# PERCOLATION TESTING RESULTS

**Proposed On-Site Stormwater Infiltration System for a**
**Proposed Warehouse/Distribution Center**
**APN 0405-062-51**
**Amargosa Road & Live Oak Lane**
**Hesperia, California**

March 23, 2020
Project No. 30-5468-01

*Prepared for:*

55555 Amargosa Rd., LLC
Attn: Mr. Jason Green
5901 S. Eastern Ave.
Commerce, CA 90040

A.G.I. GEOTECHNICAL, INC.

A. G. I. GEOTECHNICAL, INC.
16555 Sherman Way, Suite A - Van Nuys, CA 91406 - Office: (818) 785-5244 - Facsimile: (818) 785-6251

March 23, 2020 Project No. 30-5468-01

55555 Amargosa Rd., LLC
5901 S. Eastern Ave.
Commerce, CA 90040

Attention: Mr. Jason Green

Subject: **PERCOLATION TESTING RESULTS**
Proposed On-Site Stormwater Infiltration System for a
Proposed Warehouse/Distribution Center
APN: 0405-062-51
Amargosa Road & Live Oak Lane
Hesperia, California

Reference: **SOILS ENGINEERING INVESTIGATION**
Proposed Warehouse/Distribution Center
APN: 0405-062-51
Amargosa Road & Live Oak Lane
Hesperia, California
Prepared by A.G.I. Geotechnical, Inc., Project No. 30-5468-00
dated February 24, 2020

Dear Mr. Green:

Pursuant to your request, A.G.I. Geotechnical, Inc. has completed percolation testing at the subject site for a proposed on-site stormwater infiltration system. This report has been prepared to present the findings of our investigation and to provide you with our preliminary geotechnical recommendations for the planned stormwater infiltration. If you have any questions regarding the information contained in this report, please feel free to call this office. *Determination of the presence or not of hazardous or toxic materials in the on-site soils or within the subject property is beyond the scope of this investigation.*

Sincerely,
A.G.I. GEOTECHNICAL, INC.

Juan A. Vidal, R.G.E. 861
Principal Engineer

JAV:wb

Distribution: (4) 55555 Amargosa Rd., LLC

Enclosures: Site Plan, Figure 1
Boring Logs (From Soils Engineering Investigation report dated February 24, 2020)
Percolation Test Data Sheets

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# INTRODUCTION

## BACKGROUND

The site was previously investigated for a proposed warehouse/distribution center (See Referenced Soils Engineering Investigation Report dated February 24, 2020). It is understood that a drywell infiltration system is currently proposed for an on-site stormwater infiltration system at the subject site.

## SITE DESCRIPTION

The subject site is located on the northwest side of Amargosa Road, between Live Oak Lane and the California Aqueduct, in the City of Hesperia, California. The subject property is practically level, is presently vacant, and is bound on the north by a developed property. The location of the site is shown on the enclosed Location Map, Figure 1.

## PROPOSED INFILTRATION DRY WELL

The purpose of this report is to provide a soil infiltration rate so that the client can evaluate the feasibility and design of a stormwater infiltration drywell system. Four additional borings were drilled to a maximum depth of 25 feet on March 13, 2020 to conduct percolation testing. Locations of the additional borings (as well as the borings drilled on January 30, 2020) are shown on the Site Plan, Figure 1. Percolation testing was performed in accordance with the Boring Percolation Test Procedure per the County of San Bernardino "Technical Guidance Documents for Water Quality Management Plans (WQMP)". Design infiltration rates of 0.06, 0.07, 0.1, and 0.1 minutes per inch were determined for borings P-1, P-2, P-3, and P-4 respectively.

Based on the preliminary information provided to us, we understand that multiple infiltration drywells are considered to discharge "first" stormwater runoff into the subsurface which apparently reduces surface runoff and/or contributes to the recharge of groundwater. The actual or final infiltration drywell system (Designed by your civil engineer) must comply with minimum setback requirements and shall contain an overflow drain that conducts overall drainage to the street, an approved location, and/or per the regulatory government agency. We recommend that the proposed infiltration dry well(s) be sealed or capped at a minimum depth of ten feet below floor slab.

Provided minimum setback is followed, the proposed stormwater infiltration system is not anticipated to saturate the foundation bearing soils adjacent to existing or neighboring structures and is not anticipated to contribute to the effects of hydro-consolidation or expansive soils. Resulting settlements from stormwater infiltration are anticipated to less than ¼ inch and are not expected to affect any existing or proposed structures. Based on our investigation, the potential for groundwater mounding or perched groundwater, liquefaction, lateral spreading, slope instability, effects of expansion soils, etc. as a result of the proposed stormwater infiltration are anticipated to be low.

The site is **not** located in a State-Defined Liquefaction Hazard Zone. No groundwater was encountered in our exploratory borings excavated on March 13, 2020 to a maximum depth of 25 feet below existing ground level or the nine previous borings excavated on January 31, 2020 to a maximum depth of 41.5 feet below existing ground level.

The proposed infiltration drywell location should be reviewed and approved by this office. Provided that the proposed infiltration pit complies with minimum setback requirements, use of an infiltration pit at the subject site is acceptable from a geotechnical standpoint. Sustained long-term use of the stormwater infiltration system is not expected to adversely affect the site or adjacent site stability.

SCOPE OF WORK & FIELD EXPLORATION

We completed the following tasks to reach the opinions, findings and/or recommendations presented in this report.

- We researched available geologic, topographic, and seismic hazard maps relevant to the subject site.
- We excavated, logged, and sampled four exploratory, truck-mounted 8-inch diameter hollow-stem augers boring to a maximum depth of 25 feet below grade in the general areas of the proposed stormwater infiltration systems. Percolation testing was performed in Boring P-1 thru P-4. The locations of our percolation test borings are shown on the Site Plan, Figure 1.
- Preparation of this report.

## SUBSURFACE CONDITIONS

SOIL PROFILE

No artificial fill was encountered in the exploratory borings. The natural soil profile, as depicted in the borings to the depth explored, consists of light brown silty sand and well graded sand with silt. In general, the alluvium is dense to very dense and damp. For a more detailed description of the soils encountered in the exploratory borings, please refer to the Boring Logs enclosed in this report.

EXCAVATION CHARACTERISTICS

Alluvium was observed to be damp and dense to very dense. Localized caving should be expected while installing the proposed infiltration drywell(s). We recommend that an experienced driller be consulted and utilized to install the proposed infiltration pit due to caving in the highly granular alluvial soils.

GROUNDWATER

No groundwater or seepage was encountered in the exploratory borings to a maximum depth explored, 25 feet below the existing ground surface on March 13, 2020, nor in our previous exploratory borings excavated to a maximum depth of 41.5 feet on January 31, 2020. It should be noted that local fluctuations in groundwater levels may occur due to seasonal variations, rainfall, irrigation, sewage disposal, and water line leaks.

## CONCLUSIONS AND RECOMMENDATIONS

Based on our investigation, it is our conclusion that current geotechnical conditions at the site are suitable for the proposed stormwater infiltration system in accordance with current County of San Bernardino requirements, provided our recommendations are incorporated into the development plans.

PERCOLATION TESTING

Upon completion of drilling for the percolation test borings, a 3-inch diameter perforated PVC pipe, covered with a filter fabric sock, was inserted into the holes. Following removal of the augers, the borings were pre-soaked to a depth of four feet below the existing ground surface (measured from a fixed reference point).

Percolation testing was performed on March 13, 2020. To perform the tests, each boring was filled with water to a depth of approximately 48 inches below the existing ground surface. After the initial measurement, water was allowed to drain for a period of 25 minutes before being measured. This procedure was then repeated. The hole was refilled between each test interval. Measurements showed that more than six inches of water drained within both 25-minute test intervals, thereby meeting the criteria for the sandy soil percolation testing procedure.

In accordance with the sandy soil criteria, the percolation test was conducted for an additional hour with measurements taken every ten minutes. The water level was refilled between each test increment. Measurements were taken with a precision of 0.25 inch from a fixed reference point at the top of the hole and recorded. Test data and calculated percolation rates are shown on the Percolation Test Data Sheets.

The percolation rate for the last 10-minute test interval reading was 0.06, 0.07, 0.1, and 0.1 for borings P-1, P-2, P-3, and P-4 respectively. No factor of safety was applied.

PLAN REVIEW

When infiltration system design, foundation and/or final development plans become available, they should be forwarded to our office for review.

REGULATORY AGENCY REVIEW AND ADDITIONAL CONSULTING

All geotechnical and/or engineering geologic aspects of the proposed development are subject to review and approval by the government reviewing agency. It should be understood that the government reviewing agency may approve or deny any portion of the proposed development which may require additional geotechnical services by this office. Additional geotechnical services may include review responses, supplemental letters, plan reviews, construction/site observations, meetings, etc. The fees for generating additional reports, letters, exploration, analyses, etc. will be billed on a time and material basis.

## COMMENTS

The investigation findings and recommendations presented in this report are based on research, site observations, and limited subsurface information. The investigation findings and recommendations presented are based on the supposition that subsurface conditions do not vary significantly from those indicated. Although no significant variations in subsurface conditions are anticipated, the possibility of significant variations cannot be ruled out. If such conditions are encountered, this consultant should be contacted immediately to consider the need for modification of this project.

This report is subject to review by regulatory agencies and these agencies may require their approval before the project can proceed. No guarantee that the regulatory public agency or agencies will approve the project is intended, expressed or implied.

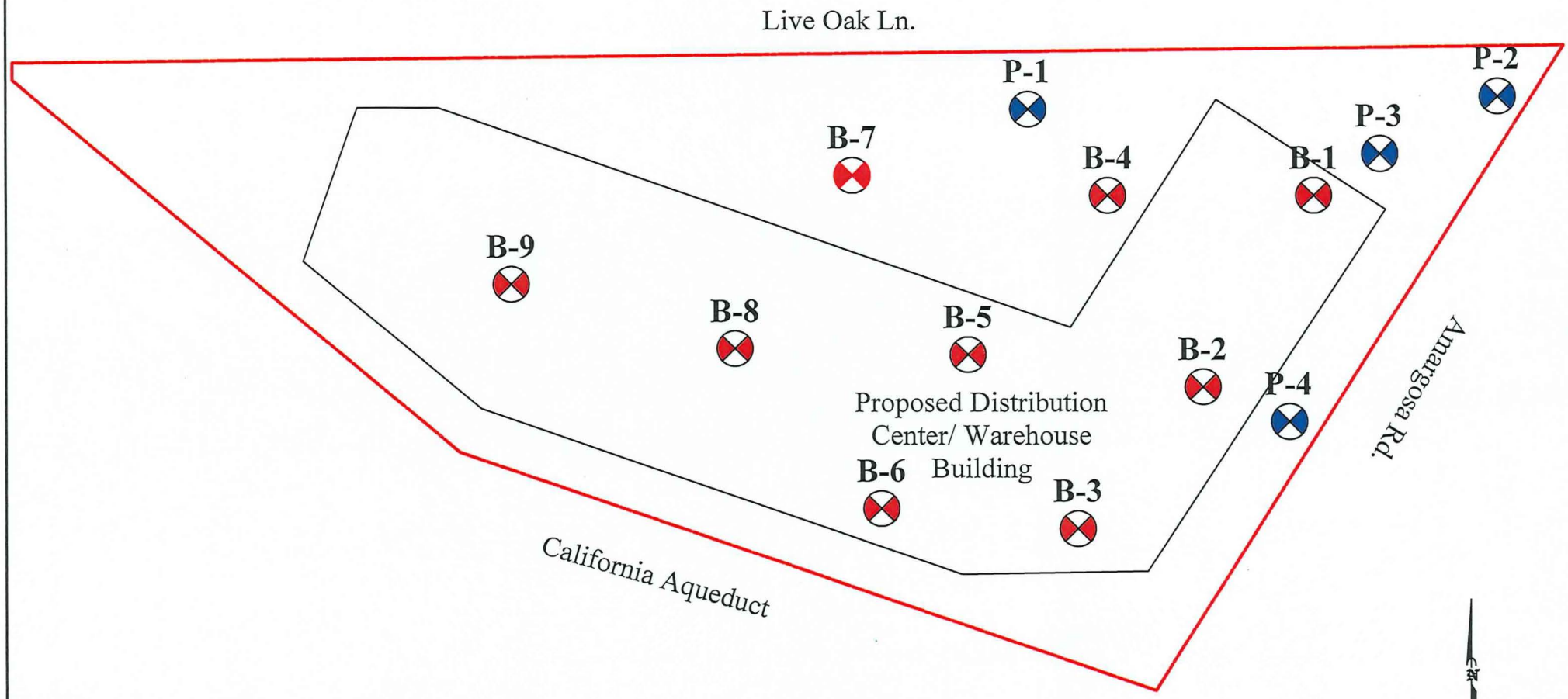
One of the purposes of this report is to provide the client with advice regarding geotechnical conditions on the site. It is important to recognize that other consultants could arrive at different conclusions and recommendations. No warranties of future site performance are intended, expressed or implied.

We trust that the foregoing information currently fulfills your requirements. If you have any questions regarding this report, or if we may be of any further service to you, please do not hesitate to contact us.

## REFERENCES

California Geological Survey, 2008, Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication 117A, 108 p.

San Bernardino County Stormwater Program "Technical Guidance Document for Water Quality Management Plans (WQMP)"; dated July 28, 2011.




## EXPLANATION

**B-1** Approximate Location of Exploratory Boring

**P-1** Approximate Location of Exploratory Boring

**Scale 1/16" = 1'-0"**

**FIGURE 1**

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# SITE PLAN

Amargosa Rd. & Live Oak Ln., Hesperia

| | |
|---|---|
| PROJECT NO. | 30-5468-01 |
| DATE | 03-2020 |
| PREPARED BY | WFB |
| APPROVED BY | JAV |

# BORING LOGS

## LEGEND


Ring Sample, or Bulk Sample


Standard Penetration Test (SPT)


Ground Water Level

| SOIL SIZE | |
|---|---|
| COMPONENT | SIZE RANGE |
| Boulders | Above 12" |
| Cobbles | 3"-12" |
| Gravel | #4 - 3" |
| coarse | ¾" - 3" |
| fine | #4 - ¾" |
| Sand | #200-#4 |
| coarse | #10-#4 |
| medium | #40-#10 |
| fine | #200-#40 |
| Fines (Silt or Clays) | Below #200 |

| PLASTICITY OF FINE GRAINED SOILS | |
|---|---|
| PLASTICITY INDEX | VOLUME CHANGE POTENTIAL |
| 0-15 | Probably Low |
| 15-30 | Probably Moderate |
| 30 or more | Probably High |

| WATER CONTENT |
|---|
| Dry: No feel of moisture |
| Damp: Much less than normal moisture |
| Moist: Normal moisture |
| Wet: Much greater than normal moisture |
| Saturated: At or near saturation |

| RELATIVE DENSITY | |
|---|---|
| SANDS & GRAVELS | BLOWS PER FOOT |
| Very loose | 0-4 |
| Loose | 4-10 |
| Medium dense | 10-30 |
| Dense | 30-50 |
| Very dense | Over 50 |

| | GROUP SYMBOLS | DESCRIPTIONS | DIVISIONS |
|---|---|---|---|
| COARSE-GRAINED SOILS (Less than 50% Fines) | GW | Well-graded gravels or gravel-sand mixtures, less than 5% fines | GRAVELS More than half of coarse fraction is larger than No. 4 sieve size |
| | GP | Poorly-graded gravels or gravel-sand mixtures, less than 5% fines | |
| | GM | Silty gravels, gravel-sand silt mixtures, more than 12% fines | |
| | GC | Clayey gravels, gravel-sand-clay mixtures, more than 12% fines | |
| | SW | Well-graded sands or gravelly sands, less than 5% fines | SANDS More than half of coarse fraction is smaller than No. 4 sieve size |
| | SP | Poorly-graded sands or gravelly sands, less than 5% fines | |
| | SM | Silty sands, sand-silt mixtures, more than 12% fines | |
| | SC | Clayey sands, sand-clay mixtures, more than 12% fines | |
| FINE-GRAINED SOILS (More than 50% Fines | ML | Inorganic silt, very fine sands, rock flour, silty or clayey fine sands | SILTS AND CLAYS Liquid limit less than 50 |
| | CL | Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays | |
| | OL | Organic silts or organic silt-clays of low plasticity | |
| | MH | Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts | SILTS AND CLAYS Liquid limit less than 50 |
| | CH | Inorganic clays of high plasticity, fat clays | |
| | OH | Organic clays of medium to high plasticity | |
| | PT | Peat, mulch, and other highly organic soils | HIGHLY ORGANIC SOILS |

| CONSISTENCY | |
|---|---|
| CLAYS & SILTS | BLOWS PER FOOT |
| Very soft | 0-2 |
| Soft | 2-4 |
| Firm | 4-8 |
| Stiff | 8-15 |
| Very stiff | 15-30 |
| Hard | Over 30 |

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# BORING NUMBER B-1



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CLIENT: 55555 Amargosa Rd., LLC PROJECT NAME: Proposed Warehouse/ Distribution Center

PROJECT NUMBER: 30-5468-00 PROJECT LOCATION: Amargosa Rd. & Live Oak Ln., Hesperia

DATE STARTED: 01/30/2020 COMPLETED: 01/31/2020 GROUND ELEVATION: N/A BORING DIAMETER: 8"

EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: N/A

DRILLING CONTRACTOR: Choice Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" Drop

LOGGED BY: CWL CHECKED BY: JAV

| DEPTH (ft) | DRIVE SAMPLE | BLOW COUNT (N VALUE) | BULK SAMPLE | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | WET UNIT WT. (pcf) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX | MATERIAL DESCRIPTION | <200 | D 50 | Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | |
| | X | 48/$\frac{50}{4"}$ | X | 8.3 | 125 | 136 | | | | Alluvium<br>Brown Silty SAND<br>(Slightly moist, very dense) | | | SM |
| 5 | X | 19/28/41 | | 1.6 | 124 | 126 | | | | Light brown Silty SAND<br>(Damp, dense) | | | SM |
| 10 | X | 26/28/45 | | 2.2 | 114 | 116 | | | | | | | |
| 15 | X | 26/28/32 | | 1.3 | 112 | 114 | | | | | | | |
| 20 | X | 19/28/37 | | 1.7 | 121 | 123 | | | | Light brown Well-graded SAND with Silt & Gravel<br>(Damp, very dense) | | | SW - SM |
| 25 | X | 21/46/49 | | 1.4 | 121 | 122 | | | | | | | |
| 30 | X | 32/40/$\frac{50}{2"}$ | | 3.6 | 117 | 122 | | | | Brown Well-graded SAND with Silt<br>(Damp, very dense) | | | SW - SM |
| | | | | | | | | | | Total Depth: 31.5'<br>No Water | | | |

# BORING NUMBER B-2



A.G.I. GEOTECHNICAL, INC.

A.G.I. Geotechnical, Inc. 16555 Sherman Way, Unit A Van Nuys, California 91406 Telephone: (818) 785-5244 Fax: (818) 785-6251

CLIENT: 55555 Amargosa Rd., LLC PROJECT NAME: Proposed Warehouse/ Distribution Center

PROJECT NUMBER: 30-5468-00 PROJECT LOCATION: Amargosa Rd. & Live Oak Ln., Hesperia

DATE STARTED: 01/30/2020 COMPLETED: 01/31/2020 GROUND ELEVATION: N/A BORING DIAMETER: 8"

EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: N/A

DRILLING CONTRACTOR: Choice Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" Drop

LOGGED BY: CWL CHECKED BY: JAV

| DEPTH (ft) | DRIVE SAMPLE | BLOW COUNT (N VALUE) | BULK SAMPLE | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | WET UNIT WT. (pcf) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX | MATERIAL DESCRIPTION | <200 | D50 | Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | |
| | X | 11/22/$\frac{50}{5"}$ | | 11.2 | 129 | 144 | | | | Alluvium<br>Brown Silty SAND<br>(Slightly moist, very dense) | | | SM |
| 5 | X | $\frac{50}{5"}$ | | 3.7 | 124 | 129 | | | | Light brown Silty SAND<br>(Damp, very dense to dense) | | | SM |
| 10 | X | 18/21/26 | | 4.1 | 119 | 124 | | | | | | | |
| 15 | X | 23/31/50 | | 2.1 | 113 | 116 | | | | | | | |
| 20 | X | 29/$\frac{50}{6"}$ | | 1.8 | 111 | 113 | | | | Light brown Well-graded SAND with Silt & Gravel<br>(Damp, very dense) | | | SW - SM |
| 25 | X | 28/43/$\frac{50}{5"}$ | | 2.0 | 127 | 129 | | | | | | | |
| 30 | X | 11/26/50 | | 4.1 | 117 | 121 | | | | Brown Well-graded SAND with Silt<br>(Damp, very dense) | | | SW - SM |
| | | | | | | | | | | Total Depth: 31.5'<br>No Water | | | |

# BORING NUMBER B-3



A.G.I. GEOTECHNICAL, INC.

A.G.I. Geotechnical, Inc. 16555 Sherman Way, Unit A Van Nuys, California 91406 Telephone: (818) 785-5244 Fax: (818) 785-6251

CLIENT: 55555 Amargosa Rd., LLC PROJECT NAME: Proposed Warehouse/ Distribution Center

PROJECT NUMBER: 30-5468-00 PROJECT LOCATION: Amargosa Rd. & Live Oak Ln., Hesperia

DATE STARTED: 01/30/2020 COMPLETED: 01/31/2020 GROUND ELEVATION: N/A BORING DIAMETER: 8"

EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: N/A

DRILLING CONTRACTOR: Choice Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" Drop

LOGGED BY: CWL CHECKED BY: JAV

| DEPTH (ft) | DRIVE SAMPLE | BLOW COUNT (N VALUE) | BULK SAMPLE | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | WET UNIT WT. (pcf) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX | MATERIAL DESCRIPTION | <200 | D 50 | Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | |
| | X | 10/21/$\frac{50}{5"}$ | X | 5.9 | 130 | 138 | | | | Alluvium<br>Brown Silty SAND<br>(Damp, very dense) | | | SM |
| 5 | X | 22/33/41 | | 4.9 | 128 | 135 | | | | Light brown Silty SAND<br>(Damp, dense to very dense) | | | SM |
| 10 | X | 25/32/38 | | 3.1 | 119 | 123 | | | | | | | |
| 15 | X | 33/34/$\frac{50}{3"}$ | | 2.2 | 118 | 120 | | | | | | | |
| 20 | X | 37/48/$\frac{50}{3"}$ | | 1.8 | 115 | 117 | | | | Light brown Well-graded SAND with Silt & Gravel<br>(Damp, very dense) | | | SW - SM |
| 25 | X | 28/42/$\frac{50}{2"}$ | | 1.9 | 119 | 121 | | | | | | | |
| 30 | X | 22/48/$\frac{50}{2"}$ | | 4.3 | 119 | 124 | | | | Brown Well-graded SAND with Silt<br>(Damp, very dense) | | | SW - SM |
| | | | | | | | | | | Total Depth: 31.5'<br>No Water | | | |

# BORING NUMBER B-4



A.G.I. GEOTECHNICAL, INC.

A.G.I. Geotechnical, Inc. 16555 Sherman Way, Unit A Van Nuys, California 91406 Telephone: (818) 785-5244 Fax: (818) 785-6251

CLIENT: 55555 Amargosa Rd., LLC PROJECT NAME: Proposed Warehouse/ Distribution Center

PROJECT NUMBER: 30-5468-00 PROJECT LOCATION: Amargosa Rd. & Live Oak Ln., Hesperia

DATE STARTED: 01/30/2020 COMPLETED: 01/31/2020 GROUND ELEVATION: N/A BORING DIAMETER: 8"

EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: N/A

DRILLING CONTRACTOR: Choice Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" Drop

LOGGED BY: CWL CHECKED BY: JAV

| DEPTH (ft) | DRIVE SAMPLE | BLOW COUNT (N VALUE) | BULK SAMPLE | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | WET UNIT WT. (pcf) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX | MATERIAL DESCRIPTION | <200 | $D_{50}$ | Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | |
| | X | 7/32/$\frac{50}{4"}$ | | 3.0 | 121 | 125 | | | | Alluvium<br>Brown Silty SAND<br>(Damp, very dense) | | | SM |
| 5 | X | 38/$\frac{50}{4"}$ | | 3.9 | 116 | 120 | | | | Light brown Silty SAND<br>(Damp, dense to very dense) | | | SM |
| 10 | X | 19/20/31 | | 3.7 | 121 | 125 | | | | | | | |
| 15 | X | 11/30/$\frac{50}{2"}$ | | 2.1 | 115 | 118 | | | | | | | |
| 20 | X | 17/$\frac{50}{6"}$ | | 1.9 | 119 | 121 | | | | Light brown Well-graded SAND with Silt & Gravel<br>(Damp, very dense to dense) | | | SW - SM |
| 25 | X | 16/21/36 | | 2.8 | 126 | 130 | | | | | | | |
| 30 | X | 20/21/46 | | 2.1 | 116 | 119 | | | | Brown Well-graded SAND with Silt<br>(Damp, dense) | | | SW - SM |

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CLIENT: 55555 Amargosa Rd., LLC PROJECT NAME: Proposed Warehouse/ Distribution Center
PROJECT NUMBER: 30-5468-00 PROJECT LOCATION: Amargosa Rd. & Live Oak Ln., Hesperia
DATE STARTED: 01/30/2020 COMPLETED: 01/31/2020 GROUND ELEVATION: N/A BORING DIAMETER: 8"
EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: N/A
DRILLING CONTRACTOR: Choice Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" Drop
LOGGED BY: CWL CHECKED BY: JAV

| DEPTH (ft) | DRIVE SAMPLE | BLOW COUNT (N VALUE) | BULK SAMPLE | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | WET UNIT WT. (pcf) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX | MATERIAL DESCRIPTION | <200 | D 50 | Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | X | 18/36/$\frac{50}{5"}$ | | 1.8 | 119 | 122 | | | | Light brown Poorly-graded SAND with Silt & Gravel (Damp, dense) | | | SP - SM |
| 40 | X | 38/$\frac{50}{6"}$ | | 1.8 | 116 | 118 | | | | | | | |
| 45 | | | | | | | | | | Total Depth: 41.5' No Water | | | |
| 50 | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | | |

# BORING NUMBER B-5



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CLIENT: 55555 Amargosa Rd., LLC PROJECT NAME: Proposed Warehouse/ Distribution Center

PROJECT NUMBER: 30-5468-00 PROJECT LOCATION: Amargosa Rd. & Live Oak Ln., Hesperia

DATE STARTED: 01/30/2020 COMPLETED: 01/31/2020 GROUND ELEVATION: N/A BORING DIAMETER: 8"

EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: N/A

DRILLING CONTRACTOR: Choice Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" Drop

LOGGED BY: CWL CHECKED BY: JAV

| DEPTH (ft) | DRIVE SAMPLE | BLOW COUNT (N VALUE) | BULK SAMPLE | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | WET UNIT WT. (pcf) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX | MATERIAL DESCRIPTION | <200 | D 50 | Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | |
| | ☒ | 8/10/20 | ☒ | 4.7 | 121 | 127 | | | | Alluvium<br>Brown Silty SAND<br>(Damp, medium dense) | | | SM |
| 5 | ☒ | 19/31/40 | | 4.6 | 127 | 133 | | | | Light brown Silty SAND<br>(Damp, dense to very dense) | | | SM |
| 10 | ☒ | 15/25/46 | | 2.5 | 123 | 126 | | | | | | | |
| 15 | ☒ | 16/29/50/5" | | 2.0 | 120 | 123 | | | | | | | |
| 20 | ☒ | 9/21/36 | | 1.8 | 120 | 122 | | | | Light brown Well-graded SAND with Silt & Gravel<br>(Damp, dense) | | | SW - SM |
| 25 | ☒ | 20/27/50 | | 4.0 | 115 | 120 | | | | | | | |
| 30 | ☒ | 20/49/50/4" | | 2.3 | 124 | 126 | | | | Brown Well-graded SAND with Silt<br>(Damp, very dense) | | | SW - SM |
| | | | | | | | | | | Total Depth: 31.5'<br>No Water | | | |

# BORING NUMBER B-6



A.G.I. GEOTECHNICAL, INC.

A.G.I. Geotechnical, Inc. 16555 Sherman Way, Unit A Van Nuys, California 91406 Telephone: (818) 785-5244 Fax: (818) 785-6251

CLIENT: 55555 Amargosa Rd., LLC PROJECT NAME: Proposed Warehouse/ Distribution Center

PROJECT NUMBER: 30-5468-00 PROJECT LOCATION: Amargosa Rd. & Live Oak Ln., Hesperia

DATE STARTED: 01/30/2020 COMPLETED: 01/31/2020 GROUND ELEVATION: N/A BORING DIAMETER: 8"

EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: N/A

DRILLING CONTRACTOR: Choice Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" Drop

LOGGED BY: CWL CHECKED BY: JAV

| DEPTH (ft) | DRIVE SAMPLE | BLOW COUNT (N VALUE) | BULK SAMPLE | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | WET UNIT WT. (pcf) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX | MATERIAL DESCRIPTION | <200 | $D_{50}$ | Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | |
| | X | 15/$\frac{50}{6"}$ | | 6.7 | 132 | 141 | | | | Alluvium<br>Brown Silty SAND<br>(Damp, very dense) | | | SM |
| 5 | X | 30/$\frac{50}{5"}$ | | 4.5 | 126 | 132 | | | | Light brown Silty SAND<br>(Damp, very dense) | | | SM |
| 10 | X | 28/38/36 | | 2.4 | 124 | 127 | | | | | | | |
| 15 | X | 19/26/$\frac{50}{5"}$ | | 1.7 | 118 | 120 | | | | | | | |
| 20 | X | 34/36/$\frac{50}{4"}$ | | 2.4 | 110 | 113 | | | | Light brown Well-graded SAND with Silt & Gravel<br>(Damp, very dense) | | | SW - SM |
| 25 | X | 18/35/$\frac{50}{5"}$ | | 2.6 | 117 | 120 | | | | | | | |
| 30 | X | $\frac{50}{6"}$ | | 2.5 | 105 | 108 | | | | Brown Well-graded SAND with Silt<br>(Damp, very dense) | | | SW - SM |
| | | | | | | | | | | Total Depth: 31.5'<br>No Water | | | |

# BORING NUMBER B-7



A.G.I. GEOTECHNICAL, INC.

A.G.I. Geotechnical, Inc. 16555 Sherman Way, Unit A Van Nuys, California 91406 Telephone: (818) 785-5244 Fax: (818) 785-6251

CLIENT: 55555 Amargosa Rd., LLC PROJECT NAME: Proposed Warehouse/ Distribution Center

PROJECT NUMBER: 30-5468-00 PROJECT LOCATION: Amargosa Rd. & Live Oak Ln., Hesperia

DATE STARTED: 01/30/2020 COMPLETED: 01/31/2020 GROUND ELEVATION: N/A BORING DIAMETER: 8"

EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: N/A

DRILLING CONTRACTOR: Choice Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" Drop

LOGGED BY: CWL CHECKED BY: JAV

| DEPTH (ft) | DRIVE SAMPLE | BLOW COUNT (N VALUE) | BULK SAMPLE | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | WET UNIT WT. (pcf) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX | MATERIAL DESCRIPTION | <200 | D50 | Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | Alluvium<br>Brown Silty SAND<br>(Damp, very dense) | | | SM |
| | X | 18/5" | | 7.2 | 136 | 146 | | | | | | | |
| 5 | | | | | | | | | | | | | |
| | X | 18/30/5" | | 3.9 | 128 | 133 | | | | Light brown Silty SAND<br>(Damp, very dense) | | | SM |
| 10 | X | 22/38/50 | | 2.2 | 124 | 127 | | | | | | | |
| 15 | X | 31/36/50 | | 2.0 | 121 | 124 | | | | | | | |
| 20 | X | 22/34/45 | | 1.5 | 124 | 126 | | | | Light brown Well-graded SAND with Silt & Gravel<br>(Damp, very dense) | | | SW - SM |
| 25 | X | 20/40/4" | | 4.4 | 126 | 132 | | | | | | | |
| 30 | X | 26/6" | | 2.2 | 118 | 121 | | | | Brown Well-graded SAND with Silt<br>(Damp, very dense) | | | SW - SM |
| | | | | | | | | | | Total Depth: 31.5'<br>No Water | | | |

# BORING NUMBER B-8



A.G.I. GEOTECHNICAL, INC.

A.G.I. Geotechnical, Inc. 16555 Sherman Way, Unit A Van Nuys, California 91406 Telephone: (818) 785-5244 Fax: (818) 785-6251

CLIENT: 55555 Amargosa Rd., LLC PROJECT NAME: Proposed Warehouse/ Distribution Center

PROJECT NUMBER: 30-5468-00 PROJECT LOCATION: Amargosa Rd. & Live Oak Ln., Hesperia

DATE STARTED: 01/30/2020 COMPLETED: 01/31/2020 GROUND ELEVATION: N/A BORING DIAMETER: 8"

EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: N/A

DRILLING CONTRACTOR: Choice Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" Drop

LOGGED BY: CWL CHECKED BY: JAV

| DEPTH (ft) | DRIVE SAMPLE | BLOW COUNT (N VALUE) | BULK SAMPLE | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | WET UNIT WT. (pcf) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX | MATERIAL DESCRIPTION | <200 | D 50 | Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | Alluvium<br>Brown Silty SAND<br>(Damp, very dense) | | | SM |
| | X | 44/49/$\frac{50}{4"}$ | | 3.7 | 127 | 132 | | | | | | | |
| 5 | X | 45/32/46 | | 2.8 | 125 | 128 | | | | Light brown Silty SAND<br>(Damp, dense to very dense) | | | SM |
| 10 | X | 25/28/40 | | 7.1 | 114 | 122 | | | | | | | |
| 15 | X | 20/30/$\frac{50}{6"}$ | | 2.0 | 121 | 123 | | | | | | | |
| 20 | X | 34/38/50 | | 2.0 | 116 | 119 | | | | Light brown Well-graded SAND with Silt & Gravel<br>(Damp, very dense) | | | SW - SM |
| 25 | X | 21/40/50 | | 1.2 | 125 | 127 | | | | | | | |
| 30 | X | 24/$\frac{50}{5"}$ | | 2.3 | 121 | 123 | | | | Brown Well-graded SAND with Silt<br>(Damp, very dense) | | | SW - SM |
| | | | | | | | | | | Total Depth: 31.5'<br>No Water | | | |

# BORING NUMBER B-9



A.G.I. GEOTECHNICAL, INC.

A.G.I. Geotechnical, Inc. 16555 Sherman Way, Unit A Van Nuys, California 91406 Telephone: (818) 785-5244 Fax: (818) 785-6251

CLIENT: 55555 Amargosa Rd., LLC PROJECT NAME: Proposed Warehouse/ Distribution Center

PROJECT NUMBER: 30-5468-00 PROJECT LOCATION: Amargosa Rd. & Live Oak Ln., Hesperia

DATE STARTED: 01/30/2020 COMPLETED: 01/31/2020 GROUND ELEVATION: N/A BORING DIAMETER: 8"

EXCAVATION METHOD: 8" Hollow Stem Auger GROUND WATER LEVELS: N/A

DRILLING CONTRACTOR: Choice Drilling SAMPLING METHOD: Autohammer, 140 lb., 30" Drop

LOGGED BY: CWL CHECKED BY: JAV

| DEPTH (ft) | DRIVE SAMPLE | BLOW COUNT (N VALUE) | BULK SAMPLE | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | WET UNIT WT. (pcf) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX | MATERIAL DESCRIPTION | <200 | $D_{50}$ | Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | |
| | X | 24/4" | X | 5.6 | 121 | 127 | | | | Alluvium<br>Brown Silty SAND<br>(Damp, very dense) | | | SM |
| 5 | X | 30/4" | | 4.3 | 122 | 128 | | | | Light brown Silty SAND<br>(Damp, very dense to dense) | | | SM |
| 10 | X | 17/22/30 | | 3.4 | 128 | 133 | | | | | | | |
| 15 | X | 12/24/28 | | 4.4 | 116 | 121 | | | | | | | |
| 20 | X | 16/32/40 | | 1.3 | 118 | 119 | | | | Light brown Well-graded SAND with Silt & Gravel<br>(Damp, dense to very dense) | | | SW - SM |
| 25 | X | 24/5" | | 3.4 | 118 | 122 | | | | | | | |
| 30 | X | 49/5" | | 3.5 | 116 | 120 | | | | Brown Well-graded SAND with Silt<br>(Damp, very dense) | | | SW - SM |
| | | | | | | | | | | Total Depth: 31.5'<br>No Water | | | |

# PERCOLATION TEST DATA SHEETS

# PERCOLATION TEST DATA SHEET

| Project | Amargosa Rd. & Live Oak Ln., Hesperia | Project No.: | 30-5468-01 | Date | 3/13/2020 |
|---|---|---|---|---|---|
| Test Hole No.: | P-1 | Tested By: | A.G.I. Geotechnical | | |
| Depth of Test Hole: | 25' | USCS Soil Classification | | SM-SW | |
| Test Hole Dimentions (inches) | | | | Length | Width |
| Diameter {if round} | 8" | Sides {if Rectangular} | | N/A | N/A |

**Sandy Soil Criteria Test***

| Trial No. | Start Time | Stop Time | Time Intrval, (min.) | Initial Depth to Water (in.) | Final Depth to Water (in) | Change in Water Level (in.) | Greater Than or Equal to 6"? (Y/N) |
|---|---|---|---|---|---|---|---|
| 1 | 10:55 a.m. | 11:20 a.m. | 25 | 48 | 291.0 | 243.0 | Y |
| 2 | 12:15 p.m. | 12:40 p.m. | 25 | 48 | 255.8 | 207.8 | Y |

***If 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 10 minutes. Otherwise, pre-soak {fill} overnight. Obtain at least twelve measurements per hole over at least six hours {approximately 30 minutes intervals} with a precision of at least 0.25".**

Percolation Rate: 952.3 in/hr.
Infiltration Rate: 10.95 in/hr.

| Trial No. | Start Time | Stop Time | Time Intrval, (min.) | Initial Depth to Water (in.) | Final Depth to Water (in) | Change in Water Level (in.) | Percolation Rate (min./in.) |
|---|---|---|---|---|---|---|---|
| 1 | 12:41 p.m. | 12:57 p.m. | 10 | 48 | 204.0 | 156.0 | 0.064 |
| 2 | 12:53 p.m. | 1:03 p.m. | 10 | 48 | 205.2 | 157.2 | 0.064 |
| 3 | 1:06 p.m. | 1:16 p.m. | 10 | 48 | 205.8 | 157.8 | 0.063 |
| 4 | 1:18 p.m. | 1:28 p.m. | 10 | 48 | 206.8 | 158.8 | 0.063 |
| 5 | 1:30 p.m. | 1:40 p.m. | 10 | 48 | 205.7 | 157.7 | 0.063 |
| 6 | 1:42 p.m. | 1:52 p.m. | 10 | 48 | 207.2 | 159.2 | 0.063 |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |

**Comments:**

A.G.I. GEOTECHNICAL, INC.

| Project No.: | 30-5468-01 | Date: 03/19/2020 |
|---|---|---|
| Calc. By: | WFB | |
| Proj Name: | Amargosa Rd. & Live Oak Ln. | |

# PERCOLATION TEST DATA SHEET

| Project | Amargosa Rd. & Live Oak Ln., Hesperia | Project No.: | 30-5468-01 | Date | 3/13/2020 |
|---|---|---|---|---|---|
| Test Hole No.: | P-2 | Tested By: | A.G.I. Geotechnical | | |
| Depth of Test Hole: | 25' | USCS Soil Classification | | SM-SW | |
| Test Hole Dimentions (inches) | | | | Length | Width |
| Diameter {if round} | 8" | Sides {if Rectangular} | | N/A | N/A |

**Sandy Soil Criteria Test***

| Trial No. | Start Time | Stop Time | Time Intrval, (min.) | Initial Depth to Water (in.) | Final Depth to Water (in) | Change in Water Level (in.) | Greater Than or Equal to 6"? (Y/N) |
|---|---|---|---|---|---|---|---|
| 1 | 11:00 a.m. | 11:25 a.m. | 25 | 48 | 252.0 | 204.0 | Y |
| 2 | 12:20 p.m. | 12:45 p.m. | 25 | 48 | 261.6 | 213.6 | Y |

***If 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 10 minutes. Otherwise, pre-soak {fill} overnight. Obtain at least twelve measurements per hole over at least six hours {approximately 30 minutes intervals} with a precision of at least 0.25".**

Infiltration Rate: 855.0 in/hr

Percolation Rate: 869.6 in/hr

| Trial No. | Start Time | Stop Time | Time Intrval, (min.) | Initial Depth to Water (in.) | Final Depth to Water (in) | Change in Water Level (in.) | Percolation Rate (min./in.) |
|---|---|---|---|---|---|---|---|
| 1 | 2:00 p.m. | 2:10 p.m. | 10 | 48 | 192.1 | 144.1 | 0.069 |
| 2 | 2:12 p.m. | 2:22 p.m. | 10 | 48 | 192.6 | 144.6 | 0.069 |
| 3 | 2:24 p.m. | 2:34 p.m. | 10 | 48 | 192.2 | 144.2 | 0.069 |
| 4 | 2:36 p.m. | 2:46 p.m. | 10 | 48 | 193.3 | 145.3 | 0.069 |
| 5 | 2:48 p.m. | 2:58 p.m. | 10 | 48 | 194.8 | 146.8 | 0.068 |
| 6 | 3:00 p.m. | 3:10 p.m. | 10 | 48 | 193.0 | 145.0 | 0.069 |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |

**Comments:**

A.G.I. GEOTECHNICAL, INC.

| Project No.: | 30-5468-01 | Date: 03/19/2020 |
|---|---|---|
| Calc. By: | WFB | |
| Proj Name: | Amargosa Rd. & Live Oak Ln. | |

# PERCOLATION TEST DATA SHEET

| Project | Amargosa Rd. & Live Oak Ln., Hesperia | Project No.: | 30-5468-01 | Date | 3/13/2020 |
|---|---|---|---|---|---|
| Test Hole No.: | P-3 | Tested By: | A.G.I. Geotechnical | | |
| Depth of Test Hole: | 20' | USCS Soil Classification | | SM | |
| Test Hole Dimentions (inches) | | | | Length | Width |
| Diameter {if round} | 8" | Sides {if Rectangular} | | N/A | N/A |

**Sandy Soil Criteria Test***

| Trial No. | Start Time | Stop Time | Time Intrval, (min.) | Initial Depth to Water (in.) | Final Depth to Water (in) | Change in Water Level (in.) | Greater Than or Equal to 6"? (Y/N) |
|---|---|---|---|---|---|---|---|
| 1 | 11:05 a.m. | 11:30 a.m. | 25 | 48 | 232.8 | 184.8 | Y |
| 2 | 12:25 p.m. | 12:50 p.m. | 25 | 48 | 230.5 | 182.5 | Y |

***If 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 10 minutes. Otherwise, pre-soak {fill} overnight. Obtain at least twelve measurements per hole over at least six hours {approximately 30 minutes intervals} with a precision of at least 0.25".**

| Trial No. | Start Time | Stop Time | Time Intrval, (min.) | Initial Depth to Water (in.) | Final Depth to Water (in) | Change in Water Level (in.) | Percolation Rate (min./in.) |
|---|---|---|---|---|---|---|---|
| 1 | 3:15 p.m. | 3:25 p.m. | 10 | 48 | 150.5 | 102.5 | 0.098 |
| 2 | 3:27 p.m. | 3:37 p.m. | 10 | 48 | 148.7 | 100.7 | 0.099 |
| 3 | 3:39 p.m. | 3:49 p.m. | 10 | 48 | 149.6 | 101.6 | 0.098 |
| 4 | 3:51 p.m. | 4:01 p.m. | 10 | 48 | 149.9 | 101.9 | 0.098 |
| 5 | 4:03 p.m. | 4:13 p.m. | 10 | 48 | 151.0 | 103.0 | 0.097 |
| 6 | 4:15 p.m. | 4:25 p.m. | 10 | 48 | 148.3 | 100.3 | 0.100 |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |

Infiltration Rate: 6.37 in/hr

Percolation Rate: 612.2 in/hr

**Comments:**

A.G.I. GEOTECHNICAL, INC.

| Project No.: | 30-5468-01 | Date: 03/19/2020 |
|---|---|---|
| Calc. By: | WFB | |
| Proj Name: | Amargosa Rd. & Live Oak Ln. | |

# PERCOLATION TEST DATA SHEET

| Project | Amargosa Rd. & Live Oak Ln., Hesperia | Project No.: | 30-5468-01 | Date | 3/13/2020 |
|---|---|---|---|---|---|
| Test Hole No.: | P-4 | Tested By: | A.G.I. Geotechnical | | |
| Depth of Test Hole: | 20' | USCS Soil Classification | | SM | |
| Test Hole Dimentions (inches) | | | | Length | Width |
| Diameter {if round} | 8" | Sides {if Rectangular} | | N/A | N/A |

**Sandy Soil Criteria Test***

| Trial No. | Start Time | Stop Time | Time Intrval, (min.) | Initial Depth to Water (in.) | Final Depth to Water (in) | Change in Water Level (in.) | Greater Than or Equal to 6"? (Y/N) |
|---|---|---|---|---|---|---|---|
| 1 | 11:45 a.m. | 12:10 p.m. | 25 | 48 | 227.2 | 179.2 | Y |
| 2 | 12:30 p.m. | 12:55 p.m. | 25 | 48 | 225.0 | 177.0 | Y |

***If 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 10 minutes. Otherwise, pre-soak {fill} overnight. Obtain at least twelve measurements per hole over at least six hours {approximately 30 minutes intervals} with a precision of at least 0.25".**

Infiltration Rate: 8.33 in/hr. Percolation Rate: 606.1 in/hr.

| Trial No. | Start Time | Stop Time | Time Intrval, (min.) | Initial Depth to Water (in.) | Final Depth to Water (in) | Change in Water Level (in.) | Percolation Rate (min./in.) |
|---|---|---|---|---|---|---|---|
| 1 | 4:30 p.m. | 4:40 p.m. | 10 | 48 | 154.4 | 106.4 | 0.094 |
| 2 | 4:42 p.m. | 4:52 p.m. | 10 | 48 | 149.4 | 101.4 | 0.099 |
| 3 | 4:54 p.m. | 5:04 p.m. | 10 | 48 | 148.7 | 100.7 | 0.099 |
| 4 | 5:06 p.m. | 5:16 p.m. | 10 | 48 | 148.9 | 100.9 | 0.099 |
| 5 | 5:18 p.m. | 5:28 p.m. | 10 | 48 | 147.2 | 99.2 | 0.101 |
| 6 | 5:30 p.m. | 5:40 p.m. | 10 | 48 | 148.0 | 100.0 | 0.100 |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |

**Comments:**

A.G.I. GEOTECHNICAL, INC.

| Project No.: | 30-5468-01 | Date: 03/19/2020 |
|---|---|---|
| Calc. By: | WFB | |
| Proj Name: | Amargosa Rd. & Live Oak Ln. | |