



# Sladden Engineering

45090 Golf Center Parkway, Suite F, Indio, CA 92201 (760) 863-0713 Fax (760) 863-0847  
 6782 Stanton Avenue, Suite C, Buena Park, CA 90621 (714) 523-0952 Fax (714) 523-1369  
 450 Egan Avenue, Beaumont, CA 92223 (951) 845-7743 Fax (951) 845-8863  
[www.Sladdenengineering.com](http://www.Sladdenengineering.com)

February 13, 2023  
 (Revised April 4, 2023)

Project No. 544-22395  
 22-12-724

## 1.0 DESCRIPTION OF SITE AND PROPOSAL

1.1 Mr. Rod Rigole  
 504½ Marguerite Avenue  
 Corona Del Mar, California 92625

Project: Proposed Lonely Dove Motel Renovation and Expansion  
 SEC Wamego Trail and Desideria Road  
 APNs: 0629-282-03 & 06 (Parcel Merger in Process)  
 Landers Area  
 San Bernardino County, California

Subject: Revised Percolation Testing for Onsite Sewage Disposal Feasibility

Sladden Engineering (Sladden) is pleased to submit our Revised Percolation Testing for Onsite Sewage Disposal Feasibility Report to address San Bernardino County Department of Environmental Health, Onsite Wastewater Treatment Systems (OWTS) review comments. The San Bernardino County Department of Environmental Health OWTS comments are attached to this report as Appendix F.

### 1.2. Location:

The project site is located on the northeast corner of Wamego Trail and Desideria Drive in the Landers area of San Bernardino County, California. The project site consists of two (2) parcels that are formally identified by the County of San Bernardino County as APNs 0629-282-03 and 0629-282-06. **A parcel merger is currently in progress to join the two individual parcels into a single parcel.** The subject property occupies a total area of approximately 10 acres and is currently zoned for commercial (HV/SD-COM) usage. At the time of our investigation, APN 0629-282-03 was occupied by an existing 8-room motel with unpaved dirt parking areas and a caretaker's residence with a detached storage structure. Generally, APN 0629-282-06 remains undeveloped and covered by scattered natural desert vegetation. The subject property is near the elevation of the adjacent properties and roadways. The site is located at approximately 34.2757 degrees north latitude and 116.4475 degrees west longitude (Figure 1). The subject property is bounded by Desideria Road on the north, by Wamego Trail on the west, by an undeveloped parcel on the east and by New Dixie Mine Road on the south.

1.3 Proposed Development:

a) It is our understanding that the proposed project will consist of renovating and expanding the existing onsite motel. The motel renovation and expansion will include a new swimming pool and spa area, new changing rooms, restrooms, a communal fire pit and patio area. A new restaurant, 12 new Quonset Huts and 1 new storage Quonset Hut are also proposed for the project. In addition, new glamping tent areas, a mini-golf area, a new guard shack and paved uncovered and covered parking areas are proposed for the project. Concrete flatwork, landscape areas and various associated site improvements are also anticipated. The buildings will be serviced by private on-site sewage disposal systems consisting of septic tanks and leach lines.

1.4 Description of Site and Surroundings:

a) The subject parcel is relatively level with no discernable surface gradients. The project site is located at an elevation of approximately 3,425 feet above mean sea level (MSL)<sup>1</sup>.

b) No natural ponding of water or surface seeps were observed at or near the site during our investigation conducted on October 5, 2022. Site drainage appears to be controlled via sheet flow and surface infiltration. No "blue line" streams or significant drainage courses were identified on the project site. The closest "blue line" stream is located approximately 1,050 feet to the southeast of the subject site.

c) It is assumed that the properties within the vicinity of the project site are utilizing individual on-site sewage disposal systems consisting of septic tanks and leach lines or seepage pits.

d) At the time of our investigation no wells were identified on the property. The property is serviced by the "Bighorn Desert View Water Agency".

e) No bedrock outcrops were observed on the subject property or in the immediate site vicinity.

f) Bedrock was not encountered within the exploratory boreholes and test holes excavated to a maximum depth of approximately 15 feet bgs.

g) Groundwater was not encountered within our exploratory boreholes or test holes that extended to a maximum explored depth of approximately 15 feet bgs. Information regarding the approximate depth to groundwater provided by the California Department of Water Resources<sup>2</sup> online database suggests that the groundwater should be in excess of 100 feet below the existing ground surface in the vicinity of the site.

a) Site geologic features are not expected to have a significant impact on sewage disposal system design.

b) It appears that there will be sufficient area for the on-site sewage disposal system and the required expansion area on the subject site.

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<sup>1</sup> United States Geological Survey (USGS), 2018, Landers Quadrangle, California-San Bernardino County, 7.5 Minute Series.

<sup>2</sup> California Department of Water Resources, 2023, Water Data Library; available at:  
<https://wdl.water.ca.gov/waterdatalibrary/>

2.0 EQUIPMENT

- a) Two (2) exploratory boreholes and eight (8) test holes were excavated on the subject property using a track mounted John Deere 30 excavator equipped with a 24-inch-wide bucket and an 8-inch outside diameter solid stem augers attachment.
- b) Tools used during testing consisted of a water level measuring device, a multi-timer application and a 500-gallon truck mounted water tank.

3.0 METHODOLOGY AND PROCEDURES

- 3.1 The exploratory boreholes and test hole locations were determined by a handheld Global Positioning System (GPS). The approximate locations of the exploratory boreholes and test holes are indicated on the attached Exploration Location Plan (Figure 2).
- 3.2 The test results and soil conditions encountered during our site exploration indicated "favorable" conditions. The rapid percolation test rates determined by testing were consistent with the alluvial soil conditions observed throughout the subject parcel. The surface gradient throughout the site is less than 30 percent.
- 3.3 The soil encountered in our boreholes and test holes consisted primarily of fine- to coarse-grained silty sand (SM) with gravel.
- 3.4 Test procedures for leach lines:

- a) Prior to testing, the County of San Bernardino DEHS was notified of the intent to perform percolation testing. The notification was submitted on September 28, 2022 via email.
- b) Two (2) exploratory boreholes and eight (8) leach line percolation test holes were excavated on the site to depths between approximately 5 and 15 feet bgs. Percolation testing was performed at a depth of approximately 5.0 feet bgs within each of the test holes. Two (2) inches of  $\frac{1}{2}$  inch gravel was placed on the bottom of the test holes to prevent scouring when water was added.
- c) Twelve inches of water (10 inches above gravel) of water was placed in the test holes and the drop in the water level was recorded over two consecutive 10-minute readings. Because 10 inches of water percolated through the test holes within two consecutive readings, testing was initiated immediately.
- d) Percolation testing was performed by filling each test hole with approximately 8 inches of water and recording the time required to drop 3-inches in accordance with San Bernardino County OWTS guidelines<sup>3</sup>.

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<sup>3</sup> San Bernardino Public Health, Environmental Health Services, Percolation Testing and Reporting Standards for Onsite Wastewater Treatment Systems, Revised September 2019.

3.4 Leach line Test Results

TABLE 1  
LEACH LINE TEST RESULTS

Test Hole No.	Depth (Ft.)	Q gal/sq. ft/day	Q minutes/inch	Minimum Square Feet of Absorption Area Per Gallon Per Day
P-1	5.0	----	1.23	0.83
P-2	5.0	----	1.33	0.83
P-3	5.0	----	1.38	0.83
P-4	5.0	----	1.40	0.83
P-5	5.0	----	2.40	0.83
P-6	5.0	----	1.33	0.83
P-7	5.0	----	1.32	0.83
P-8	5.0	----	1.68	0.83

4.0 DISCUSSION OF RESULTS

4.1 Testing indicates rapid percolation rates between 1.23 and 2.40 minutes per inch that are consistent with the alluvium encountered within the exploratory boreholes and test holes.

4.2 The recorded measurements are considered accurate, and the consistency of the individual test results indicates accuracy.

5.0 DESIGN

5.1 Criteria:

a) Leach lines may be designed based on an application rate of 0.83 square feet per gallon per day in accordance with San Bernardino County DEHS guidelines. Based upon information provided by the developer, the total combined daily flow rates were estimated to be approximately 4,442 gallons per day for the proposed restaurant, BOH, motel, caretakers' residence, Quonset huts, campsites, and swimming pool restrooms. Based on our correspondence with the County of San Bernardino Division of Environmental Health, a proposed project may have a maximum daily flow rate of 6,000-gallon to utilize a conventional OWTS system. In accordance with Table H 201 of the California Plumbing Code, the septic tank requirement was determined by multiplying the daily flow by 0.75 and adding 1,125 gallons per day. The septic tank requirement for the proposed project equals 4,456 gallons. We recommend that two (2) 2500-gallon septic tanks be utilized to service the proposed new structures described above. Tabulated flow rate calculations are included in Appendix D.

b) Design Rate: The following calculation may be utilized to determine the design rate in square feet ( $\text{ft}^2$ ) per 100 gallons of septic tank capacity (gstc):

$$= \text{Application Rate } (\text{ft}^2/\text{gal/day}) * \text{Flow (gal)} / (\text{Septic Tank Size}/100 \text{ gal})$$

$$2500 \text{ Gallon Tank} = (0.83 \text{ ft}^2/\text{gal/day} * 2,221 \text{ gal}) / (2500 \text{ gal}/100 \text{ gal}) = 73.72 \text{ ft}^2 \text{ per 100 gstc}$$

Information to assist in the design of the on-site sewage disposal systems is presented below:

#### **PRELIMINARY OWTS DESIGN**

Standard Design (3 Feet of Gravel @ Bottom of Leach Lines)

Commercial Use: Based on Provided Flow Rates

Application Rate ( $\text{ft}^2/\text{gal/day}$ ): 0.83

Estimated Gallons of Effluent Per Day: 2,221

Gallons of Septic Tank Capacity: 2,500

Design Rate: 73.72  $\text{ft}^2$  per 100 gstc

Absorption Area ( $\text{ft}^2$ ): 843  $\text{ft}^2$

Absorption Area ( $\text{ft}^2$ ):  $843 \text{ ft}^2 + 30\% = 2,949 \text{ ft}^2$

Trench Credit ( $\text{ft}^2$  per ft): 7

Leach Line Length (ft): 422

Number of Leach Lines: 5 at 85 ft each for each system

6.0 **SEE EXPLORATION LOCATION PLAN**

7.0 **GENERAL DISCUSSION AND CONCLUSIONS**

7.1 Based on the data presented in the report, it is the judgment of this engineer that leach lines may be used for the sewage disposal on this property.

7.2 Based on the data presented in this report and the tested information accumulated, it is the judgment of the engineer that the groundwater table should not encroach with the allowable limit set forth by County and State requirements, when the recommendations of this report are followed. Also, there appears to be sufficient area for the proposed on-site sewage disposal systems and future expansion.

7.3 All minimum setback distances shall be maintained for the proposed sewage disposal system in accordance with San Bernardino County guidelines<sup>4</sup>.

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<sup>4</sup> San Bernardino Public Health, Environmental Health Services, Percolation Testing and Reporting Standards for Onsite Wastewater Treatment Systems, Revised September 2019; Appendix D.

8.0 GENERAL

The findings and recommendations presented in this report are based upon an interpolation of the soil conditions between bore locations and extrapolation of the conditions throughout the sewage disposal system area. Should conditions encountered during grading (or excavation) appear different than that indicated in this report, this office should be notified.

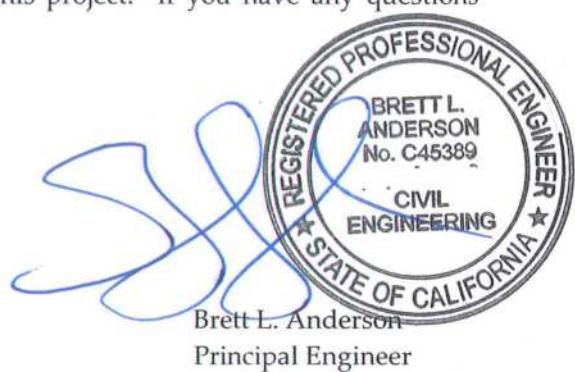
This report is considered applicable for use by the client for the specific site and project described herein. The use of this report by other parties or for other projects is not authorized.

We appreciate the opportunity to provide service to you on this project. If you have any questions regarding this report, please contact the undersigned.

Respectfully submitted,  
SLADDEN ENGINEERING

James W. Minor III  
Senior Geologist

Perc/jm



PDF/Addressee

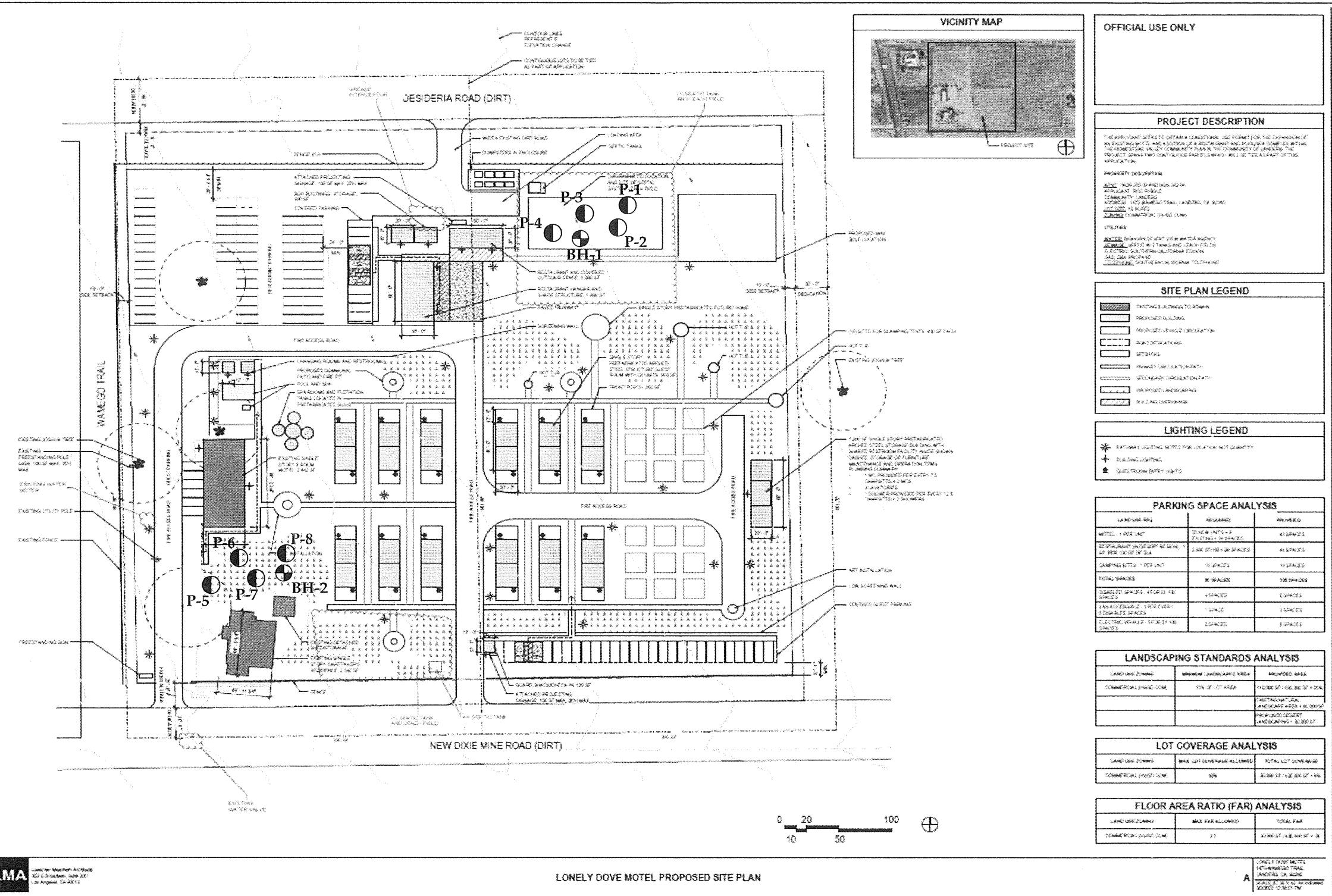
## FIGURES

SITE LOCATION MAP  
EXPLORATION LOCATION PLAN



USGS (2018)

 Sladden Engineering	SITE LOCATION MAP		FIGURE 1
	Project Number:	544-22395	
Report Number:	22-12-724		
Date:	Revised 4/4/2023		



Los Angeles, CA 90012

● BH-2      Approximate Exploratory Borehole Location

● P-8      Approximate Percolation Test Location



Sladden Engineering

## EXPLORATION LOCATION PLAN

Project Number:	544-22395
Report Number:	22-12-724
Date:	Revised 4/4/2023

# FIGURE 2

## APPENDIX A

### BORELOGS



## **SLADDEN ENGINEERING**

## BORE LOG

Excavator:	Mini-Ex	Date Drilled:	10/5/2022
Elevation:	3,425 Ft (MSL)	Boring No:	BH-1



## SLADDEN ENGINEERING

## BORE LOG

Excavator:	Mini-Ex	Date Drilled:	10/5/2022
Elevation:	3,425 Ft (MSL)	Boring No:	BH-2



## SLADDEN ENGINEERING

## BORE LOG

Excavator:	Mini-Ex	Date Drilled:	10/5/2022
Elevation:	3,425 Ft (MSL)	Boring No:	P-1

Sample	Blow Counts	Bulk Sample	Expansion Index	% Minus #200	% Moisture	Dry Density	Depth (Feet)	Graphic Lithology	Description
							2		Silty Sand (SM); yellowish brown, dry, fine-to coarse-grained with gravel.
							4		
							6		
							8		Terminated at ~ 5.0 Feet bgs
							10		No Bedrock Encountered
							12		No Groundwater or Seepage Encountered
							14		Borehole Cased with Perforated Pipe for Percolation Testing
							16		
							18		
							20		
							22		
							24		
							26		
							28		
							30		
							32		
							34		
							36		
							38		
							40		
							42		
							44		
							46		
							48		
							50		
Completion Notes:								COMMERCIAL REMODEL & RENOVATION LANDERS AREA; APN: 0629-282-03 & 06	
Project No: 544-22395								Page	
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**SLADDEN ENGINEERING****BORE LOG**

Excavator:	Mini-Ex	Date Drilled:	10/5/2022
Elevation:	3,425 Ft (MSL)	Boring No:	P-2

Sample	Blow Counts	Bulk Sample	Expansion Index	% Minus #200	% Moisture	Dry Density	Depth (Feet)	Graphic Lithology	Description	
									Silty Sand (SM); yellowish brown, dry, fine-to coarse-grained with gravel.	
									Terminated at ~ 5.0 Feet bgs No Bedrock Encountered No Groundwater or Seepage Encountered Borehole Cased with Perforated Pipe for Percolation Testing	
									12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50	
Completion Notes:								COMMERCIAL REMODEL & RENOVATION LANDERS AREA; APN: 0629-282-03 & 06		
								Project No:	544-22395	
								Report No:	22-12-724	Page 4

**SLADDEN ENGINEERING****BORE LOG**

Excavator:	Mini-Ex	Date Drilled:	10/5/2022
Elevation:	3,425 Ft (MSL)	Boring No:	P-3

Sample	Blow Counts	Bulk Sample	Expansion Index	% Minus #200	% Moisture	Dry Density	Depth (Feet)	Graphic Lithology	Description	
									Silty Sand (SM); yellowish brown, dry, fine-to coarse-grained with gravel.	
									Terminated at ~ 5.0 Feet bgs No Bedrock Encountered No Groundwater or Seepage Encountered Borehole Cased with Perforated Pipe for Percolation Testing	
									12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50	
Completion Notes:								COMMERCIAL REMODEL & RENOVATION LANDERS AREA; APN: 0629-282-03 & 06		
								Project No:	544-22395	Page
								Report No:	22-12-724	5

**SLADDEN ENGINEERING****BORE LOG**

Excavator:	Mini-Ex	Date Drilled:	10/5/2022
Elevation:	3,425 Ft (MSL)	Boring No:	P-4

Sample	Blow Counts	Bulk Sample	Expansion Index	% Minus #200	% Moisture	Dry Density	Depth (Feet)	Graphic Lithology	Description	
							2	Silty Sand (SM); yellowish brown, dry, fine-to coarse-grained with gravel.		
							4			
							6			
							8		Terminated at ~ 5.0 Feet bgs	
							10		No Bedrock Encountered	
							12		No Groundwater or Seepage Encountered	
							14		Borehole Cased with Perforated Pipe for Percolation Testing	
							16			
							18			
							20			
							22			
							24			
							26			
							28			
							30			
							32			
							34			
							36			
							38			
							40			
							42			
							44			
							46			
							48			
							50			
Completion Notes:							COMMERCIAL REMODEL & RENOVATION LANDERS AREA; APN: 0629-282-03 & 06			
							Project No:	544-22395	Page	6
							Report No:	22-12-724		



SLADDEN ENGINEERING

## BORE LOG

Excavator:	Mini-Ex	Date Drilled:	10/5/2022
Elevation:	3,425 Ft (MSL)	Boring No:	P-5

SLADDEN ENGINEERING							BORE LOG		
							Excavator: Mini-Ex		Date Drilled: 10/5/2022
							Elevation: 3,425 Ft (MSL)		Boring No: P-5
Sample	Blow Counts	Bulk Sample	Expansion Index	% Minus #200	% Moisture	Dry Density	Depth (Feet)	Graphic Lithology	Description
							2		Silty Sand (SM); yellowish brown, dry, fine-to coarse-grained with gravel.
							4		
							6		
							8		
							10		Terminated at ~ 5.0 Feet bgs
							12		No Bedrock Encountered
							14		No Groundwater or Seepage Encountered
							16		Borehole Cased with Perforated Pipe for Percolation Testing
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							20		
							22		
							24		
							26		
							28		
							30		
							32		
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							40		
							42		
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							46		
							48		
							50		
Completion Notes:							COMMERCIAL REMODEL & RENOVATION LANDERS AREA; APN: 0629-282-03 & 06		
							Project No: 544-22395		
							Report No: 22-12-724		Page 7



## SLADDEN ENGINEERING

## BORE LOG

Excavator:	Mini-Ex	Date Drilled:	10/5/2022
Elevation:	3,425 Ft (MSL)	Boring No:	P-6

Sample	Blow Counts	Bulk Sample	Expansion Index	% Minus #200	% Moisture	Dry Density	Depth (Feet)	Graphic Lithology	Description
									Silty Sand (SM); yellowish brown, dry, fine-to coarse-grained with gravel.  Terminated at ~ 5.0 Feet bgs No Bedrock Encountered No Groundwater or Seepage Encountered Borehole Cased with Perforated Pipe for Percolation Testing

**Completion Notes:**

COMMERCIAL REMODEL & RENOVATION  
LANDERS AREA; APN: 0629-282-03 & 06

Project No: 544-22395

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**SLADDEN ENGINEERING****BORE LOG**

Excavator:	Mini-Ex	Date Drilled:	10/5/2022
Elevation:	3,425 Ft (MSL)	Boring No:	P-7

Sample	Blow Counts	Bulk Sample	Expansion Index	% Minus #200	% Moisture	Dry Density	Depth (Feet)	Graphic Lithology	Description															
									2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32
									Silty Sand (SM); yellowish brown, dry, fine-to coarse-grained with gravel.															
									Terminated at ~ 5.0 Feet bgs No Bedrock Encountered No Groundwater or Seepage Encountered Borehole Cased with Perforated Pipe for Percolation Testing															

Completion Notes:

COMMERCIAL REMODEL & RENOVATION  
LANDERS AREA; APN: 0629-282-03 & 06

Project No: 544-22395

Report No: 22-12-724

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SLADDEN ENGINEERING

## BORE LOG

Excavator:	Mini-Ex	Date Drilled:	10/5/2022
Elevation:	3,425 Ft (MSL)	Boring No:	P-8

Sample	Blow Counts	Bulk Sample	Expansion Index	% Minus #200	% Moisture	Dry Density	Depth (Feet)	Graphic Lithology	Description
							2		Silty Sand (SM); yellowish brown, dry, fine-to coarse-grained with gravel.
							4		
							6		
							8		Terminated at ~ 5.0 Feet bgs
							10		No Bedrock Encountered
							12		No Groundwater or Seepage Encountered
							14		Borehole Cased with Perforated Pipe for Percolation Testing
							16		
							18		
							20		
							22		
							24		
							26		
							28		
							30		
							32		
							34		
							36		
							38		
							40		
							42		
							44		
							46		
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Completion Notes:								COMMERCIAL REMODEL & RENOVATION LANDERS AREA; APN: 0629-282-03 & 06	
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**APPENDIX B**  
**LEACH LINE TEST DATA SHEETS**

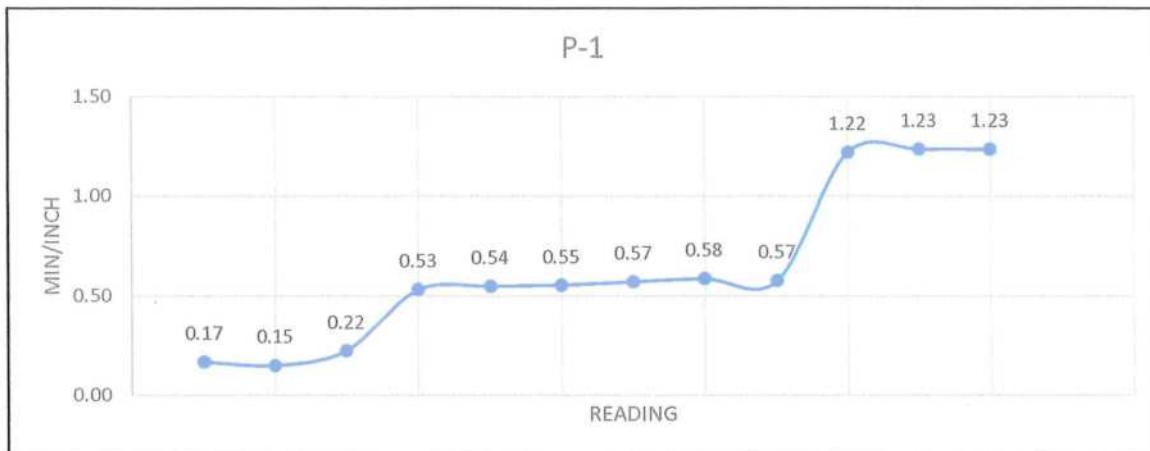
### SAN BERNARDINO COUNTY LEACH LINE DATA SHEETS

Notification of Testing: 9/28/2022  
 Project: APNs: 0629-282-03 & 0629-282-06  
 Job No. : 544-22395  
 Date: 10/5/2022  
 Test Hole #: P-1  
 Depth (ft): 5  
 Disposal Area: Favorable  
 USCS Soil Class: SM  
 Tested By: S.D.

READING	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
A	0:01:39	5	12	2	10	0.17
B	0:01:28	5	12	2	10	0.15
C	0:01:06	5	8	3	5	0.22

READING*	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
1	0:01:35	5	8	5	3	0.53
2	0:01:38	5	8	5	3	0.54
3	0:01:39	5	8	5	3	0.55
4	0:01:42	5	8	5	3	0.57
5	0:01:45	5	8	5	3	0.58
6	0:01:43	5	8	5	3	0.57
7	0:01:13	5	8	7	1	1.22
8	0:01:14	5	8	7	1	1.23
9	0:01:14	5	8	7	1	1.23

\*Initial Water level of 8-inches



Rate (Min/Inch): 1.23

### SAN BERNARDINO COUNTY LEACH LINE DATA SHEETS

Notification of Testing: 9/28/2022  
 Project: APNs: 0629-282-03 & 0629-282-06  
 Job No. : 544-22395  
 Date: 10/5/2022  
 Test Hole #: P-2  
 Depth (ft): 5  
 Disposal Area: Favorable  
 USCS Soil Class: SM  
 Tested By: S.D.

READING	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
A	0:02:12	5	12	2	10	0.22
B	0:02:30	5	12	2	10	0.25
C	0:01:43	5	8	3	5	0.34

READING*	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
1	0:01:58	5	8	5	3	0.66
2	0:01:59	5	8	5	3	0.66
3	0:02:02	5	8	5	3	0.68
4	0:02:02	5	8	5	3	0.68
5	0:02:03	5	8	5	3	0.68
6	0:02:05	5	8	5	3	0.69
7	0:01:19	5	8	7	1	1.32
8	0:01:20	5	8	7	1	1.33
9	0:01:20	5	8	7	1	1.33

\*Initial Water level of 8-inches



Rate (Min/Inch): 1.33

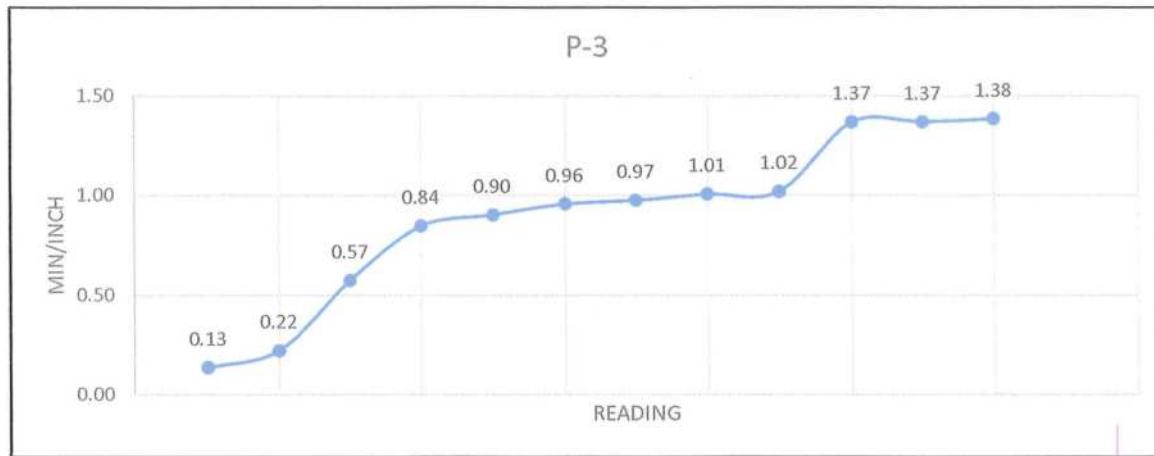
### SAN BERNARDINO COUNTY LEACH LINE DATA SHEETS

Notification of Testing: 9/28/2022  
 Project: APNs: 0629-282-03 & 0629-282-06  
 Job No. : 544-22395  
 Date: 10/5/2022  
 Test Hole #: P-3  
 Depth (ft): 5  
 Disposal Area: Favorable  
 USCS Soil Class: SM  
 Tested By: S.D.

READING	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
A	0:01:20	5	12	2	10	0.13
B	0:02:11	5	12	2	10	0.22
C	0:02:51	5	8	3	5	0.57

READING*	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
1	0:02:32	5	8	5	3	0.84
2	0:02:42	5	8	5	3	0.90
3	0:02:52	5	8	5	3	0.96
4	0:02:55	5	8	5	3	0.97
5	0:03:01	5	8	5	3	1.01
6	0:03:03	5	8	5	3	1.02
7	0:01:22	5	8	7	1	1.37
8	0:01:22	5	8	7	1	1.37
9	0:01:23	5	8	7	1	1.38

\*Initial Water level of 8-inches



Rate (Min/Inch): 1.38

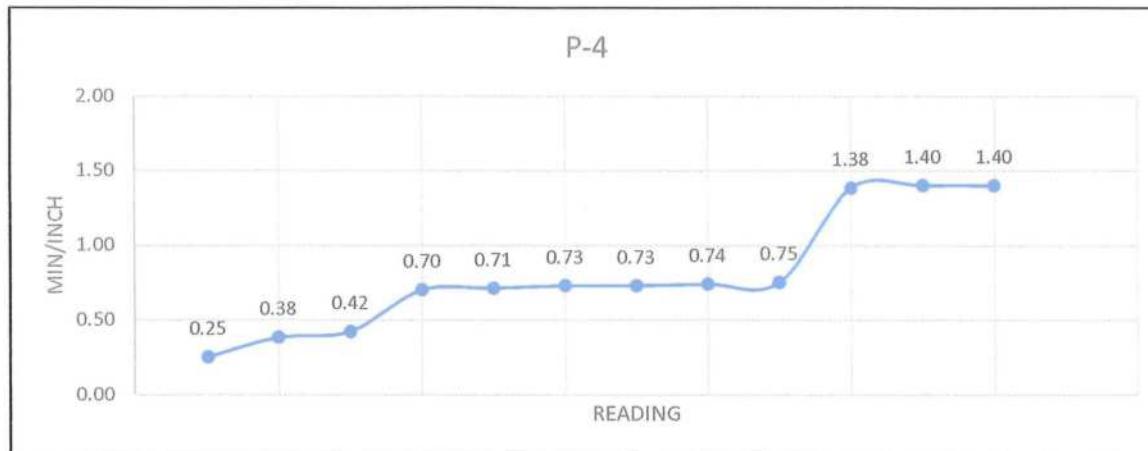
### SAN BERNARDINO COUNTY LEACH LINE DATA SHEETS

Notification of Testing: 9/28/2022  
 Project: APNs: 0629-282-03 & 0629-282-06  
 Job No. : 544-22395  
 Date: 10/5/2022  
 Test Hole #: P-4  
 Depth (ft): 5  
 Disposal Area: Favorable  
 USCS Soil Class: SM  
 Tested By: S.D.

READING	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
A	0:02:30	5	12	2	10	0.25
B	0:03:49	5	12	2	10	0.38
C	0:02:06	5	8	3	5	0.42

READING*	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
1	0:02:06	5	8	5	3	0.70
2	0:02:08	5	8	5	3	0.71
3	0:02:11	5	8	5	3	0.73
4	0:02:11	5	8	5	3	0.73
5	0:02:13	5	8	5	3	0.74
6	0:02:15	5	8	5	3	0.75
7	0:01:23	5	8	7	1	1.38
8	0:01:24	5	8	7	1	1.40
9	0:01:24	5	8	7	1	1.40

\*Initial Water level of 8-inches



Rate (Min/Inch): 1.40

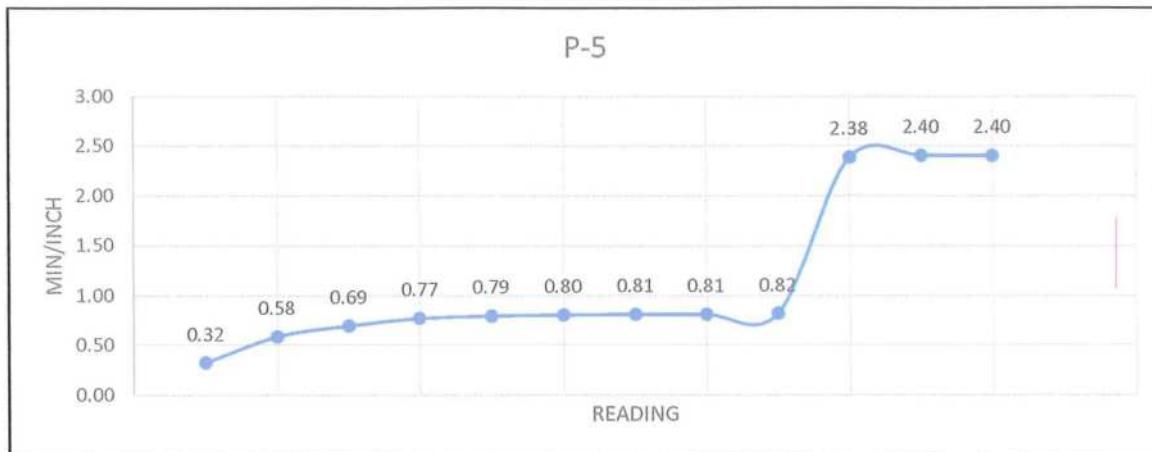
### SAN BERNARDINO COUNTY LEACH LINE DATA SHEETS

Notification of Testing: 9/28/2022  
 Project: APNs: 0629-282-03 & 0629-282-06  
 Job No. : 544-22395  
 Date: 10/5/2022  
 Test Hole #: P-5  
 Depth (ft): 5  
 Disposal Area: Favorable  
 USCS Soil Class: SM  
 Tested By: S.D.

READING	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
A	0:03:12	5	12	2	10	0.32
B	0:05:49	5	12	2	10	0.58
C	0:03:27	5	8	3	5	0.69

READING*	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
1	0:02:18	5	8	5	3	0.77
2	0:02:22	5	8	5	3	0.79
3	0:02:24	5	8	5	3	0.80
4	0:02:25	5	8	5	3	0.81
5	0:02:25	5	8	5	3	0.81
6	0:02:27	5	8	5	3	0.82
7	0:02:23	5	8	7	1	2.38
8	0:02:24	5	8	7	1	2.40
9	0:02:24	5	8	7	1	2.40

\*Initial water level of 8-inches



Rate (Min/Inch): 2.40

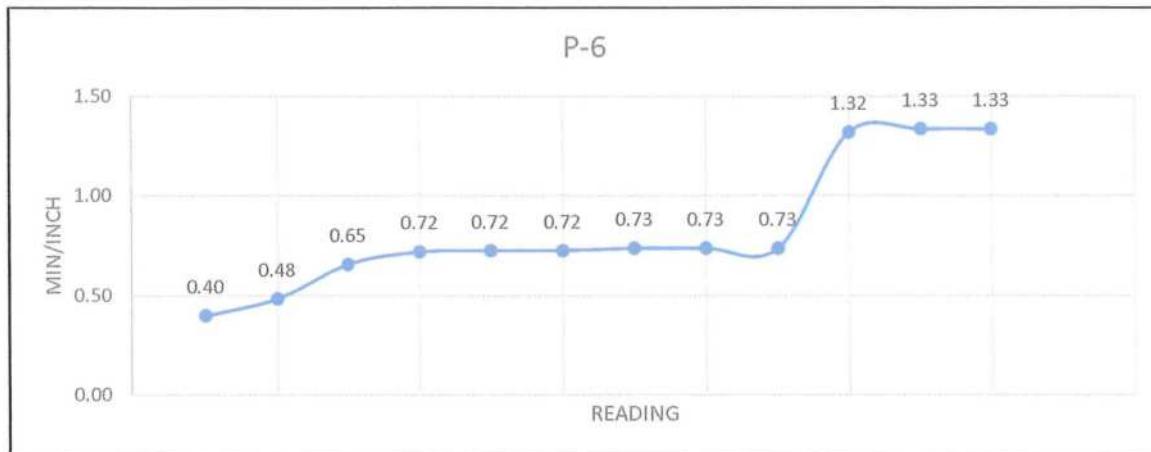
**SAN BERNARDINO COUNTY LEACH LINE DATA SHEETS**

Notification of Testing: 9/28/2022  
 Project: APNs: 0629-282-03 & 0629-282-06  
 Job No. : 544-22395  
 Date: 10/5/2022  
 Test Hole #: P-6  
 Depth (ft): 5  
 Disposal Area: Favorable  
 USCS Soil Class: SM  
 Tested By: S.D.

READING	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
A	0:03:57	5	12	2	10	0.40
B	0:04:48	5	12	2	10	0.48
C	0:03:16	5	8	3	5	0.65

READING*	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
1	0:02:09	5	8	5	3	0.72
2	0:02:10	5	8	5	3	0.72
3	0:02:10	5	8	5	3	0.72
4	0:02:12	5	8	5	3	0.73
5	0:02:12	5	8	5	3	0.73
6	0:02:12	5	8	5	3	0.73
7	0:01:19	5	8	7	1	1.32
8	0:01:20	5	8	7	1	1.33
9	0:01:20	5	8	7	1	1.33

\*Initial Water level of 8-inches



Rate (Min/Inch): 1.33

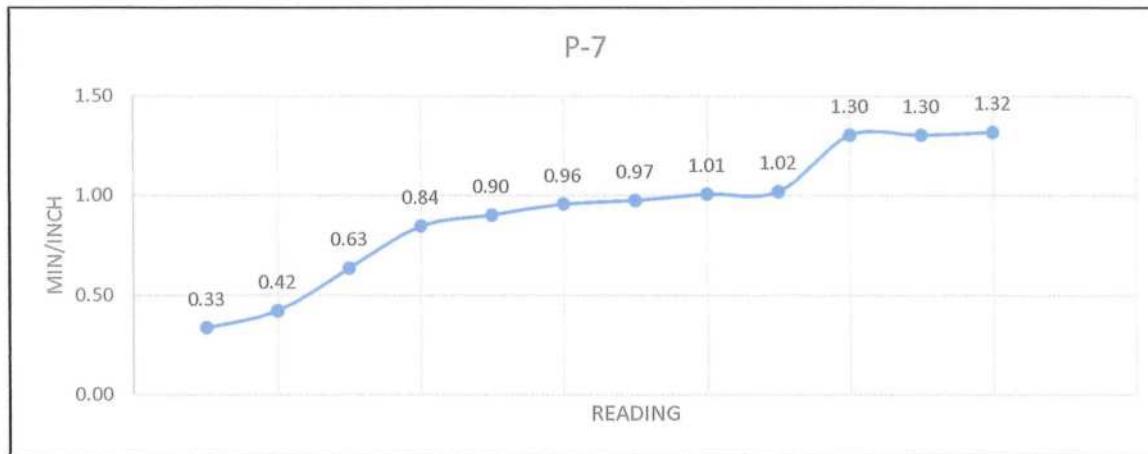
### SAN BERNARDINO COUNTY LEACH LINE DATA SHEETS

Notification of Testing: 9/28/2022  
 Project: APNs: 0629-282-03 & 0629-282-06  
 Job No. : 544-22395  
 Date: 10/5/2022  
 Test Hole #: P-7  
 Depth (ft): 5  
 Disposal Area: Favorable  
 USCS Soil Class: SM  
 Tested By: S.D.

READING	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
A	0:03:20	5	12	2	10	0.33
B	0:04:11	5	12	2	10	0.42
C	0:03:10	5	8	3	5	0.63

READING*	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
1	0:02:32	5	8	5	3	0.84
2	0:02:42	5	8	5	3	0.90
3	0:02:52	5	8	5	3	0.96
4	0:02:55	5	8	5	3	0.97
5	0:03:01	5	8	5	3	1.01
6	0:03:03	5	8	5	3	1.02
7	0:01:18	5	8	7	1	1.30
8	0:01:18	5	8	7	1	1.30
9	0:01:19	5	8	7	1	1.32

\*Initial Water level of 8-inches



Rate (Min/Inch): 1.32

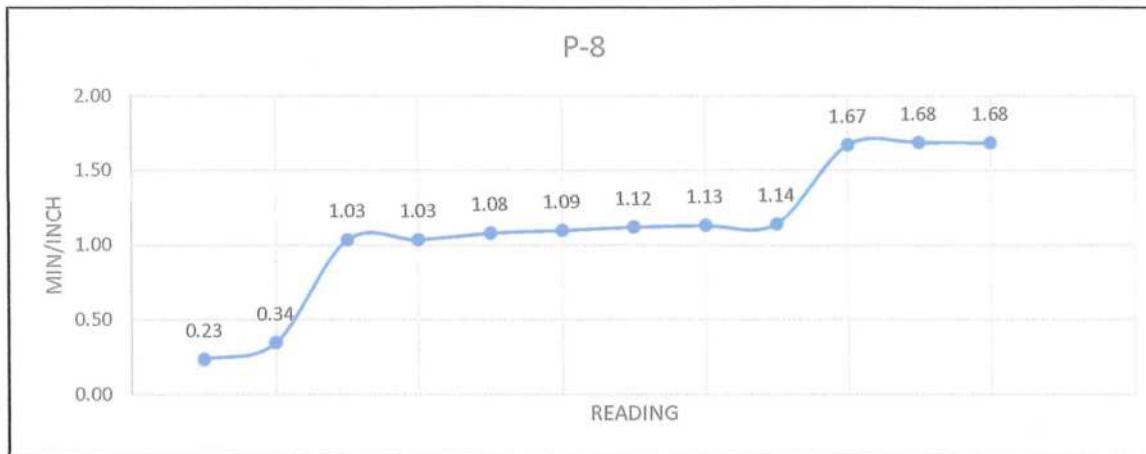
### SAN BERNARDINO COUNTY LEACH LINE DATA SHEETS

Notification of Testing: 9/28/2022  
 Project: APNs: 0629-282-03 & 0629-282-06  
 Job No. : 544-22395  
 Date: 10/5/2022  
 Test Hole #: P-8  
 Depth (ft): 5  
 Disposal Area: Favorable  
 USCS Soil Class: SM  
 Tested By: S.D.

READING	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
A	0:02:19	5	12	2	10	0.23
B	0:03:26	5	12	2	10	0.34
C	0:05:10	5	8	3	5	1.03

READING*	TIME (h:m:s)	DEPTH (ft)	INITIAL W (in)	FINAL W (in)	$\Delta W$ (in)	Min/Inch
1	0:03:06	5	8	5	3	1.03
2	0:03:14	5	8	5	3	1.08
3	0:03:17	5	8	5	3	1.09
4	0:03:21	5	8	5	3	1.12
5	0:03:23	5	8	5	3	1.13
6	0:03:25	5	8	5	3	1.14
7	0:01:40	5	8	7	1	1.67
8	0:01:41	5	8	7	1	1.68
9	0:01:41	5	8	7	1	1.68

\*Initial Water level of 8-inches



Rate (Min/Inch): 1.68

APPENDIX C  
PERCOLATION TEST NOTIFICATION



**Public Health**  
**Environmental Health Services**  
**PERCOLATION TEST NOTIFICATION**

[www.SBCounty.gov](http://www.SBCounty.gov)

[www.sbccounty.gov/dph/dehs](http://www.sbccounty.gov/dph/dehs)

Phone: (800) 442-2283



Please email form to [EHS.CustomerService@dph.sbccounty.gov](mailto:EHS.CustomerService@dph.sbccounty.gov) or fax to 909.387.4323 at least two (2) working days before testing.

THIS SECTION TO BE COMPLETED BY QUALIFIED PROFESSIONAL QUALIFIED PROFESSIONAL INFORMATION					
Firm Name <b>Sladden Engineering</b>			Date <b>9/28/2022</b>		
Firm Address <b>45900 Golf Center Pkwy., Suite F</b>		City <b>Indio</b>		State <b>Ca</b> Zip <b>92201</b>	
Firm Contact Person <b>James Minor</b>		Email(s) <b>jminor@sladdenengineering.com</b>			
Phone Number <b>760 863-0713</b>					
SITE INFORMATION					
Owner's Name <b>Rod Rigole</b>		Assessor's Parcel Number (APN) <b>0629-282-03 &amp; 06</b>			
Site Address <b>NEC Warmego Trail &amp; Desideria</b>		City <b>Landers</b>		State <b>Ca</b> Zip	
Email(s) <b>rarigole@gmail.com</b>		Phone Number <b>210 722-2994</b>			
BILLING INFORMATION					
Environmental Health Services may need to be onsite to observe percolation testing. This will be billed at the current hourly professional rate. Provide billing information below or check one of the following:					
<input type="checkbox"/> Same as Qualified Professional Information		<input checked="" type="checkbox"/> Same as Site Information			
Billing Name					
Billing Address		City		State Zip	
Email(s)		Phone Number			
PROJECT INFORMATION					
Disposal field	<input checked="" type="checkbox"/> Leach Lines		<input type="checkbox"/> Seepage Pits <input type="checkbox"/> Alternative Treatment System		
Exploratory Boring(s)	Boring Date(s) <b>10/3</b>	Boring Time <b>8am</b>	Number of Borings <b>2</b>	Depth of Boring(s) in ft. <b>15 ft.</b>	
Testing	Test Date(s) <b>10/3/2022</b>	Test Time <b>10am</b>	Number of Tests <b>8</b>	Depth of Test Hole(s) in ft. <b>5 ft.</b>	
Project Type	<input checked="" type="checkbox"/> Single Family Residence Lot Size (ft <sup>2</sup> /acres)	<input type="checkbox"/> Multi Family Residential Number of Units Lot Size (ft <sup>2</sup> /acres)		<input type="checkbox"/> Commercial Lot Size (ft <sup>2</sup> /acres) Estimated Flow	
	Please select one of the following				
	<input type="checkbox"/> Tentative Tract (TT) # >50'	<input type="checkbox"/> Tentative Parcel Map (TPM) # >50'			
Number of Proposed Lots	Original Lot Size (ft <sup>2</sup> /acres) <b>&gt;50'</b>	Average New Lot Size (ft <sup>2</sup> /acres)			
A sewer connection will be required if a sewer is available within 200 ft. of the nearest property line (add 100 ft. for each additional lot). A "sewer will not serve" letter may be required prior to submittal of the percolation report.					
Site Conditions	Historic groundwater level in feet >50'		Slope in disposal area (%) <30%		
	Source of Water				
	<input type="checkbox"/> Private Well		<input type="checkbox"/> Water Purveyor		
	<input type="checkbox"/> Check box if parcel is on Forest Service Land				
	<input type="checkbox"/> Check box if lot is within 100 feet of a river/stream				
For Office Use Only		For Office Use Only		For Office Use Only	
Fee:		FA Number:		Record ID:	
Late Fee: <input type="checkbox"/> Y <input type="checkbox"/> N		Designated Employee:		PE Number:	
Received By:				Date:	
Check One: <input type="checkbox"/> New <input type="checkbox"/> Transfer <input type="checkbox"/> Reactivate		Changes (please specify):			

## APPENDIX D

### DAILY FLOW RATES

## Lonely Dove Motel Daily Flow Rates

KITCHEN & RESTAURANT			
Number of Employees	Number of Customers	Number of meals served (peak days)	Total Daily Flow Rate (per PC H201.1(4))
5 (1,000 SF Kitchen / 200 gross)	226 (3,400 SF Restaurant / 15 gross)	300	Restaurant - with toilet waste (per customer) = 7 per customer $226 \times 7 = 1,582$ gallons per day

BOH			
Number of Employees	Number of Customers	Number of meals served (peak days)	Total Daily Flow Rate (per PC H201.1(4))
2 (600 SF BOH / 300 gross)	-	-	Motel (per bed space) = 50 $\times 2 = 100$ gallons per day

FUTURO HOME			
Number of Employees	Number of Customers	Number of meals served (peak days)	Total Daily Flow Rate (per PC H201.1(4))
-	1	-	Motel (per bed space) = 50 $\times 1 = 50$ gallons per day

MOTEL			
Number of Employees	Number of Customers	Number of meals served (peak days)	Total Daily Flow Rate (per PC H201.1(4))
-	8	-	Motel (per bed space) = 50 $\times 8 = 400$ gallons per day

CARETAKER'S RESIDENCE			
Number of Employees	Number of Customers	Number of meals served (peak days)	Total Daily Flow Rate (per PC H201.1(4))
-	1	-	Motel (per bed space) = 50 $\times 1 = 50$ gallons per day

QUONSET HUTS			
Number of Employees	Number of Customers	Number of meals served (peak days)	Total Daily Flow Rate (per PC H201.1(4))
-	24	-	Motel (per bed space) = 50 $\times 24 = 1,200$ gallons per day

CAMPsites			
Number of Employees	Number of Customers	Number of meals served (peak days)	Total Daily Flow Rate (per PC H201.1(4))
-	18	-	Camps - with central comfort station (per person) = 30 x 18 = 540 gallons per day

POOL			
Number of Employees	Number of Customers	Number of meals served (peak days)	Total Daily Flow Rate (per PC H201.1(4))
-	52	-	Swimming pools - public (per person) = 10 x 52 = 520 gallons per day

## APPENDIX E

### OWTS DESIGN



APPENDIX F  
OWTS REVIEW - OFFICIAL INSPECTION REPORT



Public Health  
Environmental Health Services

385 N Arrowhead Ave, San Bernardino, CA 92415 | Phone: 800.442.2283 Fax: 909.387.4323

[www.SBCounty.gov](http://www.SBCounty.gov)  
[www.SBCounty.gov/dph/dehs](http://www.SBCounty.gov/dph/dehs)

### OWTS REVIEW - OFFICIAL INSPECTION REPORT

FACILITY NAME <b>RIGOLE ROD (LONELY DOVE MOTEL)</b>				REINSPECTION DATE Not Specified	INSPECTOR Joseph Contreras	DATE 3/16/2023
LOCATION <b>1473 WAMEGO TR, LANDERS, CA 92285</b>				PERMIT EXPIRATION	IDENTIFIER: None SERVICE: 025 - PLAN REVIEW RESULT: 01 - CORRECTIVE ACTION NOT REQUIRED ACTION: 57 - PLANS REJECTED	
TIME IN 10:02 AM	TIME OUT 1:10 PM	FACILITY ID Not Specified	RELATED ID SR0115218	PE 4108		

### OWTS REVIEW - Commercial Dvlpmnt Perc Test Review

Based on an inspection this day, the items marked below identify the violation(s) in operation or facilities which must be corrected. Failure to correct listed violation(s) prior to the designated compliance date may necessitate an additional inspection to be billed at the hourly rate as provided in the San Bernardino County Code, Schedule of Fees.

Administrative Order to Show Cause (OSC): The Permittee has the right to a hearing if requested in writing within 15 calendar days of receipt of this notice, to show cause why the permit to operate should not be suspended or revoked; otherwise the right to a hearing shall be deemed waived.

See the following pages for the code sections and general requirements that correspond to each violation listed below.

#### 41P983 PERC - Rejected - Resubmittal Required

CRITICAL

Compliance Date: Not Specified

Inspector Comments: Initial resubmission requires no fee.

Not In Compliance

Violation Reference - SBCC - SBC Policy

All subsequent resubmissions will require resubmission fee as according to the current Fee Schedule.

**Violation Description:** The percolation report cannot be approved as submitted. Corrections and resubmittal are required along with the current resubmittal fee. If additional testing is required, DEHS will need to be notified 48 hours in advance.

#### 41P062 PERC - General Criteria - Calculations

Compliance Date: Not Specified

Inspector Comments: 1.) The DFU count uses incorrect values.

Not In Compliance

Reference - SBCC - SBC Policy

Calculate the DFU's using the Public values from California Plumbing code table 702.1. Do not use Private values for commercial projects.

2.) Verify the estimated flow for the kitchen/restaurant.

Ensure the result for estimated flow includes employees and meal waste.

**Description:** Provide accurate calculations for the proposed system.

#### 41P083 PERC - General Criteria - Scale

Compliance Date: Not Specified

Inspector Comments: The plot plan is not legible and must include the following:

Not In Compliance

Reference - SBCC - SBC Policy

- leach lines location and length  
- 100 % expansion area  
- septic tank location and size  
- water supply line location

Update the plot plan with the information listed above and is clearly legible.

**Description:** A plot plan must be provided and include a map scale (i.e. 1" = 20').

#### 41P100 PERC - Location - Accuracy

Compliance Date: Not Specified

Inspector Comments: There were two parcel numbers mentioned in the submitted Percolation Report. An EHS approved design rate can only be assigned to the parcel that a percolation test was completed and shall not be used nor borrowed by neighboring lots.

Not In Compliance

Reference - SBCC - SBC Policy

A separate percolation test and percolation report will be required per parcel. If a lot merger is proposed, please submit documentations of a lot merger approval from the San Bernardino County Land Use department. Otherwise, submit a separate Percolation Report for each parcel to EHS for review and approval. A separate invoice for the review fee will be issued per parcel

**Description:** Provide the correct Assessor Parcel Number (APN) in the report.

#### Overall Inspection Comments

Prior to resubmission it is recommended to review the "Perc Standard"

<http://http://wp.sbccounty.gov/dph/wp-content/uploads/sites/7/2019/09/PERC-9.26.19-APPROVED.pdf> and Local Agency

Management Program

<http://wp.sbccounty.gov/dph/wp-content/uploads/sites/7/2017/08/San-Bernardino-County-LAMP.pdf>



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[www.SBCounty.gov](http://www.SBCounty.gov)  
[www.SBCounty.gov/dph/dehs](http://www.SBCounty.gov/dph/dehs)

OWTS REVIEW - OFFICIAL INSPECTION REPORT

FACILITY NAME RIGOLE ROD (LONELY DOVE MOTEL)	DATE 3/16/2023
LOCATION 1473 WAMEGO TR, LANDERS, CA 92285	INSPECTOR Joseph Contreras

Total # of Images: 0