



## INFILTRATION TESTING REPORT – Revision #1

**DATE:**  
April 29, 2022  
(Revised June 20, 2024)

**PROJECT NUMBER:**  
SL09618-6

**CLIENT:**  
Morro 94, LLC &  
Curry Parkway LP  
Attn: Rob Solley, Steve  
Gallegos and  
Chris Mathys  
2141 Tuolumne St,  
Suite J  
Fresno, CA 93721

**PROJECT NAME:**  
3300 Panorama Drive  
APN: 065-038-001  
Morro Bay, California

### INTRODUCTION

GeoSolutions, Inc. performed infiltration testing using the shallow quick test methodology on February 23, 2022 for the proposed 46-lot residential development to be located at 3300 Panorama Drive, APN: 065-038-001, Morro Bay, California. See Figure 1: Site Location Map for the general location of the project area. The property will hereafter be referred to as the “Site”.

Infiltration testing was performed for the design of storm water control measures at the Site.

The proposed project is located at 35.4054397 degrees north latitude and -120.8641032 degrees west longitude. The property is approximately 9 acres in size, irregular in shape and is bound by Panorama Drive and Tuscan Avenue to the south.

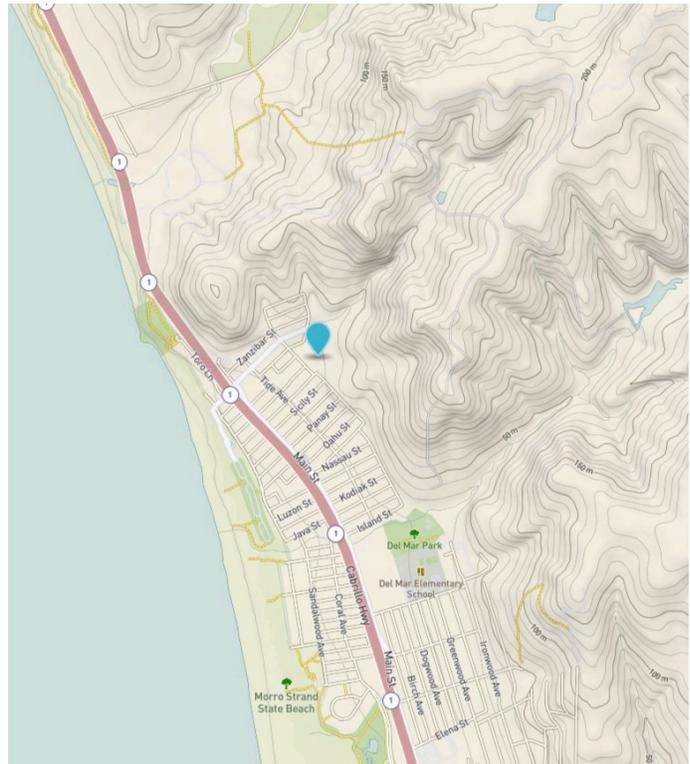


Figure 1: Site Location Map

The project area was a Defense Fuel Point tank facility. The tank farm consisted of two tanks, associated pipelines, as well as operations buildings. The tanks were surrounded by concrete covered berms. It’s our understanding that the fuel tanks and pipelines have been removed. In addition, the concrete covering has been removed, but the surrounding berms remain. The operation buildings are still located on site.

The Site is covered with seasonal grasses and assorted pine trees. Site drainage follows the topography to the west toward an existing drainage gully and south towards Panorama Drive.

### FIELD EXPLORATION

Four, six-inch diameter infiltration test borings were drilled on January 28, 2022 to a maximum depth of 8 feet below ground surface (bgs) at the approximate locations indicated on Figure 2: Infiltration Test Locations. Three-inch diameter perforated PVC pipe was placed in the infiltration test borings and annular space was filled with clean pea gravel. Groundwater and/or impermeable strata were not encountered in any of the infiltration test borings.

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805.543.8539

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Santa Barbara, CA 93103  
805.966.2200

[info@geosolutions.net](mailto:info@geosolutions.net)

[sbinfo@geosolutions.net](mailto:sbinfo@geosolutions.net)

The following field soil classifications for the borings are in accordance with the Unified Soils Classification System (USCS). The soil materials at the Site generally consisted of very dark brown sandy CLAY (CL) with gravels encountered in a slightly moist condition to the termination of the borings at a maximum depth of 8 feet bgs.

### INFILTRATION TESTING

Prior to infiltration testing, each infiltration test boring was presoaked to a stabilized percolation rate.

Infiltration testing consisted of maintaining a constant head of 1.5 gallons per minute for 30 minutes, measuring the depth to the water immediately following. Measurements were then performed every 60 minutes. Testing was terminated after an elapsed time of 240 minutes. The infiltration rates (in inches per hour) were calculated by dividing the time period of the last reading obtained by the recorded water elevation drop. The infiltration test results for the Site are attached.

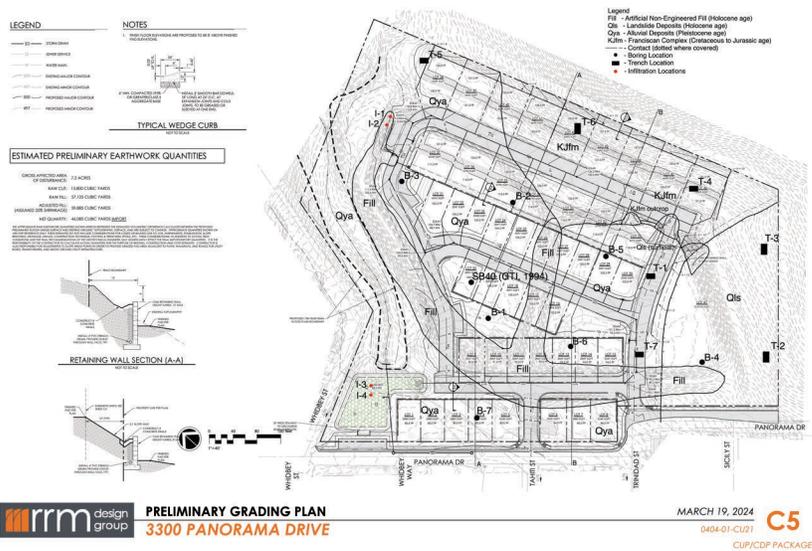


Figure 2: Infiltration Test Locations

Table 1: Infiltration Test Results

Date	Test Location	Depth (ft)	Infiltration Rate (inches/hour)
February 23, 2022	I-1	8	0.12
	I-2	8	0.12
	I-3	8	0.60
	I-4	8	0.72

### CONCLUSIONS

The infiltration test results indicate that infiltration rates of the surface materials can be categorized for hydrologic purposes utilizing the Hydrologic Soil Group (HSG) classification of D. This classification is based on the site soil profile consisting primarily of clay soils with a moderate to high swelling potential, and a very low rate of water transmission between 117.60 and 138.24 inches per hour. These test results correspond to a very low infiltration rate and high runoff potential.

In addition to the infiltration test, soil samples were obtained during the field investigation and tested in the laboratory for classification purposes. Based on the laboratory test results the soil was classified as a sandy CLAY. Based on the clay content of the native soils between 63% and 73%, the soils classify as Group D. For long duration saturated conditions the soils will behave as a Group D.

Group D-Soils in Group D have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted. Group D soils typically have greater than 40 percent clay, less than 50 percent sand, and have clayey textures. In some areas, they also have a high shrink-swell potential. All soils with a depth to a

water impermeable layer less than 20 inches and all soils with a water table within 24 inches of the surface are in this group, although some may have a dual classification, if they can be adequately drained.

The limits on the diagnostic physical characteristics of Group D are as follows. For soils with a water impermeable layer at a depth between 20 and 40 inches, the saturated hydraulic conductivity in the least transmissive soil layer is less than or equal to 0.14 inches per hour. For soils that are deeper than 40 inches to a restriction or water table, the saturated hydraulic conductivity of all soil layers within 40 inches of the surface is less than or equal to 0.06 inches per hour.

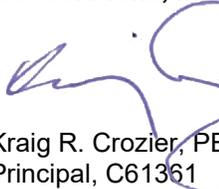
*(Part 630, Hydrology, National Engineering Handbook, 2007)*

### LIMITATIONS

Changes in the location of the proposed storm water control measures will render our findings invalid unless our staff reviews such changes. Subsurface exploration of any site is not necessarily confined to selected location and conditions may, and often do, vary between and around these locations. If varied conditions are encountered during installation, additional exploration and testing may be required. If the installer should discover field conditions that are different from those described in this letter, GeoSolutions, Inc. should be notified immediately for further evaluation.

Thank you for the opportunity to have been of service for Infiltration testing and reporting. If you have any questions or require additional assistance, please feel free to contact the undersigned at (805) 543-8539.

Sincerely,  
**GeoSolutions, Inc.**

  
Kraig R. Crozier, PE  
Principal, C61361



Attachments: Infiltration Boring Logs

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 Phone: 805-966-2200

# INFILTRATION LOG

**BORING NO. I-1**  
**JOB NO. SL09618-4**

## PROJECT INFORMATION

## DRILLING INFORMATION

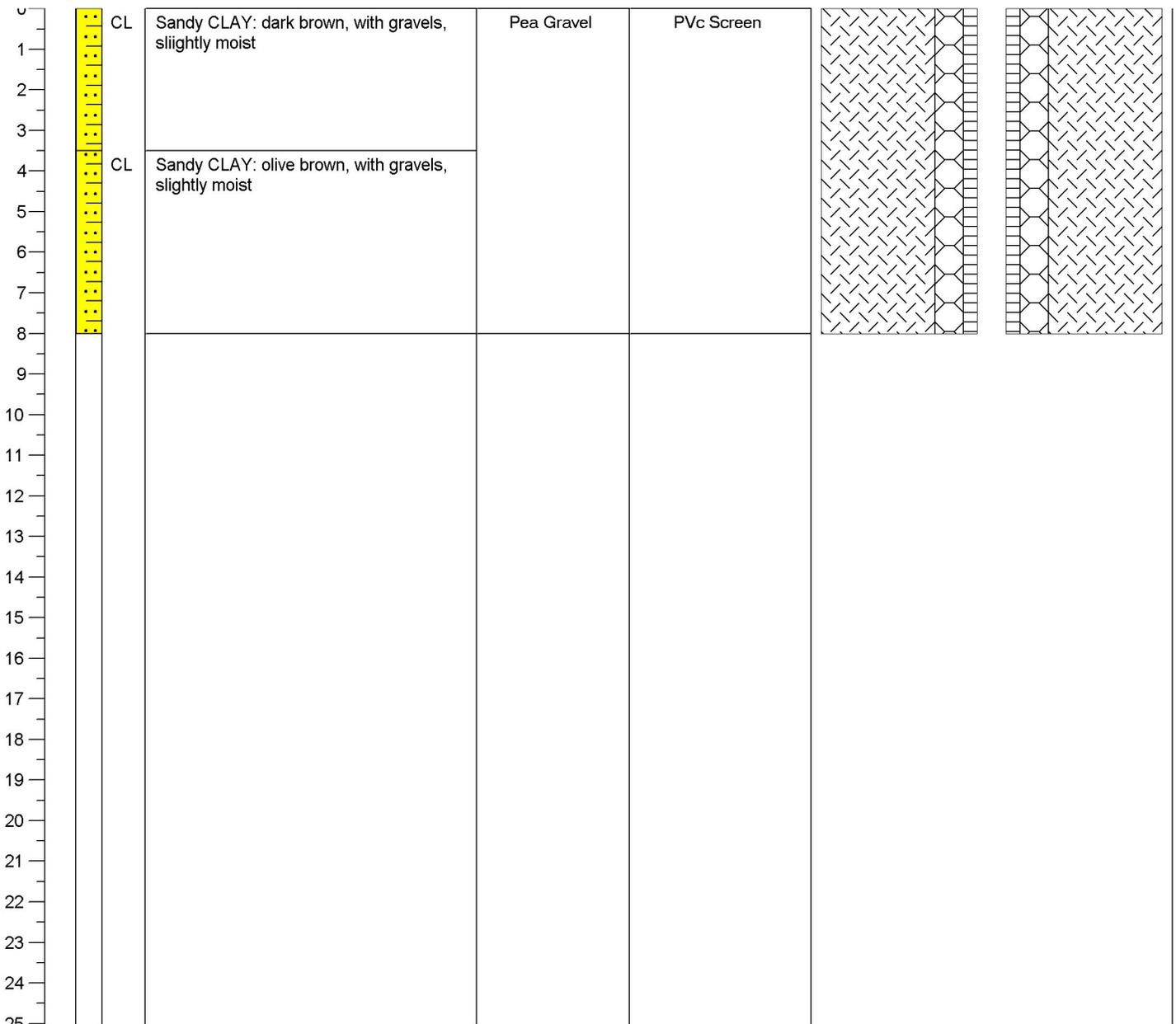
PROJECT: **3300 Panorama Dr**  
 DRILLING LOCATION: **See Figure 2, Site Plan**  
 DATE DRILLED: **January 28, 2022**  
 LOGGED BY: **D. Wordeman**

DRILL RIG: **CME 55**  
 HOLE DIAMETER: **8 Inches**  
 SAMPLING METHOD: **N/A**  
 APPROX. ELEVATION: **Not Recorded**

Depth of Groundwater: **Not Encountered** Boring Terminated At: **8 Feet**

Page 1 of 1

DEPTH	LITHOLOGY	USCS	SOIL DESCRIPTION	ANNULAR MATERIAL DESCRIPTION	WELL CASING MATERIAL DESCRIPTION	WELL CROSS-SECTION
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# INFILTRATION LOG

**BORING NO. I-2**  
**JOB NO. SL09618-4**

## PROJECT INFORMATION

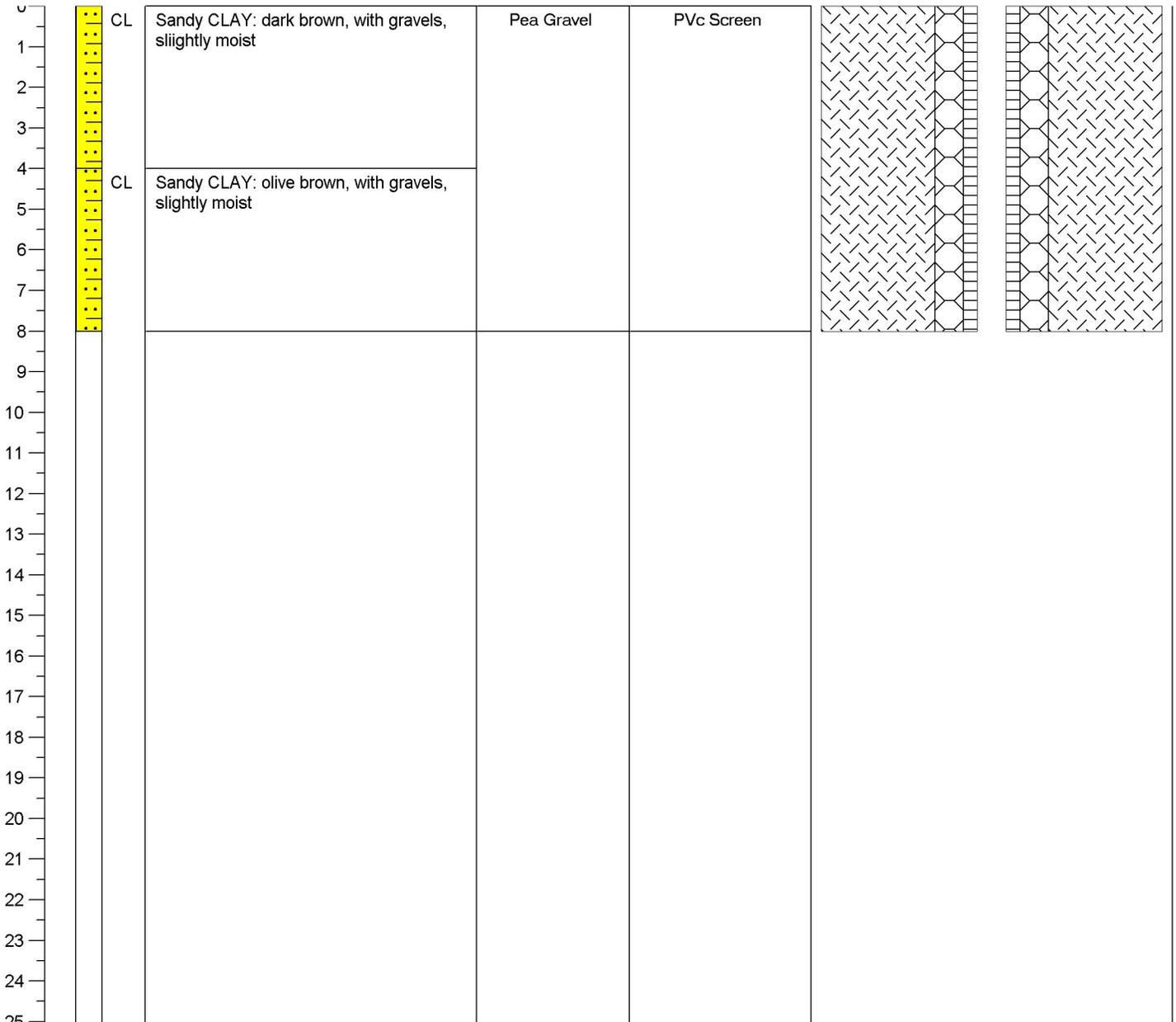
## DRILLING INFORMATION

PROJECT: **3300 Panorama Dr**  
 DRILLING LOCATION: **See Figure 2, Site Plan**  
 DATE DRILLED: **January 28, 2022**  
 LOGGED BY: **D. Wordeman**

DRILL RIG: **CME 55**  
 HOLE DIAMETER: **8 Inches**  
 SAMPLING METHOD: **N/A**  
 APPROX. ELEVATION: **Not Recorded**

Depth of Groundwater: **Not Encountered** Boring Terminated At: **8 Feet**

DEPTH	LITHOLOGY	USCS	SOIL DESCRIPTION	ANNULAR MATERIAL DESCRIPTION	WELL CASING MATERIAL DESCRIPTION	WELL CROSS-SECTION
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# INFILTRATION LOG

**BORING NO. I-3**  
**JOB NO. SL09618-4**

## PROJECT INFORMATION

## DRILLING INFORMATION

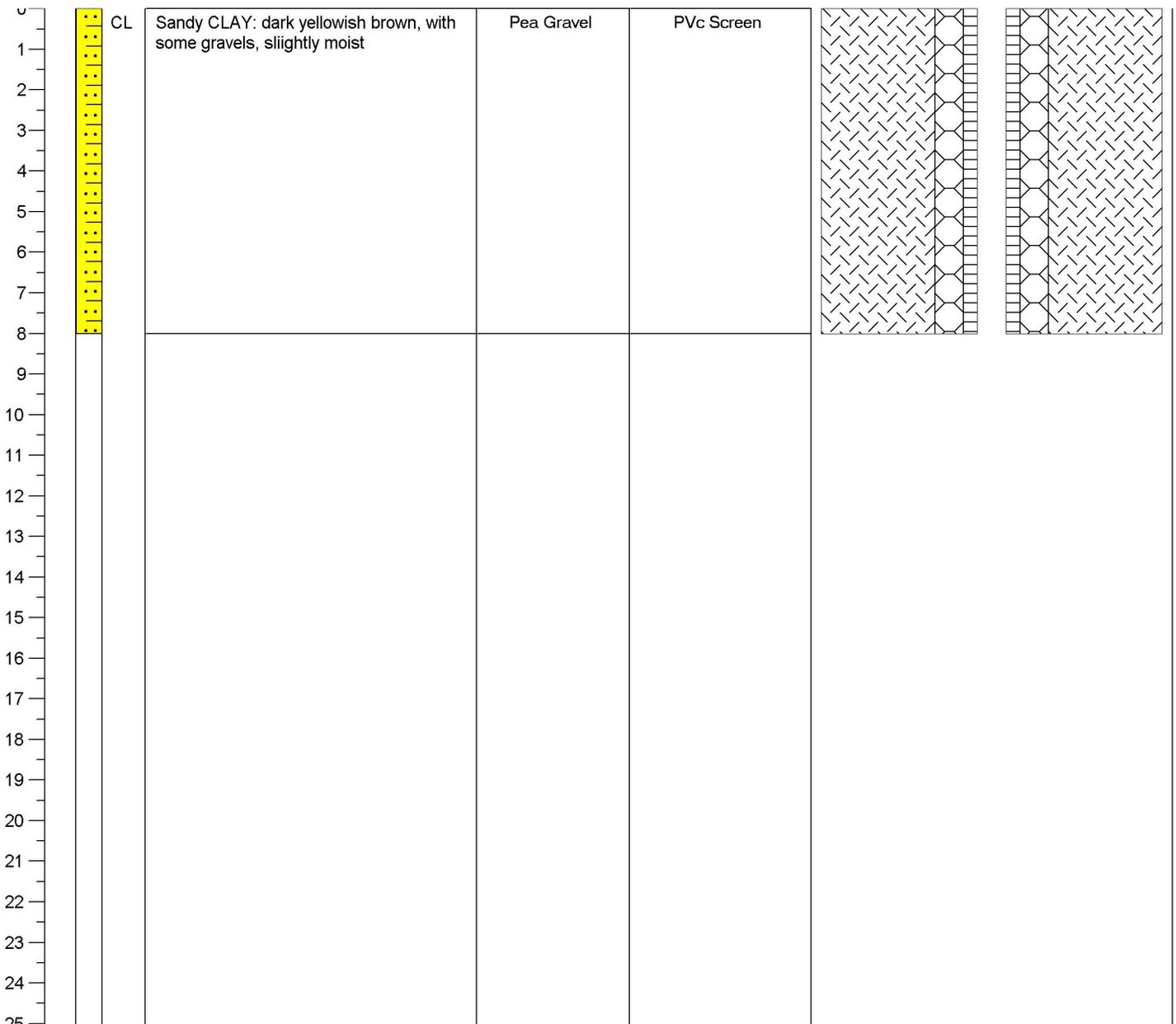
PROJECT: **3300 Panorama Dr**  
 DRILLING LOCATION: **See Figure 2, Site Plan**  
 DATE DRILLED: **January 28, 2022**  
 LOGGED BY: **D. Wordeman**

DRILL RIG: **CME 55**  
 HOLE DIAMETER: **8 Inches**  
 SAMPLING METHOD: **N/A**  
 APPROX. ELEVATION: **Not Recorded**

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Page 1 of 1

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# INFILTRATION LOG

**BORING NO. I-4**  
**JOB NO. SL09618-4**

## PROJECT INFORMATION

## DRILLING INFORMATION

PROJECT: **3300 Panorama Dr**  
 DRILLING LOCATION: **See Figure 2, Site Plan**  
 DATE DRILLED: **January 28, 2022**  
 LOGGED BY: **D. Wordeman**

DRILL RIG: **CME 55**  
 HOLE DIAMETER: **8 Inches**  
 SAMPLING METHOD: **N/A**  
 APPROX. ELEVATION: **Not Recorded**

Depth of Groundwater: **Not Encountered** Boring Terminated At: **8 Feet**

DEPTH	LITHOLOGY	USCS	SOIL DESCRIPTION	ANNULAR MATERIAL DESCRIPTION	WELL CASING MATERIAL DESCRIPTION	WELL CROSS-SECTION
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0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25		CL	Sandy CLAY: dark yellowish brown, with some gravels, slightly moist	Pea Gravel	PVC Screen	
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