SHALLOW PERCOLATION TESTING REPORT

DATE:
March 14, 2022

PROJECT NUMBER:
SL06089-3

CLIENT:
Adam and Billie Jean Nielson
1730 Northwood Road
Nipomo, California 93444

PROJECT NAME:
256 Candice Court
APN: 075-391-044
Arroyo Grande Area, San Luis Obispo County, California

INTRODUCTION

GeoSolutions, Inc. performed shallow percolation testing on February 25, 2022 for a new single-family residence at 256 Candice Court, APN: 075-391-044, Arroyo Grande Area, San Luis Obispo County, California. See Figure 1: Site Location Map for the general location of the project area and for the percolation test area. Figure 1: Site Location Map was obtained from the website application *TopoView* (USGS, 2013). The property tested for percolation will hereafter be referred to as the "Site."

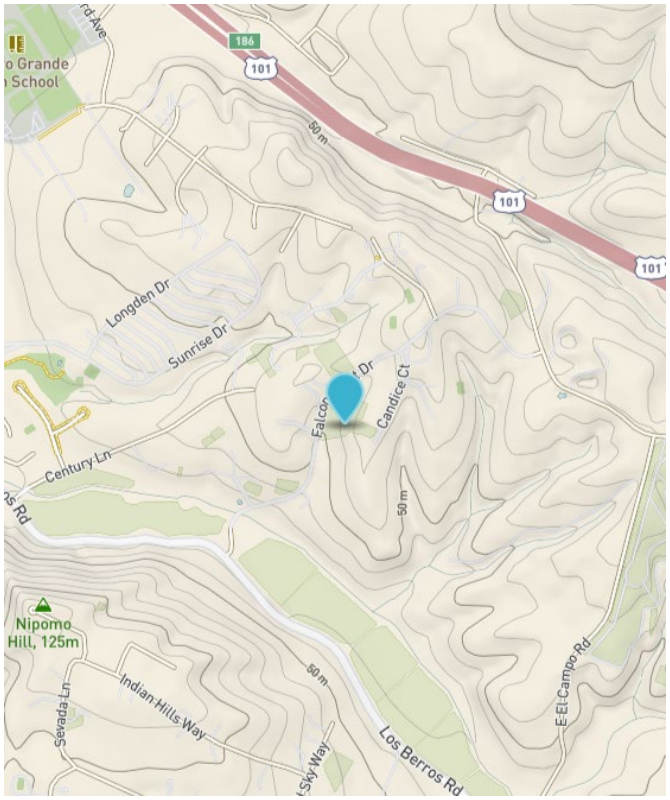

Figure 1: Site Location Map

256 Candice Court is located at 35.104 degrees north latitude and 120.568 degrees west longitude at a general elevation of 190 feet above mean sea level. The property is trapezoidal in shape and approximately 2.5 acres in size. The nearest intersection is located where Candice Court intersects Crest Drive to the north.

The Site is situated on a down-slope in a west-southwest direction. The slope gradient is generally constant at approximately 10-to-1 (horizontal to vertical) through the majority of the site and increases to approximately 8-to-1 in the western portion of the Site. Surface drainage follows the topography to the west-southwest to existing drainage ways.

FIELD EXPLORATION

Utilizing our mobile B-24 drill rig, four, 6-inch diameter percolation test borings were drilled to an average depth of 5 feet below ground surface (bgs), and one exploratory boring was drilled to an approximate depth of 25 feet bgs. See Figure 2: Site Plan for the approximately locations of the percolation test borings and the exploratory boring.

Three-inch diameter perforated PVC pipe was placed in the percolation test borings, and the annular space was filled with native material.

Groundwater was not encountered in the deep exploratory boring.

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805.543.8539

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201 S. Milpas Street, Suite 103
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805.966.2200

info@geosolutions.net

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The soils encountered during the field investigation were classified in the field in accordance with the Unified Soils Classification System (USCS).

The surface materials at the Site generally consisted of dark yellowish brown clayey SAND (SC) with gravel in a dry and medium dense to dense condition. The sub-surface materials in consisted of yellowish-brown sandy CLAY (CL) with gravel in a moist and hard condition. The soils were interpreted as Paso Robles Formation. Please refer to the attached percolation boring logs for detailed soil profiles.

Figure 2: Site Plan

PERCOLATION TESTING

Each percolation test boring was presoaked prior to percolation testing. Percolation testing consisted of placing approximately 12 inches of water in each boring and measuring the depth to the water every 30 minutes for a total of 6 hours of testing.

The stabilized percolation rates (in minutes per inch) were calculated by dividing the time period of the last reading obtained by the recorded water elevation drop. Stabilized percolation test results are presented below in Table 1.

Table 1: Percolation Test Results

Date	Test Location	Depth (ft)	Percolation Rate (minutes/inch)
February 25, 2022	P-1	5	63
	P-2	5	50
	P-3	5	83
	P-4	5	63
	P-5	25	-

CONCLUSIONS

The stabilized percolation rate for the tested area was an average of 65 minutes per inch. Groundwater was not encountered in the 25 feet below ground surface exploratory boring.

LIMITATIONS

Changes in disposal field location 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 septic system installation, additional exploration and/or testing may be required. If the installer should discover field conditions

that are different from those described in this report, then GeoSolutions, Inc. should be notified immediately for further evaluation. This percolation testing report is not intended to be used as a septic design.

Thank you for the opportunity to have been of service for percolation testing and reporting. If you have any questions or require additional assistance, please feel free to contact the undersigned at (805) 614-6333.

Sincerely,
GeoSolutions, Inc.

Patrick B. McNeill

Patrick B. McNeill, PE
Principal

Attachments: Percolation Boring Logs, Percolation Field Test Data, Private Sewage Disposal System Percolation Test and Boring Requirements (*San Luis Obispo County Planning and Building Department, 12/22/2008*), Updated Criteria for Onsite Wastewater Treatment Systems (*San Luis Obispo County Planning and Building Department, 5/11/2018*)

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PERCOLATION LOG

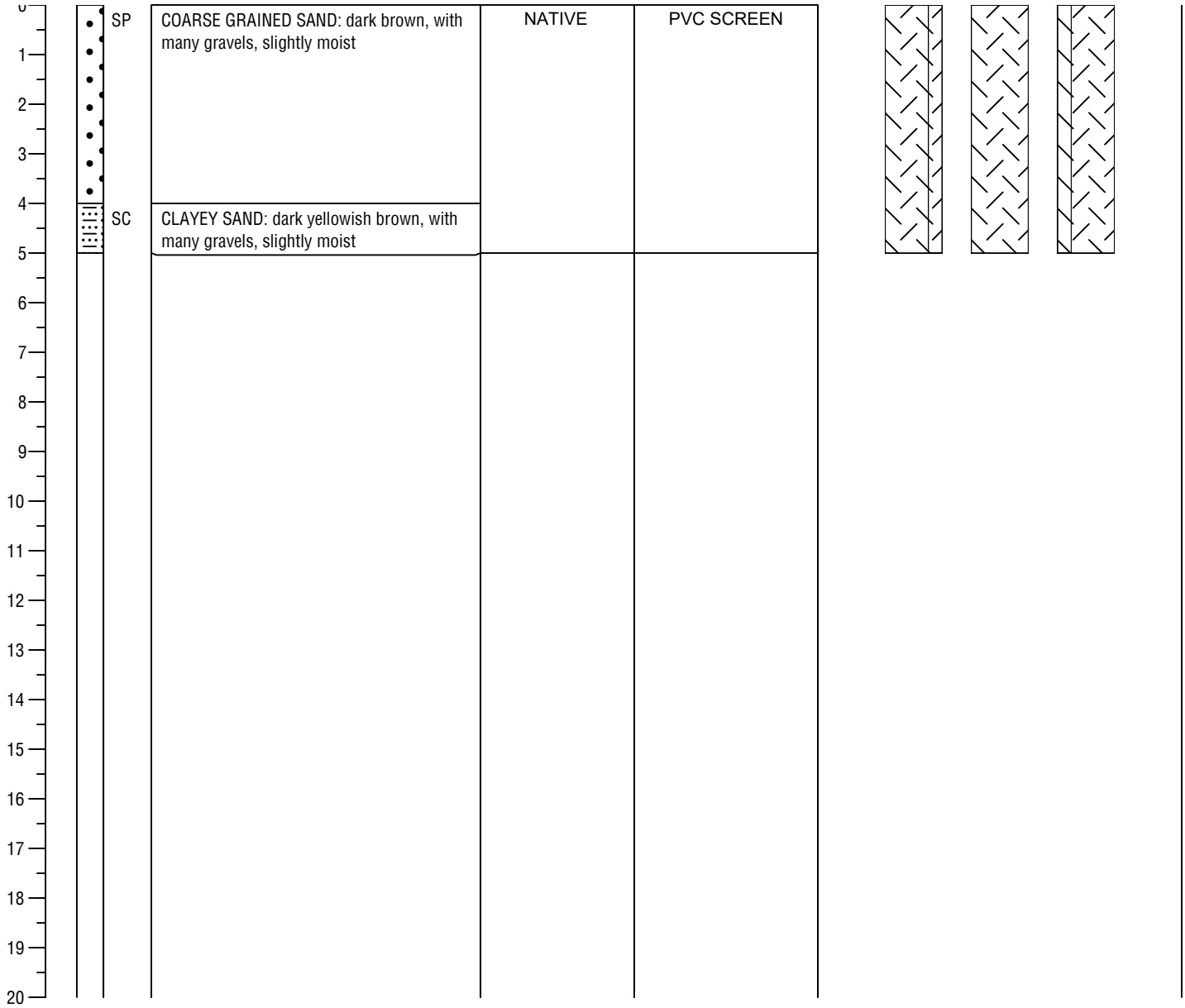
BORING NO. P-1

JOB NO. SL06089-3

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**256 Candice Court**	DRILL RIG:	**Mobile B-24**
DRILLING LOCATION:	**See Figure 2, Site Plan**	HOLE DIAMETER:	**6 inches**
DATE DRILLED:	**February 10, 2022**	SAMPLING METHOD:	**N/A**
LOGGED BY:	**DW**	APPROX. ELEVATION:	**Not Recorded**

Depth of Groundwater: **Not Encountered** Boring Terminated At: **5 feet**

DEPTH	LITHOLOGY	USCS	SOIL DESCRIPTION	ANNULAR MATERIAL DESCRIPTION	WELL CASING MATERIAL DESCRIPTION	WELL CROSS-SECTION
0–4		SP	COARSE GRAINED SAND: dark brown, with many gravels, slightly moist	NATIVE	PVC SCREEN	
4–5		SC	CLAYEY SAND: dark yellowish brown, with many gravels, slightly moist			



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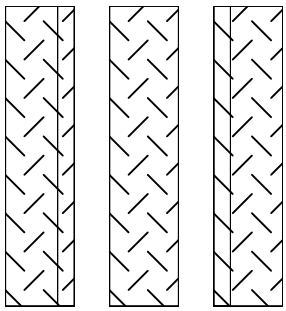
PERCOLATION LOG

BORING NO. P-2

JOB NO. SL06089-3

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**256 Candice Court**	DRILL RIG:	**Mobile B-24**
DRILLING LOCATION:	**See Figure 2, Site Plan**	HOLE DIAMETER:	**6 inches**
DATE DRILLED:	**February 10, 2022**	SAMPLING METHOD:	**N/A**
LOGGED BY:	**DW**	APPROX. ELEVATION:	**Not Recorded**

Depth of Groundwater: **Not Encountered** Boring Terminated At: **5 feet**

DEPTH	LITHOLOGY	USCS	SOIL DESCRIPTION	ANNULAR MATERIAL DESCRIPTION	WELL CASING MATERIAL DESCRIPTION	WELL CROSS-SECTION
0–4		SP	COARSE GRAINED SAND: dark brown, with many gravels, slightly moist	NATIVE	PVC SCREEN	
4–5		SC	CLAYEY SAND: dark yellowish brown, with many gravels, slightly moist			

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

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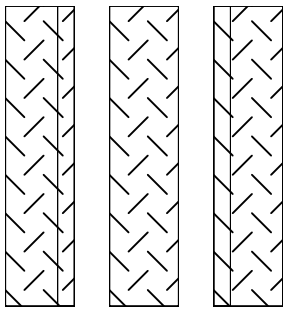
PERCOLATION LOG

BORING NO. P-3

JOB NO. SL06089-3

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**256 Candice Court**	DRILL RIG:	**Mobile B-24**
DRILLING LOCATION:	**See Figure 2, Site Plan**	HOLE DIAMETER:	**6 inches**
DATE DRILLED:	**February 10, 2022**	SAMPLING METHOD:	**N/A**
LOGGED BY:	**DW**	APPROX. ELEVATION:	**Not Recorded**

Depth of Groundwater: **Not Encountered** Boring Terminated At: **5 feet**

DEPTH	LITHOLOGY	USCS	SOIL DESCRIPTION	ANNULAR MATERIAL DESCRIPTION	WELL CASING MATERIAL DESCRIPTION	WELL CROSS-SECTION
0–4		SP	COARSE GRAINED SAND: dark brown, with many gravels, slightly moist	NATIVE	PVC SCREEN	
4–5		SC	CLAYEY SAND: dark yellowish brown, with many gravels, slightly moist			

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PERCOLATION LOG

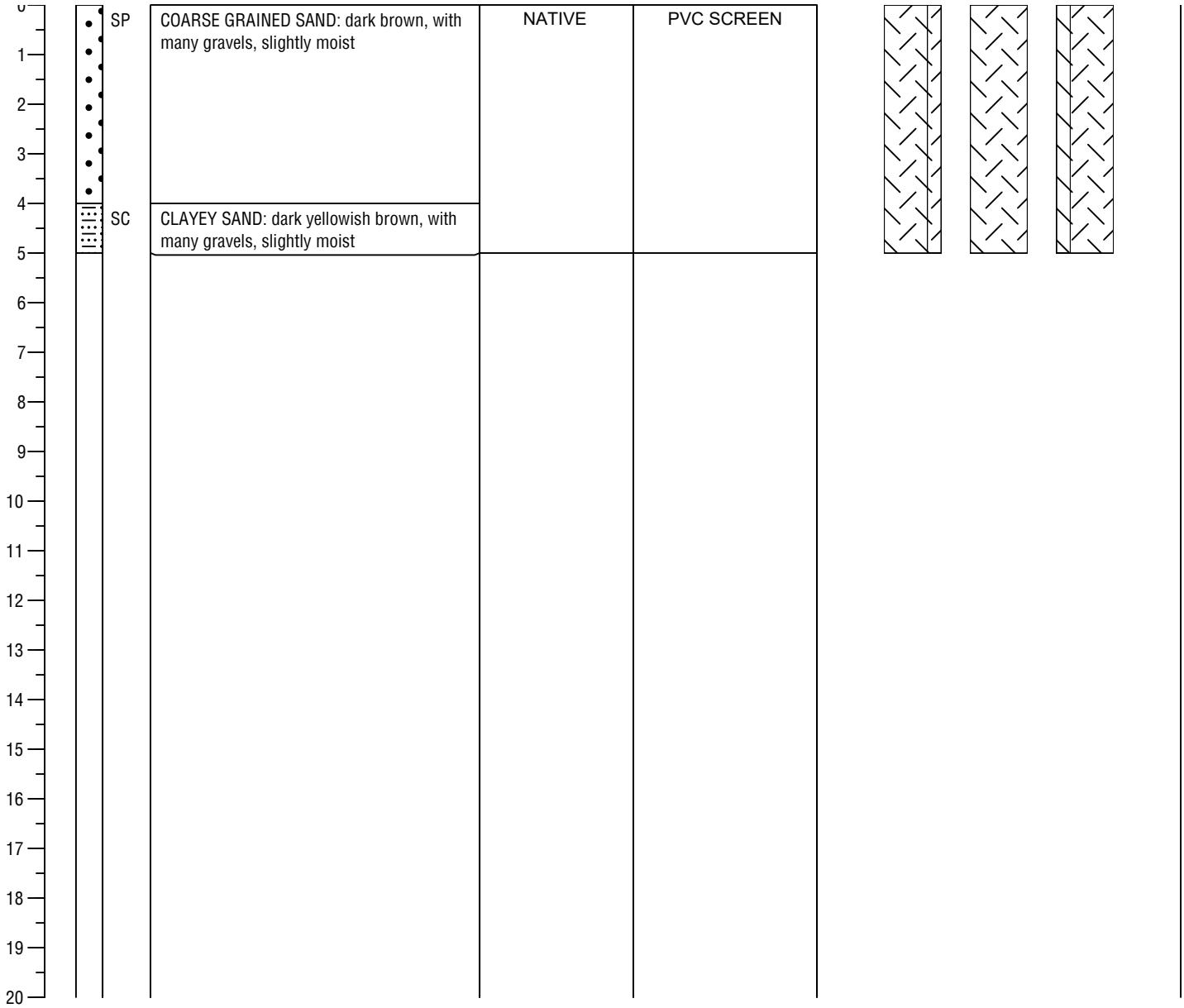
BORING NO. P-4

JOB NO. SL06089-3

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**256 Candice Court**	DRILL RIG:	**Mobile B-24**
DRILLING LOCATION:	**See Figure 2, Site Plan**	HOLE DIAMETER:	**6 inches**
DATE DRILLED:	**February 10, 2022**	SAMPLING METHOD:	**N/A**
LOGGED BY:	**DW**	APPROX. ELEVATION:	**Not Recorded**

Depth of Groundwater: **Not Encountered** Boring Terminated At: **5 feet**

DEPTH	LITHOLOGY	USCS	SOIL DESCRIPTION	ANNULAR MATERIAL DESCRIPTION	WELL CASING MATERIAL DESCRIPTION	WELL CROSS-SECTION
0–4		SP	COARSE GRAINED SAND: dark brown, with many gravels, slightly moist	NATIVE	PVC SCREEN	
4–5		SC	CLAYEY SAND: dark yellowish brown, with many gravels, slightly moist			



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PERCOLATION LOG

BORING NO. P-5

JOB NO. SL06089-3

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**256 Candice Court**	DRILL RIG:	**Mobile B-24**
DRILLING LOCATION:	**See Figure 2, Site Plan**	HOLE DIAMETER:	**6 inches**
DATE DRILLED:	**February 10, 2022**	SAMPLING METHOD:	**N/A**
LOGGED BY:	**DW**	APPROX. ELEVATION:	**Not Recorded**

Depth of Groundwater: **Not Encountered** Boring Terminated At: **25 feet**

DEPTH	LITHOLOGY	USCS	SOIL DESCRIPTION	ANNULAR MATERIAL DESCRIPTION	WELL CASING MATERIAL DESCRIPTION	WELL CROSS-SECTION
0–4		SP	COARSE GRAINED SAND: dark brown, with many gravels, slightly moist			
4–12		SC	CLAYEY SAND: dark yellowish brown, with many gravels, slightly moist many cobbles			
12–25		CL	SANDY CLAY: yellowish brown, slightly moist			

PERCOLATION FIELD TEST DATA

Job Name: 256 Candice Court
Job #: SL06089-3
Date: 2/25/2022
Technician: GD

Type of Test Hole: **(X) Standard 3" PVC w/ 6" boring** **( ) Backhoe Pit**

If the backhoe pit has been utilized please provide dimensions of the actual perc test hole including the depth of water tested.

Pit Hole Size: _____ **Water Depth:** _____

Unit of Measure:	**Inches**	**0**
1 for True (ON)	**Decimal Feet**	**1**
0 for False (OFF)	**Centimeters**	**0**

WATER DEPTH FROM TOP OF CASING							
Time (min), Rates	**P-1**	**Time (min), Ra**	**P-2**	**Time (min), Ra**	**P-3**	**Time (min), Ra**	**P-4**
0	1.13	0	0.97	0	1.15	0	1.62
DH	0.67	DH	0.59	DH	0.55	DH	0.54
Rate (min/in)	3.73	**Rate (min/in)**	4.24	**Rate (min/in)**	4.55	**Rate (min/in)**	4.63
30	1.80	30	1.56	30	1.70	30	2.16
DH	0.16	DH	0.25	DH	0.21	DH	0.18
Rate (min/in)	15.63	**Rate (min/in)**	10.00	**Rate (min/in)**	11.90	**Rate (min/in)**	13.89
60	1.96	60	1.81	60	1.91	60	2.34
DH	0.10	DH	0.14	DH	0.11	DH	0.12
Rate (min/in)	25.00	**Rate (min/in)**	17.86	**Rate (min/in)**	22.73	**Rate (min/in)**	20.83
90	2.06	90	1.95	90	2.02	90	2.46
DH	0.07	DH	0.12	DH	0.11	DH	0.09
Rate (min/in)	35.71	**Rate (min/in)**	20.83	**Rate (min/in)**	22.73	**Rate (min/in)**	27.78
120	2.13	120	2.07	120	2.13	120	2.55
DH	0.06	DH	0.08	DH	0.09	DH	0.06
Rate (min/in)	41.67	**Rate (min/in)**	31.25	**Rate (min/in)**	27.78	**Rate (min/in)**	41.67
150	2.19	150	2.15	150	2.22	150	2.61
DH	0.07	DH	0.08	DH	0.07	DH	0.07
Rate (min/in)	35.71	**Rate (min/in)**	31.25	**Rate (min/in)**	35.71	**Rate (min/in)**	35.71
180	2.26	180	2.23	180	2.29	180	2.68
DH	0.04	DH	0.06	DH	0.05	DH	0.04
Rate (min/in)	62.50	**Rate (min/in)**	41.67	**Rate (min/in)**	50.00	**Rate (min/in)**	62.50
210	2.30	210	2.29	210	2.34	210	2.72
DH	0.04	DH	0.04	DH	0.06	DH	0.05
Rate (min/in)	62.50	**Rate (min/in)**	62.50	**Rate (min/in)**	41.67	**Rate (min/in)**	50.00
240	2.34	240	2.33	240	2.40	240	2.77
DH	0.04	DH	0.06	DH	0.05	DH	0.04
Rate (min/in)	62.50	**Rate (min/in)**	41.67	**Rate (min/in)**	50.00	**Rate (min/in)**	62.50
270	2.38	270	2.39	270	2.45	270	2.81
DH	0.04	DH	0.05	DH	0.05	DH	0.04
Rate (min/in)	62.50	**Rate (min/in)**	50.00	**Rate (min/in)**	50.00	**Rate (min/in)**	62.50
300	2.42	300	2.44	300	2.50	300	2.85
DH	0.04	DH	0.05	DH	0.04	DH	0.04
Rate (min/in)	62.50	**Rate (min/in)**	50.00	**Rate (min/in)**	62.50	**Rate (min/in)**	62.50
330	2.46	330	2.49	330	2.54	330	2.89
DH	0.04	DH	0.05	DH	0.03	DH	0.04
Rate (min/in)	62.50	**Rate (min/in)**	50.00	**Rate (min/in)**	83.33	**Rate (min/in)**	62.50
360	2.50	360	2.54	360	2.57	360	2.93
Hole Depth (ft)		**Hole Depth (ft)**		**Hole Depth (ft)**		**Hole Depth (ft)**	
No. of Measurements	**13**	**No. of Measur**	**13**	**No. of Measur**	**13**	**No. of Measur**	**13**
Perc Rate (min/in)	**62.50**	**Perc Rate (mir**	**50.00**	**Perc Rate (mir**	**83.33**	**Perc Rate (mir**	**62.50**

PRIVATE SEWAGE DISPOSAL SYSTEMS
PERCOLATION TEST AND BORING REQUIREMENTS

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING
976 OSOS STREET • ROOM 200 • SAN LUIS OBISPO • CALIFORNIA 93408 • (805) 781-5600

Promoting the Wise Use of Land • Helping to Build Great Communities

Only those individuals trained and educated to perform, understand, and evaluate field conditions as they relate to on-site sewage treatment are allowed to perform percolation and boring tests. The individuals supervising the field work must be named along with their education or training background in the description of the test procedure section of the report.

A. Testing procedures for leach lines. Percolation test

1. Test hole openings should have an 8-12 inch diameter, or be 7-11 inches on the side if square. The walls should be vertical.

2. The bottom of the test hole should correspond with the bottom of the proposed trench and shall be covered with 2 inches of gravel.

3. Presoak the test hole overnight, prior to testing. For sandy soils, presoak until water level stabilizes, see B-1 below.

4. The height of the water should be re-filled to initial height of between 8 and 10 inches over the gravel after each reading.

5. The surface of the hole shall be un-compacted: any cobbles protruding from the surface shall be left in place.

B. Measurements

1. In sandy soils in which two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every ten minutes. The drop that occurs during the final ten minutes should be used to calculate the percolation rate. Field data must show the two 25 minute readings, along with the six-10 minute readings.

2. In all other than sandy soils, pre soak (fill) and wait overnight. If necessary, Re-fill the hole the next day. Obtain at least 12 measurements per hole over at least six hours with a precision of at least 0.25 inch. Intervals between readings shall be approximately 30 minutes. The drop that occurs during the last 30 minutes is used to calculate the percolation rate. Field data must show the twelve 30 minute readings.

C. Testing procedure for Dry Wells (Seepage Pits) Performance Test

1. The hole diameter should be between 6 to 8” The depth should be the same as the depth proposed to a maximum of 50’

2. Carefully fill the hole with clear water to a maximum depth of 4’ below the surface of the ground, or if cuts are anticipated, to the depth of the assumed inlet.

3. All holes shall be pre-soaked for 24 hours unless the site consists of sandy soils containing little or no clay. In sandy soils where the water on two consecutive readings seeps away faster than half the wetted depth in 25 minutes or less, re-fill the hole with water, and pre-soak for an additional two hours. After the two hour pre-soak, the test may then be run. The time interval between measurements shall be taken at ten minutes and the test run for one hour. Re-fill to original depth after each reading.

4. For all other soils, the percolation rate measurement shall be made on the day following pre-soak as described above. After 24 hours have elapsed, re-fill the hole to the proposed inlet depth. The fall of water should be measured every half hour over a five hour period. Re-fill the hole after each half hour reading. During the last or the sixth hour, do not re-fill the hole after the half hour reading. Be sure to check the total hole depth every half hour as well to see if any caving has occurred.

5. Readings will be in min/inch just like they are for leachlines. Rates are set by the RWQCB. Utilize 0.3 gallons per square foot per day for disposal rate, and 375 gallons per day average daily flow per household, up to four bedrooms.

6. Seepage pits will not be allowed when percolation rates are slower than 55 minutes and inch.

D. Exploratory Boring

1. An exploratory boring is a hole excavated or drilled in the area where the disposal field is proposed in order to determine the type of soil, moisture content, depth of water table, or impervious material.

2. All borings must extend to a minimum depth of ten feet below the bottom of the proposed disposal system so as to determine the depth of the water table, bedrock, and or impervious material. Minimum depth of any boring is 15 feet or stated refusal.

3. When percolation results are faster than 1 minute an inch, the exploratory boring shall be drilled to a depth of 50 feet below the depth of the proposed disposal system. For percolation results between 1 and 4 minutes an inch, the boring shall be drilled to a depth of 20 feet below the proposed disposal system.

4. A log of the soil spectrum shall be conducted and included as part of the written percolation test.

5. All borings used to check for groundwater must stay open a minimum of 24 hours prior to the final reading and groundwater check. Water levels are to be recorded at the highest discovered level following the 24 hour period. If any groundwater is encountered within those limits that may affect the subsurface sewage disposal , an evaluation by the engineer must be given in the conclusion section of the report to what maximum depth the water level may be anticipated to rise, taking into consideration the date of the test, season, rainfall, local well information, and historic high groundwater data.

6. Measurements of depth to seasonal high groundwater shall be conducted from November 1st to April 1st unless otherwise specified by the building official.

7. In areas with seasonal high groundwater, a groundwater level monitoring well shall be installed to a minimum depth of ten feet in the area of a proposed wastewater dispersal system. Groundwater monitoring wells shall be a minimum of 3 inch PVC pipe and shall have a removable cap. The top 18 inches around the pipe shall be sealed with Bentonite or other suitable sealer to prevent surface pollutants from intruding into the well. Below 18 inches, the pipe shall be perforated. Monitoring

wells shall not be deeper than 15 feet, unless required by the building official. If an impermeable layer is present at a depth of less than ten feet below the ground surface, the depth of the groundwater level monitoring well shall be decreased to the depth of the impermeable layer.

8. Percolation tests and borings should be located in the area that the sewage disposal system is ultimately placed. In order to be as close as possible, the engineer must assume that the system will cover a much larger area than any one test covers: and therefore random testing should be conducted.

The following is a list of the number of required percolation tests and required number of borings per parcel:

- On all lots 1 acre or larger, a minimum of 4 percolation tests and one boring will be required for all single family dwellings.

- On all lots one acre or larger, for seepage pits, a minimum of 1 percolation test and boring will be required for all single family dwellings. Boring shall be a minimum of ten feet deeper than proposed pits, to rule out groundwater or impermeable strata.

- For commercial & industrial developments, 4 percolation tests and one boring for each 2000 gallon septic tank. (leachlines)

- For commercial & industrial developments, 2 percolation tests and one boring for each 2000 gallon septic tank. (drywell)

- For all Subdivisons and Tracts, 3 percolation tests and one boring on each parcel.

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING

BLD-2028
06/21/2018

UPDATED Criteria for Onsite Wastewater Treatment Systems (Septic Systems)

This document outlines the updated criteria for permitting onsite wastewater treatment systems (septic systems) in the County of San Luis Obispo. **These standards take effect Monday, May 14. 2018 and will remain in place until the adoption of an approved County Local Agency Management Program.** The State of California Onsite Wastewater Treatment System (OWTS) Policy Standards supersede San Luis Obispo County Codes (Title 19).

Replacement or repair of Septic Systems: The County does not have the authority to permit the replacement of failing systems or system components that cannot be repaired to meet Tier 1 standards. If the repair/replacement cannot meet the criteria outlined in this document, or the OWTS Policy, the applicant must pursue permitting the repair through the Central Coast Water Board.

The County has the authority to permit repairs on systems that will conform to Tier 1 requirements. Repairs or replacements include: leach line replacement, tank failure, baffle failure, broken piping, distribution box failure, or any other failure that causes pooling effluent, wastewater backup to plumbing fixtures, or discharges of wastewater to the surface.

Percolation Pits: The County does not have the authority to permit the installation or replacement of seepage/percolation pits. Applicants must seek approval from the Central Coast Water Board for installation of systems that utilize seepage/percolation pits.

Maximum Daily Flow Volume: The County does not have the authority to permit systems discharging 3,500 gallons per day or more. Applicants must seek approval from the Central Coast Water Board for installation of systems that exceed 3,500 gallons per day.

Central Coast Water Board Permitting: Permits that cannot be reviewed or approved by the County Department of Planning & Building must attain separate approval from the Central Coast Water Board. Guidance for completing the permit application process with the Central Coast Water Board is located at:

https://www.waterboards.ca.gov/centralcoast/water_issues/programs/septics/permits.html

Questions about Water Board Permitting should be emailed to:

RB3-WDR@waterboards.ca.gov

Criteria for Permitting through County of San Luis Obispo:

Proposed septic systems must adhere to all design criteria in the following pages in order to pursue permitting through the County of San Luis Obispo Department of Planning & Building. For additional detail review the Tier 1 criteria in the State of California Onsite Wastewater Treatment System Policy:

https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf

UPDATED Criteria for Onsite Wastewater Treatment Systems

Minimum Percolation Required: Leaching systems may be used where the percolation rate is between 1 and 120 minutes per inch. Systems in areas with percolation rates outside that range must be permitted by the Central Coast Water Board. Systems shall be designed by a licensed engineer or an REHS qualified to design septic systems.

Site Slope: Septic tanks or leaching systems shall not be installed on slopes of 25 percent or more.

Separation from Impermeable Strata. A minimum distance of 10 feet shall be maintained from the bottom of leaching systems to impermeable strata. This distance shall be verified by test borings where required by the Building Official.

Groundwater Separation: The required depth from the bottom of the leach area to usable groundwater (including usable perched groundwater) is given in the table below. The Building Official may require testing or documentation to verify that the required separation has been met.

Percolation Rate (minutes per inch)	**Minimum Distance to Groundwater** (feet)
less than 1	**No County Permitting**
1 to ≤5	20
5 to ≤ 30	8
30 to ≤120	5
120 or more	**No County Permitting**

Septic Tank Size: The minimum tank capacity for new or replaced residential systems is noted below. Filters are required on all tanks. For septic tank capacity for other occupancies, and for septic tank design, refer to the California Plumbing Code.

Capacity of Septic Tanks			
Single Family Dwellings - Number of Bedrooms	**Multiple Dwelling Units/Apts - One Bedroom Each***	**Other Uses: Max Fixture Units Served****	**Minimum Septic Tank Capacity in Gallons**
1 or 2	–	15	750
3	–	20	1000
4	2 units	25	1200
5 or 6	3 units	33	1500

** Extra bedroom 150 gallons **See California Plumbing Code Table H.201.1*

UPDATED Criteria for Onsite Wastewater Treatment Systems

System Setbacks & Location: Soil absorption disposal systems, including but not limited to leach areas, shall be located in accordance with the setbacks listed below:

Required System Setbacks			
Min. Distance Required From:	**Building Sewer Line**	**Septic Tank**	**Disposal Field**
Buildings or Structures	2 feet	5 feet	8 feet
Property Line- Private Property	Clear	5 feet	5 feet
Water Supply Wells	50 feet	100 feet	100 feet
Streams, Springs & Water Migration	50 feet	100 feet	100 feet
Large Trees	–	10 feet	–
Reservoir, Spillway Elevation	–	200 feet*	200 feet*
Vernal Pools, Wetlands, lakes or Ponds	-	200 feet	200 feet
Disposal Field	–	5 feet	3 feet
Domestic Water Line	1 foot	5 feet	5 feet
Public Wells	_	150 feet	150 feet
Unstable Land Mass (bluff edge or slide)	100 feet	100 feet	100 feet
Distribution Box	–	–	5 feet

** All septic systems shall maintain a minimum of 1,200 foot setback from all components to surface water intake.*

Required Expansion Area: Individual systems shall be designed and constructed to either reserve sufficient site area for dual leach fields (100% replacement area), or to include dual leach fields with a diverter valve at the time of initial system installation. The expansion area must meet all setback criteria for disposal fields. Installation of dual leach fields will be required if site access for installation of the expansion area would not be feasible after initial site development.

Qualified System Designers: All systems shall be designed by a qualified professional. Qualified professionals include currently licensed professional engineers, professional geologists, and registered environmental health specialists.

Qualified System Installers: A Licensed General Engineering Contractor (Class A), General Building Contractor (Class B), Sanitation System Contractor (Specialty Class C42), or Plumbing Contractor (Specialty Class C-36) shall install all new OWTS and replacement OWTS in accordance with California Business and Professions Code Sections 7056, 7057, and 7058 and Article 3, Division 8, Title 16 of the California Code of Regulations.

UPDATED Criteria for Onsite Wastewater Treatment Systems

Disposal Area Criteria - Single Family Dwellings: For systems serving single family dwellings, required disposal areas are given in the table below. Percolation tests are required for all sites. Disposal systems shall not exceed a maximum depth of 10 feet as measured from the ground surface to the bottom of the trench, and shall have at least 12 inches of soil cover. The absorption areas in the table are based on the Regional Water Quality Control Board's Basin Plan requirement that residential systems be designed for a flow rate of at least 375 gallons per day.

Required Size of Disposal Area for Residential Sewage Disposal Systems[‡] Required size of disposal area based on 375 gallons per day				
Percolation Rate Minutes / inch	**Application area gallon / ft²/day**	**Absorption area Feet²**	**Standard 3'x 1' trench**	**High capacity leaching chambers**
1-10	1.00	375	94	66
10-20	0.70	536	134	94
20-30	0.60	625	156	109
30-40	0.50	750	188	131
40-50	0.35	1071	268	187
50-60	0.25	1500	375	263
60-70	0.18	2083	520*	364
70-80	0.15	2500	625*	438
80-120	0.10	3750	938*	657*

[‡]*For additional details on percolation and application rates please see Table 3 of the OWTS Policy*

**per the CPC any leach field with more than 500 linear feet shall require a dosing system approved by the County.*

Additions to Existing Single Family Dwellings: Where an addition of one or more bedrooms are proposed for an existing dwelling, the designer must provider verification that the existing system, including both septic tank and disposal fields, meets current standards as detailed in this document. Verification is done by a licensed septic system installation contractor.

Disposal Area - Other Occupancies: The size of disposal areas for other occupancies shall be determined in accordance with CPC Appendix H, except that the application rates used to calculate disposal field area shall be those given in the table above, not those found in the CPC.

Calculating Area of Disposal Fields

When disposal fields are installed, the required area of trench bottom shall be provided exclusive of any hard pan, rock, clay, or other impervious formations. Incorporating sidewall area in excess of the required twelve (12) inches is not allowed by the OWTS Policy. The following page includes an example of how to compute the minimum length of a disposal field.

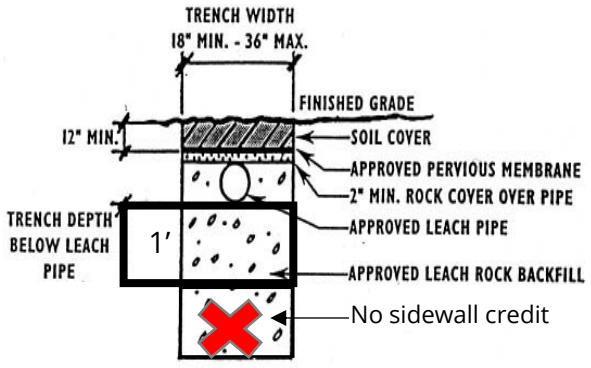
UPDATED Criteria for Onsite Wastewater Treatment Systems

Example Assumptions:

- Three-bedroom house;
- Percolation rate = 36 minutes/inch;
- Leach line = 3 feet wide, 1 foot below leach pipe.

Example Calculation:

- From the table on page 4 the minimum total required leach area would be 750 square feet.
- Calculate the unit trench area at three feet (trench bottom) of the required 12" of depth) = four square feet per linear foot.
- Calculate the minimum total length at 750 square feet divided by four square feet per linear foot = 188 feet.



The OWTS Policy does not allow credit for sidewalls deeper than 1' below the leach pipe.

Example Trench Design:

- Since the total length required is more than 100 feet, two or more parallel lines totaling 188 linear feet, supplied from a distribution box, would be required.

Plastic Leaching Chambers: Plastic leaching chambers shall have their area computed at 4 square feet per linear foot for "standard" units and 5 square feet per linear foot for "high capacity" units. Follow table H601.9 of California Plumbing Code.

Disposal Field Construction			
	Minimum	**Maximum**	**Comments**
Number of drain lines per field	1	–	Two or more lines must be fed from a distribution box
Length of each line	–	100 feet	Perforated pipe must be capped
Width of trench	18 inches	36 inches	See CPC for leaching beds
Spacing of lines (typical line with 3' of rock)	6 feet center to center, or 3 feet edge to edge	–	
Filter material (rock)	3/4 inch	2 ½ inch	Must be clean rock
Filter material over lines	2 inches	–	Cover with material such as filter fabric to limit earth intrusion
Earth cover over lines	12 inches	–	18 inches preferred
Grade of drain lines	level	3 in/100 ft	

UPDATED Criteria for Onsite Wastewater Treatment Systems

Abandonment of Septic Tanks: The abandoned septic tank will need to be pumped. The receipt or a copy of the receipt of the pumping will need to be given to the area inspector. The tank will then need to be fully removed or filled with sand, cement slurry, or concrete. If tank is completely removed the excavated area will need to be backfilled with an approved material and compacted to 90%.

Design Changes in the Field: If the contractor wants to change from a standard rock and pipe leach field, to plastic leaching chambers or vice-versa, the licensed engineer or REHS who designed the system must approve that change in writing. Design changes that would modify the system beyond Tier 1 permitting requirements are not permitted.

Minimum Parcel Size for New Subdivisions: The average density for any subdivision of property served by onsite wastewater treatment systems, occurring after May 13, 2018 shall not exceed the allowable density of the values in the table below.

Average Annual Rainfall (in/year)	**Allowable Density** (acres/single family dwelling unit)
0-15	2.5
>15-20	2.0
>20-25	1.5
>25-35	1.0
>35-40	0.75
>40	0.50

The County will utilize precipitation data from the United States Environmental Protection Agency as the basis for determining average annual rainfall throughout the County. Applicants wishing to use a different data source for determining average annual rainfall, or a variance from Tier 1 parcel size criteria shall present the data and justification the Central Coast Water Board.

Cross Section of Tank and Leach Line: