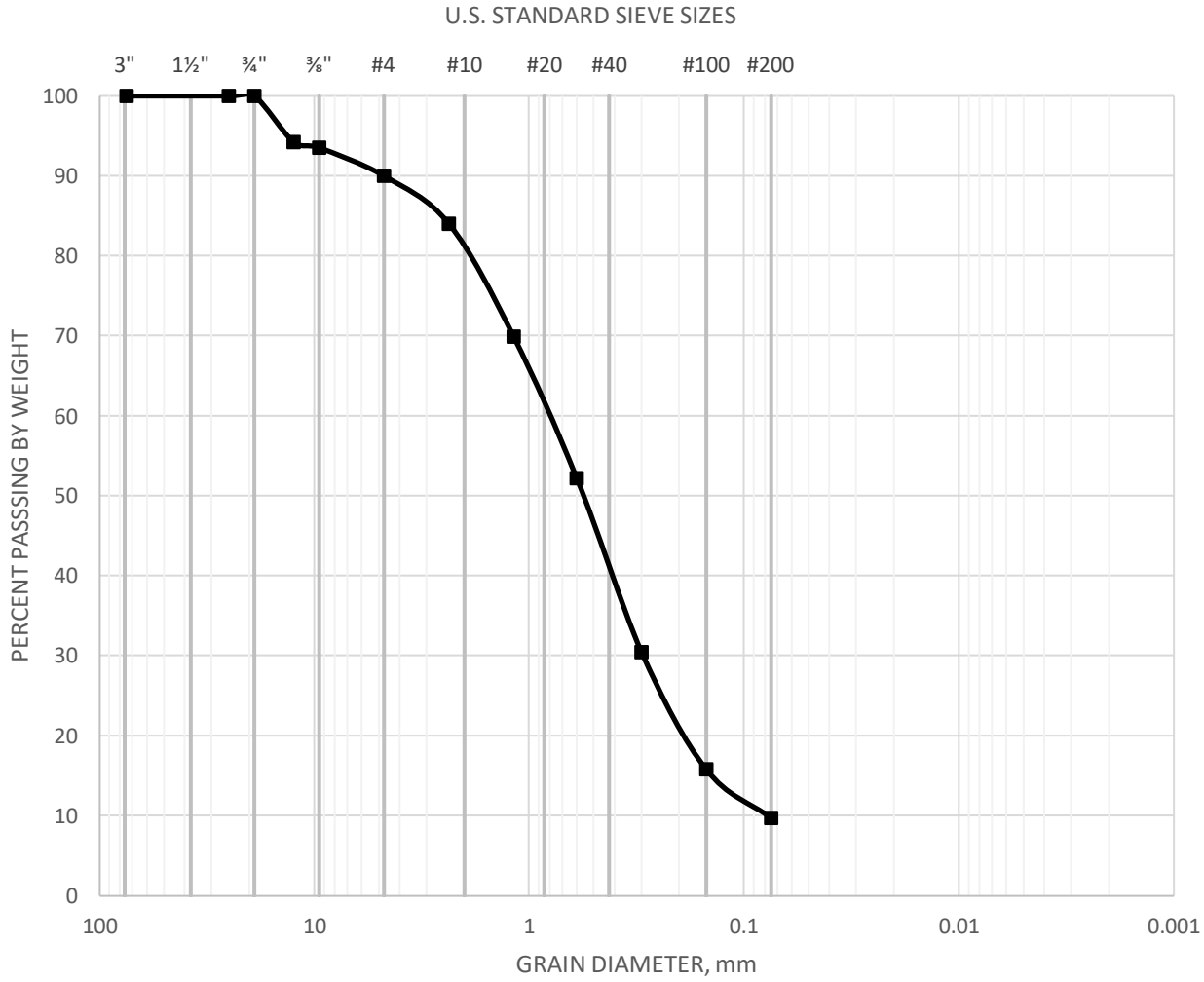
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure B10

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W3 @ 51'	Light Brown Poorly Graded Sand (SP)	0.8	0.3	0.075

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D-422

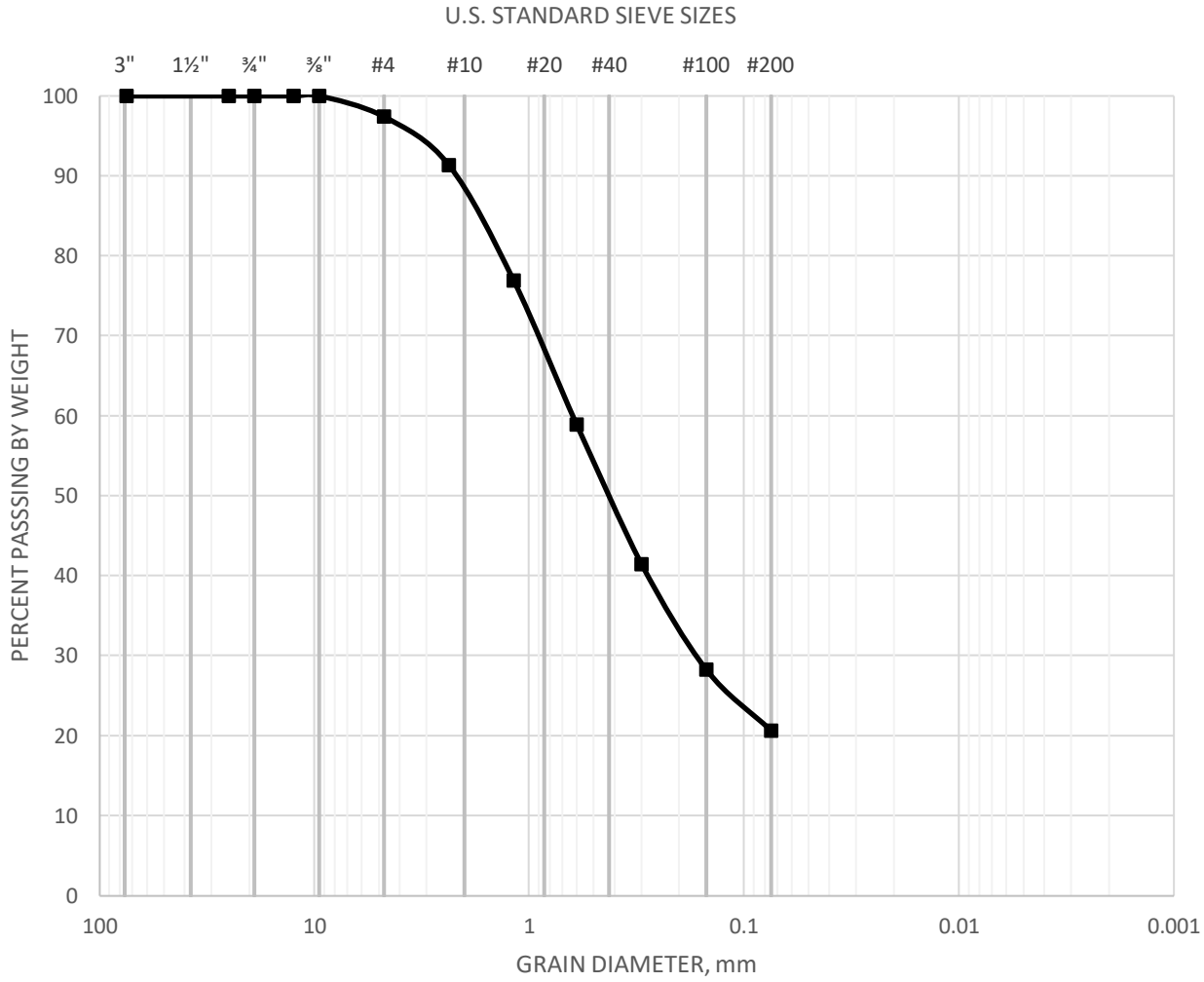
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure B11

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
W3 @ 53'	Light Brown Silty Sand (SM)	0.6	0.17	0.075

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D-422

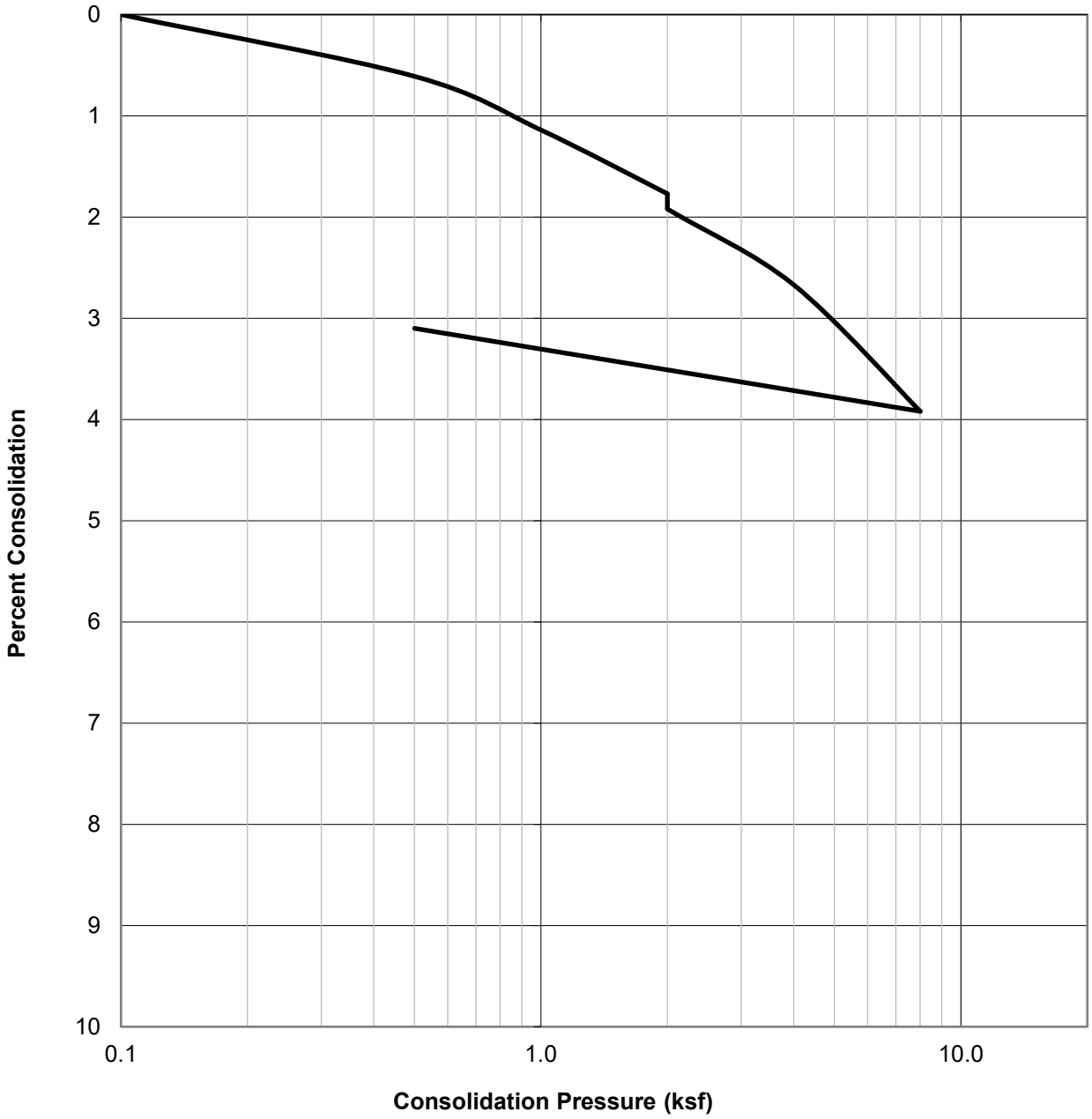
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure B12

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W2@39'	Clayey Sand (CL)	117.6	13.1	13.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

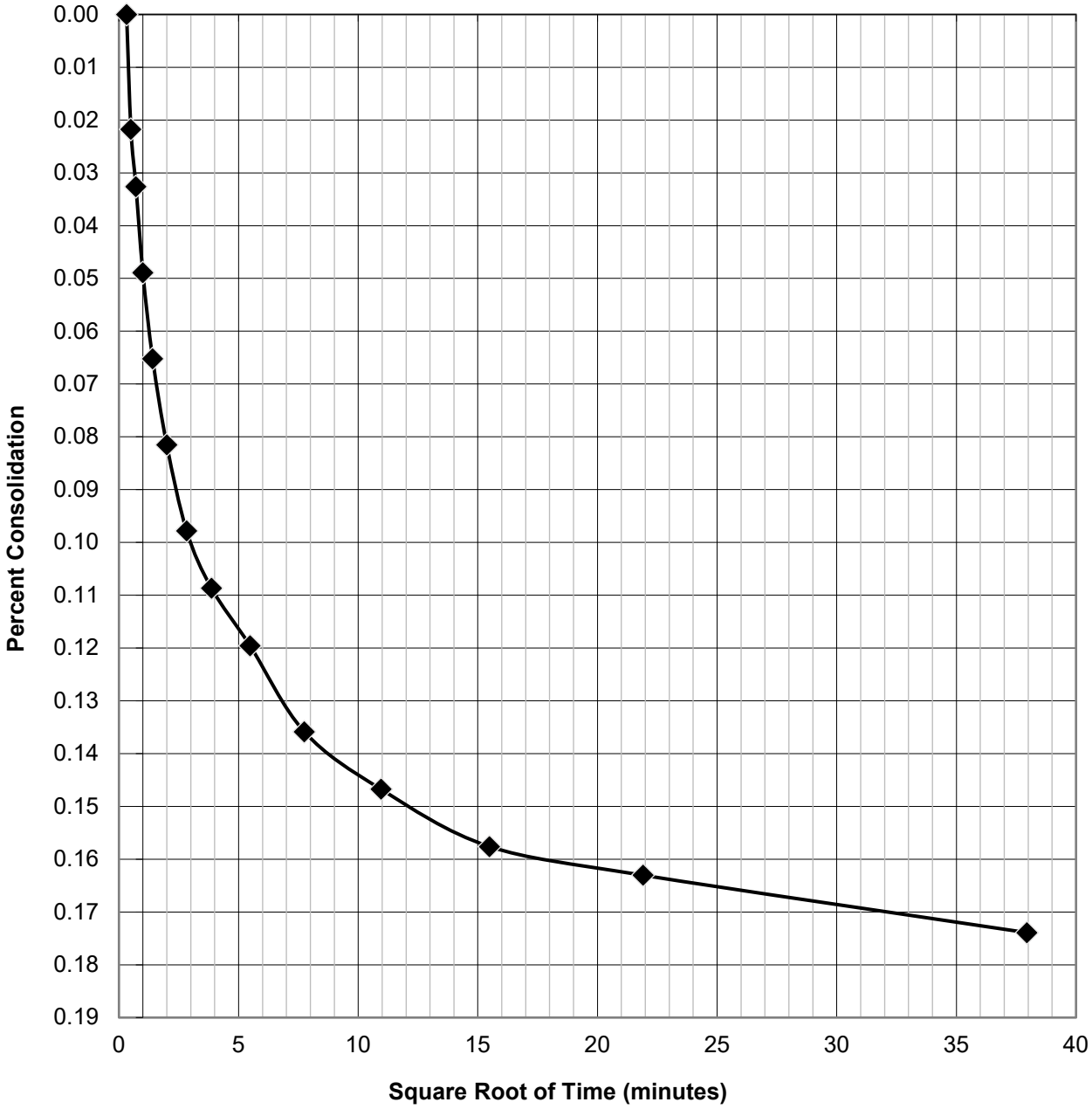
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 13

at 4.0 KSF



SAMPLE ID.	SOIL TYPE
W2@39'	Clayey Sand (CL)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

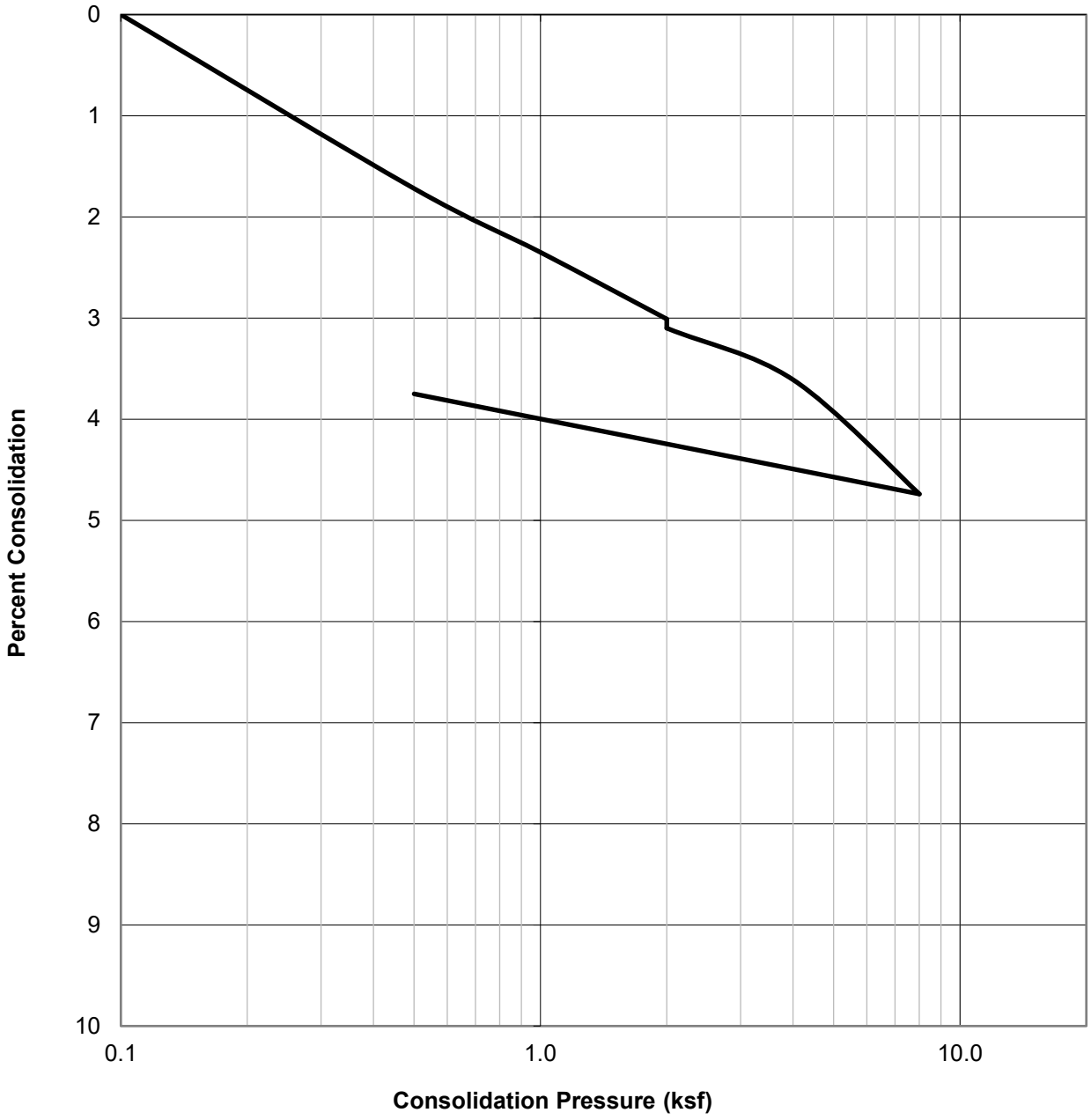
Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 14

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W2@45'	Clayey Sand (CL)	117.6	15.7	15.8

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

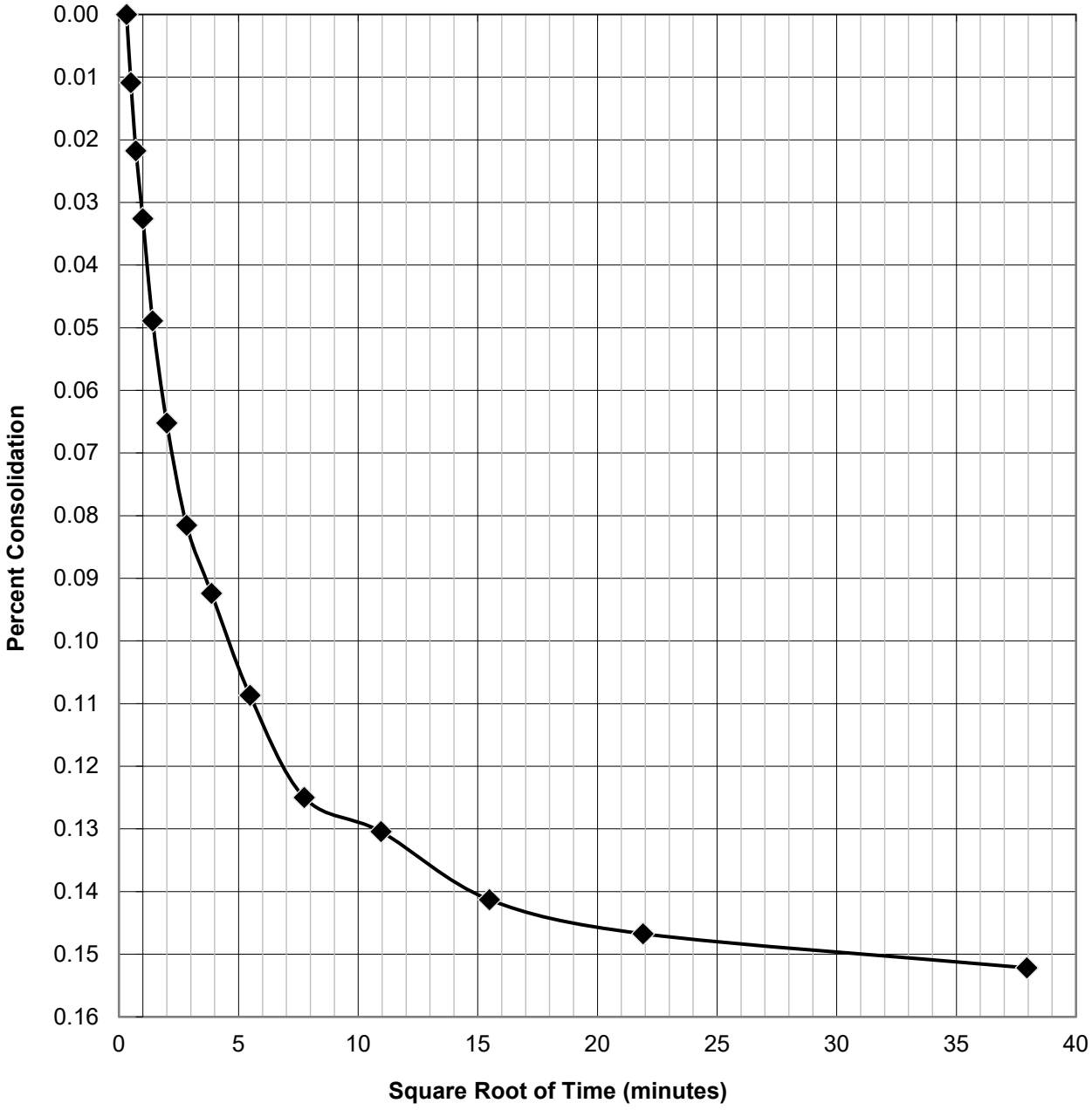
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 15

at 4.0 KSF



SAMPLE ID.	SOIL TYPE
W2@45'	Clayey Sand (CL)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

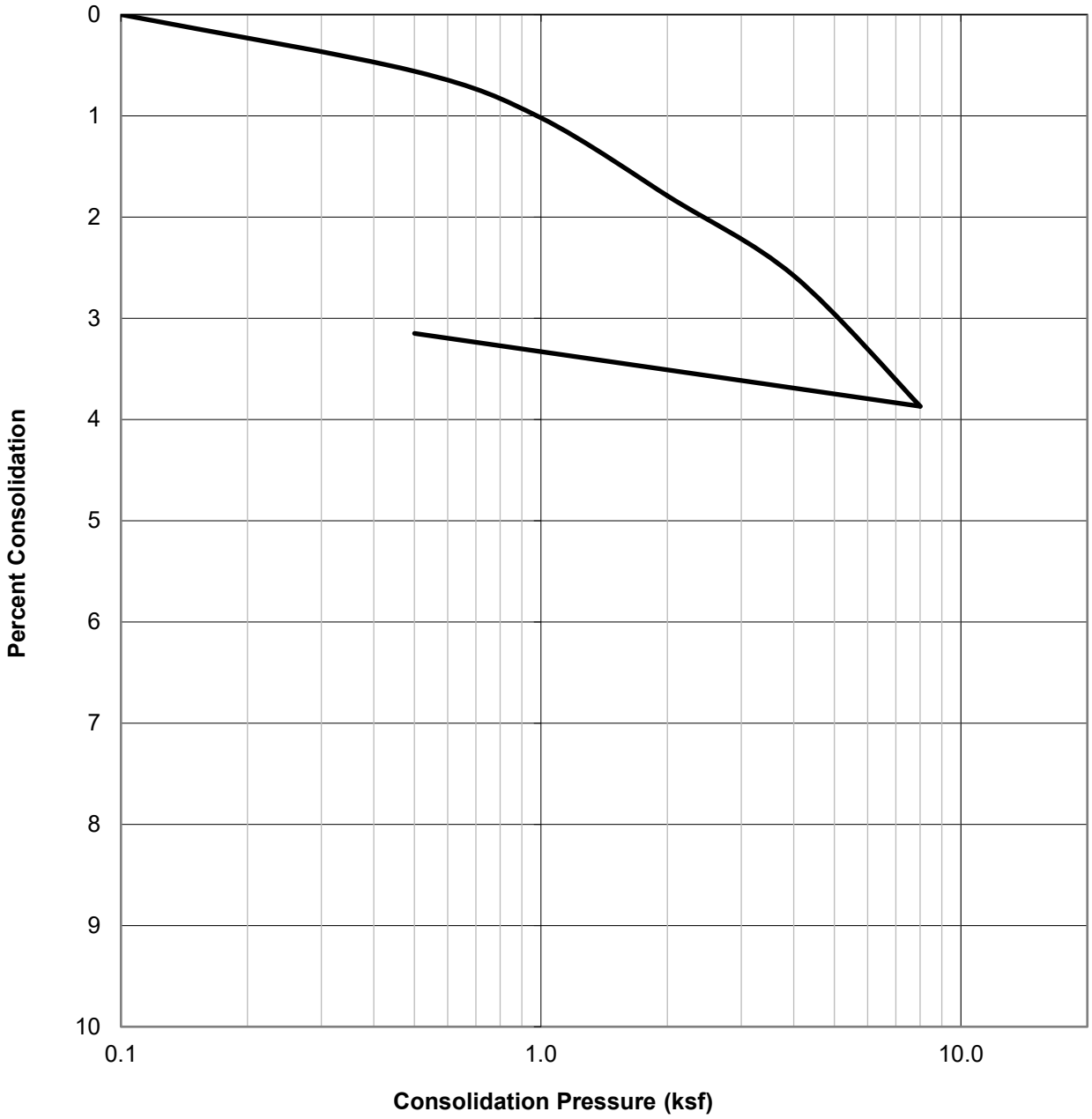
Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 16

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W2@53'	Silty Sand (SM)	109.6	19.4	18.6

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

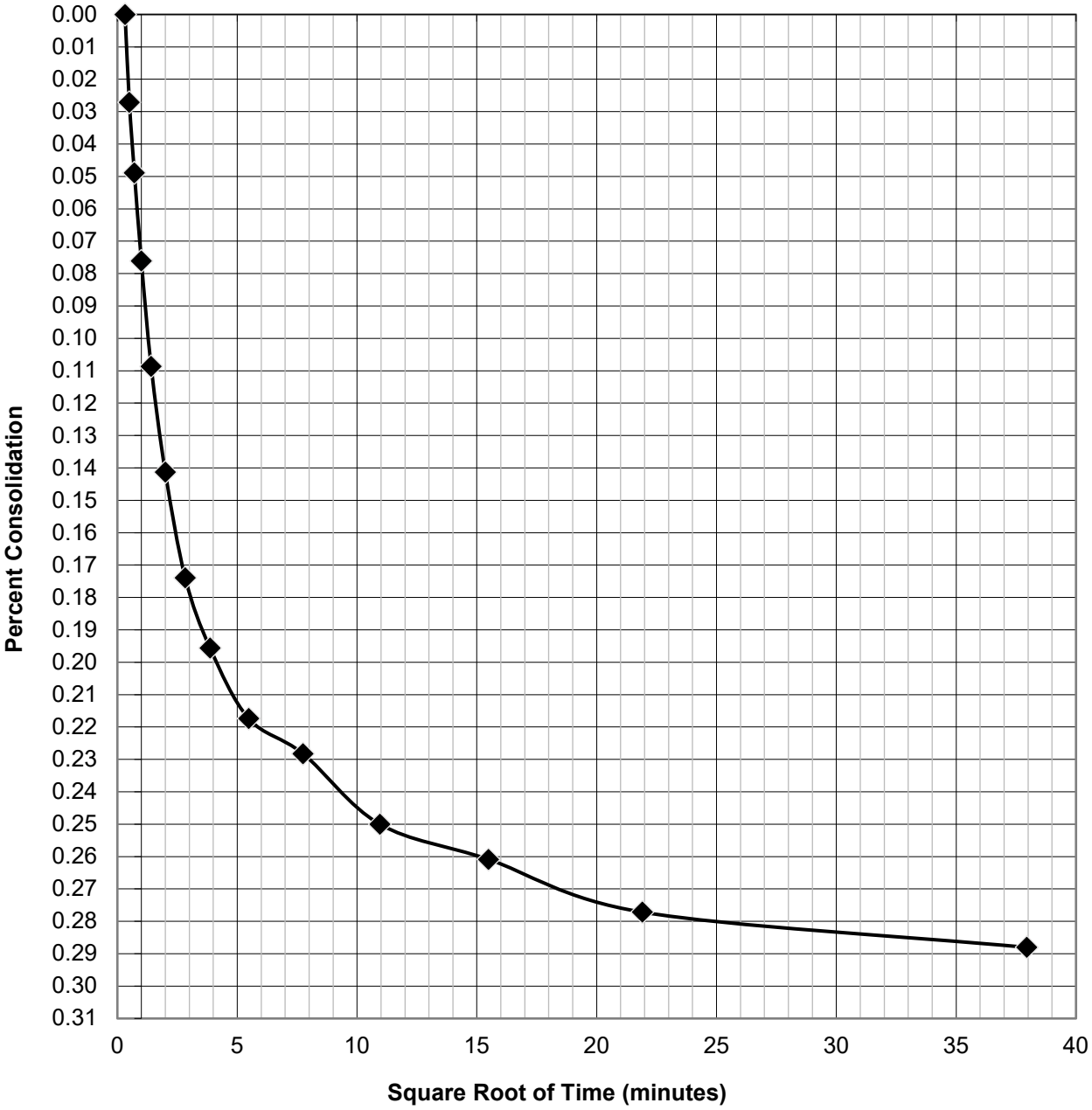
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 17

at 8.0 KSF



SAMPLE ID.	SOIL TYPE
W2@53'	Silty Sand (SM)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

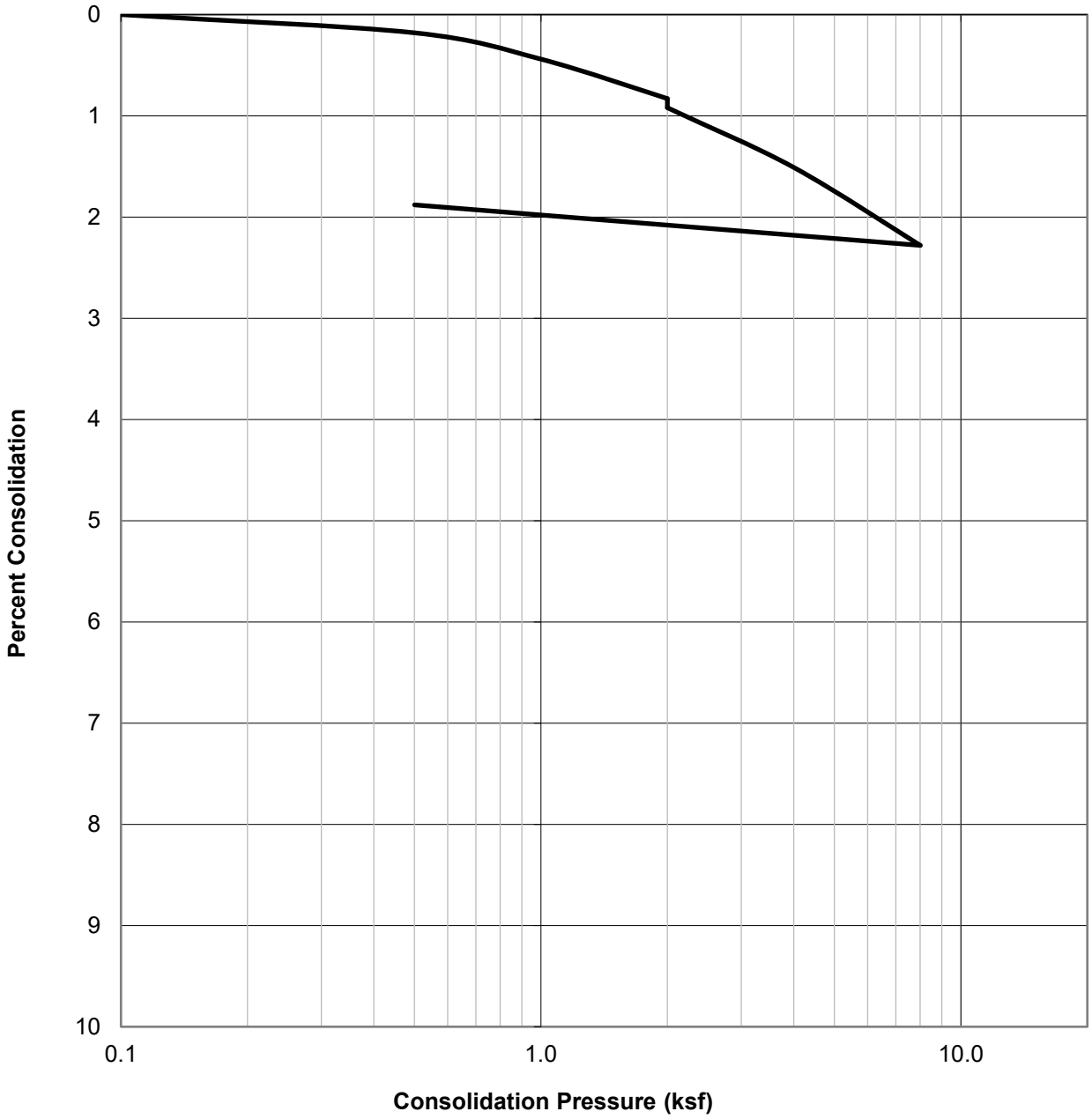
Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 18

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W2@55.5'	Silty Sand (SM)	97.6	34.9	35.7

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

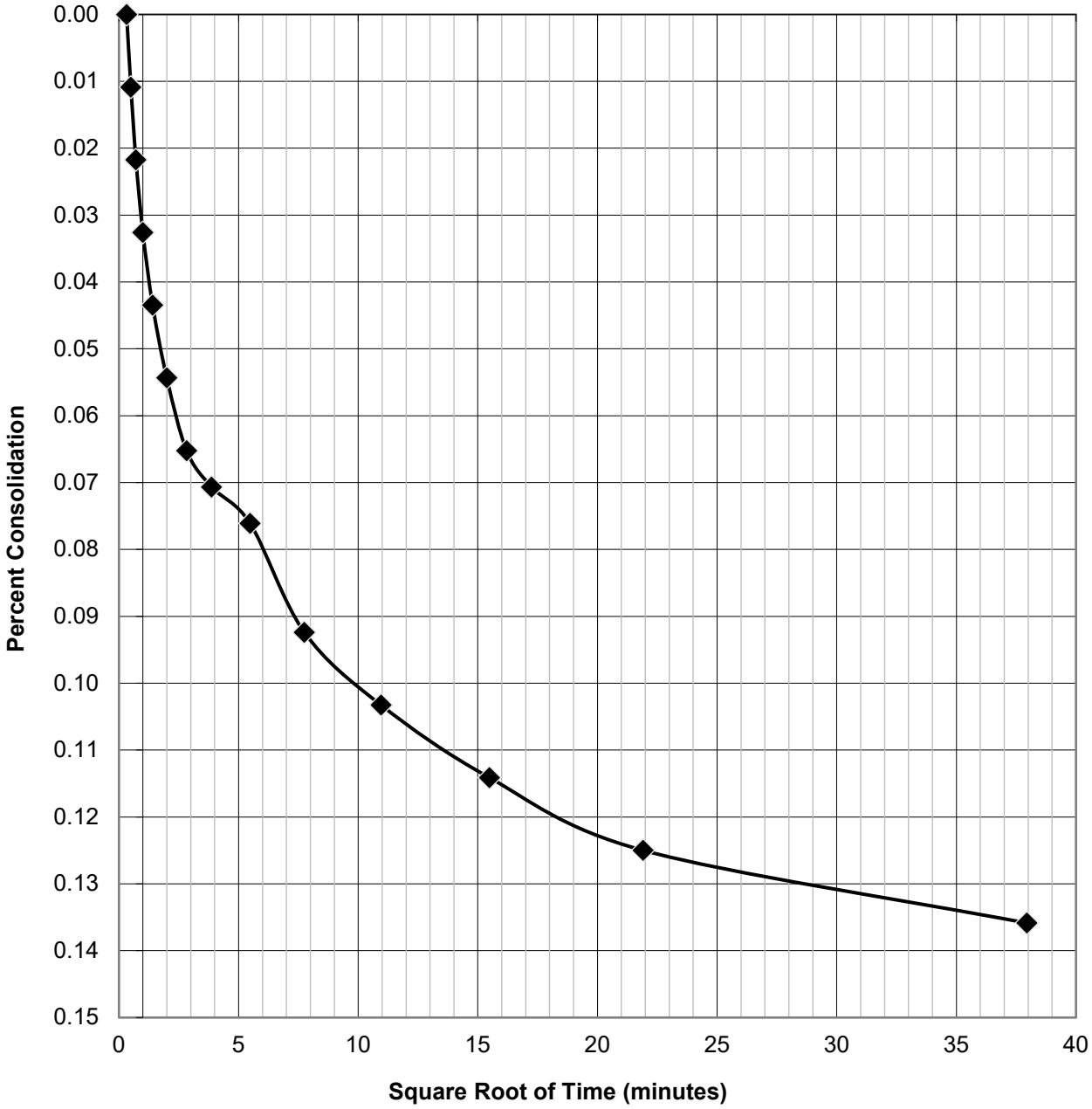
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 19

at 8.0 KSF



SAMPLE ID.	SOIL TYPE
W2@55.5'	Silty Sand (SM)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

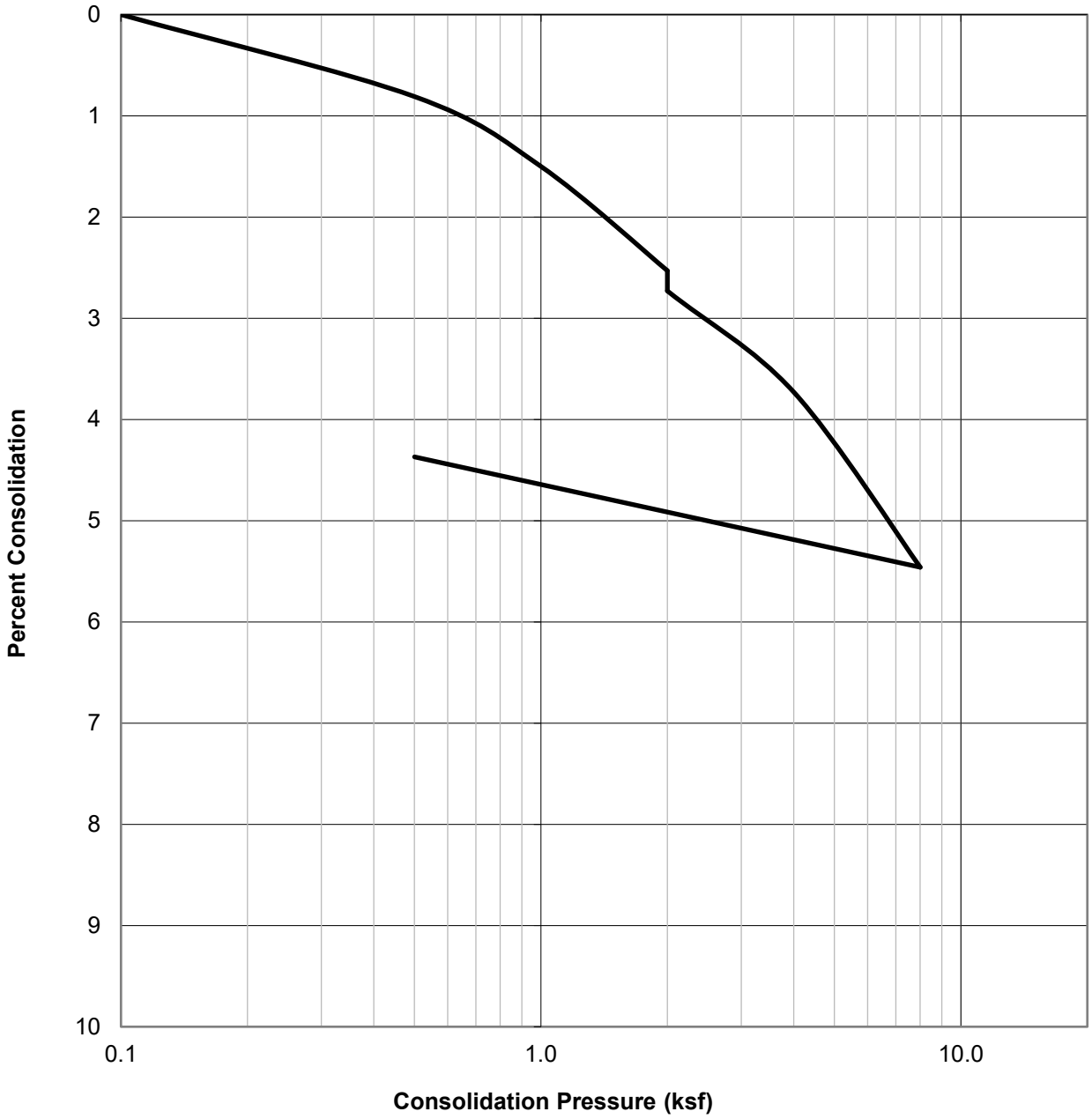
Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 20

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W2@63'	Sand and Clay (SC - CL)	109.6	17.5	17.6

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

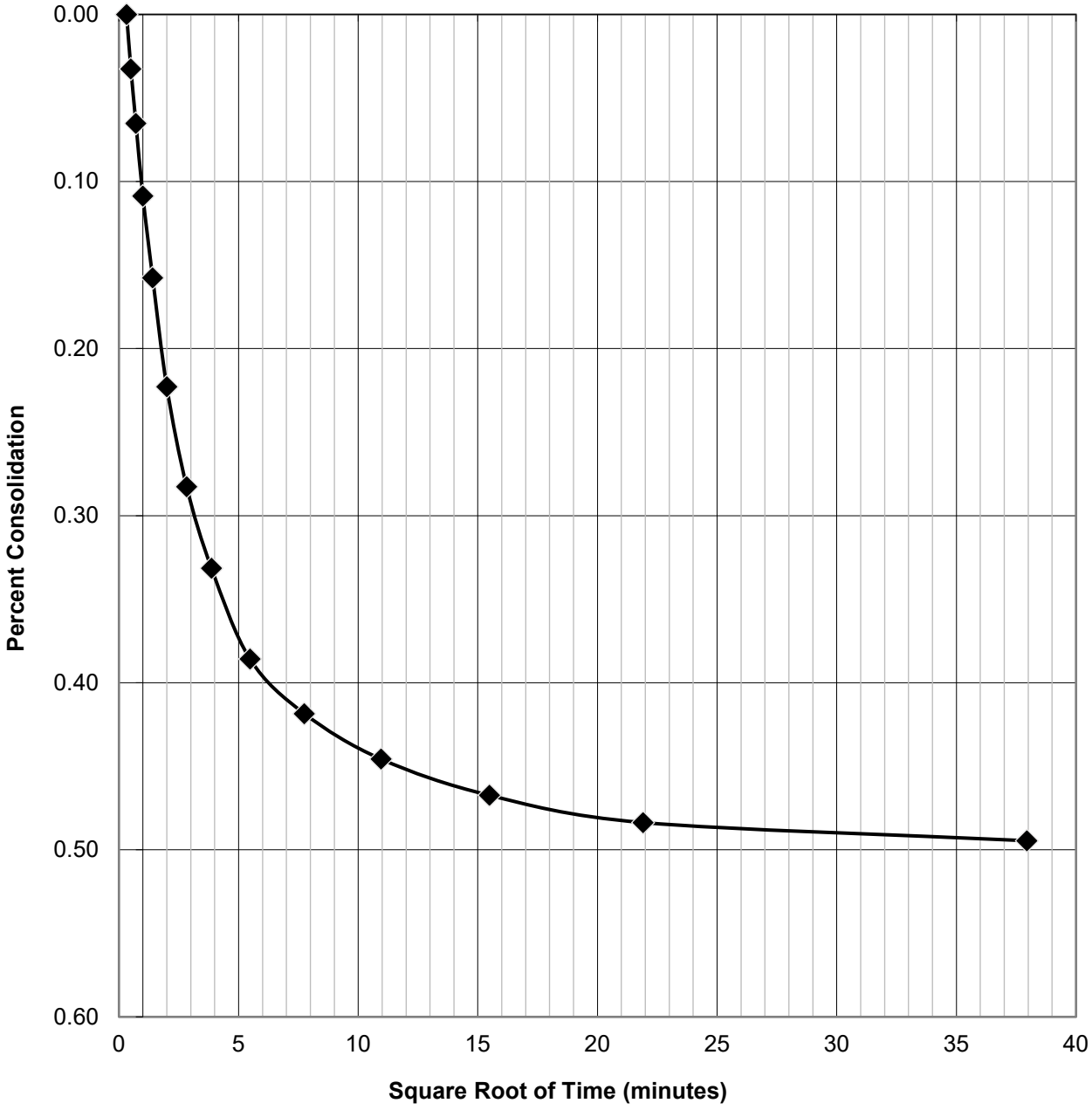
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 21

at 8.0 KSF



SAMPLE ID.	SOIL TYPE
W2@63'	Sand and Clay (SC - CL)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

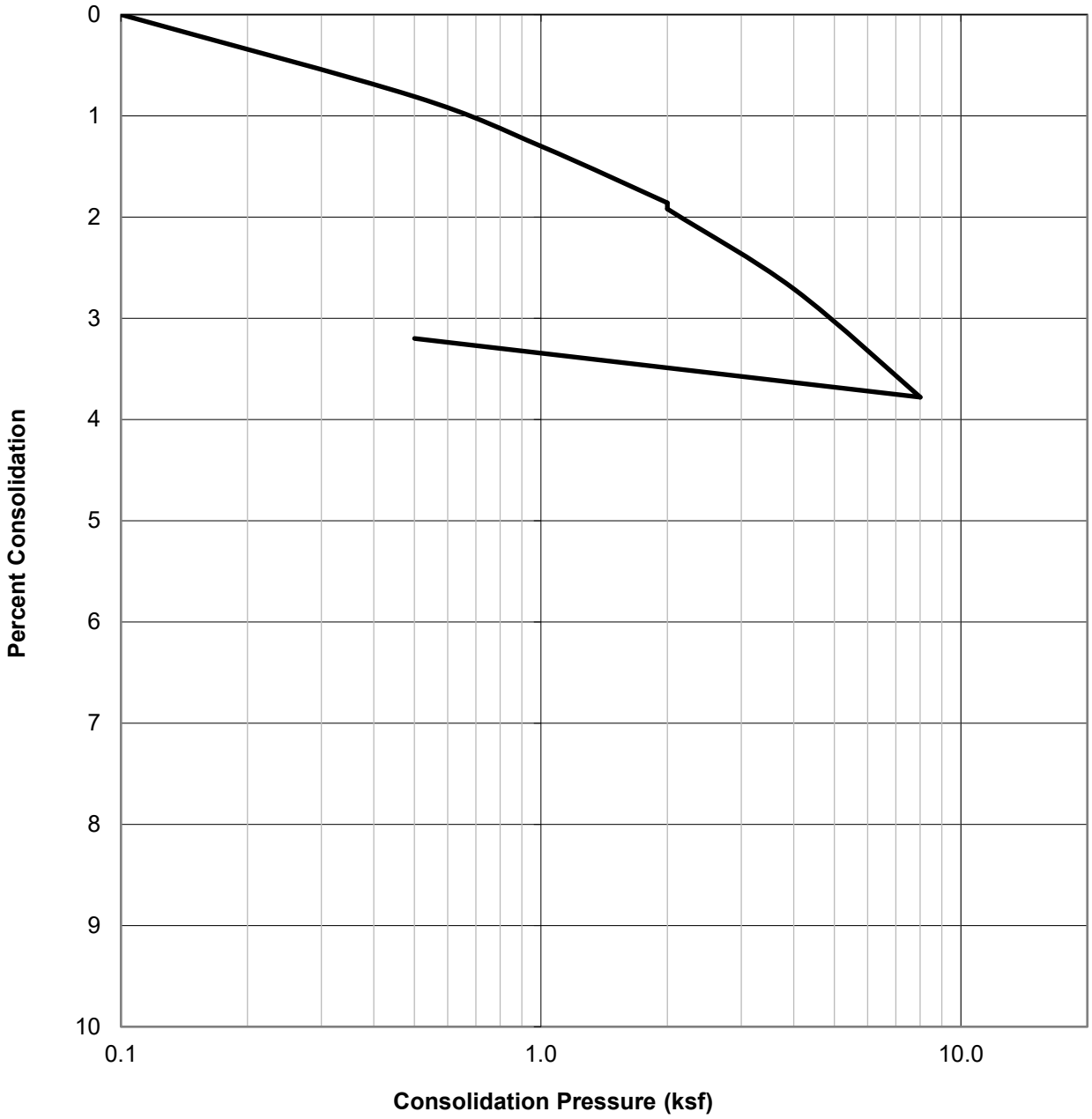
Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 22

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W2@69'	Sand and Clay (SC - CL)	117.9	15.0	14.7

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

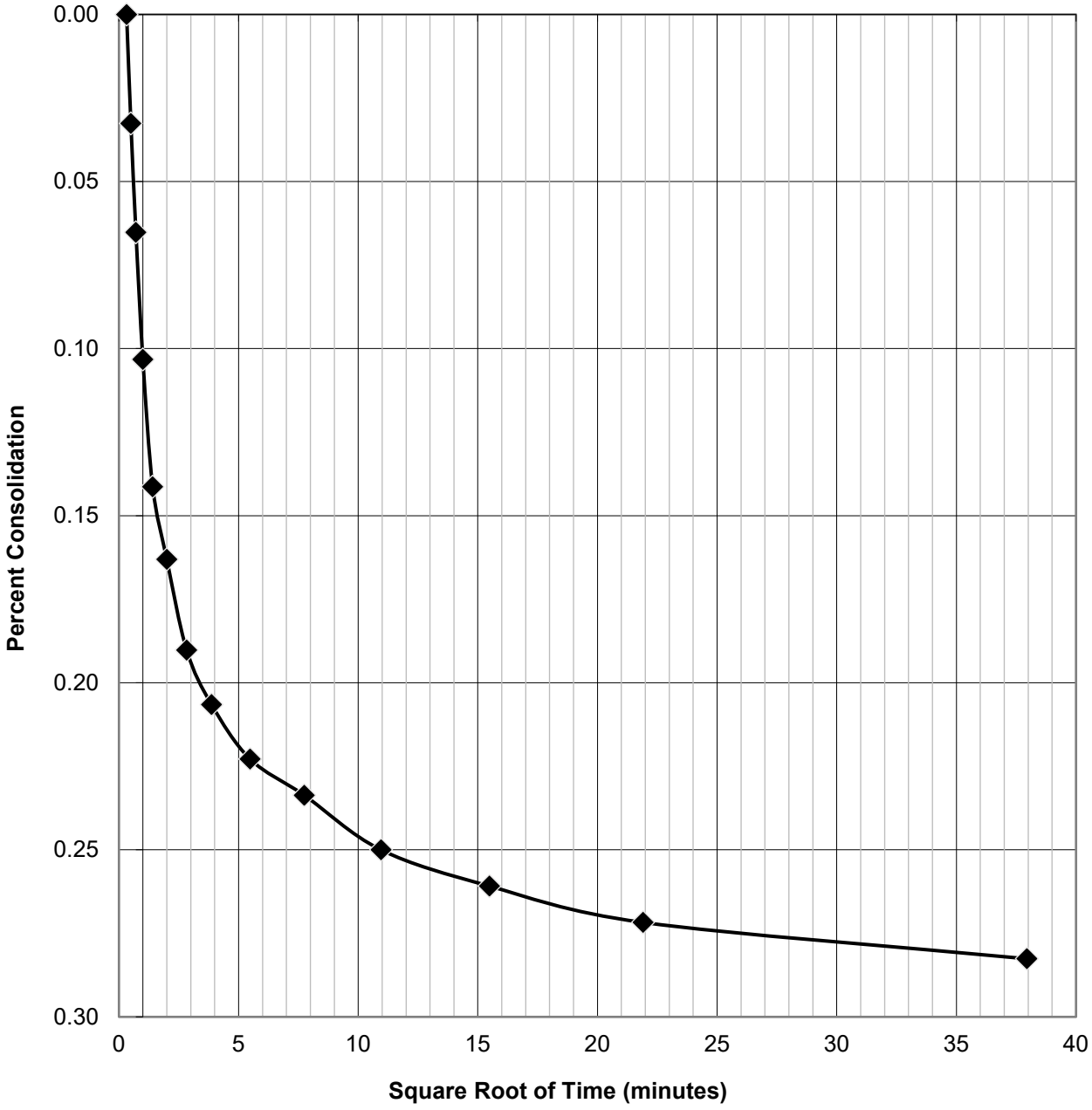
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 23

at 8.0 KSF



SAMPLE ID.	SOIL TYPE
W2@69'	Sand and Clay (SC - CL)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

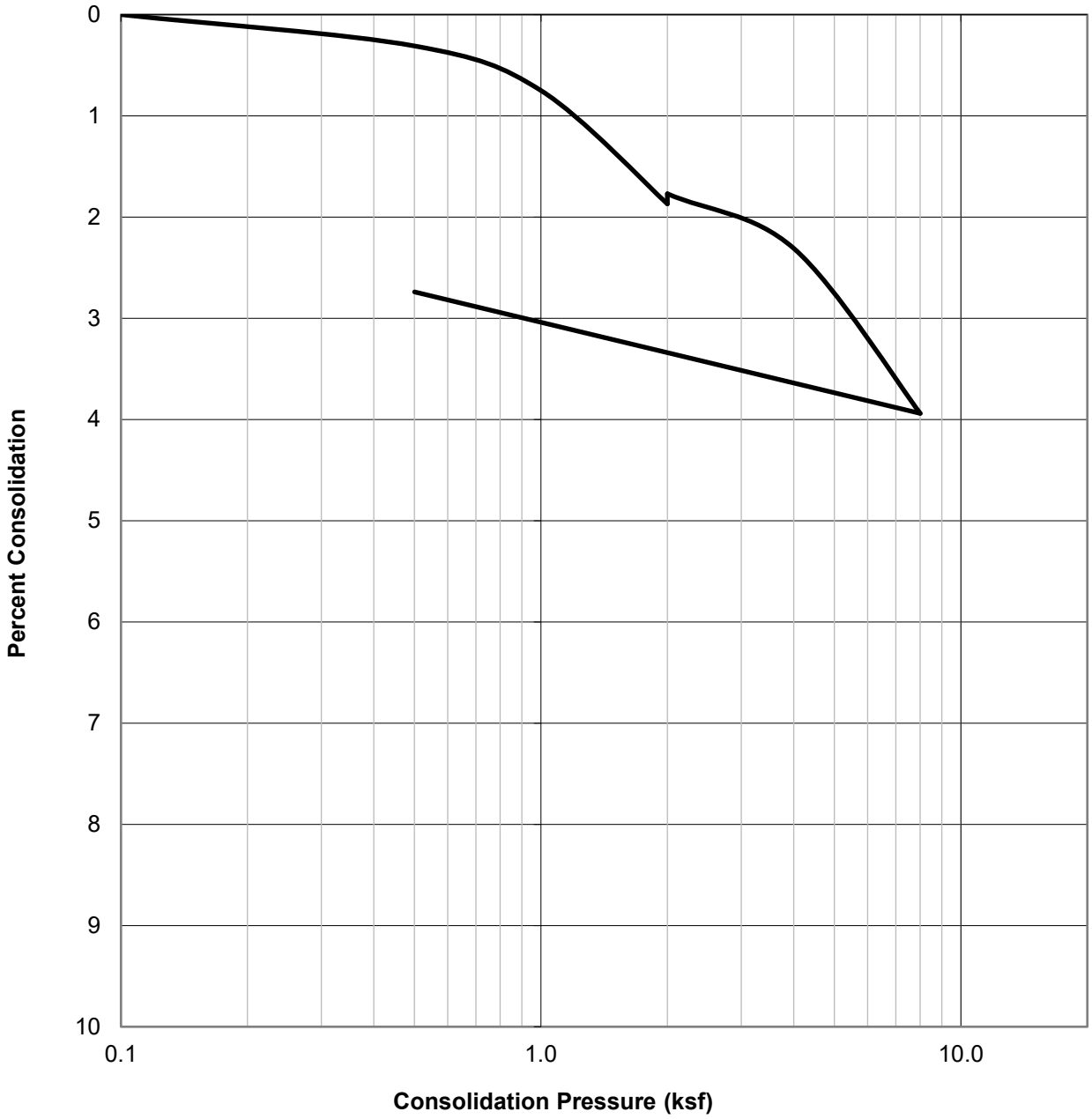
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 24

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W2@76'	Silty Sand (SM)	104.7	22.4	21.8

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

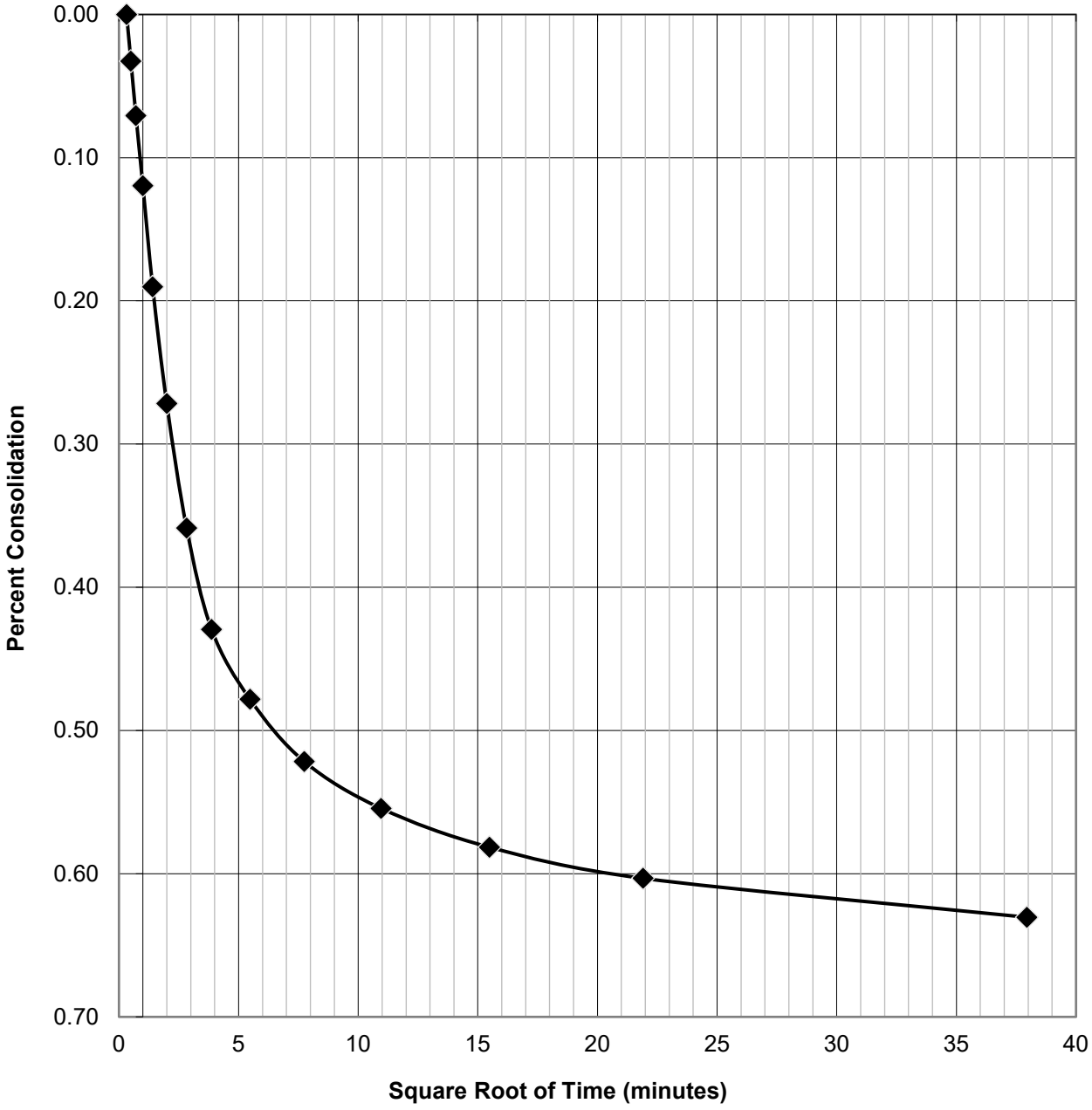
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 25

at 8.0 KSF



SAMPLE ID.	SOIL TYPE
W2@76'	Silty Sand (SM)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

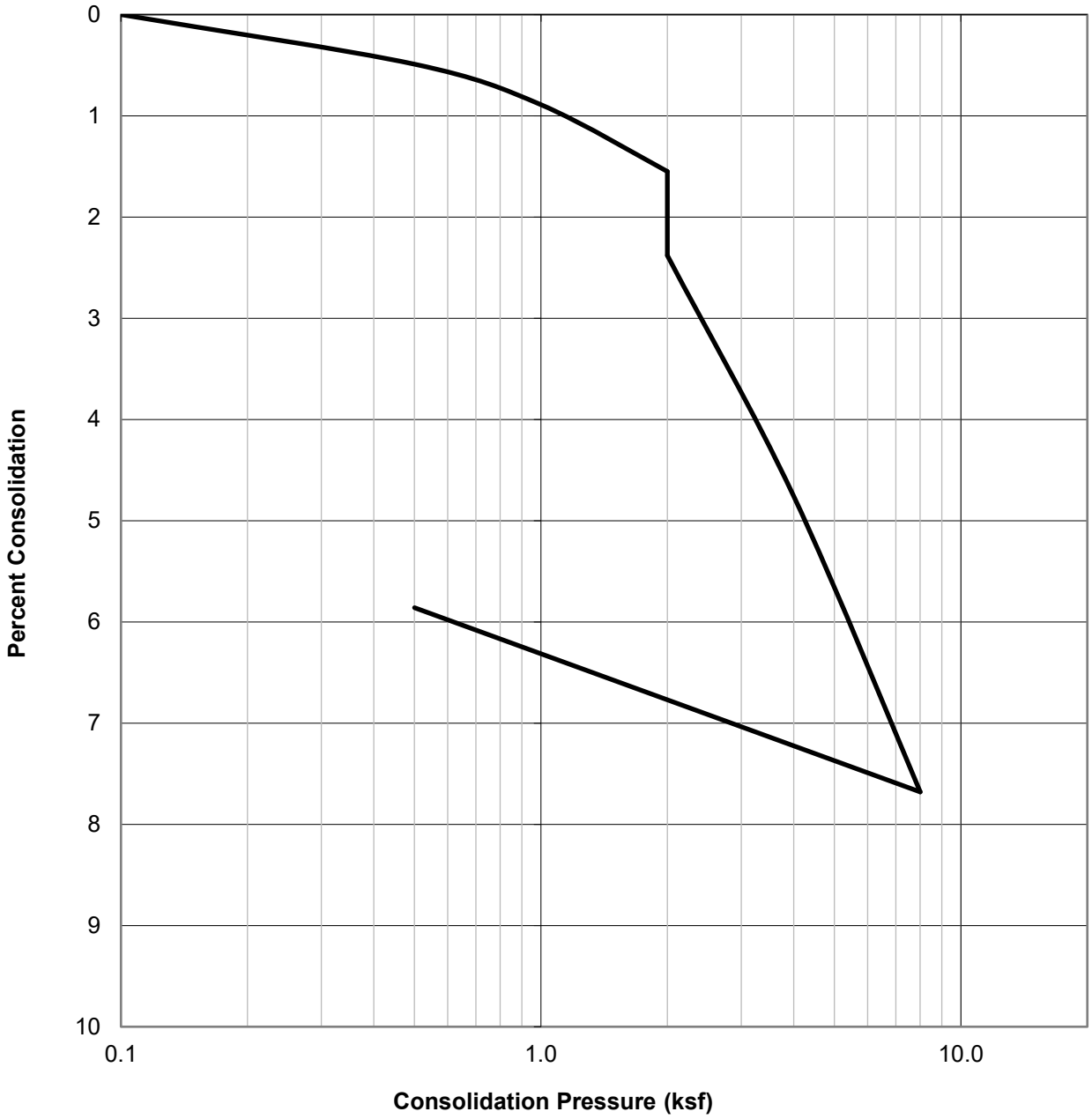
Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 26

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W3@15'	Silty Sand (SM)	102.5	16.7	19.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

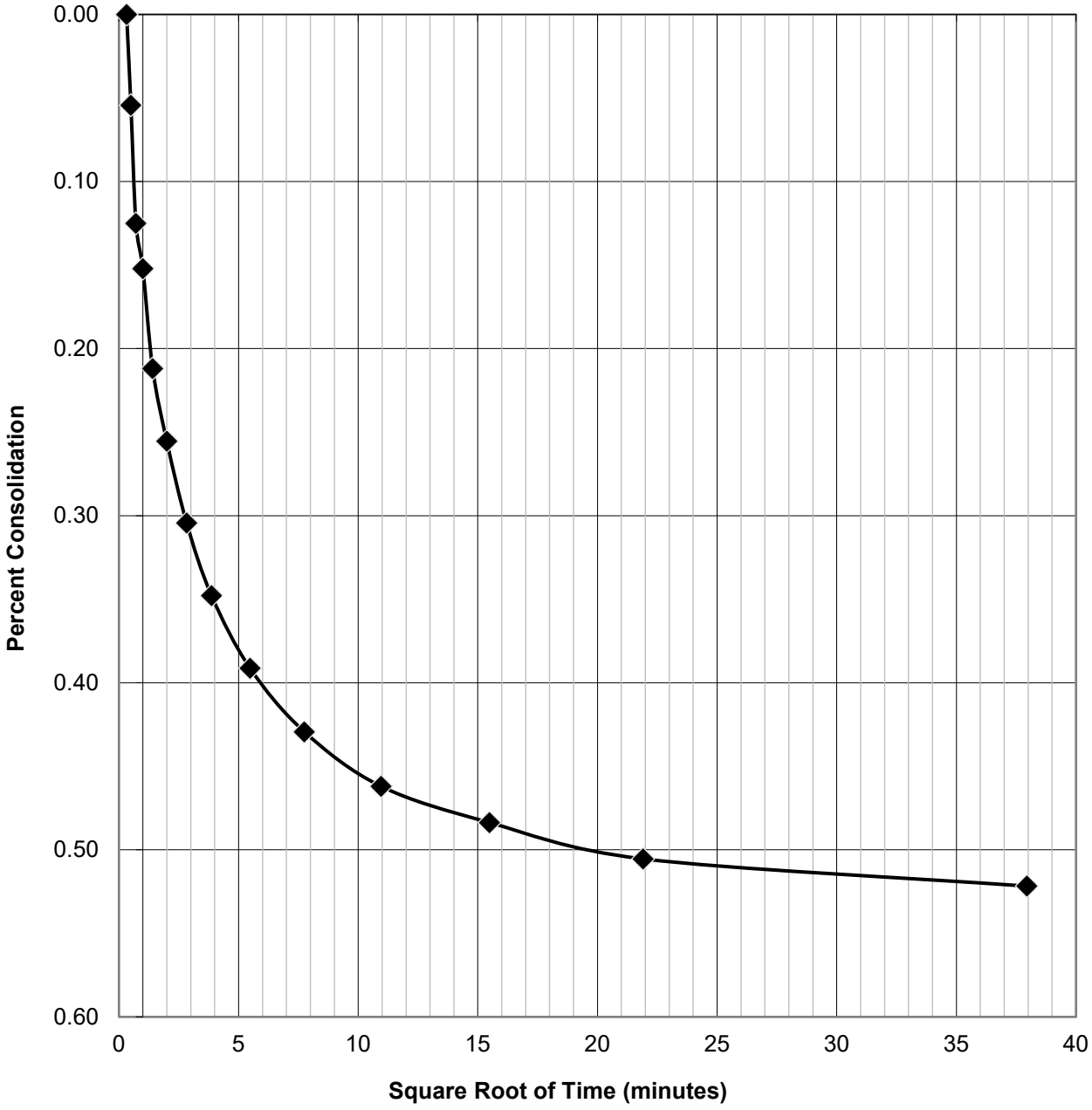
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 27

at 4.0 KSF



SAMPLE ID.	SOIL TYPE
W3@15'	Silty Sand (SM)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

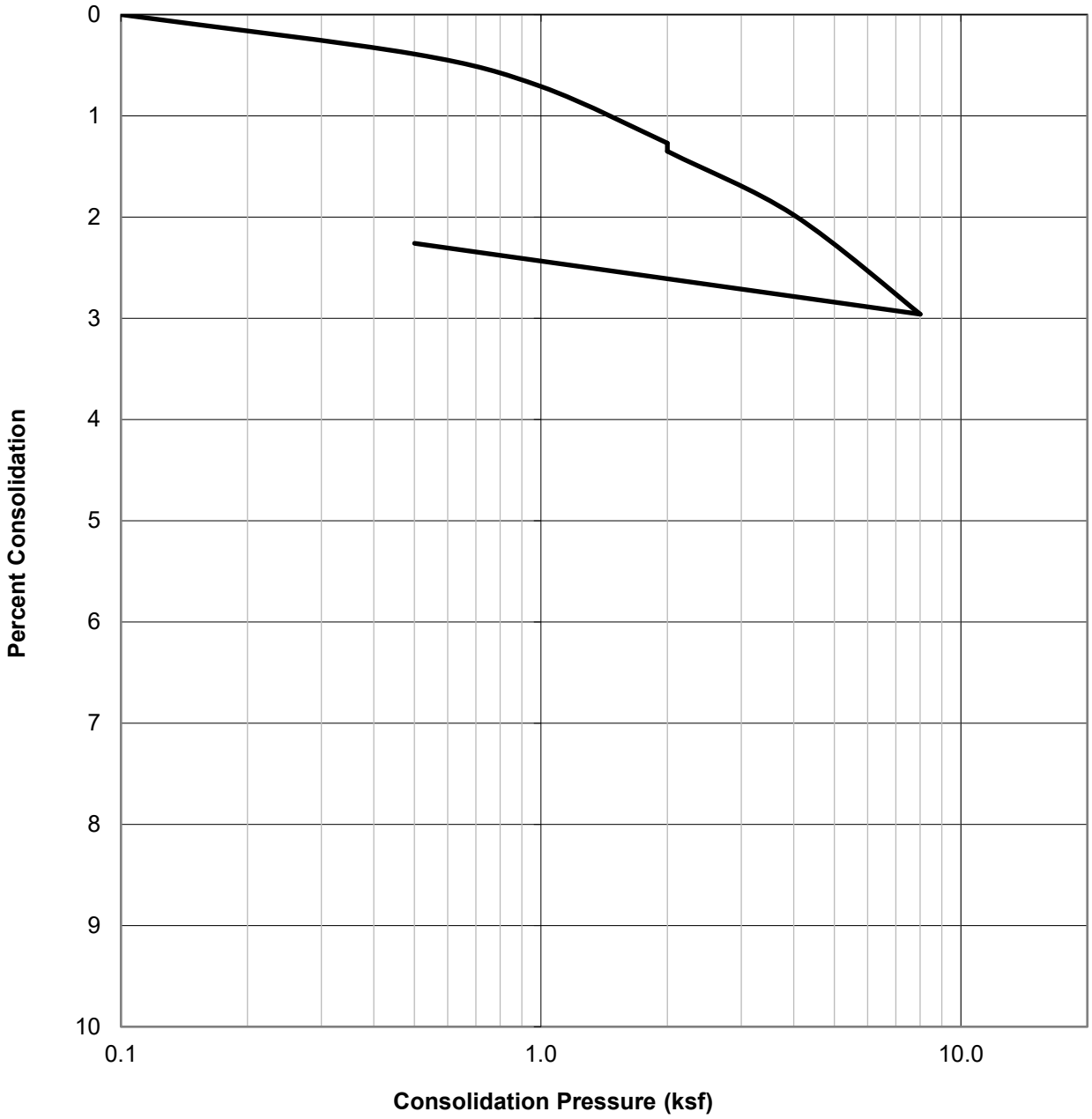
Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 28

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W3@41'	Sand and Clay (SC-CL)	119.6	13.0	13.8

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

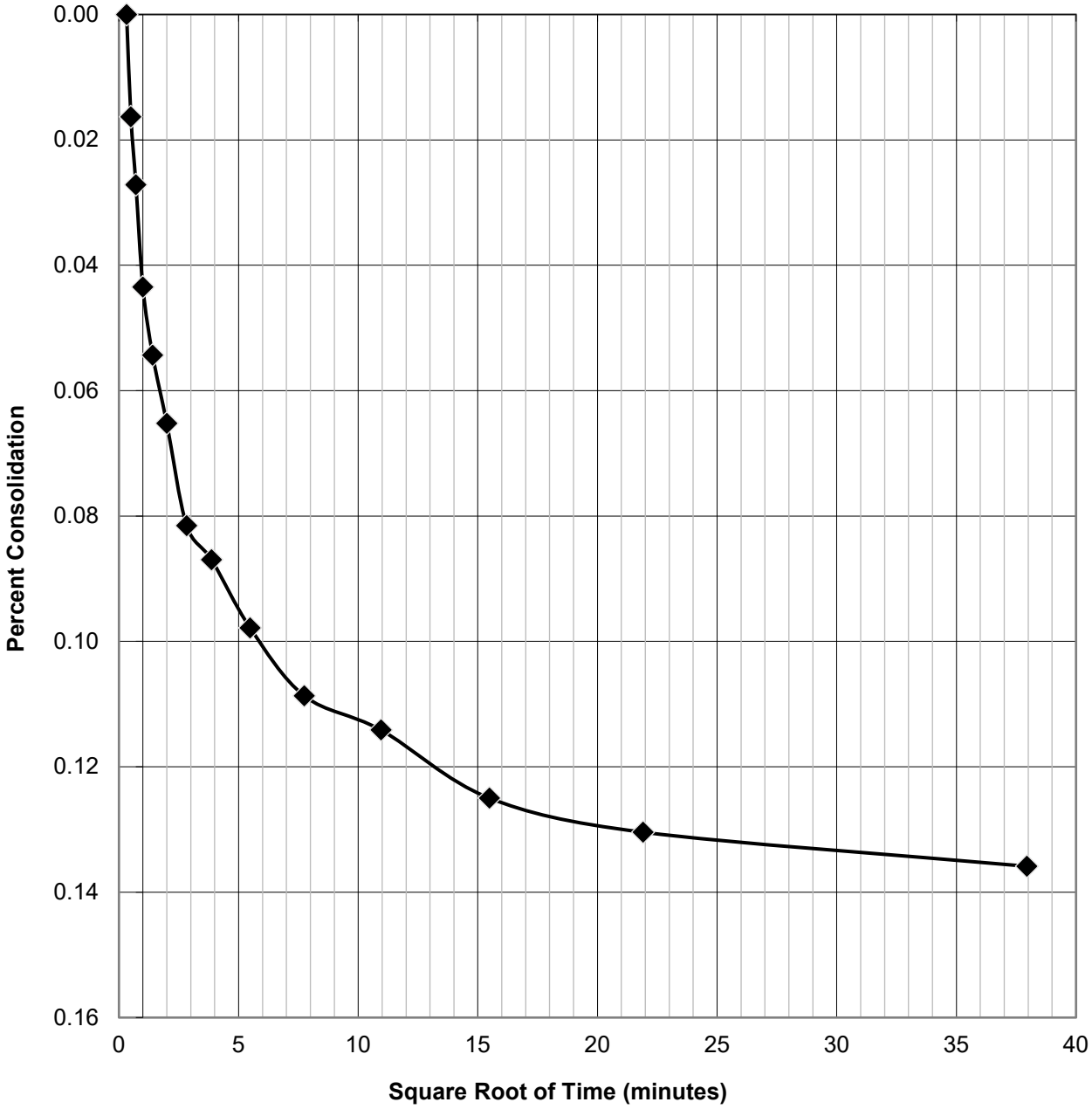
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 29

at 4.0 KSF



SAMPLE ID.	SOIL TYPE
W3@41'	Sand and Clay (SC-CL)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

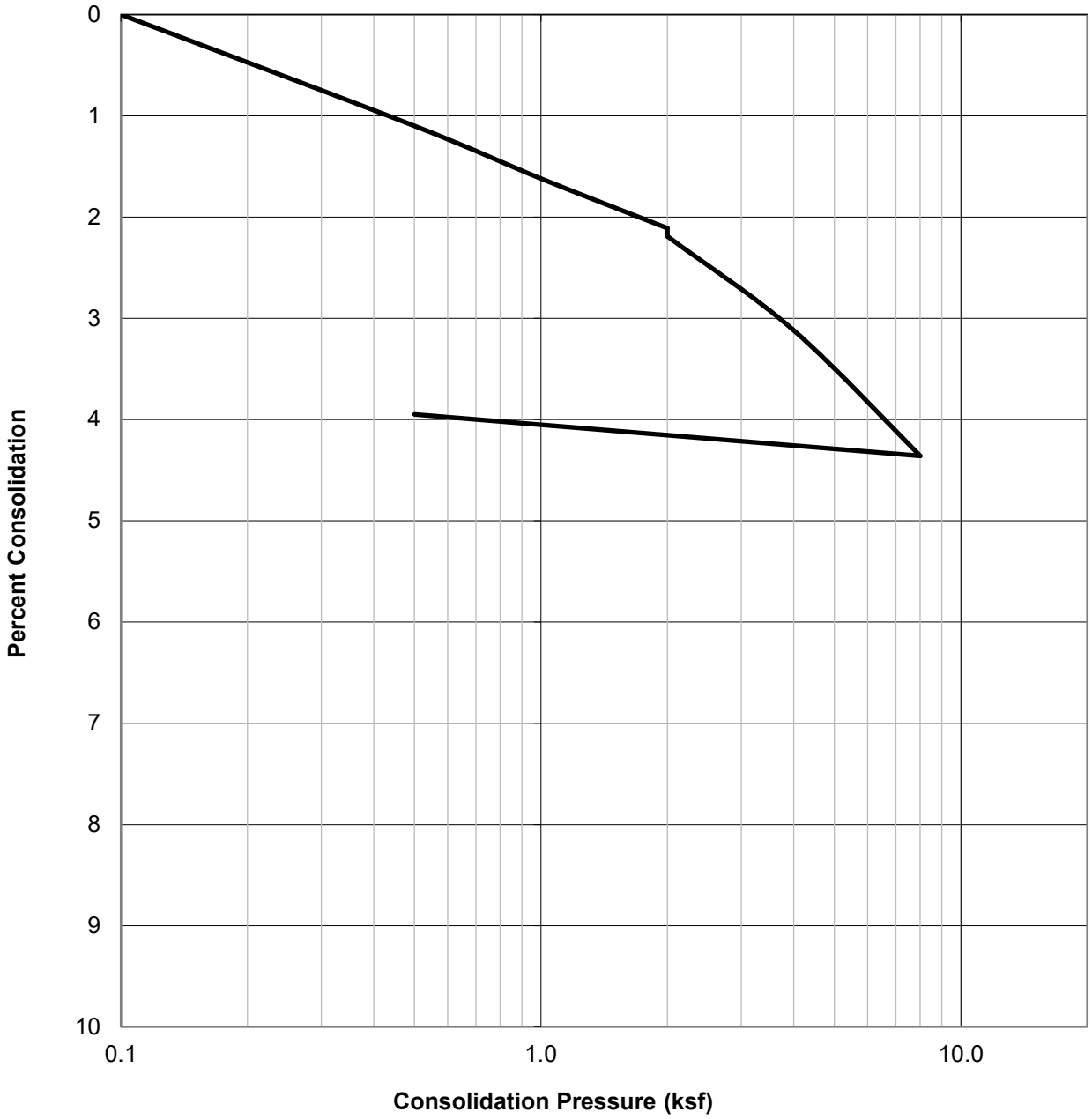
Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 30

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W3@46'	Clayey Sand (SC)	118.8	14.1	13.8

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

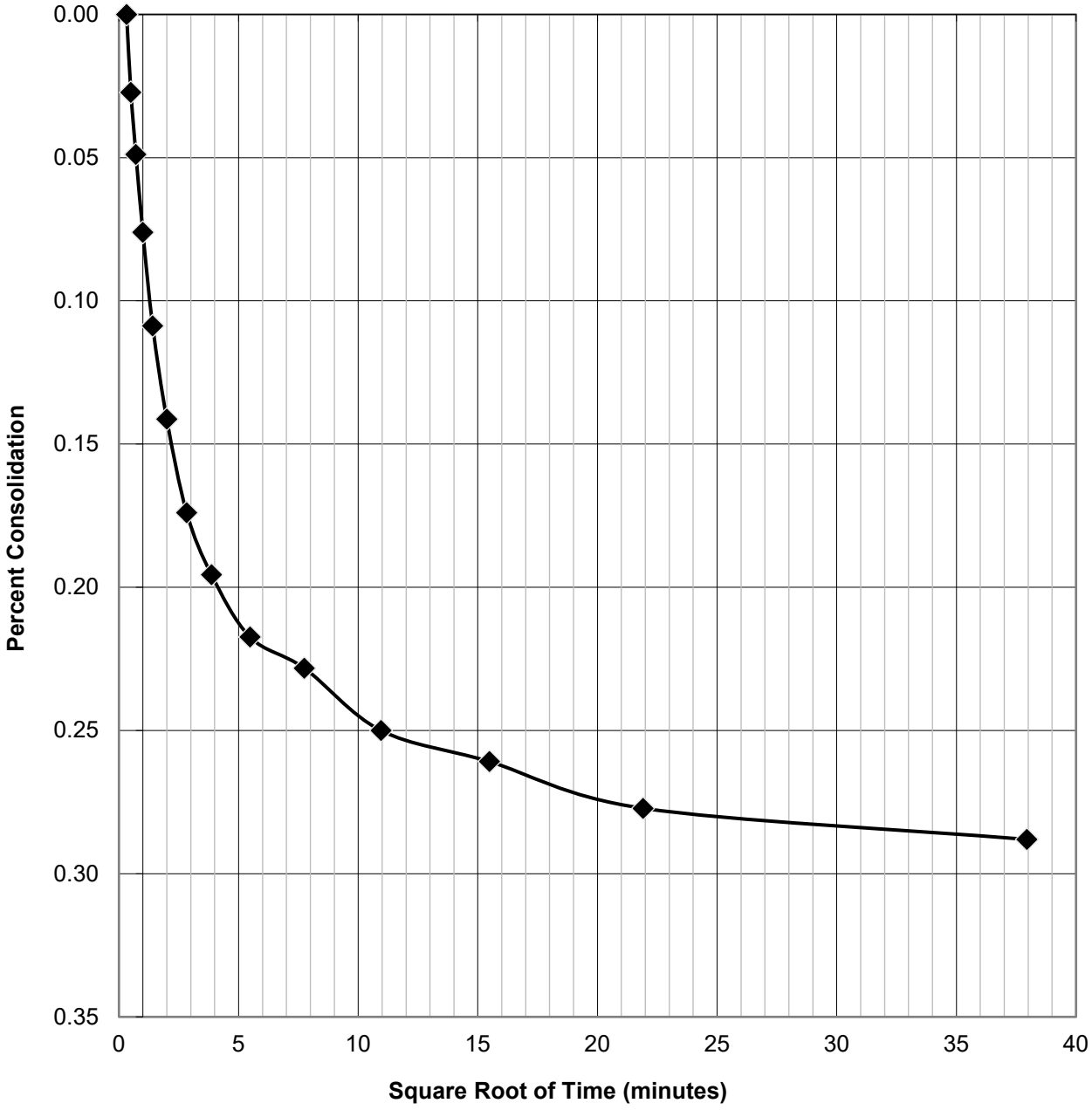
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 31

at 4.0 KSF



SAMPLE ID.	SOIL TYPE
W3@46'	Clayey Sand (SC)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

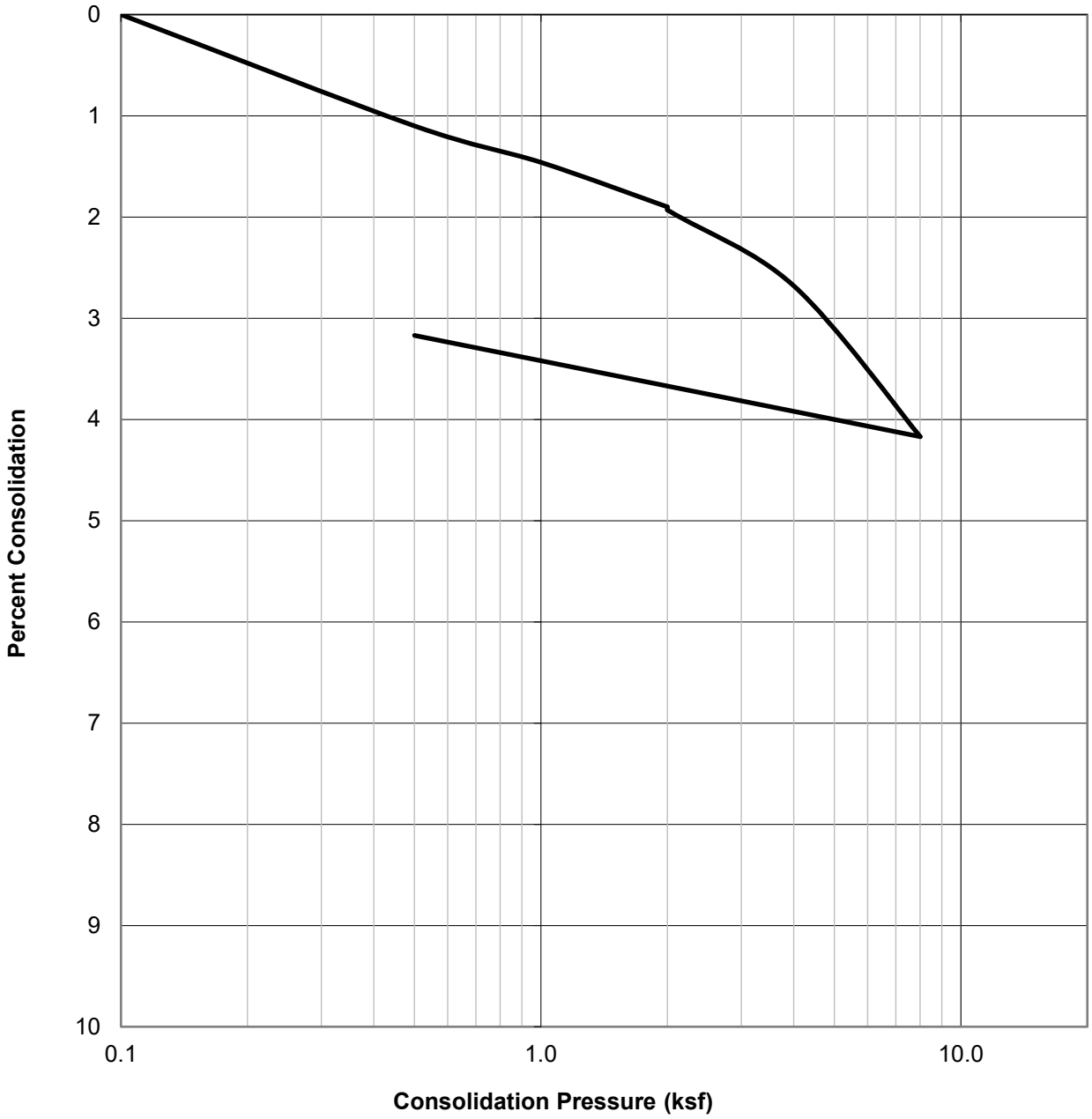
Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 32

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W3@50.5'	Clayey Sand (SC)	113.7	17.1	16.6

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

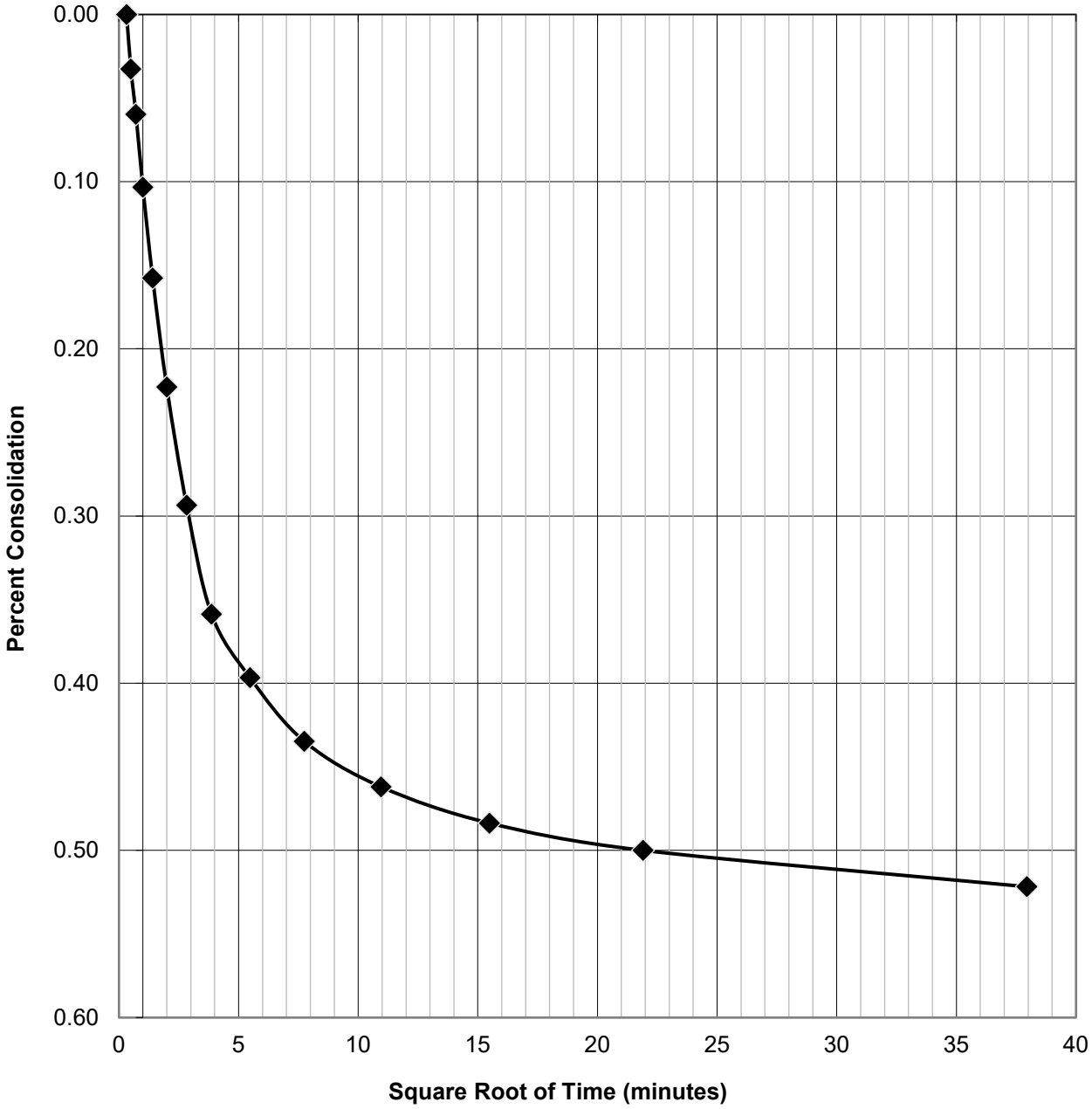
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 33

at 8.0 KSF



SAMPLE ID.	SOIL TYPE
W3@50.5'	Clayey Sand (SC)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

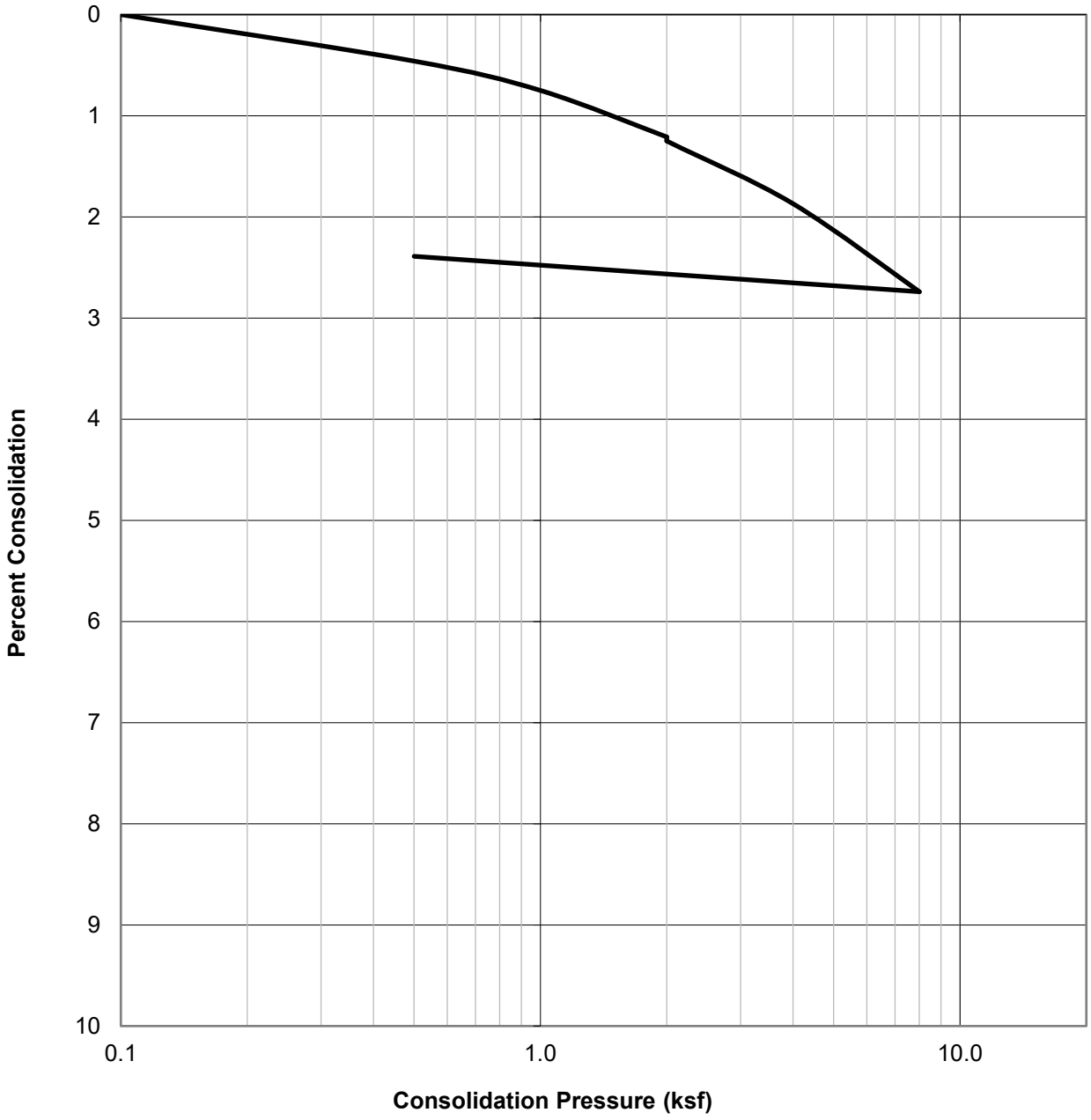
Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 34

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W3@53'	Silty Sand (SM)	118.4	14.0	13.3

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

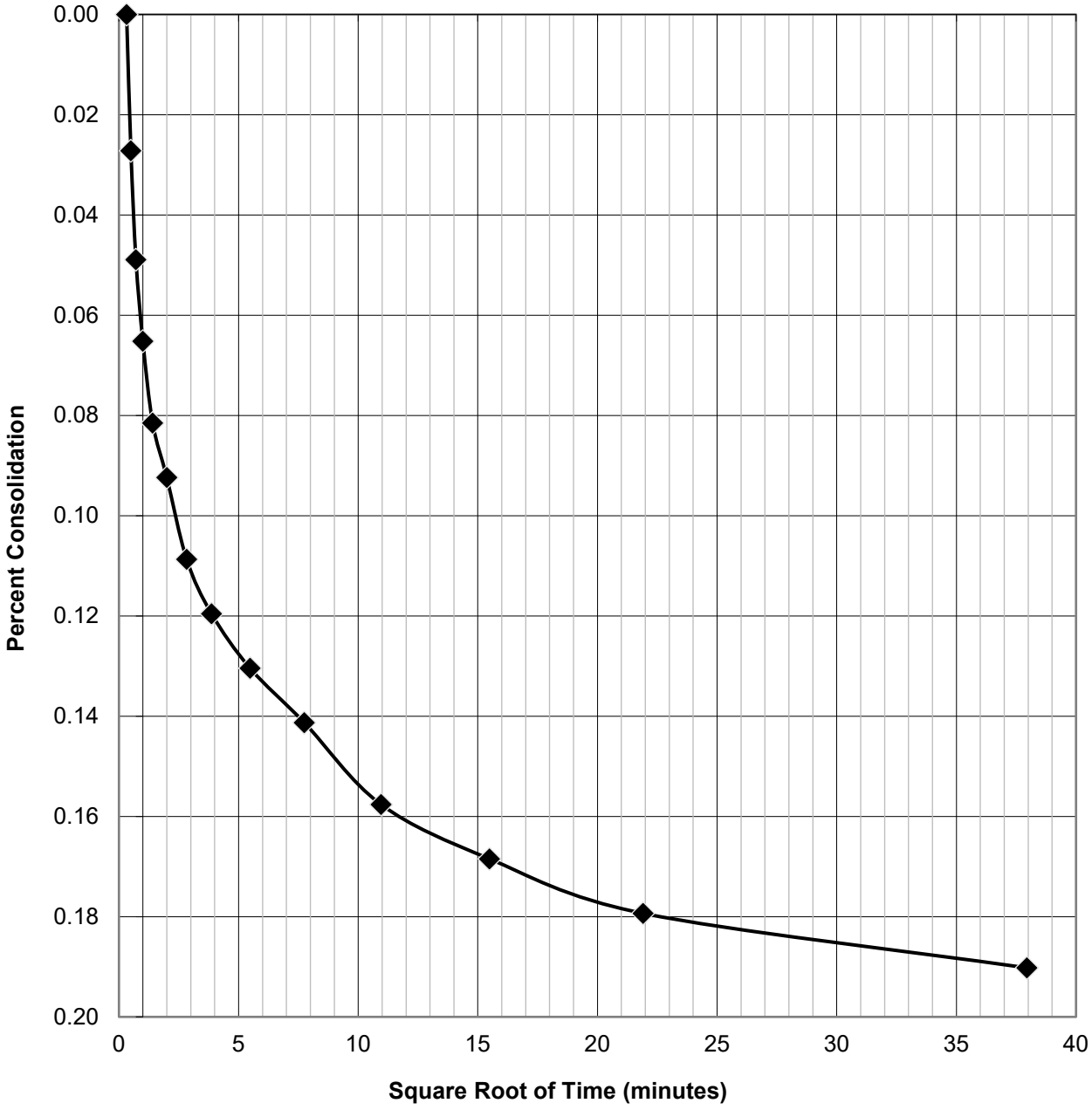
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 35

at 8.0 KSF



SAMPLE ID.	SOIL TYPE
W3@53'	Silty Sand (SM)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

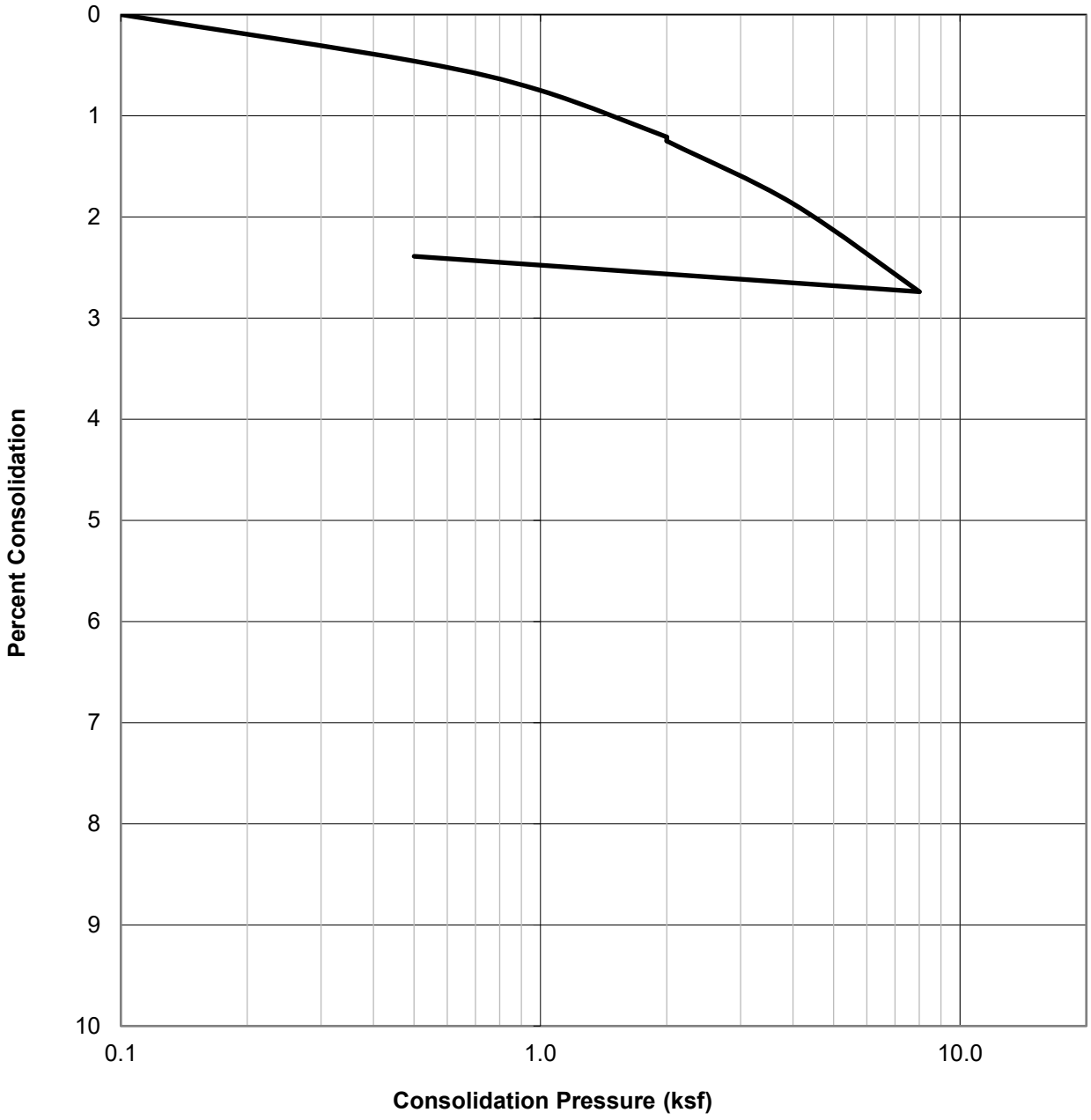
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 36

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
W3@58'	Sandy Clay (CL)	105.8	21.6	21.4

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

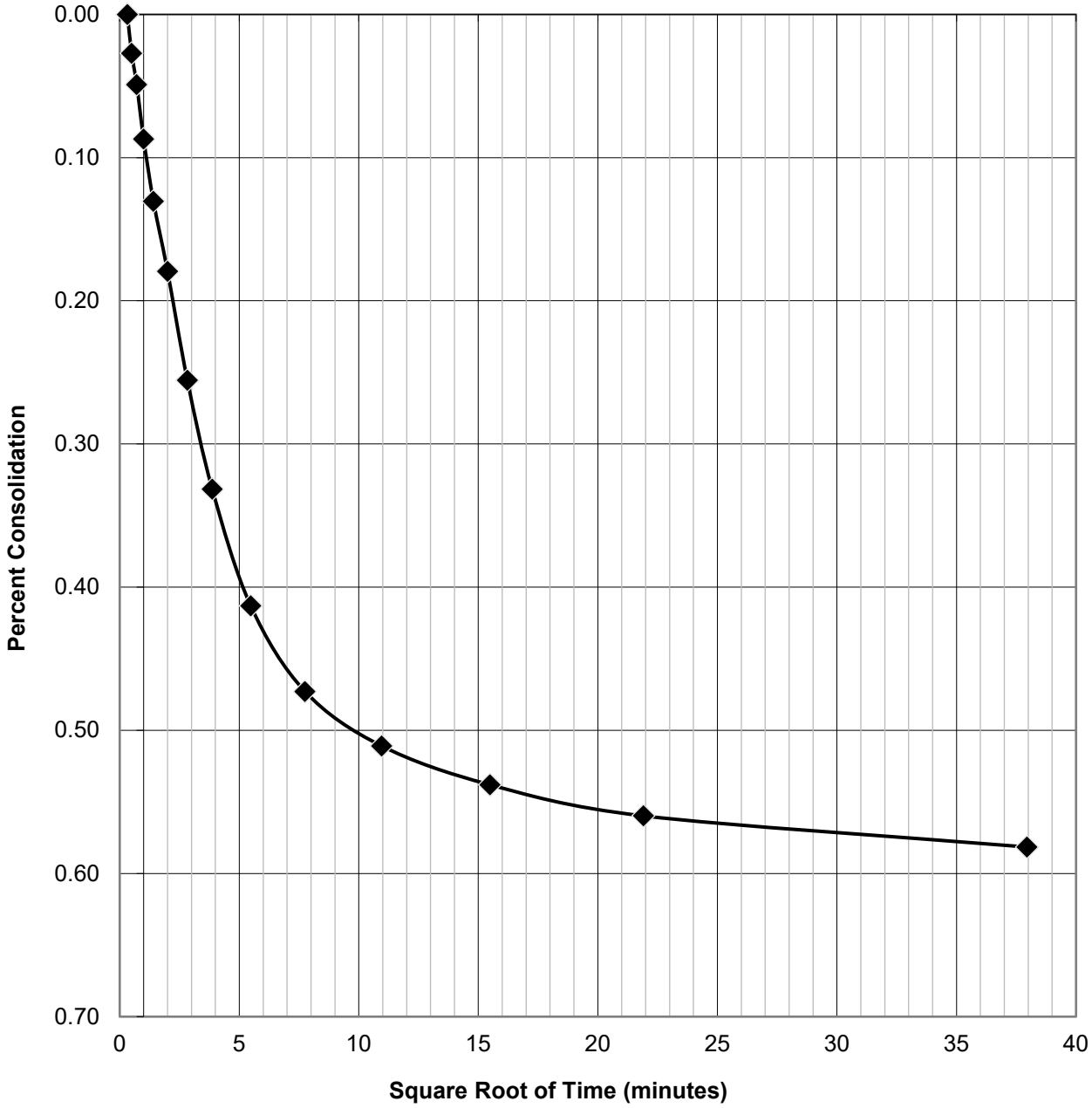
Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21 Figure 37

at 8.0 KSF



SAMPLE ID.	SOIL TYPE
W3@58'	Sandy Clay (CL)

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: JTA

Project No.: A9382-06-02

De Longpre Ave & Vine Street
Los Angeles, California

Oct 21

Figure 38

APPENDIX C

APPENDIX C

GROUNDWATER RESEARCH

HOMEWOOD AVE

AFTON PLACE

VINE ST

FOUNTAIN AVE

LA MIRADA AVE

1310 VINE ST

1253 VINE ST

W-6

IW-1

W-1

AS-1

EX-1A/B

IW-2

W-4A/B

W-2

IW-3

W-12

W-13

W-5A/B

W-3

W-14

MW1 (PLAZA)

W-15

W-17

IW-4

W-18

MW2 (PLAZA)

IW-5

IW-6

MW3 (PLAZA)

W-16A/B

N

0 30 60

SCALE IN FEET

LEGEND

- SINGLE-COMPLETION GROUNDWATER MONITORING WELL
- DUAL-COMPLETION GROUNDWATER MONITORING WELL
- MULTI-NESTED SOIL VAPOR PROBE / GROUNDWATER MONITORING WELL
- PLAZA PROPERTY GROUNDWATER MONITORING WELL
- DUAL-COMPLETION MULTI-PHASE EXTRACTION WELL
- ANGLED GROUNDWATER MONITORING WELL
- INJECTION WELL
- ANGLED INJECTION WELL
- AIR SPARGE WELL

DRAWN BY: EL REVISED BY: PG REVISION DATE: 09/21/2018

PARAGON CLEANERS
1310 VINE STREET
LOS ANGELES, CALIFORNIA

SITE PLAN SHOWING GROUNDWATER MONITORING WELL LOCATIONS - SITE / PLAZA

MUREX environmental, inc

FIGURE 3

MUREX environmental, inc

BORING LOG

BORING NO. W-6

Page 1 of 3

PROJECT	Paragon Cleaners	**MEI FILE NO.**	1042-001-201
LOCATION	1310 Vine Street, Los Angeles, CA.	**PROJECT MGR.**	J. Squire, PE
CLIENT	M. Sinclair	**FIELD REP.**	J. Squire, PE
CONTRACTOR	Gregg Drilling CME 95	**DATE STARTED**	8/28/2015
DRILLER	Juan	**DATE FINISHED**	8/28/2015

Elevation	**Rim:** 330.43 ft.	**Case:** 330.06 ft.	**Datum** CCS83 Zone 5	**Boring Location**	**Northing** 1857227.13	**Easting** 6462926.13	
Item	**Casing**	**Sampler**	**Core Barrel**	**Rig Make & Model**	**Hammer Type**	**Drilling Mud**	**Total Depth**
Type	PVC, SCH. 40	S	S 24"	☑ Truck ☐ Tripod ☐ Cat-Head	☐ Safety	☐ Bentonite	**67' bgs.**
Inside Diameter (in.)	6"/10.6"	2.0"	3	☐ ATV ☐ Geoprobe ☐ Winch	☐ Doughnut	☐ Polymer	
Hammer Weight (lb.)	NA			☐ Track ☐ Air Track ☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	NA			☐ Skid ☑ Hand Auger ☐ Cutting Head	**Drilling Notes:**		

Depth (ft.)	Recovery %	Blow Counts	Sample Depth (ft.)	Well Diagram	PID	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0		S					**Asphalt** 6"										
							ROAD BASE, 1.5' bgs.	NA	NA	NA	NA	NA	NA				
						FILL	**SAND FILL WITH GRAVEL**	NA	NA	NA	NA	NA	NA				
5							5.5' bgs.										
	100%	3/4/ 6/11	5/7				**SANDY SILT**, grayish brown (5YR 3/2) dry, dense, sand common, 0.1 to 1.0 mm. in size, angular to sub-angular.										
10	100%	5/5/ 9/11	10/12		0.0	**ML**		0	0	0	5	10	85				
							14' bgs.										
15	100%	6/8/ 12/17	15/17		0.0	**SM**	**SILTY SAND**, light brown (5YR 5/6), dry, dense, poorly gradded, sand fine grained up to 0.2 mm., angualr to sub-angular.	0	0	5	5	50	40				
20	100%		20/22		0.0	**SP**	**SAND,** grayish orange (10YR 7/4), moist, loose, poorly graded, medium to fine grained, trace of silt.	0	0	0	50	40	10				
								C	F	C	M	F	FS	D	T	P	S

Water Level Data TOC

Date	Time	Elapsed Time (hr.)	Depth in feet to: First Water	Depth in feet to: Stabilized Water
9/3/2015	11:17	120	37.66	36.70

Sample ID

CC	Cont. Core
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Well Diagram

Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Summary

Boring Depth (Linear ft.)	67' bgs.
Sample Method	Split Spoon Sampler
Number of Samples	13 S,

BORING NO. W-6

Field Tests Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High

Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on ASTM Method D2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)"

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BORING LOG

BORING NO. **W-6**

Depth (ft.)	Recovery (%)	Blow Counts	Sample Depth (ft.)	Well Diagram	PID (ppm)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	100%	4/6/ 8/11	20/22		0.0	SP	**SAND,** grayish orange (10YR 7/4), moist, loose, poorly graded, medium to fine grained, trace of silt.	0	0	0	50	40	10				
							21.5' bgs.										
							SAND, grayish brown (5YR 3/2), moist, loose, well graded, course to fine grained, trace of silt and fine gravels.										
25	100%	3/7/ 8/8	25/27		0.0	SW	**NOTE* Thin interbedding appering in sample of sands with trace of gravels.**	0	5	10	30	30	25				
							30.5' bgs.										
30	100%	6/8/ 11/12	30/32		0.0	SM	**SILTY SAND**, light brown (5YR 5/6), moist, dense, fine grained, poorly graded, angular to sub-angular in apperance.	0	0	10	15	40	35				
							35' bgs.										
35	100%	9/13/ 17/21	35/37		0.0	SW	**SAND**, grayish brown (5YR 3/2), moist, loose, well graded, course to fine grained, trace of silt and fine gravels.	10	5	20	30	25	10				
							36.5' bgs. ▼ **Depth to Static Groundwater 36.41 bgs.**										
						SM	**SILTY SAND**, moderate brown (5YR 4/4), saturated, dense, fine grained, poorly graded, angular to sub-angular in apperance.	0	0	0	40	30	30				
							▽ **First Encountered Groundwater 38' bgs.**										
40							40' bgs.										
	100%	10/16/ 21/27	40/42		0.0		**SANDY CLAY**, moderate brown (5YR 5/6), saturated, stiff, fine sand comon in bedding, gravels comon.										
						CL	**NOTE* Thin interbedding in sample of individual bands of clay, sand and gravel less than 2 inches thick.**	0	5	5	0	15	75				
45							45' bgs.										
	100%	18/28/ 31/42	45/47 **S-45.5** **S-46.0** **S-46.5**		0.0	SW	**SAND,** moderate brown (5YR 3/4), saturated, dense, well gradded, gravel comon, sand and gravel angular to sub-angular.	0	10	30	30	10	20				
							46' bgs.										
							CLAYEY SAND, grayish brown (5YR 3/2), saturated, dense, fine grained, coarse to medium sand grains dominate the sample matrix, angular to sub-angular.										
50	75%	23/34/ 50-6"	50/52		0.0	SC		0	0	25	25	10	40				
								C	F	C	M	F	FS	D	T	P	S

Field Tests Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on ASTM Method D2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)"

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BORING LOG

BORING NO. **W-6**

Page 3 of 3

Depth (ft.)	Recovery (%)	Blow Counts	Sample Depth (ft.)	Well Diagram	PID (ppm)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50	100%	15/18/ 24/28	50/52		0.0	SC	50.5' bgs	0	0	25	25	10	40				
						CL	**SANDY CLAY**, grayish brown (5YR 3/2), saturated, stiff, fine grained, well graded sand coarse to fine grained sands common. 53' bgs.	0	10	10	10	10	60				
55	100%	10/17/ 20/24	55/57		0.0	SC	**CLAYEY SAND**, grayish brown (5YR 3/2), saturated, dense, fine grained, coarse to medium sand grains dominate the soil matrix, layers of coarse thin bedding found within the sample. 56' bgs.	0	0	25	25	10	40				
60	100%	9/13/ 27/23	60/62		0.0	CL	**SANDY CLAY**, moderate brown (5YR 4/4), saturated, stiff, fine grained, fine grained sands with fine gravel in thin beds visible within the sample matrix, all granular material angular to sub-angular of metamorphic origin. 65' bgs.	0	5	0	5	20	70				
65	100%	12/22/ 27/28	65/67		0	SP	**SAND**, moderate brown (5YR 4/4), saturated, dense, poorly graded, coarse grained with gravel common. . 67' bgs.	0	5	60	20	10	5				
70							**Boring Total Depth 67' bags. Completed on 8/28/2014**										
		Well Total Depth 60.02', TOC 60.36' bgs. Well Construction 30' Sch. 40 0.20 slotted and 30' blank casing to surface, #2/12 sand to 25' bgs.															
75																	
80																	
								C	F	C	M	F	FS	D	T	P	S

Field Tests
Dilatancy: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on ASTM Method D2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)"

Table II

Summary of Groundwater Elevation Data

Paragon Cleaners

Los Angeles, California

Well ID	Date	Depth to Water (ft-bTOC)	Total Depth (ft-bTOC)	TOC Elevation* (ft-amsl)	Groundwater Elevation (ft-amsl)
W-5B	11/9/2020	28.70	69.99	324.35	295.65
W-5B	3/2/2021	28.65	69.01	324.35	295.70
W-5B	6/1/2021	29.16	68.90	324.35	295.19
W-6	9/15/2015	36.69	60.02	330.06	293.37
W-6	11/19/2015	36.89	60.02	330.06	293.17
W-6	2/24/2016	36.73	60.00	330.06	293.33
W-6	4/25/2016	36.83	60.50	330.06	293.23
W-6	8/11/2016	37.06	60.00	330.06	293.00
W-6	12/6/2016	37.35	59.95	330.06	292.71
W-6	1/31/2017	36.48	59.84	330.06	293.58
W-6	5/8/2017	36.25	59.75	330.06	293.81
W-6	8/28/2017	36.85	59.80	330.06	293.21
W-6	10/30/2017	37.04	59.81	330.06	293.02
W-6	2/19/2018	37.17	59.65	330.06	292.89
W-6	5/21/2018	36.92	59.70	330.06	293.14
W-6	9/10/2018	37.05	59.70	330.06	293.01
W-6	11/12/2018	37.25	59.42	330.06	292.81
W-6	2/11/2019	35.78	59.25	330.06	294.28
W-6	6/11/2019	34.95	59.40	330.06	295.11
W-6	8/26/2019	35.01	59.47	330.06	295.05
W-6	10/28/2019	34.90	59.10	330.06	295.16
W-6	3/23/2020	34.08	59.19	330.06	295.98
W-6	6/8/2020	33.23	59.20	330.06	296.83
W-6	8/31/2020	33.20	59.04	330.06	296.86

Table II

Summary of Groundwater Elevation Data

Paragon Cleaners

Los Angeles, California

Well ID	Date	Depth to Water (ft-bTOC)	Total Depth (ft-bTOC)	TOC Elevation* (ft-amsl)	Groundwater Elevation (ft-amsl)
W-6	11/9/2020	33.42	58.95	330.06	296.64
W-6	3/2/2021	33.30	58.85	330.06	296.76
W-6	6/1/2021	33.83	58.76	330.06	296.23
W-7A	1/31/2017	28.85	49.98	316.29	287.44
W-7A	5/8/2017	26.47	50.15	316.29	289.82
W-7A	8/28/2017	27.10	50.12	316.29	289.19
W-7A	10/30/2017	27.30	50.09	316.29	288.99
W-7A	2/19/2018	27.30	50.20	316.29	288.99
W-7A	5/21/2018	27.12	50.25	316.29	289.17
W-7A	9/10/2018	27.30	50.25	316.29	288.99
W-7A	11/12/2018	27.39	50.12	316.29	288.90
W-7A	2/11/2019	25.58	50.06	316.29	290.71
W-7A	6/11/2019	25.58	50.05	316.29	290.71
W-7A	8/26/2019	25.61	50.00	316.29	290.68
W-7A	10/28/2019	25.54	50.03	316.29	290.75
W-7A	3/23/2020	24.73	50.02	316.29	291.56
W-7A	6/8/2020	24.30	50.04	316.29	291.99
W-7A	8/31/2020	24.45	49.98	316.29	291.84
W-7A	11/9/2020	24.50	49.94	316.29	291.79
W-7A	3/2/2021	24.40	50.00	316.29	291.89
W-7A	6/1/2021	24.79	50.01	316.29	291.50
W-7B	1/31/2017	26.07	67.98	316.34	290.27
W-7B	5/8/2017	26.17	68.03	316.34	290.17