

**REPORT OF
METHANE INVESTIGATION**

**PROPOSED NEW MIXED-USE APARTMENT BUILDING
1614 WEST TEMPLE STREET
LOS ANGELES, CA 90026**

**FOR
1614 TEMPLE LLC**

**PROJECT NO. 21-325-15
FEBRUARY 16, 2021**



a division of Applied Soil Technology, Inc.

GEOTECHNICAL & ENVIRONMENTAL ENGINEERING CONSULTANTS

February 16, 2021

Project No. 21-325-15

1614 Temple LLC
300 Corporate Pointe, Suite 220
Culver City, CA 90230

Subject: Report of Methane Investigation
Proposed New Mixed-Use Apartment Building
1614 W. Temple Street
Los Angeles, CA 90026

Gentlemen:

INTRODUCTION

As requested, we are pleased to submit this report of methane investigation for the subject property.

AES has performed the Scope of Work set forth in AES proposal 1047 and in accordance with the Los Angeles Department of Building and Safety (LADBS) *Site Testing Standards for Methane* (Document No. P/BC 2014-101) and Los Angeles Municipal Code Ordinance 175790.

The purpose and scope of this report is to summarize the results of our methane investigation that occurred in February 11, 2021.

The methane investigation was conducted to determine the distribution and concentration of methane gas in the soil vapor beneath the site.

SITE CONDITIONS

The subject property consists of parcel, Lots FR12,11 (ARBS 1&2), 10, Tract; Glassell's Subdivision of Lot 3 ETC Block 39 Hancock's, and has a total surface area of approximately 17,059 square feet.

The subject property is currently developed with an existing two story on grade commercial building. The proposed project consists of a new five-story Mixed-Use apartment building over one level of subterranean building.

The subject property is located within the **Methane Zone** (Basic Grid Map, City of Los Angeles, Bureau of Engineering, and Ordinance 175790; refer to **Figure 2**).

SITE ASSESSMENT ACTIVITIES

Pre-field Activities

Pre-field activities included a reconnaissance of the site, contacting Underground Service Alert of Southern California to locate public utilities at the site, gathering of information regarding the existing site conditions and the proposed project, and preparation of a site-specific Health and Safety Plan (HASP).

Methane Probe Installation

On February 11, 2021, AES oversaw the advancing of two direct-push auger borings at the site to a maximum depth of 26 feet below ground surface. (Due to water seep at 26' per soil report the deepest probe installed at 25' bgs)

The borings were completed as soil gas monitoring wells (MW-1 and MW-2) with the installation of nested soil gas probes at 5, 15, 20 and 25 feet bgs in each boring. Soil gas probes were constructed using 1/4-inch polyethylene tubing with a porous polypropylene tip, per the *Site Testing Standards*. Following installation, the probes were immediately capped with gas-tight caps.

Boring/monitoring well locations are indicated on **Figure No. 1 – Site Map**.

Field Determination of Methane Concentrations

Two sequential measurements were taken from each probe; on February 11 & 12, 2021. A direct-read field portable RKI-Eagle Gas Monitor was used to determine methane concentrations. A Dwyer magnehelic gage calibrated for a range of -2/0/+2 inches of water were used for probe pressure.

To read the methane concentration/pressure; the valves were opened, the wells purged, and the readings taken. The valves were closed immediately after each test reading. All site testing data were recorded on the attached *Certificate of Compliance for Methane Test Data (Form 1)*. All readings have been certified by a registered Professional Geologist.

After the final testing was done on site; the tops of the soil gas probe tubes were cut off at the ground surface, the surface of the well was covered, and the wells were abandoned in-place.

INVESTIGATION RESULTS

Subsurface Conditions

Soils encountered in the borings consisted primarily of gray to light brown silty clay shale. Groundwater was encountered in a depth of 26' and historic groundwater level is around 20' bgs.

Methane Sampling

Methane gas was not detected in any of the probes, at any depth. Additionally, soil gas pressure in excess of 2 inches of water column was not detected in either monitoring well. **Form 1; Part 2 – Test Data** presents the complete testing data from our methane readings. Increasing barometric pressure from a pre-frontal weather condition was not experienced during sampling.

DISCUSSION AND RECOMMENDATIONS

Per the City of Los Angeles Methane Code, the methane concentrations and soil gas pressure encountered at the site (less than or equal to 1,000 ppmv and less than 2 inches water column) correspond to a **Site Design Level I/II** for sites within the Methane Zone (refer to **Table 1** in the attachments). As such, **A Level I/II passive methane mitigation system is required.**

The Level I/II Passive System involve a sub-slab ventilation system and an impervious membrane. The sub-slab vent system consists of perforated horizontal pipes and vent risers. Gravel blankets are required to be installed beneath the membrane and around the perforated pipes. A trench dam to prevent incursion of gas beneath a foundation, and cable seal fittings to prevent gas incursion into electrical conduits, are both required.

A methane mitigation plan can be prepared by a design professional with experience in soil gas mitigation systems. Contact us for a separate proposal.

CONCLUSIONS AND CLOSURE

The findings and recommendations presented in this report were based on the results of our field investigations combined with professional engineering and geologic experience and judgment. The report was prepared in accordance with generally accepted engineering principles and practices and LADBS guidelines for methane testing. We make no other warranty, either express or implied.

-o0o-

Thank you for the opportunity to be of service on this project. If you have any questions regarding this report, please call the undersigned.

Respectfully submitted,

Applied Earth Sciences



Vince Mehrabian
Staff Geologist



Shant Minas
Environmental Geologist
P.G. #8859



Attachments:

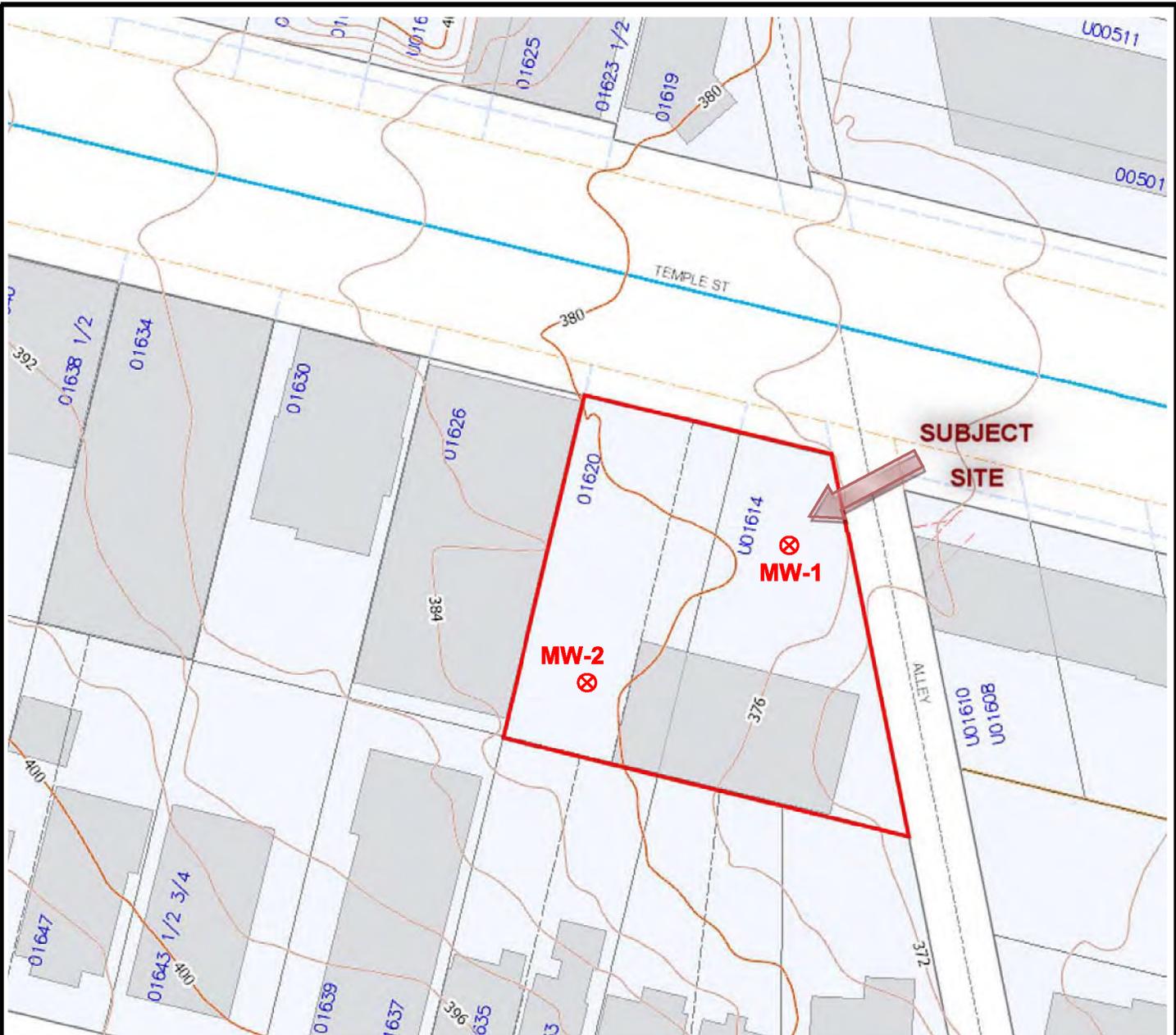
Figure No. 1 - Site Map

Figure No. 2 - Site Vicinity & Topographic Map

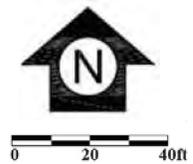
Figure No. 3 - Historical Highest Groundwater Map

Table No. 1 - Mitigation Requirements for the Methane Zone

Form 1 - LADBS Certificate of Compliance for Methane Test Data



MW-2 ⊗ Location & Number of Monitoring Well



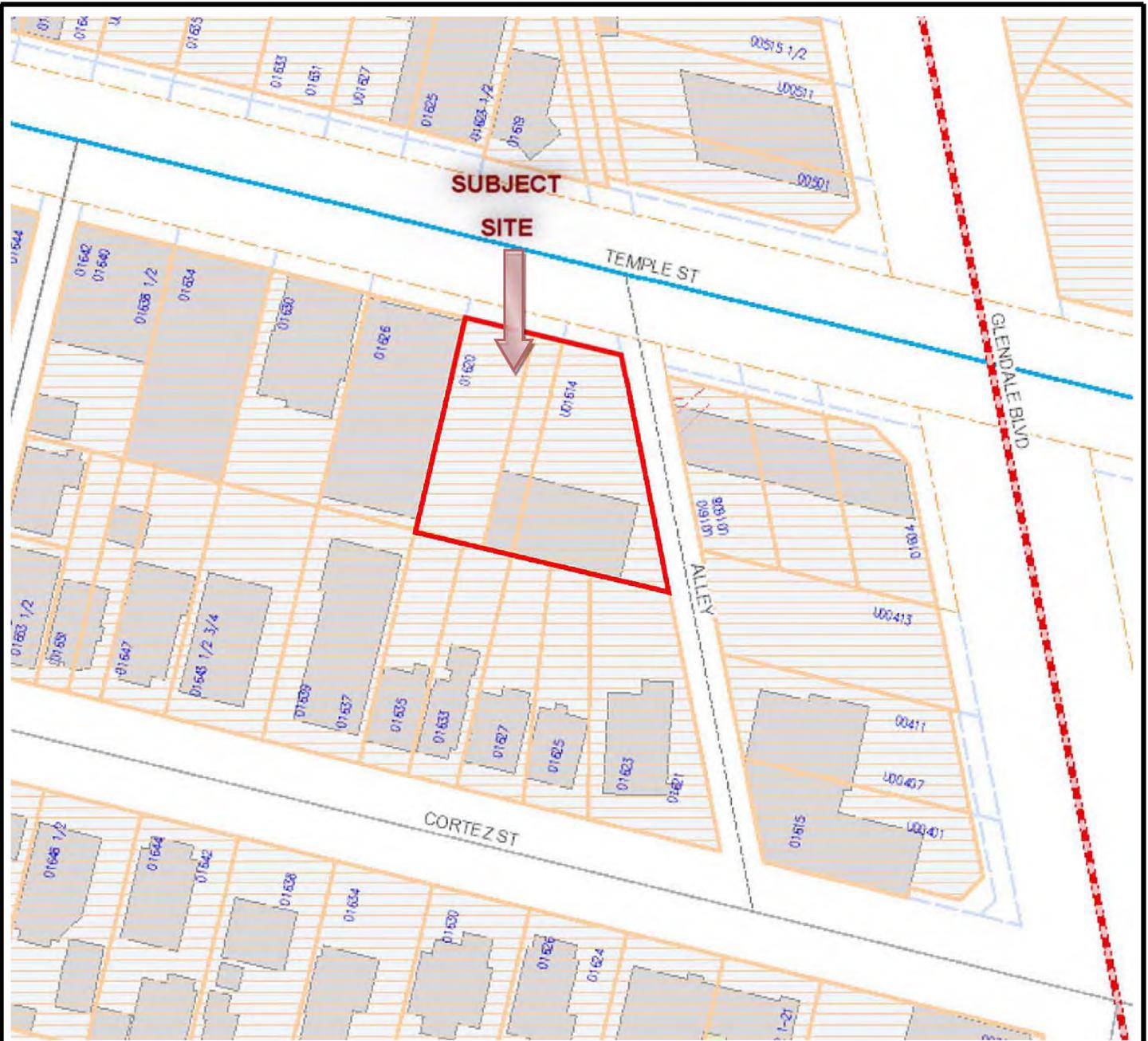
Reference: Navigate LA Map

SITE MAP

Proposed New Mixed-Use Apartment Building

1614 W. Temple Street, Los Angeles, CA 90026

FOR	1614 Temple LLC	DATE	02 / 16 / 2021	PROJECT No.	21-325-15
APPLIED EARTH SCIENCES GEOTECHNICAL . GEOLOGY . ENVIRONMENTAL ENGINEERING CONSULTANTS				FIGURE No.	1



-  Methane Zone
-  Methane Buffer Zone

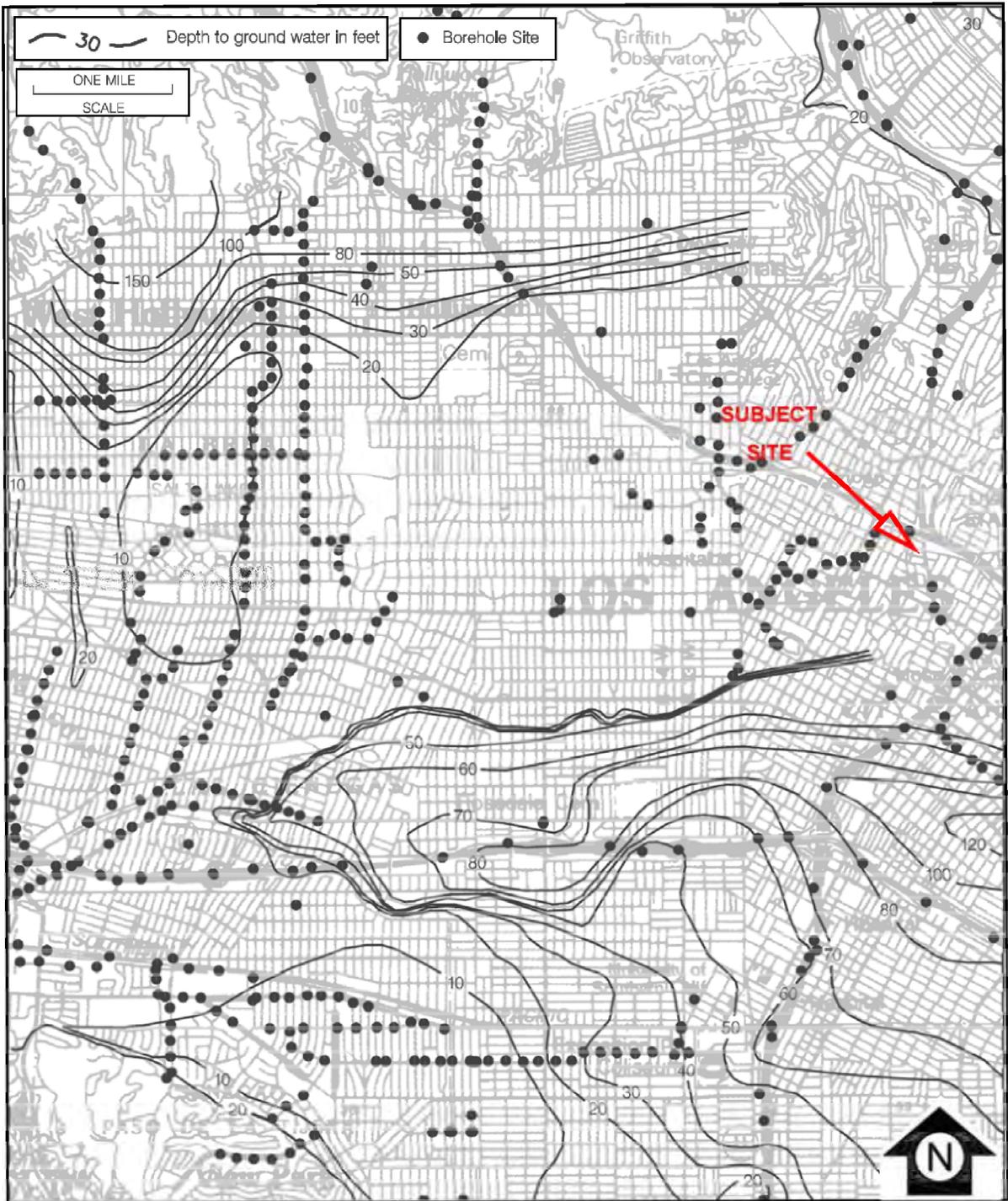


Reference: Navigate LA Map

LA Methane and Methane Buffer Zones

Proposed New Mixed-Use Apartment Building
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Reference: Hollywood 7.5 Minute Quadrangle

HISTORICALLY HIGHEST GROUNDWATER (Contour Map)

Proposed New Mixed-Use Apartment Building

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Table 1 - MITIGATION REQUIREMENTS FOR METHANE ZONE

Site Design Level		Level I		Level II		Level III		Level IV		Level V	
Design Methane Concentration (ppmv)		0 - 100		101 - 1,000		1,001 - 5,000		5,001 - 12,500		> 12,500	
Design Methane Pressure (inches of water column)		≤ 2"	> 2"	≤ 2"	> 2"	≤ 2"	> 2"	≤ 2"	> 2"	All Pressure	
PASSIVE SYSTEM	De-watering System	X	X	X	X	X	X	X	X	X	
	Sub-Slab Vent System	Perforated Horizontal Pipes	X	X	X	X	X	X	X	X	X
		Gravel Blanket Thickness Under Impervious Membrane	2"	2"	2"	3"	2"	3"	2"	4"	4"
		Gravel Thickness Surrounding Perforated Horizontal Pipes	2"	2"	2"	3"	2"	3"	2"	4"	4"
		Vent Risers	X	X	X	X	X	X	X	X	X
	Impervious Membrane	X	X	X	X	X	X	X	X	X	
ACTIVE SYSTEM	Sub-Slab Vent System	Pressure Sensors Below Impervious Membrane							X	X	
		Mechanical Extraction System							X	X	
	Lowest Occupied Space System	Gas Detection System		X		X	X	X	X	X	X
		Mechanical Ventilation		X		X	X	X	X	X	X
		Alarm System		X		X	X	X	X	X	X
	Control Panel		X		X	X	X	X	X	X	
MISC. SYSTEM	Trench Dam	X	X	X	X	X	X	X	X	X	
	Conduit or Cable Seal Fitting	X	X	X	X	X	X	X	X	X	
	Additional Vent Risers (See note 4)									X	

METHANE MITIGATION REQUIREMENTS TABLE

Proposed New Mixed-Use Apartment Building

1614 W. Temple Street, Los Angeles, CA 90026

FOR.

1614 Temple LLC

DATE

02 / 16 / 2021

PROJECT No.

21-325-15



**Applied
Earth
Sciences**

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TABLE No.

FORM 1 - CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA

Part 1: Certification Sheet

Site Address: 1614 W. Temple Street, Los Angeles, CA 90026

Legal Description: Tract: Glassell's Subdivision of Lot 3 ETC Block 39 Hancock's Lot: 12 Block: D

Building Use: Proposed New Mixed-Use Apartment Building Architect's, Engineer's or Geologist's Stamp:

Name of Architect, Engineer, or Geologist: <u>Shant Minas</u>
Mailing Address: <u>4742 San Fernando Rd.</u> <u>Glendale, CA 91204</u>
Telephone: <u>(818) 552-6000</u>
Name of Testing Laboratory: <u>C.M. Applied Earth Sciences</u>
City Test Lab License #: <u>24715</u>
Telephone: <u>(818) 552-6000</u>



I hereby certify that I have tested the above site for the purpose of methane mitigation and that all procedures were conducted by a City of Los Angeles licensed testing agency in conformity with the requirements of the LADBS Information Bulletin P/BC 2008-101. Where the inspection and testing of all or part of the work above is delegated, full responsibility shall be assumed by the architect, engineer or geologist whose signature is affixed thereon.

Signed: [Signature] date 02/16/2021

Required Data:

- Project is in the (**Methane Zone**) or (Methane Buffer Zone).
- Depth of ground water observed during testing: >15 feet below the Impervious Membrane.
- Depth of Historical High Ground Water Table Elevation*: ~10 feet below the Impervious Membrane.
- Design Methane Concentration**: 0 parts per million in volume (ppmv).
- Design Methane Pressure***: <2 inches of water column.
- Site Design Level: (Level I, **Level II**, Level III, Level IV, Level V) with 0 inches of water column.

De-watering:

- De-watering (is) (**is not**) required per Section 7104.3.7.
- Pump discharge rate _____ cubic feet per minute per reference geology or soil report:
_____ dated _____.

Additional Investigation:

- Additional investigation (was) (**was not**) conducted.

Latest Grading on Site:

- Date of last grading on site (**was**) (was not) more than 30 days before Site Testing.
- See Attached explanation of the effect on soil gas survey results by grading operations.

Notes:

* Historical High Ground Water Table Elevation shall mean the highest recorded elevation of ground water table based on historical records and field investigations as determined by the engineer for the methane mitigation system.

** Design Methane Concentration shall mean the highest recorded measured methane concentration from either Shallow Soil Gas Test or any Gas Probe Set on the site.

*** Design Methane Pressure shall mean the highest total pressure measured from any Gas Probe Set on the site.

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities. For efficient handling of information internally and in the internet, conversion to this new format of code related and administrative information bulletins including MGD and RGA that were previously issued will allow flexibility and timely distribution of information to the public.

FORM 1 (CONTINUED) - CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA

Part 2: Test Data - Shallow Soil Gas Test and Gas Probe Test

Site Address: 1614 W. Temple Street, Los Angeles, CA 90026

Description of Gas Analysis Instrument(s):

Instrument Name and Model: RKI Eagle 4-Gas Instrument Accuracy: \pm 500 ppmv.

City of Los Angeles Testing License #: TA24715

Date	Time	Probe Set #	Probe Depth	Concentration		CO ₂	Pressure (H ₂ O)	Probe Location
				ppm	%V			
02/11/2021		MW-1						See Drawing 1
	12:40 PM	↓	5'	0		1.4%	0	
		↓	15'	0		0.8%	0	
		↓	20'	0		2.2%	0	
		↓	25'	0		1.1%	0	
		MW-2						
		↓	5'	0		0.2%	0	
		↓	15'	0		0.1%	0	
		↓	20'	0		0.7%	0	
	01:10 PM	↓	25'	0		0.4%	0	
02/12/2021		MW-1						
	01:40 PM	↓	5'	0		3.6%	0	
		↓	15'	0		1.2%	0	
		↓	20'	0		7.4%	0	
		↓	25'	0		1.6%	0	
		MW-2						
		↓	5'	0		0.7%	0	
		↓	15'	0		0.0%	0	
		↓	20'	0		0.6%	0	
	02:10 PM	↓	25'	0		0.2%	0	

*non-detect is reported as 0.0, instrument detection limit is 500 ppmv

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Notes:
