November 24, 2021

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Trammell Crow Company
3501 Jamboree Road, Suite 230
Newport Beach, California 92660

Attention: Mr. Kyle Dorand
Vice President - Development

Project No.: **21G254-2**

Subject: **Results of Infiltration Testing**
Proposed Industrial Building
Nicholas Road, North of West 4th Street
Beaumont, California

Reference: Geotechnical Investigation, Proposed Industrial Building, Nicholas Road, North of West 4th Street, Beaumont, California, prepared by Southern California Geotechnical, Inc. (SCG), prepared for Trammell Crow Company, SCG Project No. 21G254-1, dated November 22, 2021.

Mr. Dorand:

In accordance with your request, we have conducted infiltration testing at the subject site. We are pleased to present this report summarizing the results of the infiltration testing and our design recommendations.

Scope of Services

The scope of services performed for this project was in general accordance with our Proposal No. 21P456, dated October 13, 2021. The scope of services included site reconnaissance, subsurface exploration, field testing, and engineering analysis to determine the infiltration rates of the onsite soils. The infiltration testing was performed in general accordance with the guidelines published in Riverside County – Low Impact Development BMP Design Handbook – Section 2.3 of Appendix A, prepared for the Riverside County Department of Environmental Health (RCDEH), dated December, 2013.

Site and Project Description

The subject site is located immediately northwest of the terminus of the Nicholas Road cul-de-sac, 1300± feet north of the intersection with West 4th Street in Beaumont, California. The site is bounded to the north by the Moreno Valley Freeway (60), to the east by an existing industrial building, to the south by an existing commercial/industrial building and vacant land and to the west by Western Knolls Avenue and an Amazon distribution facility. The general location of the site is illustrated on the Site Location Map, included as Plate 1 of this report.

The site consists of a roughly rectangular-shaped parcel, 30.9± acres in size. The site is presently developed as the Dowling Fruit Orchard. Three (3) buildings, ranging in size from 4,500 to 5,200± ft^2, are located in the northwest area of the site. Two (2) of the buildings are of wood-frame and

stucco construction. The remaining building is of steel frame and metal panel construction. Ground surface cover on the west side of the buildings consists of Portland cement concrete and asphaltic concrete. The pavements are in fair condition with moderate cracking throughout. One (1) above-ground storage (AST) is located just east of the aforementioned buildings. Additionally, one (1) shade structure is also located in the northwest area of the site. The shade structure is of wood frame construction with a metal panel roof. This area is used for storing farming equipment. One (1) single-family residence (SFR) is located near the middle of the western property line. Ground surface cover surrounding the single-family residence consists of exposed soil with several large trees. A single dry-well is located in the central area of the site. The remaining areas of the site are presently planted with several types of medium to large fruit trees. Ground surface cover in these areas consists of exposed soil.

Detailed topographic information was not available at the time of this report. Based on elevations obtained from Google Earth and visual observations made at the time of the subsurface investigation, the southern three-quarters of the site slopes downward to the south at a gradient of 2± percent. The northern quarter of the site slopes downward to the north at a gradient of 1± percent.

Proposed Development

Based on a conceptual site plan provided to our office by the client, the site will be developed with one (1) new industrial building, 600,000± ft^2 in size, located in the central area of the site. The building will be constructed in a cross-dock configuration, with docks along most of the east and west building walls. It is expected that the building will be surrounded by asphaltic concrete pavements in the parking and drive lanes, Portland cement concrete pavements in the loading dock areas, and limited areas of concrete flatwork and landscape planters.

The proposed development will include on-site stormwater infiltration. The infiltration system will consist of a detention/infiltration basin located in the western area of the site. The bottom of the infiltration system will extend to a depth of 15± feet below the existing site grades. It should be noted that the site plan was changed from the time of the field investigation to the issuance of this report. Therefore, none of the infiltration tests are located within the currently proposed location of the detention/infiltration basin.

Concurrent Study

SCG concurrently conducted a geotechnical investigation at the subject site, also referenced above. As part of this study, seven (7) borings advanced to depths of 15 to 50± feet below the existing site grades. Artificial fill soils were encountered at the ground surface or beneath the gravel surface extending to depths of 2½ to 4½± feet below ground surface. The fill soils generally consist of medium dense to dense clayey fine sands, silty fine sands and fine sandy silts, and very stiff fine sandy clays. Possible fill soils were encountered at two of the borings extending to depths of 5½ to 6½± feet. The possible fill soils consist of very stiff fine sandy clay and loose to medium dense silty fine sand. Native alluvium was encountered beneath the fill or possible fill soils at all of the boring locations, extending to at least the maximum depth explored of 50± feet below ground surface. The near-surface alluvial soils, within the upper 4½ to 8± feet, generally consist of stiff fine sandy clay and medium dense clayey fine sand. These soils possess slight cementation. At depths greater than 8± feet, the alluvial soils generally consist of medium

dense to dense silty fine sand and fine sandy silt. These soils possess trace to some clay and occasional cementation. Occasional layers of medium dense to very dense fine to medium sand, fine to coarse sand and very stiff clayey silt were encountered between depths of 17 to 50± feet below ground surface.

Groundwater

Free water was not encountered during the drilling of any of the borings. Based on the moisture content of the recovered soil samples and the lack of free water in the borings, the static groundwater table is at a greater depth than 50± feet below existing site grades.

Historic and recent water level data was obtained from the California Department of Water Resources website, http://www.water.ca.gov/waterdatalibrary/. One monitoring well on record is located 1,312± feet east of the site. Water level readings within this monitoring well indicate a high groundwater level of 226± feet below ground surface in November 1991, and 149± feet below the ground surface in October 2010.

Subsurface Exploration

Scope of Exploration

The subsurface exploration conducted for the infiltration testing consisted of three (3) infiltration test borings, advanced to a depth of 15± feet below the existing site grades. The infiltration borings were advanced using a truck-mounted drilling rig, equipped with 8-inch-diameter hollow stem augers and were logged during drilling by a member of our staff. The approximate locations of the infiltration test borings (identified as I-1 through I-3) are indicated on the Infiltration Test Location Plan, enclosed as Plate 2 of this report.

Upon the completion of the infiltration borings, the bottom of each test boring was covered with 2± inches of clean ¾-inch gravel. A sufficient length of 3-inch-diameter perforated PVC casing was then placed into each test hole so that the PVC casing extended from the bottom of the test hole to the ground surface. Clean ¾-inch gravel was then installed in the annulus surrounding the PVC casing.

Geotechnical Conditions

Artificial fill soils were encountered at the ground surface extending to depths of 2½± feet below ground surface. The fill soils generally consist of stiff fine sandy clays. Native alluvial soils were encountered beneath the fill soils at all of the infiltration test boring locations, extending to at least the maximum explored depth of 15± feet below existing site grades. The near-surface alluvium generally consists of stiff fine sandy clays extending to a depth of 7± feet. At greater depths, the alluvium consists of loose to medium dense silty fine to medium sands to fine sandy silts and fine to coarse sands with little silt. The Boring Logs, which illustrate the conditions encountered at the boring locations, are included with this report.

Infiltration Testing

As previously mentioned, the infiltration testing was performed in general accordance with the Riverside County guidelines: Riverside County – Low Impact Development BMP Design Handbook – Section 2.3 of Appendix A.

Pre-soaking

In accordance with the county infiltration standards both of the infiltration test borings were pre-soaked prior to the infiltration testing. The pre-soaking process consisted of filling the test borings by inverting a full 5-gallon bottle of clear water supported over each hole so that the water level reaches a level of at least 5 times the hole's radius above the gravel at the bottom of each hole. The pre-soaking was completed after all of the water had percolated through each test hole or after 15 hours since initiating the pre-soak. Based on the results of the pre-soaking process, different infiltration procedures were used during the infiltration testing at the infiltration boring locations.

Infiltration Testing

Following the pre-soaking process of the infiltration test borings, SCG performed the infiltration testing. Each test hole was filled with water to a depth of at least 5 times the hole's radius above the gravel at the bottom of each test hole. In accordance with the Riverside County guidelines, in areas where "non-sandy soils" were encountered at the bottom of the infiltration test borings (where 6 inches of water did not infiltrate into the surrounding soils in less than 25 minutes for two (2) consecutive readings), readings were taken at 30-minute intervals for a total of 6 hours at the test location. The water level readings are presented on the spreadsheets enclosed with this report. The infiltration rates for each of the timed intervals are also tabulated on the spreadsheets.

The infiltration rates from the test are tabulated in inches per hour. In accordance with the typically accepted practice, it is recommended that the most conservative reading from the latter part of the infiltration tests be used as the design infiltration rate. The rates are summarized below:

Infiltration Test No.	Depth (feet)	Soil Description	Infiltration Rate (inches/hour)
I-1	15	Gray Brown Silty fine to coarse Sand, little fine Gravel, little Silt	0.2
I-2	15	Brown Silty fine to medium Sand to fine to medium Sandy Silt, trace Clay	0.1
I-3	15	Brown Silty fine to medium Sand to fine to medium Sandy Silt, trace Clay	0.0

Laboratory Testing

Moisture Content

The moisture contents for the recovered soil samples within the borings were determined in accordance with ASTM D-2216 and are expressed as a percentage of the dry weight. These test results are presented on the Boring Logs.

Grain Size Analysis

The grain size distribution of selected soils collected from the bottom of each infiltration test boring have been determined using a range of wire mesh screens. These tests were performed in general accordance with ASTM D-422 and/or ASTM D-1140. The weight of the portion of the sample retained on each screen is recorded and the percentage finer or coarser of the total weight is calculated. The results of these tests are presented on Plates C-1 through C-3 of this report.

Design Recommendations

Three (3) infiltration tests were performed at the subject site. As noted above, the calculated infiltration rates at the infiltration test locations range from 0.0 to 0.2 inches per hour. **Based on the results of infiltration testing, infiltration is not recommended for a proposed infiltration system located in the southern area of the site.** As noted above, none of the infiltration tests were performed within the proposed infiltration system located in the western area of the site. However, based on the subsurface data collected during the concurrent geotechnical investigation, we expect the infiltration characteristics will be similar in the western area of the site to the southern area of the site.

General Comments

This report has been prepared as an instrument of service for use by the client in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, structural engineer, and/or civil engineer. The design of the infiltration system is the responsibility of the civil engineer. The role of the geotechnical engineer is limited to determination of infiltration rate only. By using the design infiltration rates contained herein, the civil engineer agrees to indemnify, defend, and hold harmless the geotechnical engineer for all aspects of the design and performance of the infiltration system. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur. The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between trench locations and testing depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted. The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

Closure

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

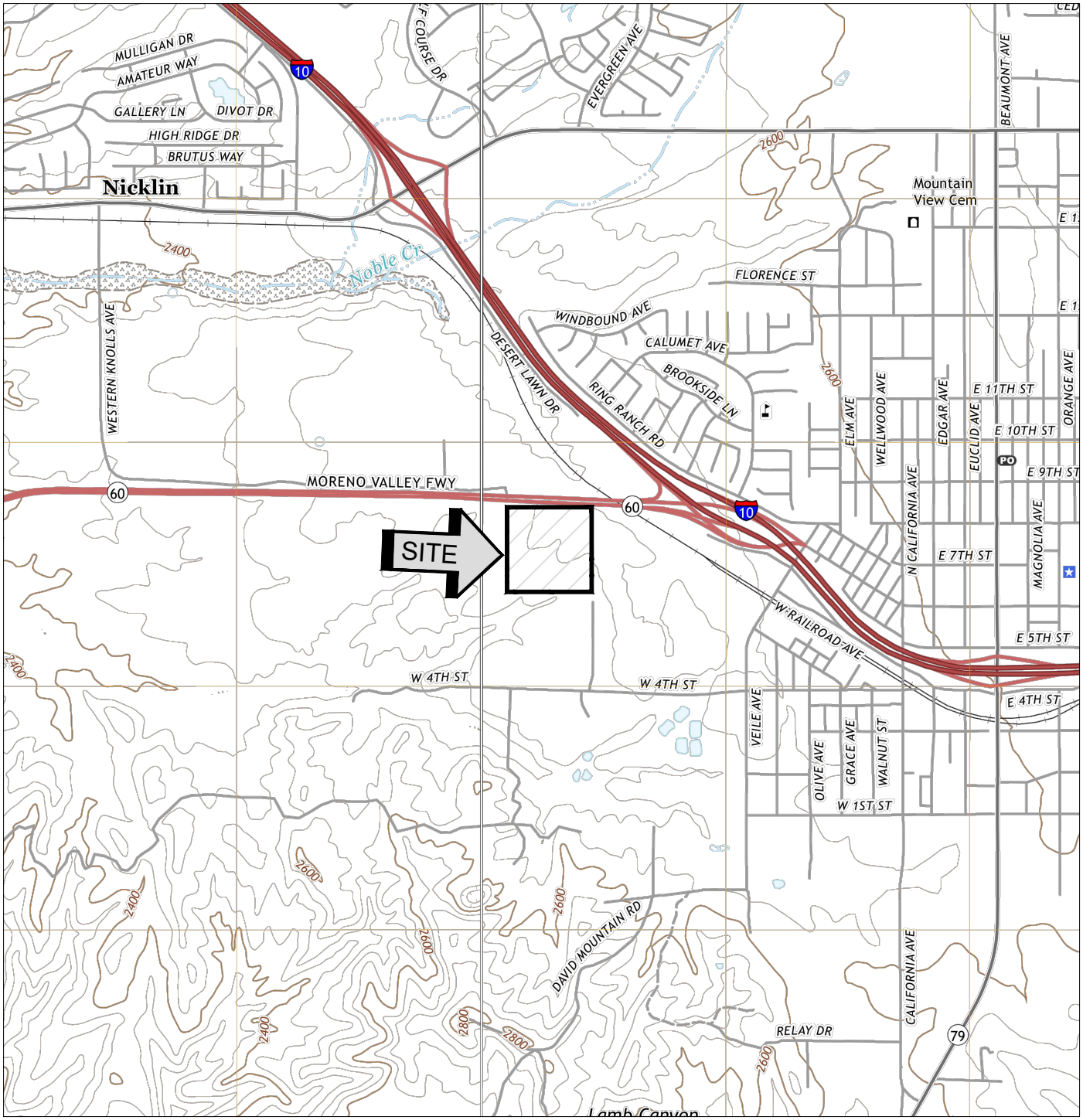
SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Daryl Kas, CEG 2467
Senior Geologist

Gregory K. Mitchell, GE 2364
Principal Engineer

Distribution: (1) Addressee

Enclosures: Plate 1 - Site Location Map
Plate 2 - Infiltration Test Location Plan
Boring Log Legend and Logs (5 pages)
Infiltration Test Results Spreadsheets (3 pages)
Grain Size Distribution Graphs (3 pages)



SOURCE: USGS TOPOGRAPHIC MAP OF THE BEAUMONT AND EL CASCO QUADRANGLES, RIVERSIDE COUNTY, CALIFORNIA, 2018.

SITE LOCATION MAP

PROPOSED INDUSTRIAL BUILDING

BEAUMONT, CALIFORNIA

SCALE: 1" = 2000'	
DRAWN: MD CHKD: GKM	
SCG PROJECT 21G254-2	
PLATE 1	

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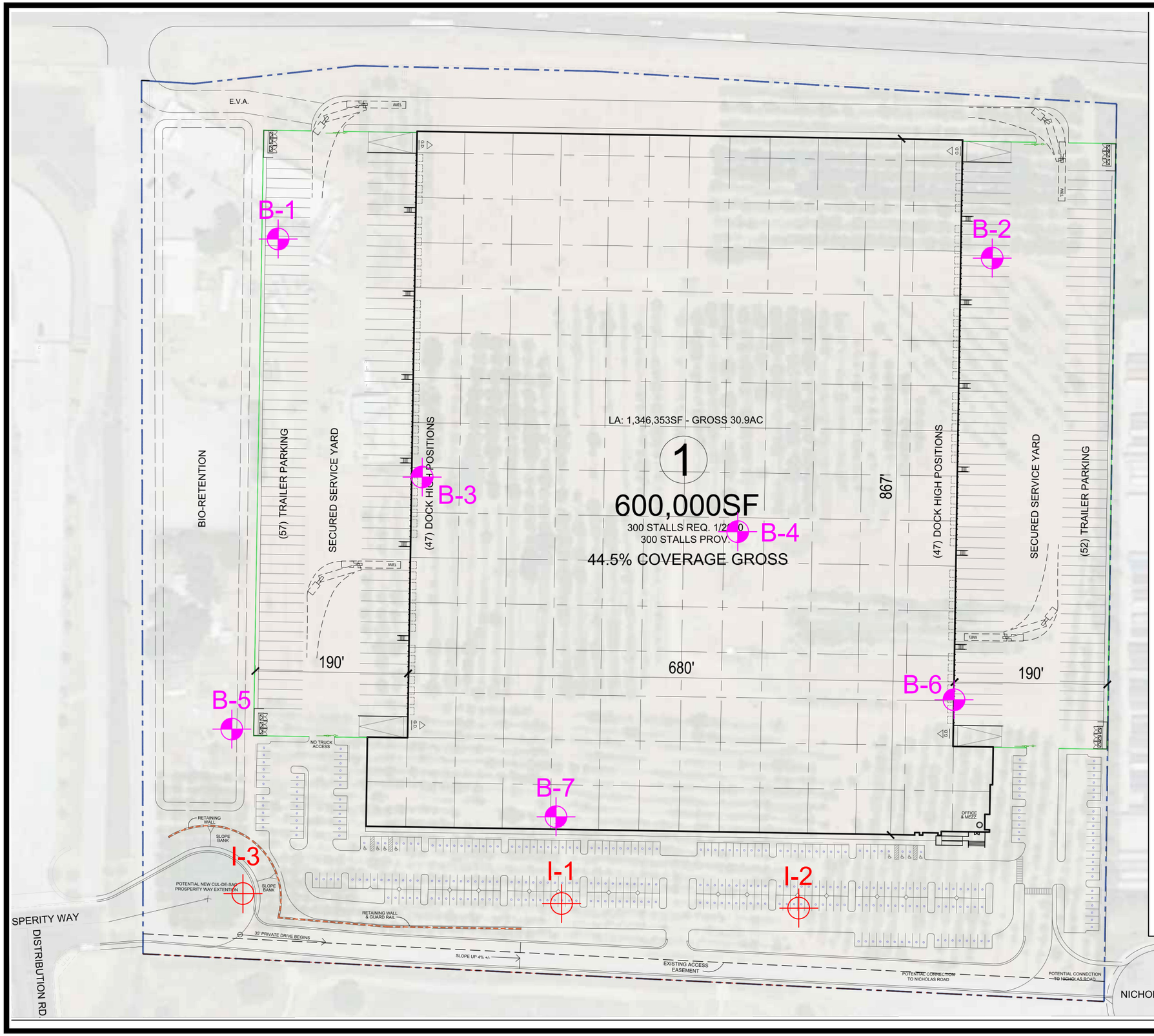

NORTH

SoCalGeo

GEOTECHNICAL LEGEND

- APPROXIMATE INFILTRATION LOCATION
- APPROXIMATE BORING LOCATION (SCG PROJECT NO. 21G254-1)

INFILTRATION TEST LOCATION PLAN

PROPOSED INDUSTRIAL BUILDING

BEAUMONT, CALIFORNIA

SCALE: 1" = 120'	
DRAWN: MD CHKD: GKM	
SCG PROJECT 21G254-2	
PLATE 2	

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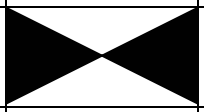
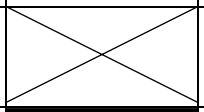
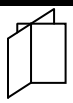
BORING LOG LEGEND

SAMPLE TYPE	GRAPHICAL SYMBOL	SAMPLE DESCRIPTION
AUGER		SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED)
CORE		ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK.
GRAB		SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED)
CS		CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED)
NSR		NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL.
SPT		STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED)
SH		SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED)
VANE		VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED.

COLUMN DESCRIPTIONS

DEPTH: Distance in feet below the ground surface.

SAMPLE: Sample Type as depicted above.

BLOW COUNT: Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

POCKET PEN.: Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

GRAPHIC LOG: Graphic Soil Symbol as depicted on the following page.

DRY DENSITY: Dry density of an undisturbed or relatively undisturbed sample in lbs/ft^3.

MOISTURE CONTENT: Moisture content of a soil sample, expressed as a percentage of the dry weight.

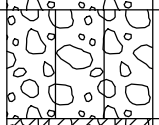
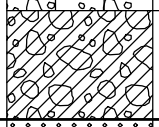
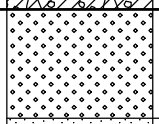
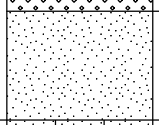
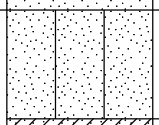
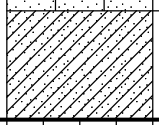
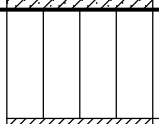
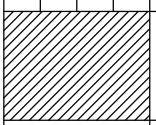
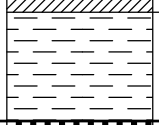
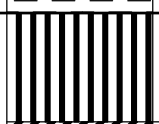
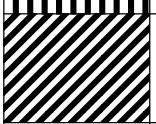
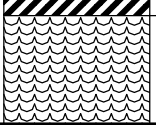
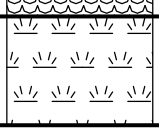
LIQUID LIMIT: The moisture content above which a soil behaves as a liquid.

PLASTIC LIMIT: The moisture content above which a soil behaves as a plastic.

PASSING #200 SIEVE: The percentage of the sample finer than the #200 standard sieve.

UNCONFINED SHEAR: The shear strength of a cohesive soil sample, as measured in the unconfined state.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. I-1

JOB NO.: 21G254-2
PROJECT: Proposed Industrial Building
LOCATION: Beaumont, California

DRILLING DATE: 10/27/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: ---
CAVE DEPTH: ---
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
					FILL: Red Brown fine Sandy Clay, slightly porous, stiff-damp							
					ALLUVIUM: Brown fine Sandy Clay, trace medium Sand, slightly cemented, stiff-damp							
5		14	4.5				10					
					Brown fine Sandy Silt, trace medium Sand, medium dense-moist							
10		19					16					
					Gray Brown fine to coarse Sand, little fine Gravel, little Silt, medium dense-damp							
		23					4					
15					Boring Terminated at 15							

TBL 21G254-2.GPJ SOCALGEO.GDT 11/24/21

TEST BORING LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. I-2

JOB NO.: 21G254-2
PROJECT: Proposed Industrial Building
LOCATION: Beaumont, California

DRILLING DATE: 10/27/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: ---
CAVE DEPTH: ---
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
					FILL: Red Brown fine Sandy Clay, slightly porous, stiff-damp							
					ALLUVIUM: Brown fine Sandy Clay, trace medium to coarse Sand, trace fine Gravel, stiff-damp to moist							
5		9	4.5				12					
					Brown Silty fine to medium Sand to fine to medium Sandy Silt, trace Clay, loose-moist							
10		9					15					
		19					18					
15					Boring Terminated at 15'							

TBL 21G254-2.GPJ SOCALGEO.GDT 11/24/21

TEST BORING LOG **PLATE B-2**

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BORING NO. I-3

JOB NO.: 21G254-2
PROJECT: Proposed Industrial Building
LOCATION: Beaumont, California

DRILLING DATE: 10/27/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: ---
CAVE DEPTH: ---
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
					FILL: Red Brown fine Sandy Clay to Clayey fine Sand, slightly porous, stiff to medium dense-damp							
					ALLUVIUM: Brown fine Sandy Clay, slightly cemented, stiff-moist							
		11	4.5				15					
5												
		18	3.0				13					
10					@ 9½', 2±-inch fine to medium Sand lens							
					Brown Silty fine to medium Sand to fine to medium Sandy Silt, trace Clay, medium dense-moist							
		17					15					
15					Boring Terminated at 15'							

TBL 21G254-2.GPJ SOCALGEO.GDT 11/24/21

TEST BORING LOG

PLATE B-3

INFILTRATION CALCULATIONS

Project Name	Proposed Industrial Building
Project Location	Beaumont, California
Project Number	21G254-2
Engineer	CB

Test Hole Radius	4	(in)
Test Depth	14.90	(ft)

Infiltration Test Hole	I-1

Soil Criteria Test

Interval Number		Time	Time Interval (min)	Water Depth (ft)	Change in Water Level (in)	Did 6 inches of water seep away in less than 25 minutes?	Sandy Soils or Non-Sandy Soils?
1	Initial	7:37 AM	25.00	12.20	1.92	NO	NON-SANDY SOILS
	Final	8:02 AM		12.36			
2	Initial	8:02 AM	25.00	12.20	1.80	NO	NON-SANDY SOILS
	Final	8:27 AM		12.35			

Test Data

Interval Number		Time	Time Interval (min)	Water Depth (ft)	Change in Water Level (ft)	Average Head Height (ft)	Infiltration Rate Q (in/hr)
1	Initial	8:30 AM	30.00	12.20	0.15	2.63	0.21
	Final	9:00 AM		12.35			
2	Initial	9:00 AM	30.00	12.20	0.14	2.63	0.20
	Final	9:30 AM		12.34			
3	Initial	9:30 AM	30.00	12.20	0.13	2.64	0.19
	Final	10:00 AM		12.33			
4	Initial	10:00 AM	30.00	12.20	0.13	2.64	0.19
	Final	10:30 AM		12.33			
5	Initial	10:30 AM	30.00	12.20	0.12	2.64	0.17
	Final	11:00 AM		12.32			
6	Initial	11:00 AM	30.00	12.20	0.12	2.64	0.17
	Final	11:30 AM		12.32			

Per County Standards, Infiltration Rate calculated as follows:

$$Q = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Where:

Q = Infiltration Rate (in inches per hour)
ΔH = Change in Height (Water Level) over the time interval
r = Test Hole (Borehole) Radius
Δt = Time Interval
H_{avg} = Average Head Height over the time interval

INFILTRATION CALCULATIONS

Project Name	Proposed Industrial Building
Project Location	Beaumont, California
Project Number	21G254-2
Engineer	CB

Test Hole Radius	4	(in)
Test Depth	15.10	(ft)

Infiltration Test Hole	I-2

Soil Criteria Test

Interval Number		Time	Time Interval (min)	Water Depth (ft)	Change in Water Level (in)	Did 6 inches of water seep away in less than 25 minutes?	Sandy Soils or Non-Sandy Soils?
1	Initial	9:29 AM	25.00	12.20	1.20	NO	NON-SANDY SOILS
	Final	9:54 AM		12.30			
2	Initial	9:54 AM	25.00	12.20	1.20	NO	NON-SANDY SOILS
	Final	10:19 AM		12.30			

Test Data

Interval Number		Time	Time Interval (min)	Water Depth (ft)	Change in Water Level (ft)	Average Head Height (ft)	Infiltration Rate Q (in/hr)
1	Initial	10:18 AM	30.00	12.20	0.13	2.84	0.17
	Final	10:48 AM		12.33			
2	Initial	10:50 AM	30.00	12.20	0.13	2.84	0.17
	Final	11:20 AM		12.33			
3	Initial	11:20 AM	30.00	12.20	0.11	2.85	0.15
	Final	11:50 AM		12.31			
4	Initial	11:50 AM	30.00	12.20	0.12	2.84	0.16
	Final	12:20 PM		12.32			
5	Initial	12:20 PM	30.00	12.20	0.10	2.85	0.13
	Final	12:50 PM		12.30			
6	Initial	12:50 PM	30.00	12.20	0.10	2.85	0.13
	Final	1:20 PM		12.30			

Per County Standards, Infiltration Rate calculated as follows:

$$Q = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Where:

Q = Infiltration Rate (in inches per hour)
ΔH = Change in Height (Water Level) over the time interval
r = Test Hole (Borehole) Radius
Δt = Time Interval
H_{avg} = Average Head Height over the time interval

INFILTRATION CALCULATIONS

Project Name	Proposed Industrial Building
Project Location	Beaumont, California
Project Number	21G254-2
Engineer	CB

Test Hole Radius	4	(in)
Test Depth	15.00	(ft)

Infiltration Test Hole	I-3

Soil Criteria Test

Interval Number		Time	Time Interval (min)	Water Depth (ft)	Change in Water Level (in)	Did 6 inches of water seep away in less than 25 minutes?	Sandy Soils or Non-Sandy Soils?
1	Initial	11:11 AM	25.00	11.65	0.60	NO	NON-SANDY SOILS
	Final	11:36 AM		11.70			
2	Initial	11:36 AM	25.00	11.70	0.60	NO	NON-SANDY SOILS
	Final	12:01 PM		11.75			

Test Data

Interval Number		Time	Time Interval (min)	Water Depth (ft)	Change in Water Level (ft)	Average Head Height (ft)	Infiltration Rate Q (in/hr)
1	Initial	12:01 PM	30.00	11.70	0.06	3.27	0.07
	Final	12:31 PM		11.76			
2	Initial	12:31 PM	30.00	11.70	0.06	3.27	0.07
	Final	1:01 PM		11.76			
3	Initial	1:01 PM	30.00	11.70	0.05	3.28	0.06
	Final	1:31 PM		11.75			
4	Initial	1:31 PM	30.00	11.70	0.04	3.28	0.05
	Final	2:01 PM		11.74			
5	Initial	2:01 PM	30.00	11.70	0.05	3.28	0.06
	Final	2:31 PM		11.75			
6	Initial	2:31 PM	30.00	11.70	0.04	3.28	0.05
	Final	3:01 PM		11.74			

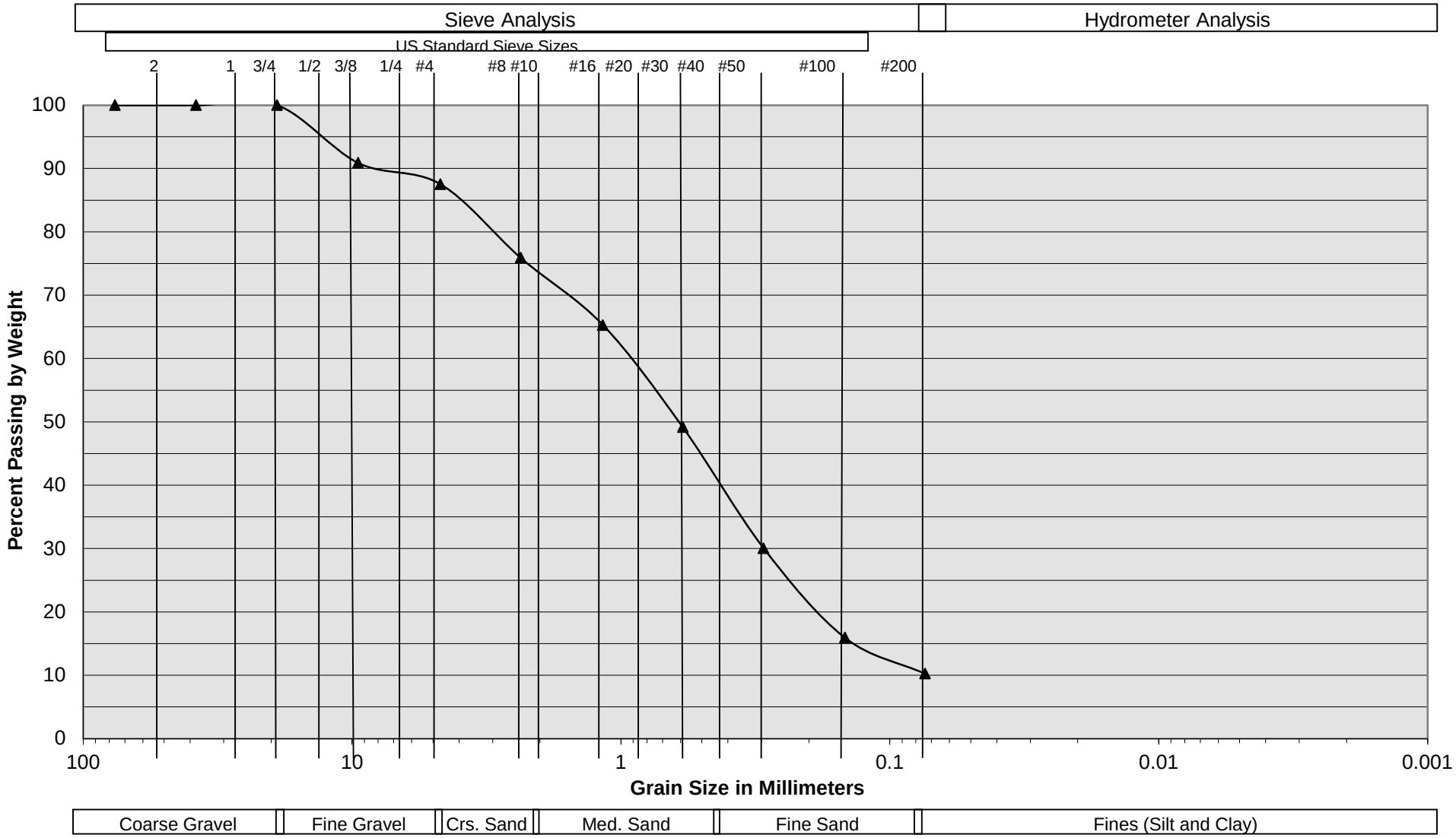
Per County Standards, Infiltration Rate calculated as follows:

$$Q = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Where:

Q = Infiltration Rate (in inches per hour)
ΔH = Change in Height (Water Level) over the time interval
r = Test Hole (Borehole) Radius
Δt = Time Interval
H_{avg} = Average Head Height over the time interval

Grain Size Distribution



Sample Description	I-1 @ 13½'
Soil Classification	Gray Brown fine to coarse Sand, little fine Gravel, little Silt

Proposed Industrial Building
Beaumont, California
Project No. 21G254-2
PLATE C- 1

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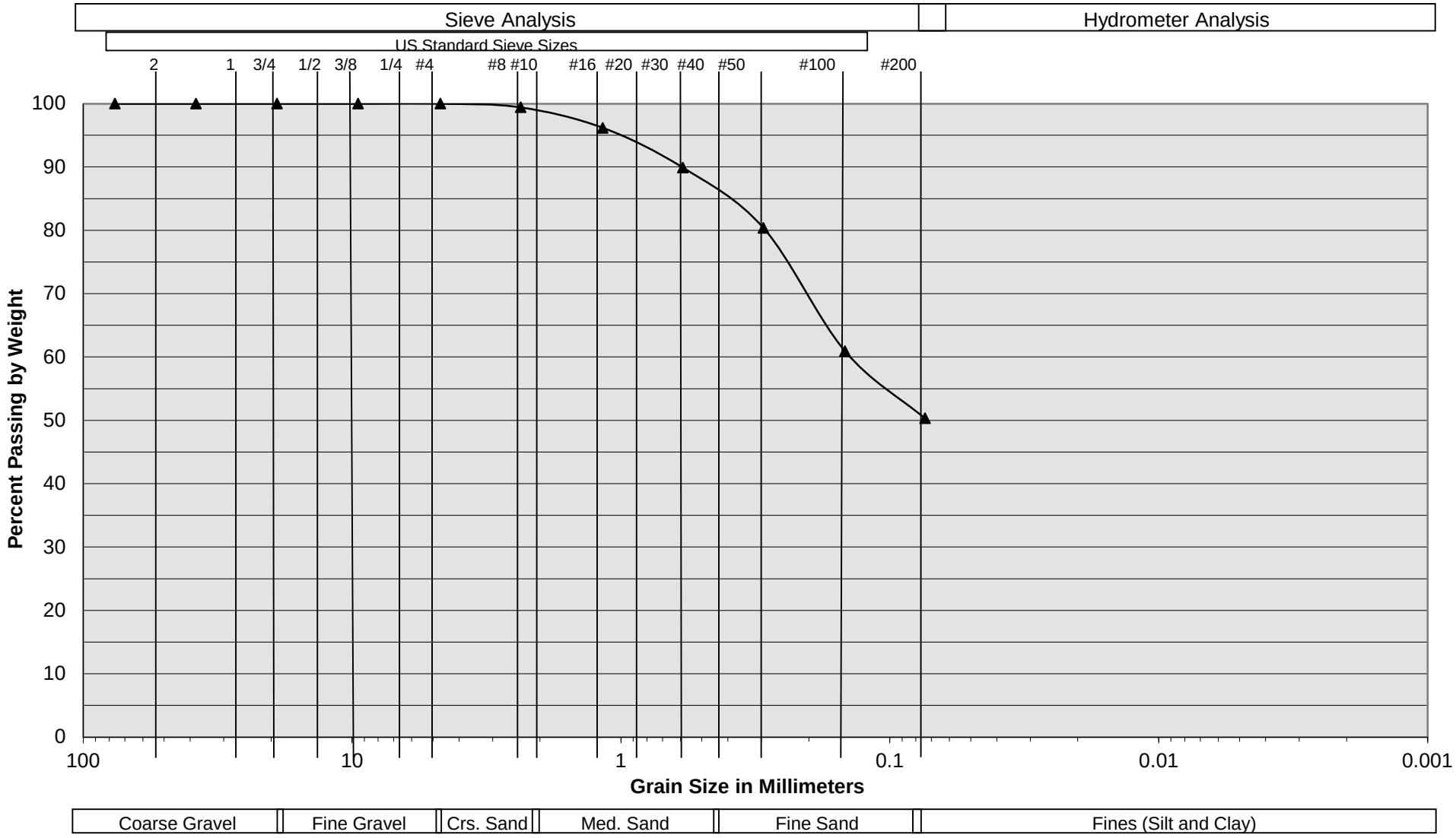
Grain Size Distribution



Sample Description	I-2 @ 13½'
Soil Classification	Brown Silty fine to medium Sand to fine to medium Sandy Silt, trace Clay

Proposed Industrial Building
Beaumont, California
Project No. 21G254-2
PLATE C- 2

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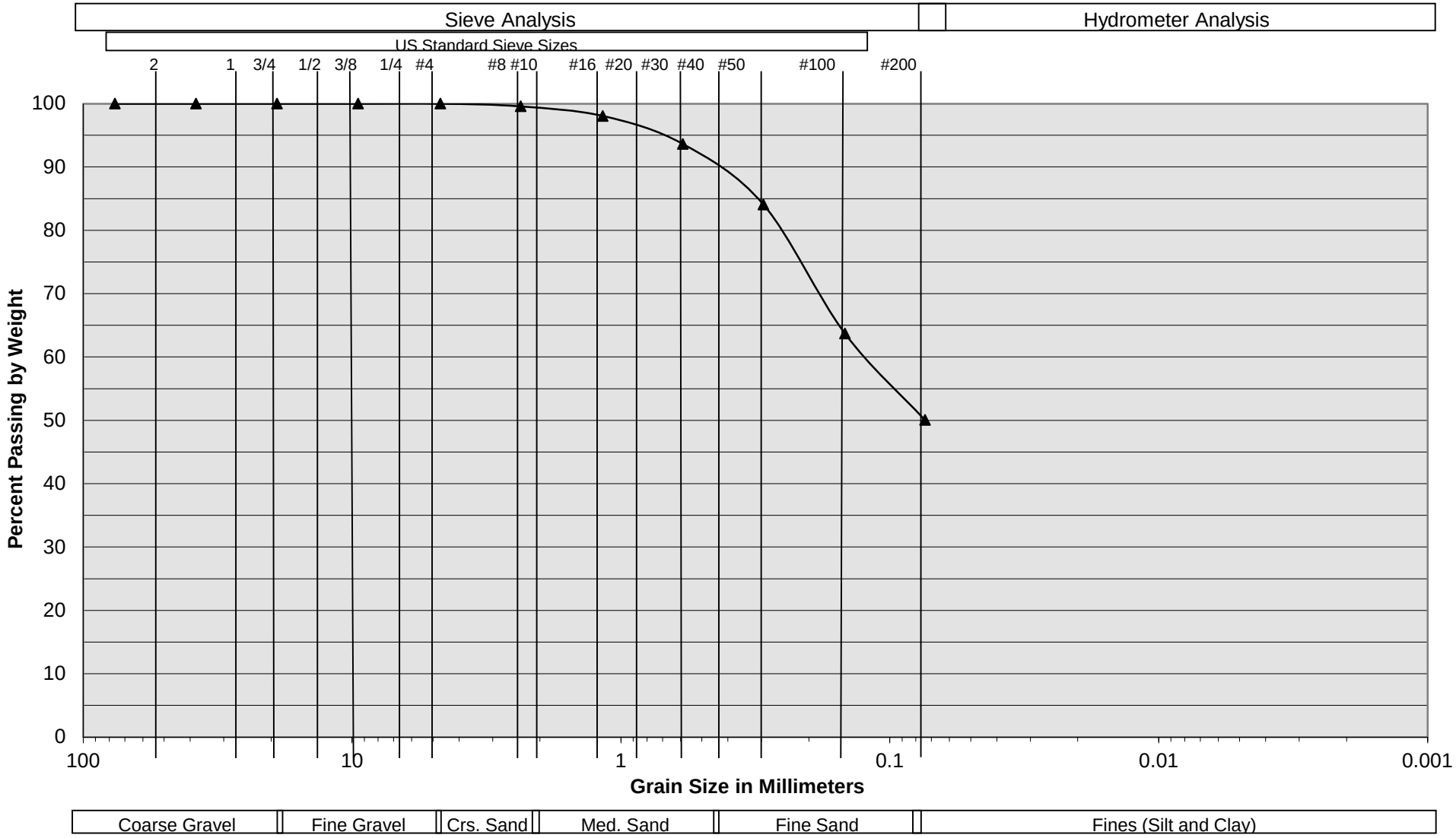
Grain Size Distribution



Sample Description	I-3 @ 13½'
Soil Classification	Brown Silty fine to medium Sand to fine to medium Sandy Silt, trace Clay

Proposed Industrial Building
Beaumont, California
Project No. 21G254-2
PLATE C- 3

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