

**APPENDIX D**  
*Geology and Soils Report*



**GEOTECHNICAL EVALUATION  
FOR  
PROPOSED SINGLE-FAMILY RESIDENTIAL DEVELOPMENT  
APNs 8406-019-018, -019 AND -020  
1106 AND 1162 NORTH CITRUS AVENUE  
COVINA, LOS ANGELES COUNTY, CALIFORNIA**

**PREPARED FOR  
MLC HOLDINGS, INC.  
14725 ALTON PARKWAY  
IRVINE, CALIFORNIA 92618**

**PREPARED BY  
GEOTEK, INC.  
710 E. PARKRIDGE AVENUE, SUITE 105  
CORONA, CALIFORNIA 92879**

**PROJECT No. 1321-CR**

**AUGUST 14, 2015**

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**GeoTek, Inc.**  
710 E. Parkridge Avenue, Suite 105, Corona, California 92879-1097  
(951) 710-1160 Office (951) 710-1167 Fax www.geotekusa.com

August 14, 2015  
Project No. 1321-CR

**MLC Holdings, Inc.**

12657 Alcosta Boulevard, Suite 175  
San Ramon, California 94583

Attention: Mr. Lester Tucker

Subject: Geotechnical Evaluation  
Proposed Single-Family Residential Development  
APNs 8406-019-018, -019 and -020  
1106 and 1162 North Citrus Avenue  
City of Covina, Los Angeles County, California

Dear Mr. Tucker:

We are pleased to provide the results of our geotechnical evaluation for the subject property located in the city of Covina, Los Angeles County, California. This report presents a discussion of our evaluation and provides preliminary geotechnical recommendations for earthwork, foundation design, and construction. In our opinion, site development appears feasible from a geotechnical viewpoint provided that the recommendations presented in this report are incorporated into the design and construction phases of the project.

The opportunity to be of service is sincerely appreciated. If you have any questions please do not hesitate to call our office.

Respectfully submitted,  
**GeoTek, Inc.**



Glenn S. Fraser  
GE 2381, Exp. 09/30/15  
Project Engineer



Edward H. LaMont  
CEG 1892, Exp. 07/31/16  
Principal Geologist

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Appendix A – Logs of Exploratory Borings

Appendix B – Laboratory Testing Results

Appendix C – Seismic Settlement Analysis

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## I. PURPOSE AND SCOPE OF SERVICES

The purpose of this study was to evaluate the geotechnical conditions for the proposed development. Services provided for this study included the following:

- Research and review of available geologic data and general information pertinent to the site,
- A site reconnaissance,
- Excavation of six exploratory borings on-site,
- Collection of soil samples of the on-site materials,
- Laboratory testing of selected soil samples collected from the site,
- Evaluation of liquefaction potential,
- Review and evaluation of site seismicity, and;
- Compilation of this geotechnical report which presents our preliminary recommendations for site development.

The intent of this report is to aid in the evaluation of the site for future proposed development from a geotechnical perspective. The professional opinions and geotechnical information contained in this report will likely need to be updated based upon our review of the final site development plans. These plans should be provided to GeoTek, Inc. (GeoTek) for review when available.

## 2. SITE DESCRIPTION AND PROPOSED DEVELOPMENT

### 2.1 SITE DESCRIPTION

The subject project is located at 1106 and 1162 North Citrus Avenue in the city of Covina, Los Angeles County, California (see Figures 1 through 3). The irregular shaped property is comprised of approximately 10.92 acres. The site is currently occupied by a small shopping center, a large vacant retail building, parking/drive areas and landscaping. Underground utilities are present associated with the existing structures. The site is bounded by North Citrus



Avenue to the west, East Covina Boulevard to the south and residential developments to the north and east. Outbuildings associated with the adjacent properties are situated along portions of the north and east property lines. Topography across the site generally slopes down toward the southwest at a gradient of approximately three percent with a total relief on the order of approximately 20 feet.

## 2.2 PROPOSED DEVELOPMENT

Based on review of a *Conceptual Site Plan*, prepared by KTG Y Group, Inc. and dated July 27, 2015, proposed site improvements include, but are not limited to, 108 single-family residential homes, a community center, two plaza areas, a transit center, a promenade, parking/drive areas and landscaping.

It is assumed that the homes and community center will incorporate concrete slab-on-grade floors that will exert relatively light loads on the underlying soils. Ancillary buildings, retaining walls and screen walls will be supported by conventional shallow isolated and continuous foundations. Major slopes and retaining walls are not proposed. The finished grade is expected to be within approximately five (5) feet of existing grades.

If site development differs from the assumptions made in this report, the recommendations should be subject to further review and evaluation by GeoTek. Final site development plans should be reviewed by GeoTek when they become available.

## 3. FIELD EXPLORATION AND LABORATORY TESTING

### 3.1 FIELD EXPLORATION

Our geotechnical field exploration was conducted on April 29, 2015. A geologist from GeoTek logged six exploratory borings excavated by a hollow-stem auger drill rig. The borings were situated at various locations across the site (see Boring Location Map, Figure 3). One of the borings was drilled to a maximum depth of 51.5 feet below the existing ground surface. Logs of the exploratory borings are included in Appendix A. Samples of on-site soils encountered in the excavations were returned to the laboratory for testing and evaluation.

### **3.2 LABORATORY TESTING**

Laboratory testing was performed on selected relatively undisturbed and bulk soil samples collected during our field exploration. The purpose of the laboratory testing was to confirm the field classification of the soils encountered and to evaluate their physical properties for use in the engineering design and analysis. Results of the laboratory testing program along with a brief description and relevant information regarding testing procedures are included in Appendix B or on the exploratory logs included in Appendix A.

## **4. GEOLOGIC AND SOILS CONDITIONS**

### **4.1 REGIONAL SETTING**

The subject property is situated in the Peninsular Ranges geomorphic province. The Peninsular Ranges province is one of the largest geomorphic units in western North America. Basically, it extends from the point of contact with the Transverse Ranges geomorphic province, southerly to the tip of Baja California. This province varies in width from about 30 to 100 miles. It is bounded on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province.

The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks. Several major fault zones are found in this province. The Elsinore Fault zone and the San Jacinto Fault zone trend northwest-southeast and are found in the near middle of the province. The San Andreas Fault zone borders the northeasterly margin of the province.

More specific to the subject property, the site is located in an area geologically mapped to be underlain by Quaternary age alluvial deposits (Morton, D.M. and Miller, F.K., 2006). No faults are shown presently in the immediate site vicinity on the maps reviewed for the area.

### **4.2 GENERAL SOIL/GEOLOGIC CONDITIONS**

A brief description of the earth materials encountered at the subject site is presented in the following sections. Based on our field exploration and observations, the site is generally underlain by native alluvial deposits. Some surficial fills may be present due to the existing site improvements.

#### 4.2.1 Alluvial Deposits

Quaternary-age alluvial deposits were encountered in all of the borings excavated on the site. In general, the alluvial deposits typically consist of loose to very dense silty or gravelly fine to coarse sand with varying amounts of gravel and silt, and stiff to hard silts with a trace of sand. These soils were relatively loose to a maximum depth of approximately seven (7) feet.

According to the results of the laboratory testing performed, one sample of alluvial deposits tested indicated a “very low” expansion potential when tested in accordance with ASTM D 4829. The test results are shown in Appendix B.

### 4.3 SURFACE AND GROUNDWATER

#### 4.3.1 Surface Water

Surface water was not observed on the site during our subsurface exploration. If encountered during the earthwork construction, surface water on this site is the result of precipitation or surface run-off from surrounding sites. Overall surface drainage in the area is generally to the southwest.

#### 4.3.2 Groundwater

Regional groundwater was not encountered in our exploratory excavations. Based on a review of groundwater levels (<http://www.water.ca.gov/waterdatalibrary/>) in the vicinity of the site, the depth to regional groundwater is greater than 100 feet.

### 4.4 FAULTING AND SEISMICITY

The geologic structure of the entire southern California area is dominated mainly by northwest-trending faults associated with the San Andreas system. The site is in a seismically active region. No active or potentially active fault is presently known to exist at this site nor is the site situated within an “Alquist-Priolo” Earthquake Fault Zone.

#### 4.4.1 Seismic Design Parameters

The site is located at approximately 34.1005 Latitude and -117.8889 Longitude. Site spectral accelerations ( $S_s$  and  $S_1$ ), for 0.2 and 1.0 second periods for a Class “D” site, were determined from the USGS Website, Earthquake Hazards Program, U.S. Seismic Design Maps for Risk-Targeted Maximum Considered Earthquake ( $MCE_R$ ) Ground Motion Response Accelerations for the Conterminous 48 States by Latitude/Longitude. The results are presented in the following table:

<b>SITE SEISMIC PARAMETERS</b>	
Mapped 0.2 sec Period Spectral Acceleration, $S_s$	2.065g
Mapped 1.0 sec Period Spectral Acceleration, $S_1$	0.715g
Site Coefficient for Site Class "D", $F_a$	1.0
Site Coefficient for Site Class "D", $F_v$	1.5
Maximum Considered Earthquake Spectral Response Acceleration for 0.2 Second, $S_{MS}$	2.065g
Maximum Considered Earthquake Spectral Response Acceleration for 1.0 Second, $S_{M1}$	1.072g
5% Damped Design Spectral Response Acceleration Parameter at 0.2 Second, $S_{DS}$	1.377g
5% Damped Design Spectral Response Acceleration Parameter at 1 second, $S_{D1}$	0.715g
Peak Ground Acceleration Adjusted for Site Class Effects, $PGA_M$	0.760g

Final selection of the appropriate seismic design coefficients should be made by the project structural engineer based upon the local practices and ordinances, expected building response and desired level of conservatism.

#### **4.5 LIQUEFACTION AND SEISMICALLY-INDUCED SETTLEMENT**

The site is not situated within a State of California Seismic Hazard Zone for liquefaction.

Liquefaction occurs when loose or soft sands and silts undergo a transformation from a solid state to a liquefied condition due to the effects of increased pore-water pressure.

It is anticipated that major earthquake groundshaking will occur during the lifetime of the proposed development from the seismically active Sierra Madre fault which is situated approximately 3.23 miles from the site. Based on an earthquake magnitude of 7.2, a peak horizontal ground acceleration of 0.76g is anticipated.

Free groundwater was not encountered in our test borings. Based on groundwater data, it is anticipated that groundwater is at a depth greater than 100 feet below existing grade. For a liquefaction analysis, groundwater would not be a factor. Since actual liquefaction will not occur, an analysis for seismically induced settlement was performed. This analysis was conducted on Boring B-1.

The standard penetration data provided input for the LiquefyPro Version 5 program for liquefaction and seismically induced settlement. As recommended by the State of California Special Publication 117, our liquefaction analysis has incorporated a safety factor of 1.3. The



results of this evaluation are shown in Appendix C, and reveal a seismic settlement potential of 3.6 inches.

The total settlement will occur over a large area and will not affect local buried utilities. Within a building area, we would estimate the differential dynamic settlement would be about one-half the total. Based on a minimum building dimension of 37 feet, a maximum angular distortion slightly less than 1/240 is calculated, which is within tolerable limits. Assuming a minimum building dimension of 37 feet, it is our opinion that neither liquefaction nor dynamic settlement should be a consideration in the design of the residences and other buildings.

#### **4.6 OTHER SEISMIC HAZARDS**

Evidence of ancient landslides or slope instabilities at this site was not observed during our investigation and the project site is relatively flat. Thus, the potential for landslides is considered negligible for design purposes.

The potential for secondary seismic hazards such as a seiche or tsunami is considered negligible due to site elevation and distance to an open body of water.

## **5. CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 GENERAL**

The anticipated site development appears feasible from a geotechnical viewpoint provided that the following recommendations, and those provided by this firm at a later date, are properly incorporated into the design and construction phases of development. Site development and grading plans should be reviewed by GeoTek when they become available.

### **5.2 EARTHWORK CONSIDERATIONS**

Earthwork and grading should be performed in accordance with the applicable grading ordinances of the City of Covina, the 2013 California Building Code (CBC), and recommendations contained in this report. The Grading Guidelines included in Appendix D outline general procedures and do not anticipate all site-specific situations. In the event of conflict, the recommendations presented in the text of this report should supersede those contained in Appendix D.

## **5.2.1 Site Clearing and Demolition**

In areas of planned grading and improvements, the site should be cleared of existing structures, underground utilities, vegetation, roots, and trash and debris. These materials should be properly disposed of off-site. Voids resulting from site clearing should be replaced with engineered fill materials with expansion characteristics similar to the on-site soils.

## **5.2.2 Removals/Overexcavations**

Artificial fill should be removed below all proposed improvements. This includes below building and hardscape areas, retaining wall and screen wall footings, and driveway and street areas.

### **5.2.2.1 Building Areas and Retaining Wall Footings**

The soils below and within five (5) feet of the proposed building envelopes and any retaining wall footings should be removed to a depth of five (5) feet below existing grade or three (3) feet below the bottom of the footings and floor-slabs, whichever is greater. A representative of this firm should observe the bottom of all excavations. In areas where artificial fill or loose soil is present in the bottom of the excavations, the removals should continue until competent natural materials are encountered. Competent materials are defined as natural soils that are uniform in appearance and with an in-place relative compaction of at least 85 percent. Relatively compressible soils were encountered to a maximum depth of seven (7) feet. Deeper deposits of compressible soils may be encountered in areas that were not explored.

The horizontal extent of removals should extend at least five (5) feet outside the footings and floor-slabs, or a distance equal to the depth of overexcavation below the bottom of the structural elements, whichever is greater.

Due to the presence of existing structures adjacent to the property lines, the horizontal limits of overexcavation may not be achieved. Additional earthwork recommendations will be prepared during review of the grading and foundation plans.

### **5.2.2.2 Perimeter Walls**

The soils below and within five (5) feet of the bottom of proposed perimeter wall footings should be removed to a depth of five (5) feet below existing grade or two (2) feet below the bottom of the footings, whichever is greater.

### **5.2.2.3 Pavement and Hardscape Areas**

The soils below asphaltic concrete pavement and Portland cement concrete hardscape areas should be removed to a depth of three (3) feet below existing grade or one (1) foot below proposed finish grade, whichever is deeper. Finish grade is defined as the elevation of the top of the subgrade.

### **5.2.2.4 Preparation of Areas to Receive Engineered Fill**

A representative of this firm should observe the bottom of all excavations. Upon approval, the exposed soils and all soils in areas to receive engineered fill should be scarified to a depth of approximately eight (8) inches, moistened to at least the optimum moisture content and compacted to a minimum relative compaction of 90 percent (ASTM D 1557).

### **5.2.3 Engineered Fills**

The on-site soils are generally considered suitable for reuse as engineered fill provided they are free from vegetation, debris and other deleterious material. The undercut areas should be brought to the final subgrade elevations with fill materials that are placed in eight (8) inch or less loose lifts, moisture conditioned to at least the optimum moisture content and compacted to a minimum relative compaction of 90% as determined by ASTM Test Method D 1557.

### **5.2.4 Excavation Characteristics**

Excavation in the on-site soils is expected to be feasible utilizing heavy-duty grading equipment in good operating condition. All temporary excavations for grading purposes and installation of underground utilities should be constructed in accordance with local and Cal-OSHA guidelines. Temporary excavations within the on-site materials should be stable at 1:1 (horizontal:vertical) inclinations for cuts less than five (5) feet in height.

### **5.2.5 Shrinkage and Subsidence**

Several factors will impact earthwork balancing on the site, including shrinkage, subsidence, trench spoil from utilities and footing excavations, as well as the accuracy of topography.

Shrinkage is primarily dependent upon the degree of compactive effort achieved during construction. For planning purposes, a shrinkage factor of 10 to 15 percent may be considered for the materials requiring removal and/or recompaction. Site balance areas should be available in order to adjust project grades, depending on actual field conditions at the conclusion of earthwork construction. Subsidence on the order of up to 0.10 foot may be anticipated for the areas that will receive fill.

## 5.3 DESIGN RECOMMENDATIONS

### 5.3.1 Foundation Design Criteria

Foundation design criteria, in general conformance with the 2013 CBC, are presented below. These are typical design criteria and are not intended to supersede the design by the structural engineer. Pursuant to the request of MLC Holdings, Inc., recommendations related to post-tensioned reinforced foundations and conventional shallow foundations are presented.

Based on the results of this investigation, GeoTek anticipates that the majority of the on-site soils to be encountered during grading may be classified as having “very low” ( $0 \leq EI \leq 20$ ) expansion potential per ASTM D 4829. For preliminary design purposes, this report presents recommendations for soils classified as having “very low” expansion potential. Additional laboratory testing should be performed at the completion of site grading to verify the expansion potential and plasticity index of the subgrade soils.

Presented below are post-tension foundation design parameters for proposed residences. Post-tensioned slabs should be designed in accordance with the *2013 California Building Code* (CBC) and PTI design methodology.

It should be noted that expansion indices are not a controlling factor in PTI design methodology. The grain size distribution of the soils and the Atterberg Limits are the dominant soil properties considered in the PTI design methodology. Using grain size distributions and Atterberg Limits from samples obtained during our exploration, the following parameters are presented. The foundation design parameters presented below are derived in general conformance with *Design of Post-Tension Slabs-on-Ground, Third Edition* (PTI, 2008) and *Standard Requirements for Design and Analysis of Shall Post-Tensioned Concrete Founds on Expansive Soils* (PTI, 2012).

Foundation Design Parameter	Design Value
	Soil Characteristics: LL≤9; PI=1; 35% passing #200, clay fines =0%
Edge Moisture Variation Distance, $e_m$ - Edge Lift (swelling) - Center Lift (shrinkage)	5.6 ft 9.0 ft
Soil Differential Movement, $y_m$ - Edge Lift (swelling) - Center Lift (shrinkage)	0.01 in 0.00 in
Ext. Perimeter Beam Embedment	One- or Two-Story – 12 inches*
Presaturation of Subgrade Soil (Percent of Optimum)	Minimum 100% to a depth of 12 inches

\* Required depth of perimeter beam/stiffening rib per structural calculations may govern.

The following assumptions were used to generate  $e_m$  and  $y_m$  values: Thornthwaite Moisture Index = -20; constant suction value = 3.8pF; depth to constant suction = 10 feet; post-equilibrium case assumed with wet (swelling) cycle going from 3.8pF to 3.0pF and drying (shrinking) cycle going from 3.8pF to 4.5pF.

The bottom of the perimeter edge beam/deepened footing should be designed to resist tension forces using either cable or conventional reinforcement, per the structural engineer.

An allowable bearing capacity of 2000 pounds per square foot (psf) may be used for design of building and retaining wall footings. This value may be increased by 300 psf for each additional 12 inches of embedment depth and by 200 psf for each additional 12 inches in width to a maximum of 3000 psf. The allowable bearing capacity may be increased by one-third when considering short-term wind and seismic loads.

For footings designed in accordance with the recommendations presented in this report, we would anticipate a maximum settlement of less than one (1) inch and a maximum differential settlement of less than one (1) inch in a 40-foot span.

The passive earth pressure may be computed as an equivalent fluid having a density of 300 psf per foot of depth, to a maximum earth pressure of 2000 psf for footings founded on engineered fill. A coefficient of friction between soil and concrete of 0.30 may be used with dead load forces. The upper one foot of soil below the adjacent grade should not be used in calculating passive pressure. When combining passive and frictional resistance, the passive pressure component should be reduced by one-third.

A moisture and vapor retarding system should be placed below slabs-on-grade where moisture migration through the slab is undesirable. Guidelines for these are provided in the 2013 California Green Building Standards Code (CALGreen) Section 4.505.2 and the 2013 CBC Section 1907.1 and ACI 360R-10. The vapor retarder design and construction should also



meet the requirements of ASTM E1643. A portion of the vapor retarder design should be the implementation of a moisture vapor retardant membrane.

It should be realized that the effectiveness of the vapor retarding membrane can be adversely impacted as a result of construction related punctures (e.g. stake penetrations, tears, punctures from walking on the aggregate layer, etc.). These occurrences should be limited as much as possible during construction. Thicker membranes are generally more resistant to accidental puncture than thinner ones. Products specifically designed for use as moisture/vapor retarders may also be more puncture resistant. Although the CBC specifies a six (6) mil vapor retarder membrane, it is GeoTek's opinion that a minimum 10 mil thick membrane with joints properly overlapped and sealed should be considered, unless otherwise specified by the slab design professional. The membrane should consist of Stego wrap or the equivalent.

Moisture and vapor retarding systems are intended to provide a certain level of resistance to vapor and moisture transmission through the concrete, but do not eliminate it. The acceptable level of moisture transmission through the slab is to a large extent based on the type of flooring used and environmental conditions. Ultimately, the vapor retarding system should be comprised of suitable elements to limit migration of water and reduce transmission of water vapor through the slab to acceptable levels. The selected elements should have suitable properties (i.e., thickness, composition, strength, and permeability) to achieve the desired performance level. Consideration should be given to consulting with an individual possessing specific expertise in this area for additional evaluation.

Moisture retarders can reduce, but not eliminate, moisture vapor rise from the underlying soils up through the slab. Moisture retarders should be designed and constructed in accordance with applicable American Concrete Institute, Portland Cement Association, Post-Tensioning Concrete Institute, ASTM and California Building Code requirements and guidelines.

GeoTek recommends that a qualified person, such as the flooring contractor, structural engineer, and/or architect be consulted to evaluate the general and specific moisture vapor transmission paths and any impact on the proposed construction.

In addition, the recommendations in this report and our services in general are not intended to address mold prevention, since we along with geotechnical consultants in general, do not practice in areas of mold prevention. If specific recommendations are desired, a professional mold prevention consultant should be contacted.

### 5.3.2 Miscellaneous Foundation Recommendations

- To reduce moisture penetration beneath the slab on grade areas, utility trenches should be backfilled with engineered fill, lean concrete or concrete slurry where they intercept the perimeter footing or thickened slab edge.
- Soils from the footing excavations should not be placed in the slab-on-grade areas unless properly compacted and tested. The excavations should be free of loose/sloughed materials and be neatly trimmed at the time of concrete placement.
- Under-slab utility trenches should be compacted to project specifications. Compaction should be achieved with a mechanical compaction device. If soils to be used as backfill have dried out, they should be thoroughly moisture conditioned prior to placement in trenches.
- Unsuitable soil removals along the property lines will likely be restricted due to adjacent improvements. Special considerations will be required for foundation elements in these areas. Such considerations may include deepening of foundations, reduced bearing capacity, or other measures. This issue should be further evaluated once site plans become available for review.

### 5.3.3 Foundation Set Backs

Minimum setbacks for all foundations should comply with the 2013 CBC or City of Covina requirements, whichever is more stringent. Improvements not conforming to these setbacks are subject to the increased likelihood of excessive lateral movements and/or differential settlements. If large enough, these movements can compromise the integrity of the improvements. The following recommendations are presented:

- The top outside edge of all footings should be set back a minimum of  $H/3$  (where  $H$  is the slope height) from the face of any descending slope. The setback should be at least five (5) feet and need not exceed 40 feet.
- The bottom of all footings for new structures near retaining walls should be deepened so as to extend below a 1:1 projection upward from the bottom inside edge of the wall footing.

### 5.3.4 Retaining and Garden Wall Design and Construction

#### 5.3.4.1 General Design Criteria

Recommendations presented in this report apply to typical masonry or concrete vertical retaining walls to a maximum height of up to six (6) feet. Additional review and

recommendations should be requested for higher walls. These are typical design criteria and are not intended to supersede the design by the structural engineer.

Retaining wall foundations should be embedded a minimum of 24 inches into engineered fill. Retaining wall foundations should be designed in accordance with Section 5.3.1 of this report. Structural needs may govern and should be evaluated by the project structural engineer.

All earth retention structure plans, as applicable, should be reviewed by this office prior to finalization. The seismic design parameters as discussed in this report remain applicable to all proposed earth retention structures at this site, and should be properly incorporated into the design and construction of the structures.

Earthwork considerations, site clearing and remedial earthwork for all earth retention structures should meet the requirements of this report, unless specifically provided otherwise, or more stringent requirements or recommendations are made by the designer. The backfill material placement for all earth retention structures should meet the requirement of Section 5.3.4.3 in this report.

In general, cantilever earth retention structures, which are designed to yield at least  $0.001H$ , where  $H$  is equal to the height of the earth retention structure, may be designed using the active condition. Rigid earth retention structures (including but not limited to rigid walls, and walls braced at top, such as typical basement walls) should be designed using the at-rest condition.

In addition to the design lateral forces due to retained earth, surcharges due to improvements, such as an adjacent building or traffic loading, should be considered in the design of the earth retention structures. Loads applied within a 1:1 (h:v) projection from the surcharge on the stem of the earth retention structure should be considered in the design.

Final selection of the appropriate design parameters should be made by the designer of the earth retention structures.

#### **5.3.4.2 Cantilevered Walls**

The recommendations presented below are for cantilevered retaining walls up to six (6) feet high. Active earth pressure may be used for retaining wall design, provided the top of the wall is not restrained from minor deflections. An equivalent fluid pressure approach may be used to compute the horizontal pressure against the wall. Appropriate fluid unit weights are given below for specific slope gradients of the retained material. These do not include other

superimposed loading conditions such as traffic, structures, seismic events, or adverse geologic conditions.

<b>ACTIVE EARTH PRESSURES</b>	
Surface Slope of Retained Materials (h:v)	Equivalent Fluid Pressure (pcf)
Level	40
2:1	66

\* The design pressures assume the backfill material has an expansion index less than or equal to 20. Backfill zone includes area between back of the wall to a plane (1:1 h:v) up from bottom of the wall foundation (on the backside of the wall) to the ground surface.

#### 5.3.4.3 Retaining Wall Backfill and Drainage

Retaining wall backfill should consist of granular, non-expansive soil with an expansion index less than or equal to 20. The wall backfill should also include a minimum one (1) foot wide section of ¾- to 1-inch clean crushed rock (or an approved equivalent). The rock should be placed immediately adjacent to the back of the wall and extend up from a back drain to within approximately 12 inches of the finish grade. The upper 12 inches should consist of compacted on-site materials. The presence of other materials might necessitate revision to the parameters provided and modification of the wall designs. The backfill materials should be placed in lifts no greater than eight (8) inches in thickness and compacted to a minimum of 90% relative compaction in accordance with ASTM Test Method D 1557. Proper surface drainage needs to be provided and maintained.

Retaining walls should be provided with an adequate pipe and gravel back drain system to help prevent buildup of hydrostatic pressures. Backdrains should consist of a four (4)-inch diameter perforated collector pipe (Schedule 40, SDR 35, or approved equivalent) embedded in a minimum of one (1) cubic foot per linear foot of ¾- to 1-inch clean crushed rock or an approved equivalent, wrapped in filter fabric (Mirafi 140N or an approved equivalent). The drain system should be connected to a suitable outlet. Waterproofing of site walls should be performed where moisture migration through the walls is undesirable.

#### 5.3.4.4 Restrained Retaining Walls

Retaining walls that will be restrained at the top that support level backfill or that have reentrant or male corners, should be designed for an equivalent at-rest fluid pressure of 65 pcf,

plus any applicable surcharge loading. For areas of male or reentrant corners, the restrained wall design should extend a minimum distance of twice the height of the wall laterally from the corner, or a distance otherwise determined by the project structural engineer.

#### **5.3.4.5 Other Design Considerations**

- Wall design should consider the additional surcharge loads from superjacent slopes and/or footings, where appropriate.
- No backfill should be placed against concrete until minimum design strengths are evident by compression tests of cylinders.
- The retaining wall footing excavations, backcuts, and backfill materials should be approved by the project geotechnical engineer or their authorized representative.
- Positive separations should be provided in garden walls at horizontal distances not exceeding 20 feet.

#### **5.3.5 Soil Corrosivity**

The soil resistivity at this site was tested in the laboratory on one sample collected during the field investigation. The results of the testing indicate that the on-site soils are considered “moderately corrosive” to buried ferrous metal in accordance with current standards used by corrosion engineers. We recommend that a corrosion engineer be consulted to provide recommendations for the protection of buried ferrous metal at this site.

#### **5.3.6 Soil Sulfate Content**

The sulfate content was determined in the laboratory for one on-site soil sample. The results indicate that the water soluble sulfate result is less than 0.1 percent by weight, which is considered “not applicable” (negligible) as per Table 4.2.1 of ACI 318.

#### **5.3.7 Import Soils**

Import soils should have expansion characteristics similar to the on-site soils. GeoTek also recommends that the proposed import soils be tested for expansion and corrosivity potential. GeoTek should be notified a minimum of 72 hours prior to importing so that appropriate sampling and laboratory testing can be performed.

### **5.3.8 Concrete Flatwork**

#### **5.3.8.1 Exterior Concrete Slabs, Sidewalks and Driveways**

Exterior concrete slabs, sidewalks and driveways should be designed using a four (4) inch minimum thickness. No specific reinforcement is required from a geotechnical perspective. However, some shrinkage and cracking of the concrete should be anticipated as a result of typical mix designs and curing practices commonly utilized in industrial construction.

Sidewalks and driveways may be under the jurisdiction of the governing agency. If so, jurisdictional design and construction criteria would apply, if more restrictive than the recommendations presented in this report.

Subgrade soils (typically “very low” expansion potential) should be pre-moistened prior to placing concrete. The subgrade soils below exterior slabs, sidewalks, driveways, etc. at the subject site should be pre-saturated to a minimum of 100% of optimum moisture content to a depth of at least 12 inches.

All concrete installation, including preparation and compaction of subgrade, should be done in accordance with the City of Covina specifications, and under the observation and testing of GeoTek and a City/County inspector, if necessary.

#### **5.3.8.2 Concrete Performance**

Concrete cracks should be expected. These cracks can vary from sizes that are essentially unnoticeable to more than 0.125-inch in width. Most cracks in concrete, while unsightly, do not significantly impact long-term performance. While it is possible to take measures (proper concrete mix, placement, curing, control joints, etc.) to reduce the extent and size of cracks that occur, some cracking will occur despite the best efforts to minimize it. Concrete can also undergo chemical processes that are dependent upon a wide range of variables, which are difficult, at best, to control. Concrete, while seemingly a stable material, is subject to internal expansion and contraction due to external changes over time.

One of the simplest means to control cracking is to provide weakened control joints for cracking to occur along. These do not prevent cracks from developing; they simply provide a relief point for the stresses that develop. These joints are a widely accepted means to control cracks but are not always effective. Control joints are more effective the more closely spaced they are. GeoTek suggests that control joints be placed in two directions and located a distance apart approximately equal to 24 to 36 times the slab thickness.

Exterior concrete flatwork (patios, walkways, driveways, etc.) is often some of the most visible aspects of site development. They are typically given the least level of quality control, being considered “non-structural” components. We suggest that the same standards of care be applied to these features as to the structures themselves.

## **5.4 POST CONSTRUCTION CONSIDERATIONS**

### **5.4.1 Landscape Maintenance and Planting**

Water has been shown to weaken the inherent strength of soil, and slope stability is significantly reduced by overly wet conditions. Positive surface drainage away from graded slopes should be maintained and only the amount of irrigation necessary to sustain plant life should be provided for planted slopes. Controlling surface drainage and runoff, and maintaining a suitable vegetation cover can minimize erosion. Plants selected for landscaping should be lightweight, deep-rooted types that require little water and are capable of surviving the prevailing climate.

Overwatering should be avoided. Care should be taken when adding soil amendments to avoid excessive watering. An abatement program to control ground-burrowing rodents should be implemented and maintained. This is critical as burrowing rodents can decreased the long-term performance of slopes.

It is common for planting to be placed adjacent to the structures in planter or lawn areas. This will result in the introduction of water into the ground adjacent to the foundation. This type of landscaping should be avoided.

### **5.4.2 Drainage**

Positive site drainage should be maintained at all times. Drainage should not flow uncontrolled down any descending slope. Water should be directed away from foundations and not allowed to pond or seep into the ground adjacent to the footings. Pad drainage should be directed toward approved area(s) and not be blocked by other improvements.

It is the owner’s responsibility to maintain and clean drainage devices on or contiguous to their lot. In order to be effective, maintenance should be conducted on a regular and routine schedule and necessary corrections made prior to each rainy season.

## 5.5 PLAN REVIEW AND CONSTRUCTION OBSERVATIONS

We recommend that specifications and foundation plans be reviewed by this office prior to construction to check for conformance with the recommendations of this report. Additional earthwork recommendation may be required due to the proximity of outbuildings along three of the property lines. We also recommend that GeoTek representatives be present during site grading and foundation construction to observe and document proper implementation of the geotechnical recommendations. The owner/developer should verify that GeoTek representatives perform at least the following duties:

- Observe site clearing and grubbing operations for proper removal of unsuitable materials.
- Observe and test bottom of removals prior to fill placement.
- Evaluate the suitability of on-site and import materials for fill placement, and collect soil samples for laboratory testing where necessary.
- Observe the fill for uniformity during placement, including utility trench backfill. Also, perform field density testing of the fill materials.
- Observe and probe foundation excavations to confirm suitability of bearing materials with respect to density.

If requested, a construction observation and compaction report can be provided by GeoTek, which can comply with the requirements of the governmental agencies having jurisdiction over the project. We recommend that these agencies be notified prior to commencement of construction so that necessary grading permits can be obtained.

## 6. INTENT

It is the intent of this report to aid in the design and construction of the proposed development. Implementation of the advice presented in this report is intended to reduce risk associated with construction projects. The professional opinions and geotechnical advice contained in this report are not intended to imply total performance of the project or guarantee that unusual or variable conditions will not be discovered during or after construction.

The scope of our evaluation is limited to the boundaries of the subject property. This review does not and should in no way be construed to encompass any areas beyond the specific area of the proposed construction as indicated to us by the client. Further, no evaluation of any existing site improvements is included. The scope is based on our understanding of the project

and the client's needs, our fee estimate (Proposal No. P-0303715) dated March 26, 2015 and geotechnical engineering standards normally used on similar projects in this locality at the present.

## **7. LIMITATIONS**

Our findings are based on site conditions observed and the stated sources. GeoTek has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the engineering and science professions currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report.

Our recommendations are based on the site conditions observed and encountered and laboratory testing. Our conclusions and recommendations are professional opinions that are limited to the extent of the available data. Observations during construction are important to allow for any change in recommendations found to be warranted. These opinions have been derived in accordance with current standards of practice and no warranty of any kind is expressed or implied. Standards of care/practice are subject to change with time.

## **8. SELECTED REFERENCES**

American Concrete Institute (ACI), 2006, Publication 302.2R-06, Guide for Concrete Slabs That Receive Moisture Sensitive Flooring Materials.

\_\_\_\_\_, 2010, Publications 360R-10, Guide to Design of Slabs-On-Ground.

American Society of Civil Engineers (ASCE), 2013, "Minimum Design Loads for Buildings and Other Structures," ASCE/SEI 7-10, Third Printing, Errata Incorporated through March 15.

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Morton, D.M. and Miller, F.K., 2006, Geologic Map of the San Bernardino and Santa Ana 30' x 60; Quadrangles, California; scale 1:100,000.

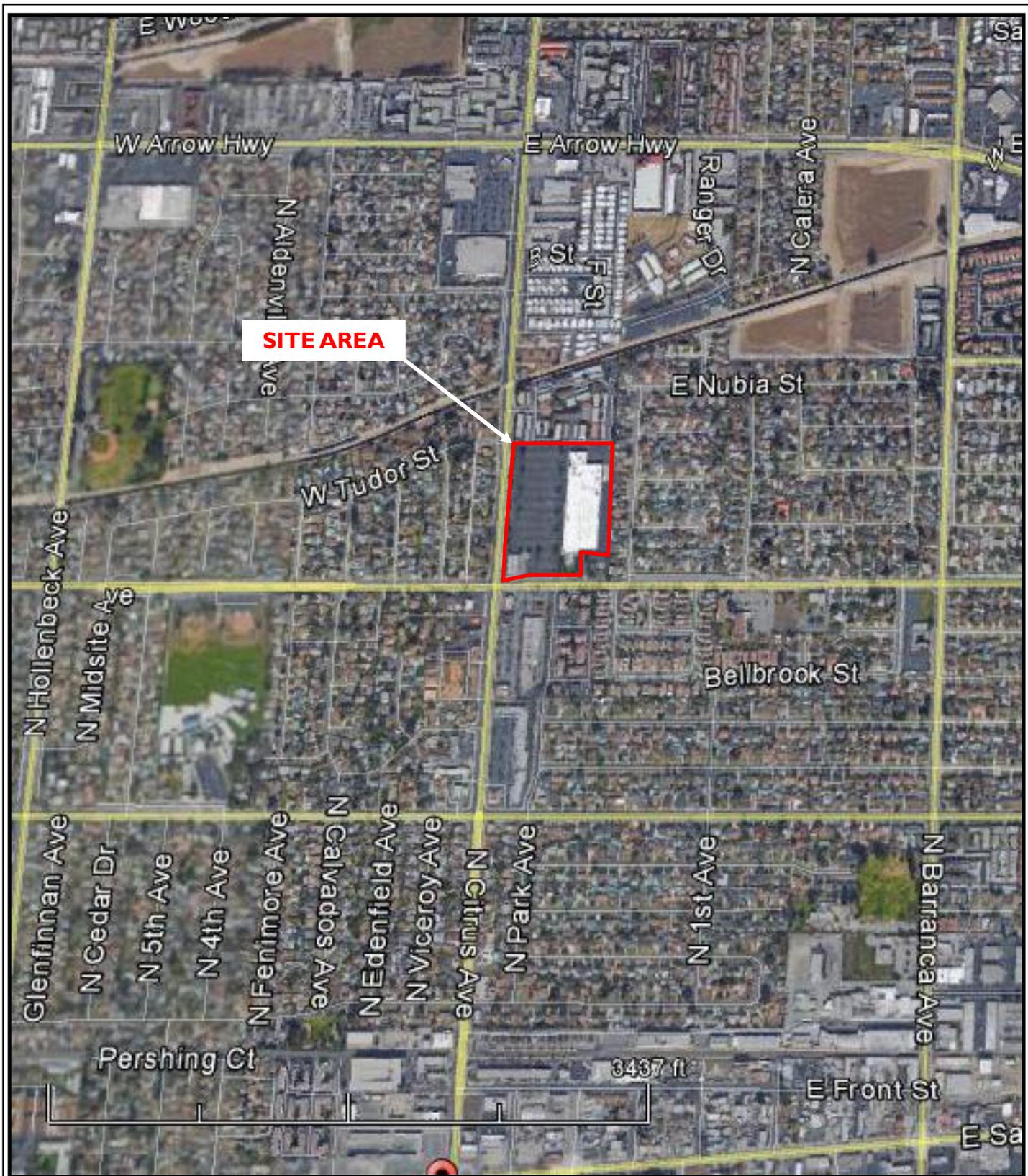
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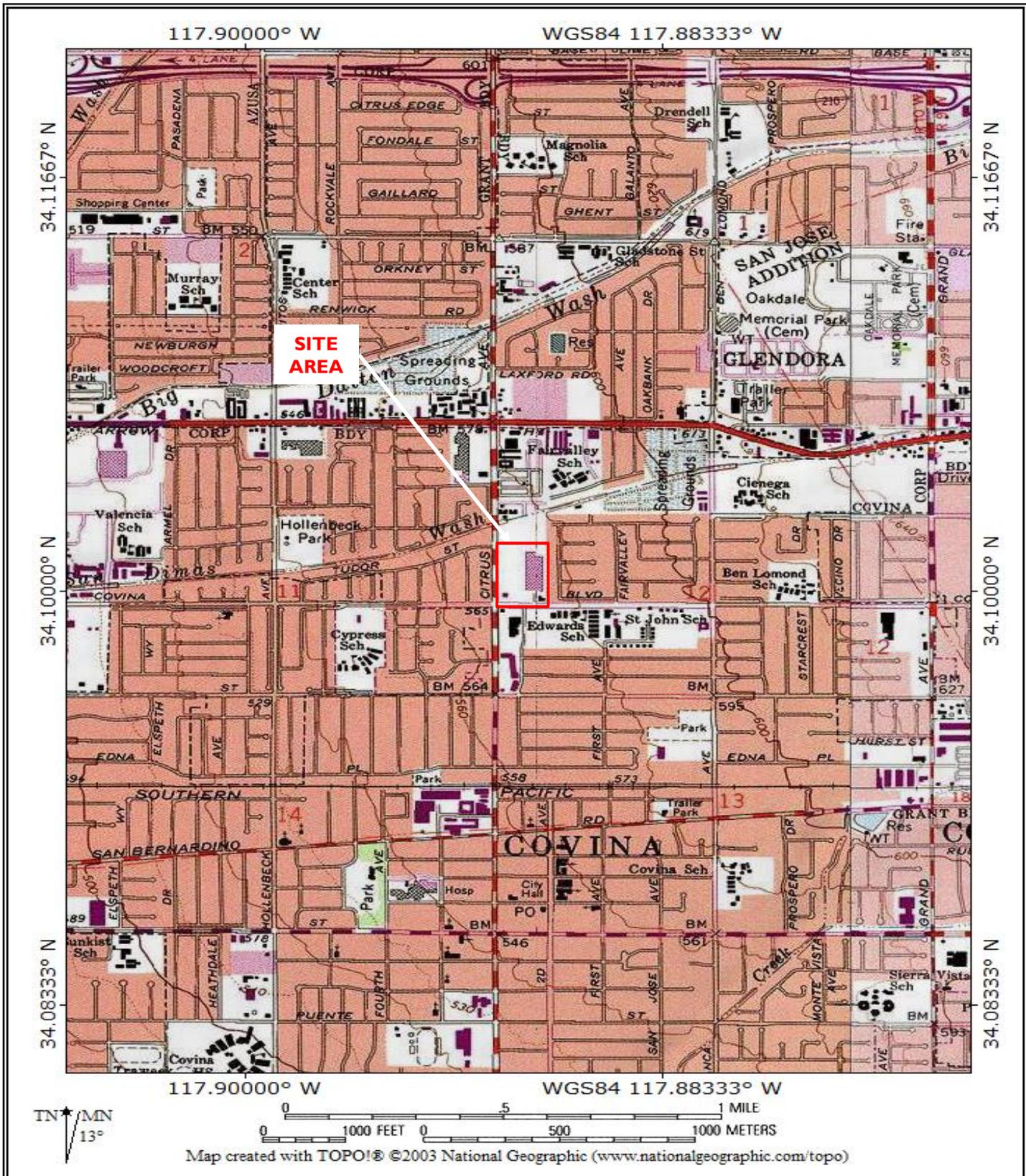
**MLC Holdings, Inc.**  
 APNs 8406-019-018, -019 and -020  
 Covina, Los Angeles County, California

Project No. 1321-CR



**Figure 1**  
 Site Location  
 Map





**MLC Holdings, Inc.**  
 APNs 8406-019-018, -019 and -20  
 Covina, Los Angeles County, California

Project No. 1321-CR



Modified from USGS  
 7.5 Topographic Map

**Figure 2**

**General Site  
 Topography  
 Map**





**MLC Holdings, Inc.**  
 APNs 8406-019-018, -019 and -020  
 Chino, San Bernardino County, California



**Figure 3**  
**Boring Location Map**



Project No. 1320-CR

# **APPENDIX A**

## **LOGS OF EXPLORATORY BORINGS**

**APNs 8046-018, -019 and -020**

**City of Covina, Los Angeles County, California**

**Project No. 1321-CR**



## A - FIELD TESTING AND SAMPLING PROCEDURES

### The Modified Split-Barrel Sampler (Ring)

The Ring sampler is driven into the ground in accordance with ASTM Test Method D 3550. The sampler, with an external diameter of 3.0 inches, is lined with 1-inch long, thin brass rings with inside diameters of approximately 2.4 inches. The sampler is typically driven into the ground 12 or 18 inches with a 140-pound hammer free falling from a height of 30 inches. Blow counts are recorded for every 6 inches of penetration as indicated on the log of boring. The samples are removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.

### Bulk Samples (Large)

These samples are normally large bags of earth materials over 20 pounds in weight collected from the field by means of hand digging or exploratory cuttings.

### Bulk Samples (Small)

These are plastic bag samples which are normally airtight and contain less than 5 pounds in weight of earth materials collected from the field by means of hand digging or exploratory cuttings. These samples are primarily used for determining natural moisture content and classification indices.

## B – BORING LOG LEGEND

The following abbreviations and symbols often appear in the classification and description of soil and rock on the logs of borings:

### SOILS

USCS            Unified Soil Classification System

f-c             Fine to coarse

f-m             Fine to medium

### GEOLOGIC

B: Attitudes    Bedding: strike/dip

J: Attitudes    Joint: strike/dip

C: Contact line

..... Dashed line denotes USCS material change

\_\_\_\_\_ Solid Line denotes unit / formational change

———— Thick solid line denotes end of boring

(Additional denotations and symbols are provided on the log of borings)

**GeoTek, Inc.**  
**LOG OF EXPLORATORY BORING**

**CLIENT:** MLC Holdings, Inc.  
**PROJECT NAME:** 1162 North Citrus Avenue  
**PROJECT NO.:** 1321-CR  
**LOCATION:** Covina, California

**DRILLER:** 2R Drilling  
**DRILL METHOD:** 8" Hollow Stem  
**HAMMER:** Auto 140#/30"

**LOGGED BY:** AMS  
**OPERATOR:** Rudy  
**RIG TYPE:** CME 75  
**DATE:** 4/29/2015

Depth (ft)	SAMPLES			USCS Symbol	BORING NO.: B-1	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number			Water Content (%)	Dry Density (pcf)	Others
MATERIAL DESCRIPTION AND COMMENTS								
0					Surface: 2" Asphalt over 2 1/4" of Base Alluvium:			SH, MD, EI
3		3	BI-1	SM	Silty fine SAND with gravel, light brown, dry, loose	2.5	94.5	HC
6		6						
9		9						
5		2	BI-2		Silty f-c SAND, light gray brown, dry, loose			
		3						
		5						
		9	BI-3	SP-SM	Gravelly f-c SAND with a trace of silt, light gray brown, dry, medium dense	0.4		
		11						
		18						
10		3	BI-4		SAME			
		6						
		10						
		23	BI-5		SAME	0.9	114.1	
		28						
		28						
15		8	BI-6		SAME			SA; Passing #200 = 5.2%
		11						
		13						
		38	BI-7	SM	Silty f-c SAND with gravel and cobbles, light brown gray, dry, very dense	1.0	119.4	
		35						
		50-5"						
20		23	BI-8		SAME, becomes dense			
		25						
		33						
25		20	BI-9		SAME, very dense			
		33						
		43						
30		5	BI-10	ML	Fine sandy SILT, medium brown, slightly moist, very stiff			SA; Passing #200 = 77%
		10						
		11						

**LEGEND**

**Sample type:** ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

**Lab testing:** AL = Atterberg Limits      EI = Expansion Index      SA = Sieve Analysis      RV = R-Value Test  
SR = Sulfate/Resistivity Test      SH = Shear Test      HC = Consolidation      MD = Maximum Density

**GeoTek, Inc.**  
**LOG OF EXPLORATORY BORING**

**CLIENT:** MLC Holdings, Inc.  
**PROJECT NAME:** 1162 North Citrus Avenue  
**PROJECT NO.:** 1321-CR  
**LOCATION:** Covina, California

**DRILLER:** 2R Drilling  
**DRILL METHOD:** 8" Hollow Stem  
**HAMMER:** Auto 140#/30"

**LOGGED BY:** AMS  
**OPERATOR:** Rudy  
**RIG TYPE:** CME 75  
**DATE:** 4/29/2015

Depth (ft)	SAMPLES			USCS Symbol	BORING NO.: B- 1 (continued)	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number			Water Content (%)	Dry Density (pcf)	Others
MATERIAL DESCRIPTION AND COMMENTS								
30					<b>continued:</b>			
35	6 12 13	BI-11	SM		Silty fine SAND, medium brown, slightly moist, medium dense			
40	7 11 15	BI-12		SAME				
45	13 32 30	BI-13			Silty f-c SAND with gravel, light brown gray, slightly moist, very dense			
50	12 26 27	BI-14	ML		Fine sandy SILT, medium brown, slightly moist, hard			SA; Passing #200 = 72%
<b>BORING TERMINATED AT 51.5 FEET</b>								
55					Boring backfilled with cuttings No groundwater encountered			
60								

<b>LEGEND</b>	<b>Sample type:</b>	---Ring	---SPT	---Small Bulk	---Large Bulk	---No Recovery	---Water Table	
	<b>Lab testing:</b>	AL = Atterberg Limits	EI = Expansion Index	SA = Sieve Analysis	RV = R-Value Test	SR = Sulfate/Resistivity Test	SH = Shear Test	HC= Consolidation

**GeoTek, Inc.**  
**LOG OF EXPLORATORY BORING**

**CLIENT:** MLC Holdings, Inc.  
**PROJECT NAME:** 1162 North Citrus Avenue  
**PROJECT NO.:** 1321-CR  
**LOCATION:** Covina, California

**DRILLER:** 2R Drilling  
**DRILL METHOD:** 8" Hollow Stem  
**HAMMER:** Auto 140#/30"

**LOGGED BY:** AMS  
**OPERATOR:** Rudy  
**RIG TYPE:** CME 75  
**DATE:** 4/29/2015

Depth (ft)	SAMPLES			USCS Symbol	BORING NO.: B-2	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number			Water Content (%)	Dry Density (pcf)	Others
MATERIAL DESCRIPTION AND COMMENTS								
0					<b>Surface: 2" Asphalt over 2 1/2" of Base</b>			
					<b>Alluvium:</b>			
5		8 14 15	B2-1					
		12 18 24	B2-2	SM	Silty f-c SAND with gravel, light brown gray, dry, medium dense	0.5		
10								
		10 13 20	B2-3		Silty fine SAND with some medium to coarse grained, medium brown, slightly moist, medium dense	4.7	113.3	
15								
		33 42 50-5"	B2-4	SP-SM	Gravelly f-c SAND with a trace of silt, light brown gray, dry, very dense	0.6		
20								
		20 26 44	B2-5		SAME, becomes dense	0.6	114.9	
25					<b>BORING TERMINATED AT 21.5 FEET</b>			
					Boring backfilled with cuttings No groundwater encountered			
30								
35								

**LEGEND**

**Sample type:** ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

**Lab testing:** AL = Atterberg Limits      EI = Expansion Index      SA = Sieve Analysis      RV = R-Value Test  
SR = Sulfate/Resistivity Test      SH = Shear Test      HC = Consolidation      MD = Maximum Density

**GeoTek, Inc.**  
**LOG OF EXPLORATORY BORING**

**CLIENT:** MLC Holdings, Inc.  
**PROJECT NAME:** 1162 North Citrus Avenue  
**PROJECT NO.:** 1321-CR  
**LOCATION:** Covina, California

**DRILLER:** 2R Drilling  
**DRILL METHOD:** 8" Hollow Stem  
**HAMMER:** Auto 140#/30"

**LOGGED BY:** AMS  
**OPERATOR:** Rudy  
**RIG TYPE:** CME 75  
**DATE:** 4/29/2015

Depth (ft)	SAMPLES			USCS Symbol	BORING NO.: B-3	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number			Water Content (%)	Dry Density (pcf)	Others
MATERIAL DESCRIPTION AND COMMENTS								
0					Surface: 2 1/2" Asphalt over 2 1/2" of Base <u>Alluvium:</u>			
9 11 21		9 11 21	B3-1	SM	Silty fine SAND, light gray brown, dry, loose	2.5	104.5	
14 26 36		14 26 36	B3-2	SP-SM	Gravelly f-c SAND with silt, light brown gray, dry, dense	0.5		
19 20 20		19 20 20	B3-3		SAME, becomes medium dense	0.6	115.2	
32 34 45		32 34 45	B3-4		SAME, becomes very dense	0.4		
<b>BORING TERMINATED AT 21.5 FEET</b>								
20					Boring backfilled with cuttings No groundwater encountered			
25								
30								

LEGEND

**Sample type:** ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

**Lab testing:** AL = Atterberg Limits      EI = Expansion Index      SA = Sieve Analysis      RV = R-Value Test  
SR = Sulfate/Resistivity Test      SH = Shear Test      HC= Consolidation      MD = Maximum Density

**GeoTek, Inc.**  
**LOG OF EXPLORATORY BORING**

**CLIENT:** MLC Holdings, Inc.  
**PROJECT NAME:** 1162 North Citrus Avenue  
**PROJECT NO.:** 1321-CR  
**LOCATION:** Covina, California

**DRILLER:** 2R Drilling  
**DRILL METHOD:** 8" Hollow Stem  
**HAMMER:** Auto 140#/30"

**LOGGED BY:** AMS  
**OPERATOR:** Rudy  
**RIG TYPE:** CME 75  
**DATE:** 4/29/2015

Depth (ft)	SAMPLES			USCS Symbol	BORING NO.: B-4	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number			Water Content (%)	Dry Density (pcf)	Others
MATERIAL DESCRIPTION AND COMMENTS								
0					<b>Alluvium:</b>			
5		9 9 13	B4-1	SM	Silty f-c SAND with gravel, light brown gray, dry, medium dense	1.0	107.2	
10		8 14 18	B4-2		Silty f-c SAND with gravel and trace cobbles, light brown gray, dry, medium dense	0.9	109.9	
15		11 20 27	B4-3		SAME, becomes dense	1.1	114.8	
20		50-5"	B4-5	SP-SM	Gravelly f-c SAND with silt and trace cobbles, light brown gray, dry, very dense	0.6		
<b>BORING TERMINATED AT 20.5 FEET</b>								
Boring backfilled with cuttings No groundwater encountered								
25								
30								

<b>LEGEND</b>	<b>Sample type:</b>	---Ring	---SPT	---Small Bulk	---Large Bulk	---No Recovery	---Water Table	
	<b>Lab testing:</b>	AL = Atterberg Limits	SR = Sulfate/Resistivity Test	EI = Expansion Index	SH = Shear Test	SA = Sieve Analysis	HC = Consolidation	RV = R-Value Test

**GeoTek, Inc.**  
**LOG OF EXPLORATORY BORING**

**CLIENT:** MLC Holdings, Inc.  
**PROJECT NAME:** 1162 North Citrus Avenue  
**PROJECT NO.:** 1321-CR  
**LOCATION:** Covina, California

**DRILLER:** 2R Drilling  
**DRILL METHOD:** 8" Hollow Stem  
**HAMMER:** Auto 140#/30"

**LOGGED BY:** AMS  
**OPERATOR:** Rudy  
**RIG TYPE:** CME 75  
**DATE:** 4/29/2015

Depth (ft)	SAMPLES			USCS Symbol	BORING NO.: B-5  MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number			Water Content (%)	Dry Density (pcf)	Others
0					<b>Surface: 3" Asphalt over 5" of Base</b> <b>Alluvium:</b>			
5	4 14 20	B5-1	SM-SP	Gravelly f-c SAND with silt, light gray brown, dry, medium dense	1.2	112.7	HC	
10	11 18 24	B5-2	SAME	Gravelly f-c SAND with silt, light gray brown, dry, medium dense	1.9	113.9		
15	7 15 28	B5-3	Silty fine SAND with some medium to coarse grained, medium brown, dry, dense	1.5	114.0			
20	30 36 46	B5-4	SP-SM	Gravelly f-c SAND with silty, light brown gray, dry, very dense	0.9	122.6		
25				<b>BORING TERMINATED AT 17.5 FEET</b>				
30				Boring backfilled with cuttings No groundwater encountered				

**LEGEND**

**Sample type:** ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

**Lab testing:** AL = Atterberg Limits      EI = Expansion Index      SA = Sieve Analysis      RV = R-Value Test  
SR = Sulfate/Resistivity Test      SH = Shear Test      HC = Consolidation      MD = Maximum Density

**GeoTek, Inc.**  
**LOG OF EXPLORATORY BORING**

**CLIENT:** MLC Holdings, Inc.  
**PROJECT NAME:** 1162 North Citrus Avenue  
**PROJECT NO.:** 1321-CR  
**LOCATION:** Covina, California

**DRILLER:** 2R Drilling  
**DRILL METHOD:** 8" Hollow Stem  
**HAMMER:** Auto 140#/30"

**LOGGED BY:** AMS  
**OPERATOR:** Rudy  
**RIG TYPE:** CME 75  
**DATE:** 4/29/2015

Depth (ft)	SAMPLES			USCS Symbol	BORING NO.: B-6  MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number			Water Content (%)	Dry Density (pcf)	Others
0					<b>Surface: 3" Asphalt over 4" of Base</b> <b>Alluvium:</b>			
5	8 14 17	B6-1	SP-SM	Gravelly f-c SAND with silt, light gray brown, dry, medium dense	0.3			
10	6 11 12	B6-2	SM	Silty f-m SAND with trace gravel, medium brown, slightly moist, medium dense	6.2	116.6	HC	
15	14 28 38	B6-3		Silty f-c SAND with gravel, light gray brown, dry, dense	1.5	115.4		
15	<b>BORING TERMINATED AT 18.5 FEET</b>							
20	Boring backfilled with cuttings No groundwater encountered							
25								
30								

**LEGEND**

**Sample type:**  ---Ring  ---SPT  ---Small Bulk  ---Large Bulk  ---No Recovery  ---Water Table

**Lab testing:** AL = Atterberg Limits      EI = Expansion Index      SA = Sieve Analysis      RV = R-Value Test  
SR = Sulfate/Resistivity Test      SH = Shear Test      HC= Consolidation      MD = Maximum Density

# **APPENDIX B**

## **LABORATORY TESTING RESULTS**

**APNs 8046-018, -019 and -020**

**City of Covina, Los Angeles County, California**

**Project No. 1321-CR**



## SUMMARY OF LABORATORY TESTING

### Classification

Soils were classified visually in general accordance to the Unified Soil Classification System (ASTM Test Method D 2487). The soil classifications are shown on the log of borings in Appendix A.

### Consolidation

Consolidation testing was performed on selected samples of the site soils according to ASTM Test Method D 2435. The results of this testing is presented in Appendix B.

### Direct Shear

Shear testing was performed in a direct shear machine of the strain-control type in general accordance with ASTM Test Method D 3080. The rate of deformation is approximately 0.035 inches per minute. The samples were sheared under varying confining loads in order to determine the coulomb shear strength parameters, angle of internal friction and cohesion. One test was performed on a remolded sample of bulk soils collected on the site. The results of the testing are included in Appendix B.

### Expansion Index

Expansion Index testing was performed on one soil sample. Testing was performed in general accordance with ASTM Test Method D 4829. The results of the testing is included in Appendix B.

### In-Situ Moisture and Density

The natural water content was determined (ASTM D 2216) on samples of the materials recovered from the subsurface exploration. In addition, in-place dry density determination (ASTM D 2937) were performed on relatively undisturbed samples to measure the unity weight of the subsurface soils. Results of these tests are shown on the boring logs at the appropriate sample depths in Appendix A.

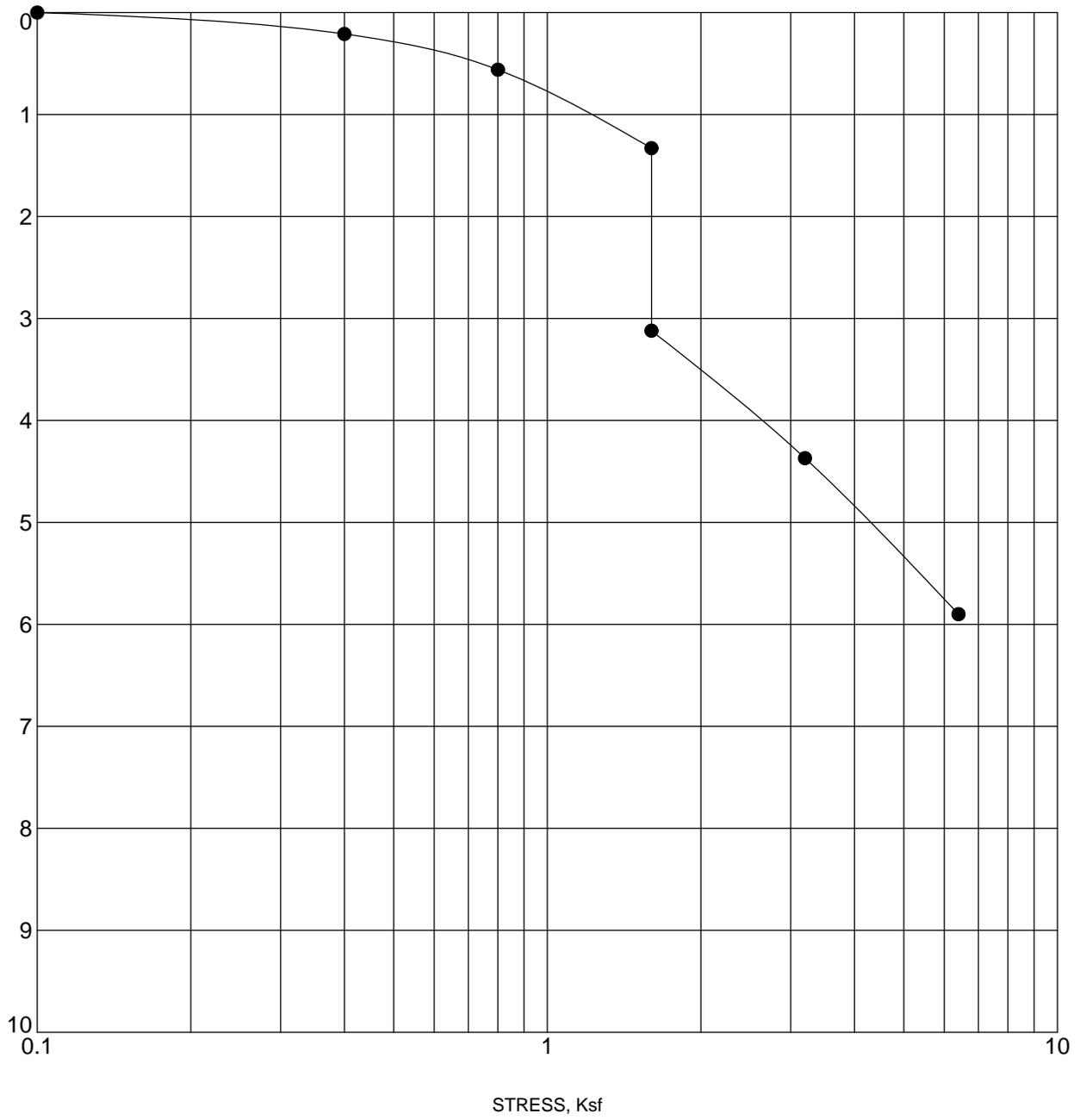
### Moisture-Density Relationship

Laboratory testing was performed on one sample collected during the subsurface exploration. The laboratory maximum dry density and optimum moisture content for the soil type was determined in general accordance with test method ASTM Test Procedure D 1557. The results are included in Appendix B.

### Sulfate Content, Resistivity and Chloride Content

Testing to determine the water-soluble sulfate content was performed by others in general accordance with California Test No. 417. Resistivity testing was completed by others in general accordance with California Test No. 643. Testing to determine the chloride content was performed by others in general accordance with California Test No. 422. The results of the testing are included in Appendix B.

STRAIN, %



Specimen Identification	Classification	$\gamma_d$	MC%
● B-3; 1321-CR3 3.0			

US CONSOL STRAIN 10-2700 GEOTEK.GPJ TGR GEOTECH.GDT 8/10/15

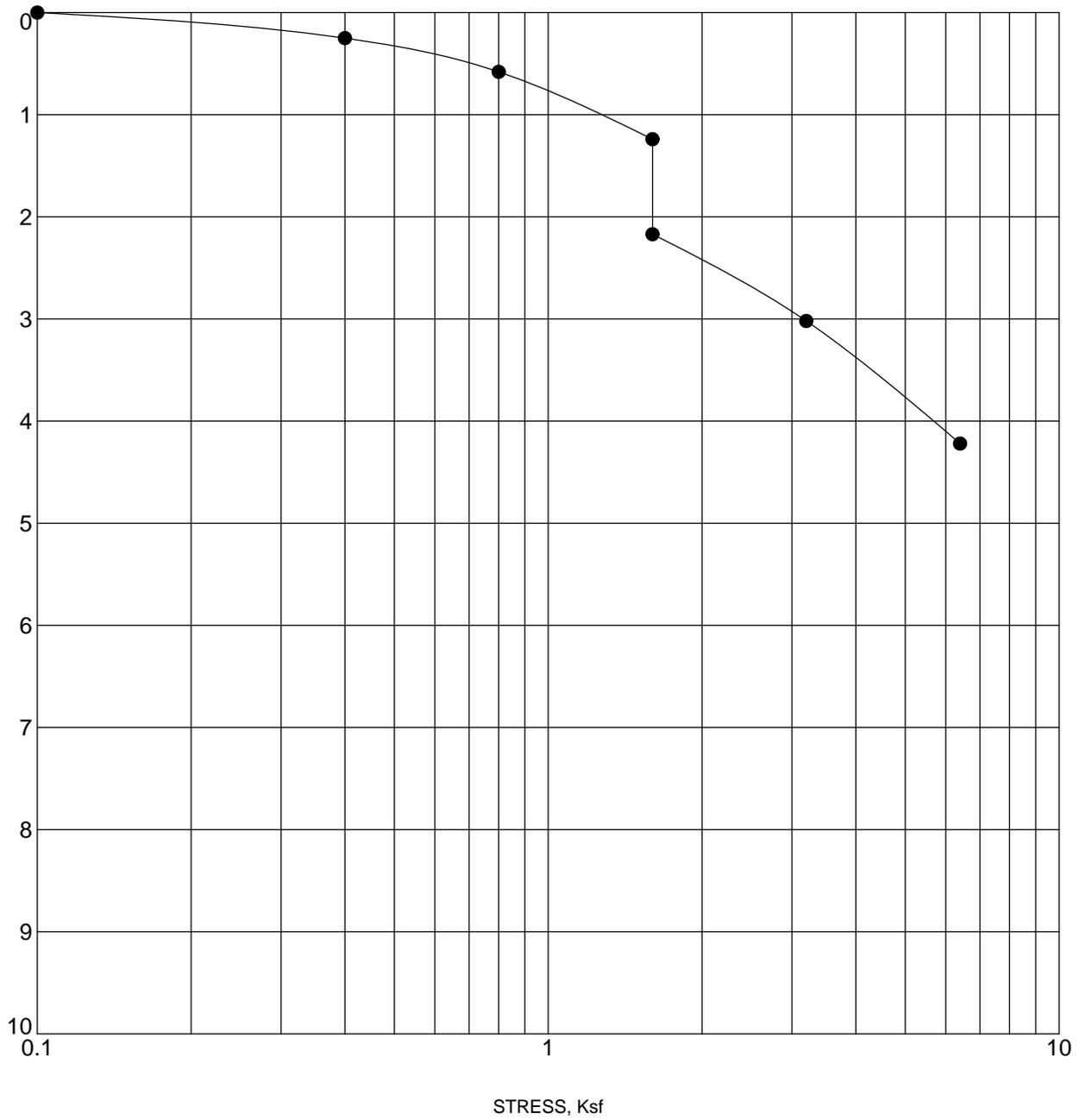


3037 S. Harbor Blvd.  
 Santa Ana, CA  
 Telephone:  
 TGR GEOTECHNICAL, INC. Fax:

**CONSOLIDATION TEST**

Project Number: 10-2700  
 Project Name: GeoTek (1272-CR3)

STRAIN, %



Specimen Identification	Classification	$\gamma_d$	MC%
● B-5; 1321-CR3 4.0			



TGR GEOTECHNICAL, INC.

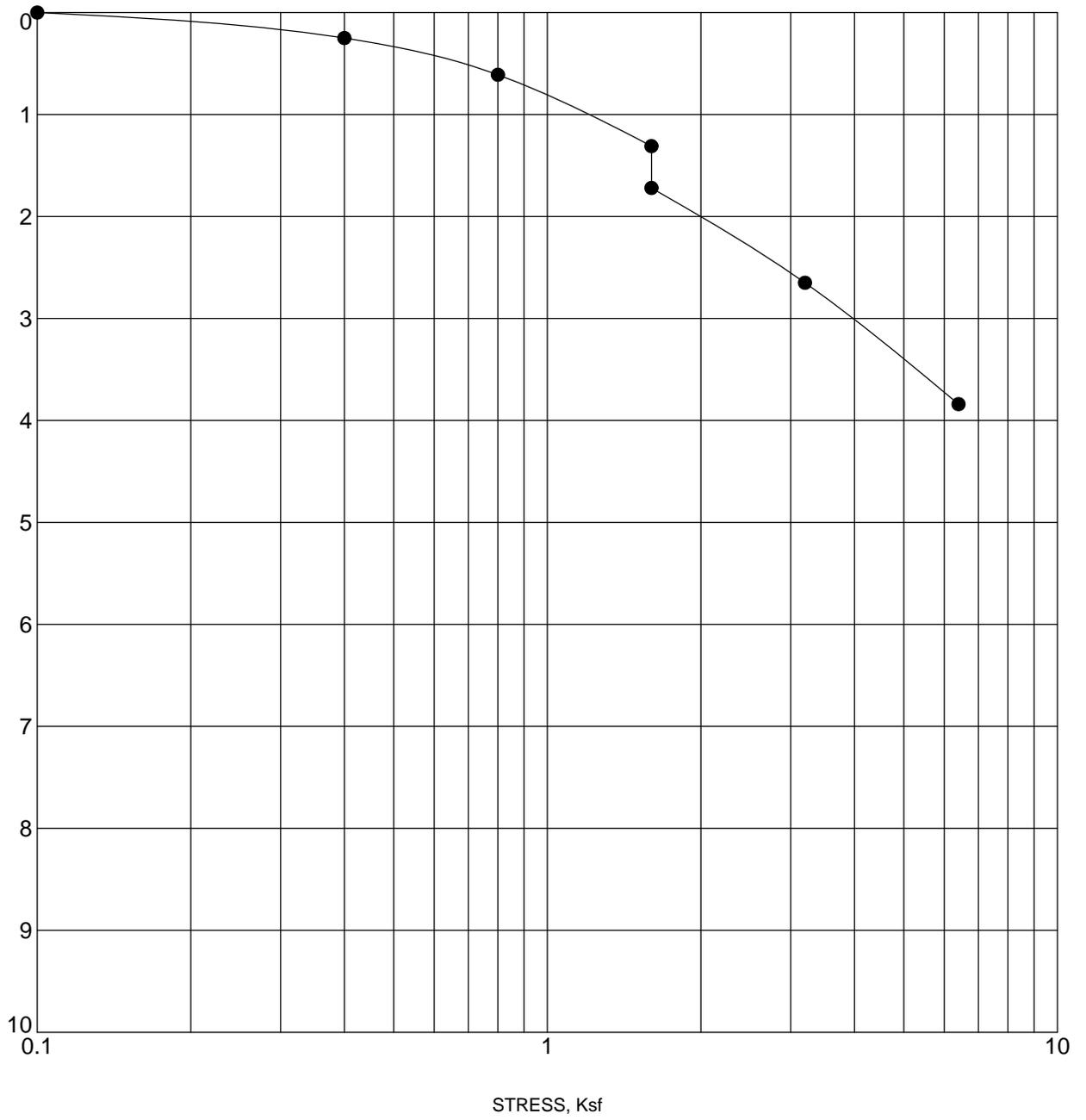
3037 S. Harbor Blvd.  
 Santa Ana, CA  
 Telephone:  
 Fax:

**CONSOLIDATION TEST**

Project Number: 10-2700

Project Name: GeoTek (1272-CR3)

STRAIN, %



Specimen Identification	Classification	$\gamma_d$	MC%
● B-6; 1321-CR3 7.0			



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 Santa Ana, CA  
 Telephone:  
 Fax:

TGR GEOTECHNICAL, INC.

**CONSOLIDATION TEST**

Project Number: 10-2700

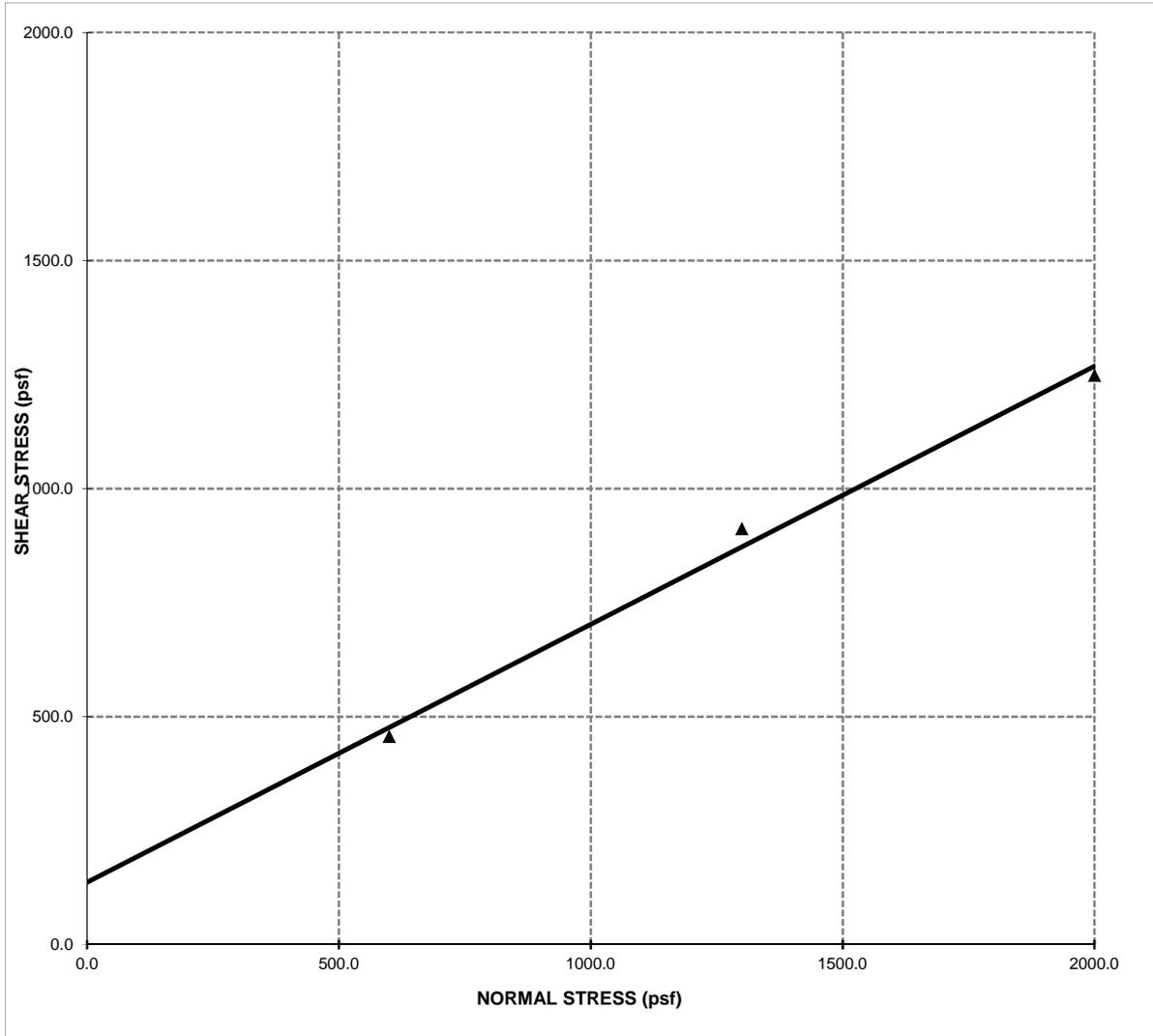
Project Name: GeoTek (1272-CR3)



# DIRECT SHEAR TEST

Client: MLC Holdings, Inc.  
Project Number: 1321-CR

Sample Location: B-1 @ 0-2'  
Date Tested: 8/10/2015



**Shear Strength:**  $\Phi = 29.5^\circ$  ; **C = 136.57 psf**

- Notes:**
- 1 - The soil specimen used in the shear box was a ring sample remolded to approximately 90% relative compaction from a bulk sample collected during the field investigation.
  - 2 - The above reflect residual shear strength at saturated conditions.
  - 3 - The tests were run at a shear rate of 0.035 in/min.



# EXPANSION INDEX TEST

(ASTM D4829)

**Client:** MLC Holdings, Inc. DI Lab No Corona  
**Project Number:** 1321-CR Date Tested: 8/5/2015  
**Project Location:** Covina Sample Source: B-1 @ 0-2'  
Sample Description: Silty Sand

Ring #: \_\_\_\_\_ Ring Dia. : 4.01" Ring Ht. 1.1"

### DENSITY DETERMINATION

<b>A</b>	Weight of compacted sample & ring (gm)	765.9
<b>B</b>	Weight of ring (gm)	366.2
<b>C</b>	Net weight of sample (gm)	<b>399.7</b>
<b>D</b>	Wet Density, lb / ft3 (C*0.3016)	<b>120.6</b>
<b>E</b>	Dry Density, lb / ft3 (D/1.F)	<b>109.6</b>

### SATURATION DETERMINATION

<b>F</b>	Moisture Content, %	10.0
<b>G</b>	Specific Gravity, assumed	<b>2.70</b>
<b>H</b>	Unit Wt. of Water @ 20°C, (pcf)	<b>62.3</b>
<b>I</b>	% Saturation	<b>50.5</b>

READINGS		
DATE	TIME	READING
8/5/2015	12:47	0.3110
8/5/2015	12:57	0.3110
8/6/2015	3:40	0.3110

Initial  
10 min/Dry

Final

FINAL MOISTURE	
Final Weight of wet sample & tare	% Moisture
797.1	<b>17.8</b>

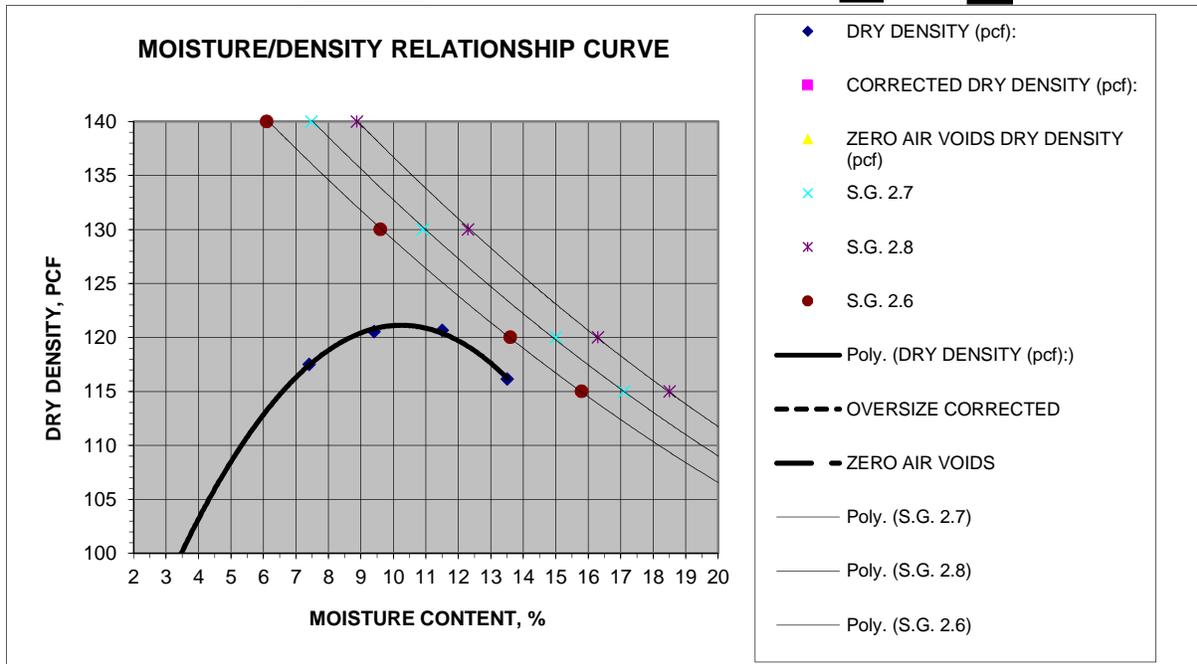
**EXPANSION INDEX = 0**



## MOISTURE/DENSITY RELATIONSHIP

<b>Client:</b> MLC Holdings, Inc. <b>Project:</b> Covina Project <b>Location:</b> Covina Project <b>Material Type:</b> Brown Silty Fine Sand <b>Material Supplier:</b> _____ <b>Material Source:</b> _____ <b>Sample Location:</b> B-1 @ 0-2'  <b>Sampled By:</b> AMS <b>Received By:</b> DI <b>Tested By:</b> DI <b>Reviewed By:</b> GFS	<b>Job No.:</b> 1321-CR <b>Lab No.:</b> Corona  <b>Date Sampled:</b> 29-Apr-15 <b>Date Received:</b> 29-Apr-15 <b>Date Tested:</b> 15-Aug-15 <b>Date Reviewed:</b> 10-Aug-15
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**Test Procedure:** ASTM 1557      **Method:** A  
**Oversized Material (%):** 0.0      **Correction Required:**  yes  no



### MOISTURE DENSITY RELATIONSHIP VALUES

Maximum Dry Density, pcf	121.0	@ Optimum Moisture, %	10.5
Corrected Maximum Dry Density, pcf		@ Optimum Moisture, %	

### MATERIAL DESCRIPTION

**Grain Size Distribution:**

	% Gravel (retained on No. 4)
	% Sand (Passing No. 4, Retained on No. 200)
	% Silt and Clay (Passing No. 200)

**Classification:**

Unified Soils Classification: \_\_\_\_\_  
 AASHTO Soils Classification: \_\_\_\_\_

**Atterberg Limits:**

	Liquid Limit, %
	Plastic Limit, %
	Plasticity Index, %

GeoTek, Inc.  
710 East Parkridge Avenue, Suite 105  
Corona, California 92879

Client: MLC Holdings Inc.  
W.O.: 1321-CR  
Project: Covina

Date: August 11, 2015  
QCI Project No.: 15-167-008b  
Summarized by: KA

### Corrosivity Test Results

Sample ID	Sample Depth (Feet)	pH CT-532 (643)	Chloride CT-422 (ppm)	Sulfate CT-417 (% By Weight)	Resistivity CT-532 (643) (ohm-cm)
B-1	2'	7.09	163	0.0030	7400

# **APPENDIX C**

## **SEISMIC SETTLEMENT ANALYSIS**

**APNs 8046-018, -019 and -020**

**City of Covina, Los Angeles County, California**

**Project No. 1321-CR**

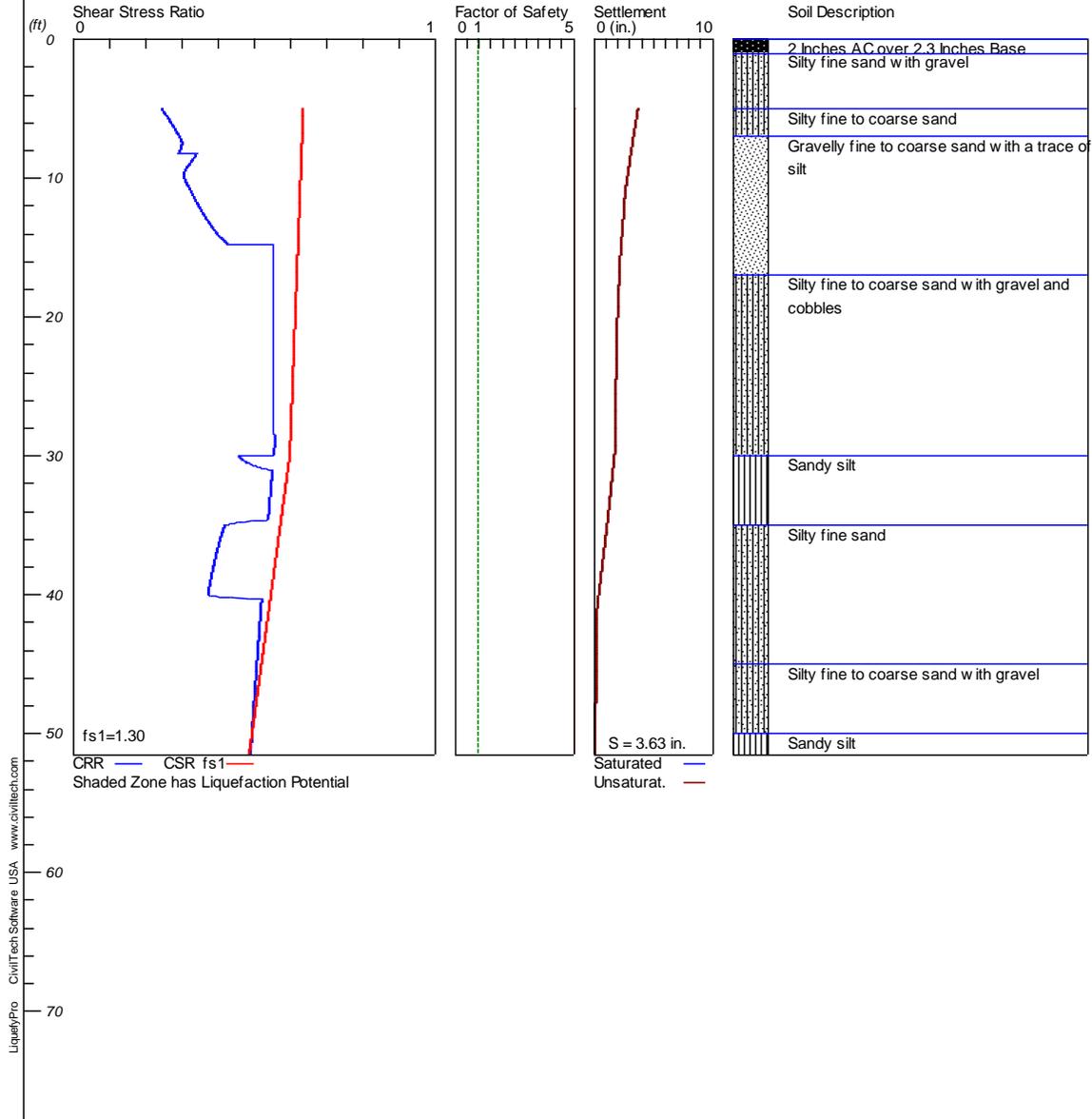


# LIQUEFACTION ANALYSIS

1106 AND 1162 NORTH CITRUS AVENUE, COVINA

Hole No.=B-1 Water Depth=100 ft

Magnitude=7.2  
Acceleration=0.76g



## Liquefaction Summary

\*\*\*\*\*  
\*\*\*\*\*

### LIQUEFACTION ANALYSIS SUMMARY

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Font: Courier New, Regular, Size 8 is recommended for this report.  
Licensed to , 8/13/2015 4:14:04 PM

Input File Name: G:\Projects\1301 to 1350\1321CR MLC Holdings Inc APNs  
8406-019-019 and -020 Covina\Liquefaction.liq  
Title: 1106 AND 1162 NORTH CITRUS AVENUE, COVINA  
Subtitle:

Surface Elev.=  
Hole No.=B-1  
Depth of Hole= 51.50 ft  
Water Table during Earthquake= 100.00 ft  
Water Table during In-Situ Testing= 100.00 ft  
Max. Acceleration= 0.76 g  
Earthquake Magnitude= 7.20

#### Input Data:

Surface Elev.=  
Hole No.=B-1  
Depth of Hole=51.50 ft  
Water Table during Earthquake= 100.00 ft  
Water Table during In-Situ Testing= 100.00 ft  
Max. Acceleration=0.76 g  
Earthquake Magnitude=7.20  
No-Liquefiable Soils: CL, OL are Non-Liq. Soil

1. SPT or BPT Calculation.
  2. Settlement Analysis Method: Ishihara / Yoshimine
  3. Fines Correction for Liquefaction: Idriss/Seed
  4. Fine Correction for Settlement: During Liquefaction\*
  5. Settlement Calculation in: All zones\*
  6. Hammer Energy Ratio,  $C_e = 1.25$
  7. Borehole Diameter,  $C_b = 1$
  8. Sampling Method,  $C_s = 1$
  9. User request factor of safety (apply to CSR) , User= 1.3  
Plot one CSR curve ( $f_{s1} = \text{User}$ )
  10. Use Curve Smoothing: Yes\*
- \* Recommended Options

## Liquefaction Summary

### In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
5.00	8.00	97.00	35.00
10.00	16.00	115.00	5.00
15.00	24.00	115.00	5.00
20.00	38.00	121.00	15.00
25.00	76.00	130.00	15.00
30.00	21.00	130.00	77.00
35.00	25.00	130.00	25.00
40.00	26.00	130.00	25.00
45.00	62.00	130.00	25.00
50.00	53.00	130.00	72.00

### Output Results:

Settlement of Saturated Sands=0.00 in.

Settlement of Unsaturated Sands=3.63 in.

Total Settlement of Saturated and Unsaturated Sands=3.63 in.

Differential Settlement=1.815 to 2.396 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
5.00	0.24	0.63	5.00	0.00	3.63	3.63
6.00	0.27	0.63	5.00	0.00	3.45	3.45
7.00	0.29	0.63	5.00	0.00	3.26	3.26
8.00	0.29	0.63	5.00	0.00	3.07	3.07
9.00	0.32	0.63	5.00	0.00	2.90	2.90
10.00	0.31	0.63	5.00	0.00	2.73	2.73
11.00	0.32	0.63	5.00	0.00	2.55	2.55
12.00	0.35	0.62	5.00	0.00	2.47	2.47
13.00	0.37	0.62	5.00	0.00	2.38	2.38
14.00	0.40	0.62	5.00	0.00	2.29	2.29
15.00	0.55	0.62	5.00	0.00	2.19	2.19
16.00	0.55	0.62	5.00	0.00	2.12	2.12
17.00	0.55	0.62	5.00	0.00	2.06	2.06
18.00	0.55	0.62	5.00	0.00	2.00	2.00
19.00	0.55	0.61	5.00	0.00	1.95	1.95
20.00	0.55	0.61	5.00	0.00	1.90	1.90
21.00	0.55	0.61	5.00	0.00	1.85	1.85
22.00	0.55	0.61	5.00	0.00	1.81	1.81
23.00	0.55	0.61	5.00	0.00	1.79	1.79
24.00	0.55	0.61	5.00	0.00	1.78	1.78
25.00	0.55	0.60	5.00	0.00	1.77	1.77
26.00	0.55	0.60	5.00	0.00	1.76	1.76

Liquefaction Summary						
27.00	0.55	0.60	5.00	0.00	1.75	1.75
28.00	0.55	0.60	5.00	0.00	1.73	1.73
29.00	0.56	0.60	5.00	0.00	1.70	1.70
30.00	0.45	0.60	5.00	0.00	1.64	1.64
31.00	0.54	0.59	5.00	0.00	1.52	1.52
32.00	0.55	0.59	5.00	0.00	1.40	1.40
33.00	0.54	0.58	5.00	0.00	1.27	1.27
34.00	0.54	0.58	5.00	0.00	1.15	1.15
35.00	0.42	0.57	5.00	0.00	1.02	1.02
36.00	0.40	0.57	5.00	0.00	0.88	0.88
37.00	0.39	0.56	5.00	0.00	0.74	0.74
38.00	0.39	0.56	5.00	0.00	0.59	0.59
39.00	0.38	0.55	5.00	0.00	0.45	0.45
40.00	0.37	0.54	5.00	0.00	0.31	0.31
41.00	0.52	0.54	5.00	0.00	0.18	0.18
42.00	0.51	0.53	5.00	0.00	0.16	0.16
43.00	0.51	0.53	5.00	0.00	0.14	0.14
44.00	0.51	0.52	5.00	0.00	0.12	0.12
45.00	0.51	0.52	5.00	0.00	0.10	0.10
46.00	0.50	0.51	5.00	0.00	0.09	0.09
47.00	0.50	0.51	5.00	0.00	0.07	0.07
48.00	0.50	0.50	5.00	0.00	0.06	0.06
49.00	0.50	0.50	5.00	0.00	0.04	0.04
50.00	0.49	0.49	5.00	0.00	0.03	0.03
51.00	0.49	0.49	5.00	0.00	0.01	0.01

---

\* F.S.<1, Liquefaction Potential Zone  
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

---

1 atm (atmosphere) = 1 tsf (ton/ft<sup>2</sup>)  
CRRm                   Cyclic resistance ratio from soils  
CSRsf                   Cyclic stress ratio induced by a given earthquake (with user  
request factor of safety)  
F.S.                    Factor of Safety against liquefaction, F.S.=CRRm/CSRsf  
S\_sat                   Settlement from saturated sands  
S\_dry                   Settlement from Unsaturated Sands  
S\_all                   Total Settlement from Saturated and Unsaturated Sands  
NoLiq                   No-Liquefy Soils

# **APPENDIX D**

## **GENERAL GRADING GUIDELINES**

**APNs 8046-018, -019 and -020**

**City of Covina, Los Angeles County, California**

**Project No. 1321-CR**



## **GENERAL GRADING GUIDELINES**

Guidelines presented herein are intended to address general construction procedures for earthwork construction. Specific situations and conditions often arise which cannot reasonably be discussed in general guidelines, when anticipated these are discussed in the text of the report. Often unanticipated conditions are encountered which may necessitate modification or changes to these guidelines. It is our hope that these will assist the contractor to more efficiently complete the project by providing a reasonable understanding of the procedures that would be expected during earthwork and the testing and observation used to evaluate those procedures.

### **General**

Grading should be performed to at least the minimum requirements of governing agencies, Chapters 18 and 33 of the Uniform Building Code, CBC (2013) and the guidelines presented below.

### **Preconstruction Meeting**

A preconstruction meeting should be held prior to site earthwork. Any questions the contractor has regarding our recommendations, general site conditions, apparent discrepancies between reported and actual conditions and/or differences in procedures the contractor intends to use should be brought up at that meeting. The contractor (including the main onsite representative) should review our report and these guidelines in advance of the meeting. Any comments the contractor may have regarding these guidelines should be brought up at that meeting.

### **Grading Observation and Testing**

1. Observation of the fill placement should be provided by our representative during grading. Verbal communication during the course of each day will be used to inform the contractor of test results. The contractor should receive a copy of the "Daily Field Report" indicating results of field density tests that day. If our representative does not provide the contractor with these reports, our office should be notified.
2. Testing and observation procedures are, by their nature, specific to the work or area observed and location of the tests taken, variability may occur in other locations. The contractor is responsible for the uniformity of the grading operations; our observations and test results are intended to evaluate the contractor's overall level of efforts during grading. The contractor's personnel are the only individuals participating in all aspect of site work. Compaction testing and observation should not be considered as relieving the contractor's responsibility to properly compact the fill.
3. Cleanouts, processed ground to receive fill, key excavations, and subdrains should be observed by our representative prior to placing any fill. It will be the contractor's responsibility to notify our representative or office when such areas are ready for observation.
4. Density tests may be made on the surface material to receive fill, as considered warranted by this firm.



5. In general, density tests would be made at maximum intervals of two feet of fill height or every 1,000 cubic yards of fill placed. Criteria will vary depending on soil conditions and size of the fill. More frequent testing may be performed. In any case, an adequate number of field density tests should be made to evaluate the required compaction and moisture content is generally being obtained.
6. Laboratory testing to support field test procedures will be performed, as considered warranted, based on conditions encountered (e.g. change of material sources, types, etc.) Every effort will be made to process samples in the laboratory as quickly as possible and in progress construction projects are our first priority. However, laboratory workloads may cause in delays and some soils may require a **minimum of 48 to 72 hours to complete test procedures**. Whenever possible, our representative(s) should be informed in advance of operational changes that might result in different source areas for materials.
7. Procedures for testing of fill slopes are as follows:
  - a) Density tests should be taken periodically during grading on the flat surface of the fill, three to five feet horizontally from the face of the slope.
  - b) If a method other than over building and cutting back to the compacted core is to be employed, slope compaction testing during construction should include testing the outer six inches to three feet in the slope face to determine if the required compaction is being achieved.
8. Finish grade testing of slopes and pad surfaces should be performed after construction is complete.

### **Site Clearing**

1. All vegetation, and other deleterious materials, should be removed from the site. If material is not immediately removed from the site it should be stockpiled in a designated area(s) well outside of all current work areas and delineated with flagging or other means. Site clearing should be performed in advance of any grading in a specific area.
2. Efforts should be made by the contractor to remove all organic or other deleterious material from the fill, as even the most diligent efforts may result in the incorporation of some materials. This is especially important when grading is occurring near the natural grade. All equipment operators should be aware of these efforts. Laborers may be required as root pickers.
3. Nonorganic debris or concrete may be placed in deeper fill areas provided the procedures used are observed and found acceptable by our representative.

### **Treatment of Existing Ground**

1. Following site clearing, all surficial deposits of alluvium and colluvium as well as weathered or creep effected bedrock, should be removed unless otherwise specifically indicated in the text of this report.



2. In some cases, removal may be recommended to a specified depth (e.g. flat sites where partial alluvial removals may be sufficient). The contractor should not exceed these depths unless directed otherwise by our representative.
3. Groundwater existing in alluvial areas may make excavation difficult. Deeper removals than indicated in the text of the report may be necessary due to saturation during winter months.
4. Subsequent to removals, the natural ground should be processed to a depth of six inches, moistened to near optimum moisture conditions and compacted to fill standards.
5. Exploratory back hoe or dozer trenches still remaining after site removal should be excavated and filled with compacted fill if they can be located.

**Fill Placement**

1. Unless otherwise indicated, all site soil and bedrock may be reused for compacted fill; however, some special processing or handling may be required (see text of report).
2. Material used in the compacting process should be evenly spread, moisture conditioned, processed, and compacted in thin lifts six (6) to eight (8) inches in compacted thickness to obtain a uniformly dense layer. The fill should be placed and compacted on a nearly horizontal plane, unless otherwise found acceptable by our representative.
3. If the moisture content or relative density varies from that recommended by this firm, the contractor should rework the fill until it is in accordance with the following:
  - a) Moisture content of the fill should be at or above optimum moisture. Moisture should be evenly distributed without wet and dry pockets. Pre-watering of cut or removal areas should be considered in addition to watering during fill placement, particularly in clay or dry surficial soils. The ability of the contractor to obtain the proper moisture content will control production rates.
  - b) Each six-inch layer should be compacted to at least 90 percent of the maximum dry density in compliance with the testing method specified by the controlling governmental agency. In most cases, the testing method is ASTM Test Designation D 1557.
4. Rock fragments less than eight inches in diameter may be utilized in the fill, provided:
  - a) They are not placed in concentrated pockets;
  - b) There is a sufficient percentage of fine-grained material to surround the rocks;
  - c) The distribution of the rocks is observed by, and acceptable to, our representative.
5. Rocks exceeding eight (8) inches in diameter should be taken off site, broken into smaller fragments, or placed in accordance with recommendations of this firm in areas designated suitable for rock disposal. On projects where significant large quantities of oversized materials are anticipated, alternate guidelines for placement may be included. If significant oversize materials are encountered during construction, these guidelines should be requested.
6. In clay soil, dry or large chunks or blocks are common. If in excess of eight (8) inches minimum dimension, then they are considered as oversized. Sheepsfoot compactors or other suitable

methods should be used to break up blocks. When dry, they should be moisture conditioned to provide a uniform condition with the surrounding fill.

### **Slope Construction**

1. The contractor should obtain a minimum relative compaction of 90 percent out to the finished slope face of fill slopes. This may be achieved by either overbuilding the slope and cutting back to the compacted core, or by direct compaction of the slope face with suitable equipment.
2. Slopes trimmed to the compacted core should be overbuilt by at least three (3) feet with compaction efforts out to the edge of the false slope. Failure to properly compact the outer edge results in trimming not exposing the compacted core and additional compaction after trimming may be necessary.
3. If fill slopes are built "at grade" using direct compaction methods, then the slope construction should be performed so that a constant gradient is maintained throughout construction. Soil should not be "spilled" over the slope face nor should slopes be "pushed out" to obtain grades. Compaction equipment should compact each lift along the immediate top of slope. Slopes should be back rolled or otherwise compacted at approximately every 4 feet vertically as the slope is built.
4. Corners and bends in slopes should have special attention during construction as these are the most difficult areas to obtain proper compaction.
5. Cut slopes should be cut to the finished surface. Excessive undercutting and smoothing of the face with fill may necessitate stabilization.

### **UTILITY TRENCH CONSTRUCTION AND BACKFILL**

Utility trench excavation and backfill is the contractors responsibility. The geotechnical consultant typically provides periodic observation and testing of these operations. While efforts are made to make sufficient observations and tests to verify that the contractors' methods and procedures are adequate to achieve proper compaction, it is typically impractical to observe all backfill procedures. As such, it is critical that the contractor use consistent backfill procedures.

Compaction methods vary for trench compaction and experience indicates many methods can be successful. However, procedures that "worked" on previous projects may or may not prove effective on a given site. The contractor(s) should outline the procedures proposed, so that we may discuss them **prior** to construction. We will offer comments based on our knowledge of site conditions and experience.

1. Utility trench backfill in slopes, structural areas, in streets and beneath flat work or hardscape should be brought to at least optimum moisture and compacted to at least 90 percent of the laboratory standard. Soil should be moisture conditioned prior to placing in the trench.

2. Flooding and jetting are not typically recommended or acceptable for native soils. Flooding or jetting may be used with select sand having a Sand Equivalent (SE) of 30 or higher. This is typically limited to the following uses:
  - a) shallow (12 + inches) under slab interior trenches and,
  - b) as bedding in pipe zone.

The water should be allowed to dissipate prior to pouring slabs or completing trench compaction.

3. Care should be taken not to place soils at high moisture content within the upper three feet of the trench backfill in street areas, as overly wet soils may impact subgrade preparation. Moisture may be reduced to 2% below optimum moisture in areas to be paved within the upper three feet below sub grade.
4. Sand backfill should not be allowed in exterior trenches adjacent to and within an area extending below a 1:1 projection from the outside bottom edge of a footing, unless it is similar to the surrounding soil.
5. Trench compaction testing is generally at the discretion of the geotechnical consultant. Testing frequency will be based on trench depth and the contractors procedures. A probing rod would be used to assess the consistency of compaction between tested areas and untested areas. If zones are found that are considered less compact than other areas, this would be brought to the contractors attention.

## **JOB SAFETY**

### **General**

Personnel safety is a primary concern on all job sites. The following summaries are safety considerations for use by all our employees on multi-employer construction sites. On ground personnel are at highest risk of injury and possible fatality on grading construction projects. The company recognizes that construction activities will vary on each site and that job site safety is the contractor's responsibility. However, it is, imperative that all personnel be safety conscious to avoid accidents and potential injury.

In an effort to minimize risks associated with geotechnical testing and observation, the following precautions are to be implemented for the safety of our field personnel on grading and construction projects.

1. Safety Meetings: Our field personnel are directed to attend the contractor's regularly scheduled safety meetings.
2. Safety Vests: Safety vests are provided for and are to be worn by our personnel while on the job site.
3. Safety Flags: Safety flags are provided to our field technicians; one is to be affixed to the vehicle when on site, the other is to be placed atop the spoil pile on all test pits.



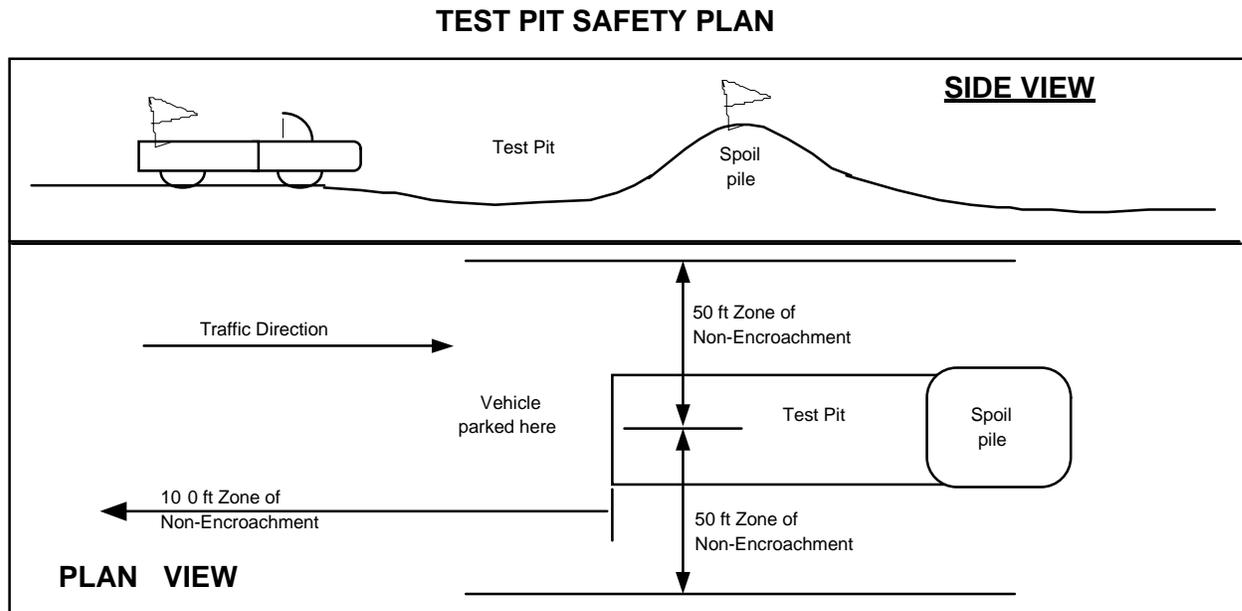
In the event that the contractor's representative observes any of our personnel not following the above, we request that it be brought to the attention of our office.

### Test Pits Location, Orientation and Clearance

The technician is responsible for selecting test pit locations. The primary concern is the technician's safety. However, it is necessary to take sufficient tests at various locations to obtain a representative sampling of the fill. As such, efforts will be made to coordinate locations with the grading contractors authorized representatives (e.g. dump man, operator, supervisor, grade checker, etc.), and to select locations following or behind the established traffic pattern, preferably outside of current traffic. The contractors authorized representative should direct excavation of the pit and safety during the test period. Again, safety is the paramount concern.

Test pits should be excavated so that the spoil pile is placed away from oncoming traffic. The technician's vehicle is to be placed next to the test pit, opposite the spoil pile. This necessitates that the fill be maintained in a drivable condition. Alternatively, the contractor may opt to park a piece of equipment in front of test pits, particularly in small fill areas or those with limited access.

A zone of non-encroachment should be established for all test pits (see diagram below). No grading equipment should enter this zone during the test procedure. The zone should extend outward to the sides approximately 50 feet from the center of the test pit and 100 feet in the direction of traffic flow. This zone is established both for safety and to avoid excessive ground vibration, which typically decreases test results.



### **Slope Tests**

When taking slope tests, the technician should park their vehicle directly above or below the test location on the slope. The contractor's representative should effectively keep all equipment at a safe operation distance (e.g. 50 feet) away from the slope during testing.

The technician is directed to withdraw from the active portion of the fill as soon as possible following testing. The technician's vehicle should be parked at the perimeter of the fill in a highly visible location.

### **Trench Safety**

It is the contractor's responsibility to provide safe access into trenches where compaction testing is needed. Trenches for all utilities should be excavated in accordance with CAL-OSHA and any other applicable safety standards. Safe conditions will be required to enable compaction testing of the trench backfill.

All utility trench excavations in excess of 5 feet deep, which a person enters, are to be shored or laid back. Trench access should be provided in accordance with OSHA standards. Our personnel are directed not to enter any trench by being lowered or "riding down" on the equipment.

Our personnel are directed not to enter any excavation which;

1. is 5 feet or deeper unless shored or laid back,
2. exit points or ladders are not provided,
3. displays any evidence of instability, has any loose rock or other debris which could fall into the trench, or
4. displays any other evidence of any unsafe conditions regardless of depth.

If the contractor fails to provide safe access to trenches for compaction testing, our company policy requires that the soil technician withdraws and notifies their supervisor. The contractor's representative will then be contacted in an effort to effect a solution. All backfill not tested due to safety concerns or other reasons is subject to reprocessing and/or removal.

### **Procedures**

In the event that the technician's safety is jeopardized or compromised as a result of the contractor's failure to comply with any of the above, the technician is directed to inform both the developer's and contractor's representatives. If the condition is not rectified, the technician is required, by company policy, to immediately withdraw and notify their supervisor. The contractor's representative will then be contacted in an effort to effect a solution. No further testing will be performed until the situation is rectified. Any fill placed in the interim can be considered unacceptable and subject to reprocessing, recompaction or removal.

In the event that the soil technician does not comply with the above or other established safety guidelines, we request that the contractor bring this to technicians attention and notify our project



manager or office. Effective communication and coordination between the contractors' representative and the field technician(s) is strongly encouraged in order to implement the above safety program and safety in general.

The safety procedures outlined above should be discussed at the contractor's safety meetings. This will serve to inform and remind equipment operators of these safety procedures particularly the zone of non-encroachment.

The safety procedures outlined above should be discussed at the contractor's safety meetings. This will serve to inform and remind equipment operators of these safety procedures particularly the zone of non-encroachment.

**The First American  
MASTER PROPERTY DISCLOSURE REPORT  
PDR®**

**Information Provided by:**



**PLEASE VERIFY THAT THE PROPERTY INFORMATION BELOW IS CORRECT.**

**Underlying APN ("Property"): N/A**

**APNS: 8406-019-019 and 8406-019-020**

**Project Name: 1162 N. CITRUS AVENUE**

**City, State, Zip: COVINA, CA**

**Report Date: 08/17/2015**

**RECIPIENTS**

MLC HOLDINGS INC.  
Attn.: JUSTIN DERBY  
12657 ALCOSTA BLVD. #175  
SAN RAMON, CA 94583

**NOTICE**

First American Natural Hazard Disclosures ("FANHD") is pleased to provide Recipient with this Property Disclosure Report ("PDR®") for the Property identified above. Please note that this PDR® ("Report") is a contract subject to the Methods and Limitations (Section 5) set forth herein which should be reviewed carefully.

*If you have any questions or comments regarding this Report,  
please contact FANHD's Customer Service Department at (800) 200-2561.*



# The First American MASTER PROPERTY DISCLOSURE REPORT PDR®

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 COVINA, LOS ANGELES County, CA

**APN:** N/A

**Report Number:** 1776630

**Parties:** The parties for whom this Report was prepared are the Recipient, any owner(s) of the Property on the Report Date (“Owners”), and any owner or legal entity owned by the Owners.

## CONTENTS

This Report includes (i) a **Determination Summary** (following pages) showing the disclosure determinations specific to the Property provided in detail in Sections 1 through 4, inclusive, and (ii) the Methods and Limitations (Section 5) and this Report is not complete if any one of these 5 sections is missing. Please note that the determinations and information provided address the disclosures mandated by California law to be provided for 1-4 family California residential properties when being sold or transferred.

SECTION	TITLE	PURPOSE
1.	Statutory Disclosures	The statutory disclosures applicable to the Property as required by California Civil Code § 1103 (the “Law”).
2.	County Level Natural Hazard Disclosures	County level disclosures.
3.	City Level Natural Hazard Disclosures	City level disclosures
4.	Other Disclosures and Advisories	Additional mandated disclosures specific to the property and important advisories and notices dealing with potential general concerns related to home ownership in California but not specific to the Property.
5.	Methods and Limitations <b>(IMPORTANT)</b>	A summary explanation of the methods used to make the disclosure determinations and limitations on liability.

**THIS IS A PUBLIC RECORD REPORT ONLY:** This Report only provides information identified in this Report. While FANHD has made good faith efforts to report from the Public Records as accurately as possible, the quality, accuracy, and currency of the information contained in these Public Records can vary greatly. For more information regarding a specific disclosure and the related Public Record, please read Sections 1 through 4, inclusive of this Report.

**NOT AN INSPECTION REPORT:** This Report is not the same thing as a physical inspection report nor a full environmental or geological assessment report. FANHD has not physically inspected the Property. This Report only summarizes the information from the specified Public Records.

**LIABILITY PROTECTIONS:** Upon filing of the DRE Application, the Parties involved in the DRE Application are protected against loss caused by any error in this Report as specified in Section 5 below entitled “Methods and Limitations.”

**NOT AN INSURANCE POLICY:** This Report is a binding contract but is not an insurance policy. The price charged for the Report does not cover the costs that would be necessary to provide all of the protections of an insurance policy.

**NOT FOR DISCLOSURES TO THIRD PARTIES:** This Report may not be used to satisfy any disclosure requirements to third parties including, but not limited to, any future transactions of the Property.



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## DETERMINATION SUMMARY

This Report discloses the results of a review of officially adopted maps ("Public Records") containing the information applicable to the Property. For a detailed explanation as to the meaning of each of the disclosures and the reporting standards used to make the determinations, please refer to the Disclosure Explanations in the specific Section as indicated.

### SUMMARY AND INDEX OF DISCLOSURES AND ADVISORIES

*For a complete explanation of the disclosures summarized below, please refer to the sections and pages indicated.*

## SECTION 1 STATUTORY DISCLOSURES

<b>State Level Statutory Zone Disclosures</b>		<u>Determination</u>	
<b>Flood</b>	<b>A SPECIAL FLOOD HAZARD AREA</b>	<b>NOT IN</b>	<b>See Section 1 Page 1</b>
	<b>AN AREA OF POTENTIAL FLOODING</b>	<b>IN</b>	<b>See Section 1 Page 1</b>
<b>Fire</b>	<b>A VERY HIGH FIRE HAZARD SEVERITY ZONE</b>	<b>NOT IN</b>	<b>See Section 1 Page 2</b>
	<b>A WILDLAND FIRE AREA (SRA)</b>	<b>NOT IN</b>	<b>See Section 1 Page 2</b>
<b>Seismic</b>	<b>AN EARTHQUAKE FAULT ZONE</b>	<b>NOT WITHIN</b>	<b>See Section 1 Page 3</b>
	<b>A SEISMIC HAZARD LANDSLIDE ZONE</b>	<b>NOT IN</b>	<b>See Section 1 Page 3</b>
	<b>A SEISMIC HAZARD LIQUEFACTION ZONE</b>	<b>NOT IN</b>	<b>See Section 1 Page 3</b>

\* N/A = The map is not yet released by the State.

## SECTION 2 COUNTY LEVEL DISCLOSURES

<b>County Level Zone Disclosures</b>		
<b>FAULT</b>	<b>NOT WITHIN</b>	<b>See Section 2 Page 1</b>
<b>LANDSLIDE</b>	<b>NOT WITHIN</b>	<b>See Section 2 Page 1</b>
<b>LIQUEFACTION</b>	<b>NOT IN</b>	<b>See Section 2 Page 1</b>
<b>HILLSIDE</b>	<b>NOT IN</b>	<b>See Section 2 Page 1</b>
<b>DAM INUNDATION</b>	<b>IN</b>	<b>See Section 2 Page 1</b>
<b>TSUNAMI</b>	<b>NOT IN</b>	<b>See Section 2 Page 1</b>
<b>FIRE</b>	<b>NOT IN</b>	<b>See Section 2 Page 1</b>
<b>METHANE</b>	<b>NOT IN</b>	<b>See Section 2 Page 1</b>



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**DEBRIS FLOW**

**NOT IN**

**See Section 2 Page 1**

## SECTION 3 CITY LEVEL DISCLOSURES

### City Level Natural Hazard Disclosures

The jurisdiction in which the subject property is located is either in an unincorporated area or does not have officially adopted mapped information available at this time from which a geologic determination can be made.

## SECTION 4 OTHER DISCLOSURES AND ADVISORIES

### Other Zone Disclosures

### Determination

**Mello-Roos, Special Assessment, and Supplemental Tax Disclosures**

**See Section 4**

**Military Ordnance**

**1 MILE FORMER MILITARY ORDNANCE SITE RADIUS**

**NOT WITHIN**

**Commercial/Industrial**

**1 MILE COMMERCIAL OR INDUSTRIAL SITE RADIUS**

**WITHIN**

**Airports**

**AIRPORT INFLUENCE AREA**

**NOT IN**

**AIRPORT NOISE 65 DECIBEL ZONE**

**NOT WITHIN**

**California Energy Commission**

**IN**

**Right to Farm Disclosure**

**1 MILE STATE-DESIGNATED FARMLAND RADIUS**

**MNA**

**Notice of Mining Operations**

**1 MILE REPORTED MINING OPERATION(S) RADIUS**

**NOT IN**

**Gas and Hazardous Liquid Transmission Pipeline Database Advisory**

**See Section 4**



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## **SECTION 1** **EXPLANATION OF STATUTORY DISCLOSURES**

This Section provides a detailed explanation of certain statutory disclosures made in this Report including identifying the applicable Public Record.

**REPORTING STANDARD:** "IN" shall be reported if any portion of the Property is situated within any of the Statutory Hazard Zones as designated in the Public Record. "NOT IN" shall be reported if no portion of the Property is situated within any of the Statutory Hazard Zones. "Map Not Available" shall be reported if the Property is situated in an area which has not yet been evaluated by responsible government agency.

### **SPECIAL FLOOD HAZARD AREAS**

#### **DETERMINATION**

**NOT IN** a Special Flood Hazard Area. The Property is **IN** a FEMA-designated Flood Zone X. If the property is located in or partially in any Zone A or V, in certain circumstances some lenders may be required by federal law to require homeowners to purchase and maintain flood insurance.

**Zones X:** An area of moderate to minimal flood risk.

**DISCUSSION:** Property in a Special Flood Hazard Area (any type of Zone "A" or "V" as designated by the Federal Emergency Management Agency ("FEMA")) is subject to flooding in a "100-year rainstorm." Federally connected lenders are required to have homeowners maintain flood insurance in these zones. A 100-year flood occurs on average once every 100 years, but may not occur in 1,000 years or may occur in successive years. According to FEMA, a home located within a SFHA has a 26% chance of suffering flood damage during the term of a 30-year mortgage. Other types of flooding, such as dam failure, are not considered in developing these zones. In some cases, the insurance requirement may be waived or modified by obtaining a "Letter of Map Revision" ("LOMR") or "Letter of Map Amendment" ("LOMA") from ("FEMA"). This might be possible where flooding is shallow and fill was placed on the site, appropriate flood control measures were taken, or only the lot and no part of the structure is in the zone. Contact FEMA directly for more information. Flood insurance for properties in Zones B, C, X or D is available but is not required. This disclosure is not the same as a flood certification as required by federal law for certain lenders.

**PUBLIC RECORD:** Official Flood Insurance Rate Maps ("FIRM") compiled and issued by the Federal Emergency Management Agency ("FEMA") pursuant to 42 United States Code §4001, et seq.

### **AREA OF POTENTIAL FLOODING**

#### **DETERMINATION**

**IN** an area of potential dam inundation.

**DISCUSSION:** Local governmental agencies, utilities, and owners of certain dams are required to prepare and submit inundation maps for review and approval by the California Office of Emergency Services ("OES"). A property within an Area of Potential Flooding Caused by Dam Failure is subject to potential flooding in the event of a sudden and total dam failure with a full reservoir. Such a failure could result in property damage and/or personal injury. However, dams rarely fail instantaneously and reservoirs are not always filled to capacity. Please note that not all dams (such as federally controlled dams) located within the state have been included within these dam inundation zones. Also these maps do not identify areas of potential flooding resulting from storms or other causes.



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**PUBLIC RECORD:** Official dam inundation maps or digital data thereof made publicly available by The State of California Office of Emergency Services ("OES") pursuant to California Government Code §8589.5.

## **VERY HIGH FIRE HAZARD SEVERITY ZONE (VHFHS Zones)**

### **DETERMINATION**

**NOT IN a very high fire hazard severity zone.**

**DISCUSSION:** VHFHSZs can be defined by the California Department of Forestry and Fire Protection ("Calfire") as well as by local fire authorities within "Local Responsibility Areas" where fire suppression is the responsibility of a local fire department. Properties located within VHFHS Zones may have a higher risk for fire damage and, therefore, may be subject to (i) additional construction requirements such as a "Class A" roof for new construction or replacement of existing roofs; and (ii) additional maintenance responsibilities such as adequate vegetation clearance near the structure, spark screens on chimneys and stovepipes, leaf removal from roofs, and other basic fire-safety practices. Contact the local fire department for a complete list of requirements and exceptions.

**PUBLIC RECORD:** Maps issued by Calfire pursuant to California Government Code § 51178 recommending VHFHSZs to be adopted by the local jurisdiction within its Local Responsibility Area, or VHFHSZs adopted by the local jurisdiction within the statutory 120-day period defined in California Government Code § 51179.

## **WILDLAND FIRE AREA - STATE RESPONSIBILITY AREA**

### **DETERMINATION**

**Not in a wildland-state responsibility area.**

**DISCUSSION:** The State Board of Forestry classifies all lands within the State of California based on various factors such as ground cover, beneficial use of water from watersheds, probable damage from erosion, and fire risks. Fire prevention and suppression in all areas which are not within a Wildland - State Responsibility Area ("WSRA") is primarily the responsibility of the local or federal agencies, as applicable.

For property located within a WSRA, please note that (1) there may be substantial forest fire risks and hazards; (2) except for property located within a county which has assumed responsibility for prevention and suppression of all fires, it is NOT the state's responsibility to provide fire protection services to any building or structure located within a WSRA unless the Department has entered into a cooperative agreement with a local agency; and (3) the property owner may be subject to (i) additional construction requirements such as a "Class A" roof for new construction or replacement of existing roofs; and (ii) additional maintenance responsibilities such as adequate vegetation clearance near the structure, spark screens on chimneys and stovepipes, leaf removal from roofs, and other basic fire-safety practices

The existence of local agreements for fire service is not available in the Public Record and, therefore, is not included in this disclosure. For very isolated properties with no local fire services there may be significant fire risk or only seasonal fire services. If the Property is located within a WSRA, please contact the local fire department for more detailed information.

**PUBLIC RECORD:** Official maps or digital data thereof issued by the California Department of Forestry and Fire Protection (Calfire) pursuant to California Public Resources Code § 4125.



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## SRA Fire Prevention Benefit Fee Advisory

On January 23, 2012, the State Board of Forestry and Fire Protection ("Board") adopted an emergency regulation that implements a Fire Prevention Benefit Fee ("Benefit Fee") imposed annually on property owners in wildland areas where the state has responsibility for providing fire protection. According to the adopted regulation, the Benefit Fee is one hundred-fifty dollars (\$150.00) per habitable structure in the State Responsibility Area ("SRA"), including single-family homes, multi-dwelling structures, mobile and manufactured homes, and condominiums. The Board regulation is pursuant to Chapter 1.5 (commencing with Section 4210) to Part 2 of Division 4 of the Public Resources Code (also known as Assembly Bill X1 29). The regulation allows a fee reduction of thirty-five dollars (\$35.00) per habitable structure located in the SRA and within the boundaries of a local agency that provides fire protection services. For more information, please refer to "Part 5. State Responsibility Area Fire Prevention Fee" in the FANHD Property Tax Report.

## EARTHQUAKE FAULT ZONE

### DETERMINATION

**NOT IN** an earthquake fault zone designated pursuant to the Alquist-Priolo Act.

**DISCUSSION:** Earthquake Fault Zones are delineated and adopted by California as part of the Alquist-Priolo Earthquake Fault Zone Act of 1972. Property within an Earthquake Fault Zone ("EF Zone") does not necessarily have a fault trace existing on the site. EF Zones are areas or bands delineated on both sides of known active earthquake faults. EF Zones vary in width but average one-quarter (1/4) mile in width with the "typical" zone boundaries set back approximately 660 feet on either side of the fault trace. The potential for "fault rupture" damage (ground cracking along the fault trace) is relatively high only if a structure is located directly on a fault trace. If a structure is not on a fault trace, shaking will be the primary effect of an earthquake. During a major earthquake, shaking will be strong in the vicinity of the fault and may be strong at some distance from the fault depending on soil and bedrock conditions. It is generally accepted that properly constructed wood-frame houses are resistant to shaking damage.

Property that lies partially or entirely within a designated EF Zone may be subject to requirements for site-specific geologic studies and mitigation before any new or additional construction may take place. If an active fault is found on a property, structures (including new and replacement structures) generally will not be allowed to be constructed within 50 feet of the fault trace.

**PUBLIC RECORD:** Official earthquake fault zone or special study zone maps or digital data thereof approved by the State Geologist and issued by the California Department of Conservation, California Geological Survey pursuant to California Public Resources Code §2622.

## SEISMIC HAZARD ZONE

### DETERMINATION

**NOT IN** an area of potential liquefaction designated pursuant to the Seismic Hazard Mapping Act. **NOT IN** an area of earthquake-induced land sliding designated pursuant to the Seismic Hazard Mapping Act.

**DISCUSSION:** Official Seismic Hazard Zone ("SH Zones") maps currently available from the California Geological Survey pursuant to the Seismic Hazards Mapping Act (California Public Resources Code §2690 *et seq.*) delineate Areas of Potential Liquefaction and Areas of Earthquake-Induced Landsliding. A property that lies partially or entirely within a designated SH Zone may be subject to requirements for site-specific geologic studies and mitigation before any new or additional construction may take place.



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**Areas of Potential Liquefaction** are areas where there is a potential for, or an historic occurrence of liquefaction. Liquefaction is a soil phenomenon that can occur when loose, water saturated granular sediment within 40 feet of the ground surface, are shaken in a significant earthquake. The soil temporarily becomes liquid-like and structures may settle unevenly. The Public Record is intended to identify areas with a relatively high potential for liquefaction but not to predict the amount or direction of liquefaction-related ground displacement, nor the amount of damage caused by liquefaction. The many factors than control ground failure resulting from liquefaction must be evaluated on a site specific basis.

**Areas of Earthquake-Induced Landslide** are areas where the potential for earthquake-induced landslides is relatively high. Areas most susceptible to these landslides are steep slopes in poorly cemented or highly fractured rocks, areas underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits. The CGS cautions these maps do not capture *all* potential earthquake-induced landslide hazards and that earthquake-induced ground failures are not addressed by these maps. Furthermore, no effort has been made to map potential run-out areas of triggered landslides. It is possible that such run-out areas may extend beyond the zone boundaries.

An earthquake capable of causing liquefaction or triggering a landslide may not uniformly affect all areas within a SH Zone.

**PUBLIC RECORD:** Official seismic hazard maps or digital data thereof approved by the State Geologist and issued by the California Department of Conservation, California Geological Survey pursuant to California Public Resources Code §2696.



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## **SECTION 2** **EXPLANATION OF COUNTY LEVEL DISCLOSURES**

This Section provides a detailed explanation of the County level disclosures made in this Report including identifying the applicable Public Record and the Reporting Standard used to make each determination.

The following natural hazard disclosures are provided to give local-level Seismic Safety information for the subject property.

**NOTE:** California law allows cities and counties to establish policies and criteria stricter than those set by the State respecting, but not limited to, the permitting and development of properties found to be IN or affected by the following and other natural hazards. This information may be used by the local jurisdiction relative to making decisions regarding new development or additional construction. The agencies and jurisdictions that develop the official maps do not necessarily define or delineate hazards in the same way. A site can be *in* a hazard zone from one source and *not in* a hazard zone from another source.

### **LOS ANGELES County Geologic and Seismic Zone Determination**

This Property is:

- in a mapped dam or debris basin inundation area
- not in a mapped area of county-designated liquefaction susceptibility
- not in a mapped area of known shallow methane accumulation
- not in a mapped fault zone or within one-eighth of one mile of a mapped fault trace
- not in a mapped fire zone 4 or additional areas of high fire hazard
- not in a mapped general area within or adjacent to the los angeles basin impacted by historic mud and debris flooding
- not in a mapped hillside area
- not in a mapped tsunami inundation area
- not within for county landslide

**NOTE:** If the site is in a locally mapped hazard zone or if information of concern exists in another source, the property may require a geologic study prior to any new or additional construction. The disclosures above are material facts and should prudently be disclosed to buyers in addition to the Statutory Natural Hazard Disclosures. Additional sources of information which are not officially adopted, may be available at the local jurisdiction that are not reported here.

### **LOS ANGELES COUNTY GEOLOGIC ZONES DISCUSSION**

**PUBLIC RECORD(S) SEARCHED:** The following Public Records, created by the County Department of Regional Planning and Leighton & Associates and incorporated into the Safety Element of the County General Plan as adopted by the County Board of Supervisors in 1990, are utilized for those county-level disclosures below: "Fault Rupture Hazards and Historic Seismicity," "Landslide Inventory," "Liquefaction Susceptibility," "Engineering Geologic Materials," "Flood and Inundation Hazards," and "Wildland and Urban Fire Hazards."

#### **FAULT**

- **Active Faults:** Several faults and fault segments not included as part of the Earthquake Fault Zone Act are considered active by the County. Zones from 1000 feet to 1.2 miles wide have been defined by the County around these faults. Properties in these zones are at some risk for fault rupture (surface cracking along the fault).
- **Potentially Active Faults:** Faults active in the last 750,000 years but with no historical activity (past 11,000 years) are considered "potentially active" by the County. Zones from 1000 feet to 1.2 miles wide have been defined by the County around these faults. Properties within a Potentially Active Fault Zone may be at some risk for fault rupture, but the risk is probably lower than that for active faults.



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- **Conditionally Active Faults:** Faults active between 750,000 and 2,000,000 years ago are considered "conditionally active" by the County. Properties located directly on one of these faults are at an undetermined but relatively small risk of rupture.

**Reporting Standards:** If any portion of the Property is within either a fault zone or one-eighth of one mile (660 feet) of a fault not contained within such a fault zone as delineated in the Public Record, "WITHIN" shall be reported.

## LANDSLIDE INVENTORY

- **Slope Stability Zones** The County Safety Element inventories landslides and slope stability hazards. The minimum size of a slide is five acres, but clusters of slides may be shown as a single landslide. Bedrock landslides are categorized as definite and probable. They are also distinguished as 5 to 100 acres in size and greater than 100 acres in size. A delineated landslide is not a definitive statement of a site's stability, either now or in the future. Many slides are mitigated during development. For detailed stability information, a geotechnical consultant should be retained.
- **Area Impacted by Storm-Induced Landsliding:** Areas that experienced storm-induced shallow landsliding during the particularly wet years of 1969, 1978, and 1980 have been delineated on the maps.
- **Area of Shallow Surficial Landslides:** These areas include regions in the Santa Monica and San Gabriel Mountains and the Puente Hills where abundant shallow landslides may occur.

**Reporting Standards:** Mapped "Definite" and "Probable" Bedrock Landslides 5-100 acres in size, as well as mapped Storm-Induced Landslide Areas, are mapped uniformly and do not effectively take into account either size or direction; therefore, if any portion of the Property is within a Landslide or Slope Stability Zone as delineated in the Public Record, or is within one-quarter of one mile (1,320 feet) of either, "IN" shall be reported.

## LIQUEFACTION

Liquefaction is a liquid-like soil condition which may occur during strong earthquake shaking if the groundwater is shallow and the subsurface soils are loose and cohesionless (such as sands).

- **Liquefiable Areas (Zone L):** These are areas where groundwater is less than 30 feet deep. While presence within this zone does not necessarily mean that liquefaction will occur during earthquake shaking, this zone has a higher potential for liquefaction.
- **Potentially Liquefiable Areas (Zone PL):** Flat-lying valley areas of relatively low liquefaction potential.
- **Low Liquefaction Susceptibility (Zone LL):** Flat to gently sloping areas of relatively low liquefaction potential.
- **Very Low Liquefaction Susceptibility (Zone VL):** Areas not normally susceptible to liquefaction.

**Reporting Standards:** This Report discloses if any portion of the Property is in either (1) a Liquefiable Area or a Potentially Liquefiable Area OR (2) a Low Liquefaction Susceptibility Zone or a Very Low Liquefaction Susceptibility Zone as delineated in the Public Record. If a Property is situated within a Liquefiable or Potential Liquefiable Area AND a Low of Very Low Liquefaction Susceptibility Zone, only the former will be reported.



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## HILLSIDE AREAS AND DEBRIS FLOW AREAS

- **"Hillside Areas"** are subject to slope instability, particularly if slope gradients exceed 25 percent. If a Property is in a designated Hillside Area it does not necessarily mean that landslides exist on the property or that landsliding is imminent or probable.
- **"Debris Flow Areas"** are those identified in the Public Record impacted by historic mud and debris flooding in the years 1969, 1978, and 1980; however, these are restricted to areas within and adjacent to the Los Angeles Basin only. Furthermore, the public record advises that historical damage does not predict, nor preclude, impact of these or other hillside areas in future storms.

**Reporting Standards:** If any portion of the Property is within a Hillside Area or a Debris Flow as delineated in the Public Record, "IN" shall be reported, respectively.

## DAM INUNDATION

- **Dam inundation areas** may be subject to flooding in the event of dam failure. They are defined assuming an instantaneous dam failure with a full reservoir. However, dams rarely fail instantaneously and reservoirs are not always filled to capacity.

**Reporting Standards:** If any portion of the Property is within a Dam or Debris Basin Inundation Area as delineated in the Public Record, "IN" shall be reported.

## TSUNAMI INUNDATION

- **Tsunami inundation areas** have been designated as a zone of moderate risk for tsunami (seismic sea wave or "tidal wave") run-up. The tsunami zone may be inundated by waves which recur on average of once every 500 years.

**Reporting Standards:** If any portion of the Property is within a Tsunami Inundation Area as delineated in the Public Record, "IN" shall be reported.

## FIRE HAZARDS

- **Fire Zone 4** encompasses most of the areas having a potential for woodland and brush fires. These areas require strategies to enforce stringent fire enforcement measures including fire-resistant construction materials, brush clearance, fire breaks, and fuel load management requirements.
- **Areas of High Fire Hazard** represents areas outside Fire Zone 4 but having features similar to those included in Fire Zone 4. Within wildland areas, fires are most likely to start in areas of man's activity such as roads, campgrounds, cabins, wood cutting areas, power lines, and the urban-wildland interface.

**Reporting Standards:** If any portion of the Property is within either a Fire Zone 4 or Area of High Fire Hazard as delineated in the Public Record, "IN" shall be reported.

## AREAS OF KNOWN SHALLOW METHANE ACCUMULATION

Several areas in the County are known to be the sites of shallow methane gas accumulations. The absence of methane gas areas on the map is not a guarantee of the absence of gas in the soil. Most of the shallow methane found to date seems to be spatially associated with shallow oil and gas fields.

**Reporting Standards:** If any portion of the Property is within an Area of Known Shallow Methane Accumulate as delineated in the Public Record, "IN" shall be reported.



# The First American MASTER PROPERTY DISCLOSURE REPORT PDR®

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COVINA, LOS ANGELES County, CA

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## **SECTION 3 EXPLANATION OF CITY LEVEL DISCLOSURES**

**The jurisdiction in which the Property is located in is either in an unincorporated area or does not have officially adopted mapped information available at this time from which a geologic determination can be made.**

This Section provides a detailed explanation of the City level disclosures made in this Report including identifying the applicable Public Record and the Reporting Standard used to make each determination.

The following natural hazard disclosures are provided to give local-level seismic safety information for the subject property.

**NOTE:** California law allows cities and counties to establish policies and criteria stricter than those set by the State respecting, but not limited to, the permitting and development of properties found to be IN or affected by the following and other natural hazards. This information may be used by the local jurisdiction relative to making decisions regarding new development or additional construction. The agencies and jurisdictions which develop the official maps do not necessarily define or delineate hazards in the same way. A site can be *in* a hazard zone from one source and *not in* a hazard zone from another source.

### **COVINA Geologic and Seismic Zone Determination**

#### **CITY-LEVEL GEOLOGIC AND SEISMIC ZONES DISCUSSION**

This disclosure report reviews the officially adopted geologic hazard maps in the Safety Element that each incorporated city in California is required to include in its General Plan. The city the subject property is located in has either not officially adopted hazard zonation maps in its General Plan at an appropriate scale to delineate where hazards may exist on a single parcel basis or will not make such maps available outside city offices. However, potential natural hazards may exist and be delineated on other sources used by the city in its Planning, Engineering, or Building Departments. Such potential sources are not reviewed in this report.

All parties should be aware that California is "earthquake country." Faults that may exist in this City or in neighboring regions could cause earthquake shaking or other fault related phenomena at the property. Other geologic hazards such as, but not limited to liquefaction (a type of soil settling that can occur when loose, water-saturated sediments are shaken significantly in an earthquake) may occur in certain valley floor areas and landslides are a possibility in any hillside area.

**NOTE:** County and city-level information sources are developed independently of each other and do not necessarily define or delineate hazards in the same way. A site can be in a geologic hazard zone according to the city and not in zone according to the county and vice versa. Cities and counties may use other information in addition to their General Plan sources to determine if hazards exist at a site or which sites may require geologic studies prior to new or additional construction. Such information could be a material fact to be disclosed in addition to General Plan information.

Additional natural hazards may exist and be delineated on other sources used by the City in its Planning, Engineering, or Building Departments. Such potential sources are not reviewed in this report. To investigate other sources of natural hazard information that may be available and used at the city level, contact the city Engineering, Planning, or Building departments.



*First American  
Natural Hazard Disclosures*

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## **SECTION 4** **OTHER DISCLOSURES AND ADVISORIES**

This Section provides a detailed explanation of the Other Disclosures and Advisories made in this Report including identifying the applicable Public Record and the Reporting Standard used to make each determination.

### **MELLO-ROOS and SPECIAL ASSESSMENT DETERMINATION**

*NO DETERMINATIONS MADE IN THIS REPORT*

#### **Discussion**

California laws allow "special taxes" and "special assessments" to be levied against a parcel of real property in addition to ad valorem property taxes in order to help fund benefits such as streets, curbs, gutters and underground sewer and water infrastructure. The Mello-Roos Community Facilities Act ("Mello-Roos") and the Improvement Bond Act of 1915 ("1915 Bond Act") are two of these assessment laws, and assessments made under these laws carry a disclosure obligation as of January 1, 2002 (California Civil Code § 1102.6b).

When either of these assessment laws is activated, an assessment lien is placed against each affected parcel of property and a special assessment appears on the property tax bill until the amortized debt is fully paid. An important feature of "Mello-Roos" and "1915 Bond Act" assessment districts is that the lien has a priority status. If the assessment tax is not paid on time, the home can be foreclosed upon and sold through an accelerated foreclosure process. Even though a "special" or "supplemental assessment" may appear on the property tax bill, it is not necessarily a "Mello-Roos" or "1915 Bond Act" bond assessment subject to a property lien or a specific disclosure requirement.

**Note: A comprehensive property tax disclosure report can be ordered along with this Report.  
Please contact FANHD for additional information**



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## **FORMER MILITARY ORDNANCE SITE DISCLOSURE**

### **DETERMINATION**

The Property is **NOT WITHIN** one mile of a Formerly Used Defense (FUD) site containing military ordnance.

### **DISCUSSION**

California Civil Code §1102.15 requires the seller of residential real property who has actual knowledge of any "Former Ordnance Locations" (former state or federal ordnance locations which have been identified by an agency or instrumentality of the federal or state government as an area once used for military training purposes which may contain potentially explosive munitions) within the "neighborhood area" (defined as within one (1) mile of the residential real property) to give written notice of that knowledge to buyer as soon as practicable before transfer of title.

Besides former military sites which may have contained ordnance, other Sites may also include real properties containing industrial waste (such as fuels), ordnance or other warfare materiel, unsafe structures to be demolished, or other debris. California Civil Code Section 1102 only requires disclosure of those sites containing unexploded ordnance. "Military ordnance" is any kind of munitions, explosive device/material or chemical agent used in military weapons. Unexploded ordnance are munitions that did not detonate. Only those Sites that the USACE has identified to contain Military Ordnance or have mitigation projects planned for them are disclosed in this Report.

NOTE: Active military bases are NOT eligible FUD Sites; however, portions of currently active facilities that were previously operated or owned by DOD may be reported. In some rare cases the Public Record may not effectively differentiate those divested Sites and may as a result include the currently operated facility within the study area for that Site.

**PUBLIC RECORD:** Data contained in Inventory Project Reports, Archives Search Reports, and related materials produced for, and made publicly available in conjunction with, the Defense Environmental Restoration Program for Formerly Used Defense Sites by the U.S. Army Corps of Engineers. Sites for which no map has been made publicly available shall not be disclosed.

**REPORTING STANDARD:** "IN" shall be reported if one or more facility identified in the Public Record is situated within a one (1) mile radius of the Property. The name of that facility shall also be reported. "NOT IN" shall be reported if no facility identified in the Public Record is situated within a one (1) mile radius of the Property.



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## **COMMERCIAL/INDUSTRIAL ZONE DISCLOSURE**

### **DETERMINATION**

Based on publicly-available parcel zoning records only:

**The Property IS within one-mile of a property that is zoned for industrial or commercial use.**

**DISCUSSION:** Pursuant to California Civil Code § 1102.17, the seller of residential real property who has actual knowledge that his/her property is affected by or zoned to allow commercial or industrial use (as defined in California Code of Civil Procedure § 731a) must give written notice of that knowledge to the buyer as soon as practicable before transfer of title. CCP 731a defines industrial use as areas in which a city and/or county "...has established zones or districts under authority of law wherein certain manufacturing or commercial or airport uses are expressly permitted...."

The "Commercial/Industrial Zoning Disclosure" made in this Report DOES NOT purport to determine whether the Property is or is not "**affected by**" a commercial or industrial zone. As stated above, that determination must be based upon ACTUAL KNOWLEDGE of the seller of the Property.

The disclosure provided in this Report only identifies if any parcels of property zoned for commercial or industrial use exists within a one (1) mile of the Property. It is very common that the general vicinity around a home will have one or more properties that are zoned for commercial or industrial use such as restaurants, gasoline stations, convenience stores, golf courses, country clubs, etc.

**PUBLIC RECORD:** Based on publicly-available hardcopy and/or digital zoning and land use records for California cities and counties.

**REPORTING STANDARD:** "IN" shall be reported if one or more property identified in the Public Record as "commercial," "industrial," or "mixed use" is situated within a one (1) mile radius of the Property. Please note that an airports facility that may be classified as public use facility in the Public Record will be reported as "commercial/industrial" in this disclosure. "NOT IN" shall be reported if no property classified by Public Record as "commercial," "industrial," or "mixed use" is situated within a one (1) mile radius of the Property.



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## AIRPORT INFLUENCE AREA DISCLOSURE

### DETERMINATION

Based on certain mapped Airport Influence Areas determined by a County Airport Land Use Commission, the following determination can be made:

**The Property is NOT IN an officially-designated Airport Influence Area (AIA) and is NOT WITHIN two (2) statute miles of an airport for which no AIA has been officially designated.**

**DISCUSSION:** **Certain airports are not disclosed in this Report.** FANHD has made a good faith effort to identify the airports covered under California Civil Code § 1102.6a(d) and California Business and Professions Code 11010 *et seq.* Most facilities for which an Airport Influence Area (also referred to as an “Airport Referral Area”) has been designated are included in the “California Aeronautical Facilities, Airports & Heliports, (FAA) 5010 Airport Master Records” list maintained by the California Department of Transportation’s Division of Aeronautics. Not disclosed in this Report are public use airports that are not in the Master Records List- airports that are physically located outside California, heliports and seaplane bases that do not have regularly scheduled commercial service, private airports, and military air facilities unless included in materials provided by the ALUC or other designated government body.

**NOTE:** Proximity to an airport does not necessarily mean that a property is exposed to significant aviation noise levels. Alternatively, there may be properties exposed to aviation noise that are more than two (2) miles from an airport. Factors that affect the level of aviation noise can include weather, aircraft type and size, frequency of aircraft operations, airport layout, flight patterns or nighttime operations. Aviation noise levels can vary seasonally or change if airport usage changes.

**PUBLIC RECORD:** Based on officially adopted land use maps and/or digital data made publicly available by the governing ALUC or other designated government body. If the ALUC or other designated government body has not made publicly available a current officially adopted airport influence area map, then California law states that “a written disclosure of an airport within two (2) statute miles shall be deemed to satisfy any city or county requirements for the disclosure of airports in connection with transfers of real property.”

**REPORTING STANDARD:** “IN” shall be reported along with the facility name(s) and the “Notice of Airport in Vicinity” if any portion of the Property is situated within either (a) an Airport Influence Area as designated on officially adopted maps or digital data or (b) a two mile radius of a qualifying facility for which an official Airport Influence Area map or digital data has not been made publicly available by the ALUC or other designated governing body. “NOT IN” shall be reported if no portion of the Property is within either such area.



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## AIRPORT NOISE DISCLOSURE

### DETERMINATION

Based on certain 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour maps produced under the Federal Aviation Administration's *Airport Noise Compatibility Planning Program* Part 150, the following determination has been made:

**The Property IS NOT within a delineated 65 dB CNEL or greater aviation noise zone.**

**DISCUSSION:** California Civil Code § 1102.17 requires that the seller(s) of residential real property who has (have) actual knowledge that his/her property is affected by airport use must give written notice of that knowledge as soon as practicable before the transfer of title.

**Not all airports have produced noise exposure maps. A property may be near or even at some distance from an airport and not be within a delineated noise exposure area, but still experience aviation noise. Unless 65dB CNEL contour maps are published, helipads and military sites are not included in this section of the Report.**

The *Airport Noise Compatibility Planning Program* is voluntary and not all airports have elected to participate. Not all property in the vicinity of an airport is exposed to 65dB CNEL or greater average aviation noise levels. Conversely a property may be at some distance from an airport and still experience aviation noise. Purchasers should also be aware that aviation noise levels can vary seasonally or change if airport usage changes after a map is published or after FANHD has received the annual updated maps within the schedule set by FANHD. FANHD uses the most seasonally conservative noise exposures provided.

Federal funding may be available to help airports implement noise reduction programs. Such programs vary and may include purchasing properties, rezoning, and insulating homes for sound within 65dB areas delineated on CNEL maps. Airport owners have also cooperated by imposing airport use restrictions that include curfews, modifying flight paths, and aircraft limitations.

**PUBLIC RECORD:** Certain 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour maps produced under the Federal Aviation Administration's *Airport Noise Compatibility Planning Program* Part 150.

**REPORTING STANDARD:** "IN" shall be reported if any portion of the Property is situated within a 65 decibel Community Noise Equivalent Level contour identified in the Public Record. "NOT IN" shall be reported if no portion of the Property is situated within a 65 decibel Community Noise Equivalent Level contour identified in the Public Record.



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## **CALIFORNIA ENERGY COMMISSION DUCT SEALING & TESTING REQUIREMENT**

**DISCUSSION:** According to the California Energy Commission (“CEC”) most California homes have improperly sealed central air conditioning and heating system ducts such that approximately 30 percent of the conditioned air actually leaks outside the home.

Effective October 1, 2005, in order to combat this waste of energy and money, the CEC set forth new duct sealing and testing requirements in Title 24 of the Building Energy Efficiency Standards. Title 24 requires that, in specific climate zones as designated by the CEC, **when a central air conditioner or furnace is installed or replaced**, homeowners must have ducts tested for leaks. Ducts found to leak more than 15 percent or more must be repaired. Once a contractor tests and fixes these ducts, you must have an approved third-party verifier determine that the ducts have been properly sealed. The CEC cautions homeowners that a contractor who fails to obtain a required building permit and fails to test and repair your ducts “is violating the law and exposing you to additional costs and liability.” If you do not obtain a permit, you may be required to bring your home into compliance with code requirements for that work and may incur additional penalties and fines that have to be paid prior to selling your home. Remember that you have a duty to disclose whether you obtained required permits for work performed to prospective buyers and appraisers.

Local governments may mandate more stringent requirements; however, please be advised that duct sealing and associated testing is generally not required:

- if homes are located in specific coastal climates;
- when systems have less than 40 feet of ductwork in unconditioned spaces such as attics, garages, crawlspaces, basements, or outside the building; or
- when ducts are constructed, insulated, or sealed with asbestos.

Please note there are specific alternatives that allow high efficiency equipment and added duct insulation to be installed instead of fixing duct leaks. Please also be advised that there are separate regulations which govern duct insulation levels required by climate zone and HVAC system.

For more information on these requirements, please contact the California Energy Commission or visit the official CEC “2005 HVAC Change-Out Information” portal at <http://www.energy.ca.gov/title24/changeout/>

**PUBLIC RECORD:** Vector digital rendition of the official “California Building Climate Zone Map” made publicly available by the California Energy Commission (“CEC”).

**REPORTING STANDARD:** “IN” shall be reported if the Property is situated within climate zone 2 or any climate zone 9 through 16 as designated in the Public Record. These are areas wherein duct sealing is “prescriptively required when an air conditioner or furnace is replaced and when new ducts are added or ducts are altered in an existing home.” “NOT IN” shall be reported if the Property is situated in climate zone 1 or any climate zones 3 through 8 as designated in the Public Record.



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## **RIGHT TO FARM DISCLOSURE**

### **DETERMINATION**

The California Department of Conservation, Division of Land Resource Protection, has not designated important farmland areas for the county (or portion thereof) in which the Property is located. Therefore, no determination is provided here.

**DISCUSSION:** California has a "Right to Farm Act" (Civil Code Section 3482.5) to protect farming operations. When agricultural land within the State's agricultural areas is bought and sold, the purchasers are often not made aware of the fact that there are right-to-farm laws. This has led to confusion and a misunderstanding of the actual uses of the land or uses of the surrounding agricultural lands.

In 2008 the State of California enacted Assembly Bill 2881 to limit the exposure of farmers to nuisance lawsuits by homeowners in neighboring developments. The mechanism of this bill is a formal notification of the buyer, through a "Notice of Right to Farm" in an expert disclosure report, that advises the buyer if the subject property is within one mile of farmland as defined in the bill.

**If the seller has actual knowledge of an agricultural operation in the vicinity of the subject property that is not disclosed in this report, and that is material to the transaction, the seller should disclose this actual knowledge in writing to the buyer.**

**PUBLIC RECORD:** Based on the most current available version of the "Important Farmland Map" issued by the California Department of Conservation, Division of Land Resource Protection, utilizing solely the county-level GIS map data, if any, available on the Division's Farmland Mapping and Monitoring Program website, pursuant to Section 11010 of the Business and Professions Code, and Section 1103.4 of the California Civil Code.

**REPORTING STANDARD:** "IN" shall be reported and the "Notice of Right to Farm" provided if any portion of the Property is situated within, or within one mile of, a parcel of real property designated as "Prime Farmland," "Farmland of Statewide Importance," "Unique Farmland," "Farmland of Local Importance," or "Grazing Land" in the public record. "NOT IN" shall be reported if no portion of the Property is within that area.

Some counties, or parts thereof, are not included in the Public Record because they have not been mapped for farmland parcels under this State program. Typically, this is because the county area is public land and not planned for incorporation, or, in the case of San Francisco, the county is entirely incorporated. In those instances, we report "Map Not Available" above, or "MNA" in the Summary of Disclosures and Advisories at the beginning of this report.



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## **NOTICE OF MINING OPERATIONS DISCLOSURE**

### **DETERMINATION**

The Property is **NOT IN** a one mile radius of a reported mining operation(s).

If the Property has been determined to be located within one (1) mile of a reported mining operation(s), the following notice is provided as mandated by California law:

### **NOTICE OF MINING OPERATIONS**

This property is located within one mile of a mine operation for which the mine owner or operator has reported mine location data to the Department of Conservation pursuant to Section 2207 of the Public Resources Code. Accordingly, the property may be subject to inconveniences resulting from mining operations. You may wish to consider the impacts of these practices before you complete your transaction.

**DISCUSSION:** Historically mining operations have been located in remote areas. However, increasing urbanization has resulted in some residential projects being developed near existing mining operations.

California Public Resources Code §2207 requires owners and operators of mining operations to provide annually specific information to the California Department of Conservation ("DOC"), including but not limited to, (i) ownership and contact information, and (ii) the latitude, longitude, and approximate boundaries of the mining operation marked on a specific United States Geological Survey map. The Office of Mining Reclamation ("OMR") is a division of the DOC. Using the mandatory data specified above, OMR provides map coordinate data that can be used by GIS systems to create points representing mine locations ("OMR Maps"). For more information please visit OMR's Mines OnLine Map Viewer (<http://maps.conservation.ca.gov/mol/index.html>).

Effective January 1, 2012, California Civil Code §1103.4 requires the seller of residential property to disclose to a buyer if the residential property is located with one (1) mile of mining operations as specified on OMR Maps.

### **Special Notes:**

1. This statutory disclosure does **not** rely on the OMR's "AB 3098 List," a list of mines regulated under the Surface Mining and Reclamation Act of 1975 ("SMARA") that meet provisions set forth under California Public Resources Code §2717(b). The AB 3098 List does not include map coordinate data as required under California Public Resources Code §2207 and may not include all mining operations subject to the "Notice of Mining Operations" disclosure.
2. This "Notice of Mining Operations" disclosure is not satisfied by disclosing abandoned mines. An abandoned mine is NOT an operating mine. California Civil Code §1103.4 is satisfied only by disclosing based on OMR Maps.

**PUBLIC RECORD:** Mining operations as provided on OMR Maps made publicly available by DOC pursuant to California law.

**REPORTING STANDARDS:** "IN" is reported if any portion of the Property is located within a one (1) mile radius of one or more mining operation(s) identified in the Public Record for which map coordinate data is provided. If "IN", the name of the mining operation(s) as it appears in the Public Record is also reported. "NOT IN" is reported if no portion of the Property is located within a one (1) mile radius of a mining operation specified on OMR Maps.



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## GAS AND HAZARDOUS LIQUID TRANSMISSION PIPELINE DATABASE DISCLOSURE REQUIREMENT

**DISCUSSION:** Following a number of pipeline disasters in the U.S., such as the 2010 San Bruno explosion in Northern California, there is an increased awareness of the potential dangers associated with underground transmission pipelines. As a result, the California Legislature unanimously passed Assembly Bill 1511 (Bradford), signed by Governor Jerry Brown on July 13, 2012. This law, effective January 1, 2013, is chaptered as California Civil Code Section 2079.10.5 and mandates the disclosure of the following notice to homebuyers:

### NOTICE REGARDING GAS AND HAZARDOUS LIQUID TRANSMISSION PIPELINES

This notice is being provided simply to inform you that information about the general location of gas and hazardous liquid transmission pipelines is available to the public via the National Pipeline Mapping System (NPMS) Internet Web site maintained by the United States Department of Transportation at <http://www.npms.phmsa.dot.gov/>. To seek further information about possible transmission pipelines near the property, you may contact your local gas utility or other pipeline operators in the area. Contact information for pipeline operators is searchable by ZIP Code and county on the NPMS Internet Web site. (California Civil Code Section 2079.10.5(a))

Civil Code Section 2079.10.5(c) adds, *“Nothing in this section shall alter any existing duty under any other statute or decisional law imposed upon the seller or broker, including, but not limited to, the duties of a seller or broker under this article, or the duties of a seller or broker under Article 1.5 (commencing with Section 1102) of Chapter 2 of Title 4 of Part 4 of Division 2.”*

Such “existing duties” include the disclosure of actual knowledge about a potential hazard, such as may be created by the delivery of a letter from the local utility company informing the seller that a gas transmission pipeline exists within 2,000 feet of the Property.

**Beginning on the law’s January 1, 2013, effective date,** except where such “existing duties” apply, “Upon delivery of the notice to the transferee of the real property, the seller or broker is not required to provide information in addition to that contained in the notice regarding gas and hazardous liquid transmission pipelines in subdivision (a). The information in the notice shall be deemed to be adequate to inform the transferee about the existence of a statewide database of the locations of gas and hazardous liquid transmission pipelines and information from the database regarding those locations.” (California Civil Code Section 2079.10.5(b))

The disclosure of underground transmission pipelines helps the parties in a real estate transaction make an informed decision and is in the best interest of the public. Buyer should be aware that, according to the NPMS Internet Web site, gas and/or hazardous liquid transmission pipelines are known to exist in 49 of California’s 58 counties, the exceptions being in rural mountainous parts of the state. Every home that utilizes natural gas is connected to a gas “distribution” pipeline, which is generally of smaller size and lower pressure than a transmission pipeline.

**For More Information:** For a parcel-specific disclosure of gas and hazardous liquid transmission pipelines within 2,000 feet of the Property as depicted on the NPMS website, please obtain the FANHD Residential EnviroCheck Report. To investigate whether any pipeline easement (right-of-way) exists on the Property, buyer should review the Preliminary Title Report. **Buyer should consult an attorney for interpretation of any law. This notice is for information purposes only and should not be construed as legal advice.**



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## TSUNAMI MAP ADVISORY

**DISCUSSION:** The California Emergency Management Agency (CalEMA), the University of Southern California Tsunami Research Center (USC), and the California Geological Survey (CGS) have prepared maps that depict areas of maximum tsunami inundation for all populated areas at risk to tsunamis in California (20 coastal counties). The maps were publicly released in December 2009 with the stated purpose that the maps are to assist cities and counties in identifying their tsunami hazard and developing their coastal evacuation routes and emergency response plans only.

These maps specifically contain the following disclaimer:

**Map Disclaimer:** This tsunami inundation map was prepared to assist cities and counties in identifying their tsunami hazard. It is intended for local jurisdictional, coastal evacuation planning uses only. This map, and the information presented herein, **is not a legal document and does not meet disclosure requirements for real estate transactions nor for any other regulatory purpose.** The California Emergency Management Agency (CalEMA), the University of Southern California (USC), and the California Geological Survey (CGS) make no representation or warranties regarding the accuracy of this inundation map nor the data from which the map was derived. Neither the State of California nor USC shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.

A tsunami is a series of ocean waves or surges most commonly caused by an earthquake beneath the sea floor. These maps show the maximum tsunami inundation line for each area expected from tsunamis generated by undersea earthquakes and landslides in the Pacific Ocean. Because tsunamis are rare events in the historical record, the maps provide no information about the probability of any tsunami affecting any area within a specific period of time.

Although these maps may not be used as a legal basis for real estate disclosure or any other regulatory purpose, the CGS has, however, provided diagrams of the maps online which the public can view. To see a maximum tsunami inundation map for a specific coastal community, or for additional information about the construction and/or intended use of the tsunami inundation maps, visit the websites below:

State of California Emergency Management Agency, Earthquake and Tsunami Program:  
<http://myhazards.calema.ca.gov/>

University of Southern California –Tsunami Research Center:  
<http://www.usc.edu/dept/tsunamis/2005/index.php>

State of California Geological Survey Tsunami Information:  
[http://www.conservation.ca.gov/cgs/geologic\\_hazards/Tsunami/index.htm](http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/index.htm)

National Oceanic and Atmospheric Agency Center for Tsunami Research (MOST model):  
<http://nctr.pmel.noaa.gov/time/background/models.html>



# The First American MASTER PROPERTY DISCLOSURE REPORT PDR®

**Property:** APNS: 8406-019-019 and 8406-019-020  
**Property Address:** ,**Report Date:** 08/17/2015  
COVINA, LOS ANGELES County, CA

**APN:** N/A

**Report Number:** 1776630

## **SECTION 5** **METHODS AND LIMITATIONS**

This Section will summarize (a) the methods used in creating this Report, (b) the limitations with respect to the determination and the Public Record, and (c) the responsibilities and liabilities of FANHD under this Report. Please read this section to fully understand the limitations of this Report and FANHD's responsibilities.

### **A. LIMITATIONS ON PUBLIC RECORD INFORMATION AND THIS REPORT**

FANHD has accurately reported the information in the Public Records with respect to the Property as of the Report Date. With respect to the Public Records, it is important to understand that:

- The Public Records may not be accurate, current, fully detailed, or complete.
- A parcel of real property may be affected by hazards that have not been identified in the Public Records.
- There may be other governmental Public Records with relevant information which are not included in this Report.
- FANHD does not make any representations as to:
  - The significance or extent of any hazard disclosed.
  - Any related health or risk of the hazard to humans or animals or how they may affect the Property.
  - The drinking water sources for the Property.
  - Any information regarding the Property after the Report Date.

### **B. REPORTING STANDARDS**

The Reporting Standards utilized by FANHD in making each determination are specified in the Disclosure Explanations (Sections 1 through 4, inclusive) of this Report. If the Property is near the state border, hazards which may be in the adjoining state or nation are not disclosed in this Report. Where appropriate, FANHD may use the assessor's rolls, cadastral-type maps, photographic enlargements of maps and various cartographic techniques to locate the site on the appropriate map. The respective determination is made as accurately as reasonably possible using these maps. For purposes of defining property lines, the assessor's parcel number and parcel maps are used. Any errors in the assessor's rolls may affect the determination procedures. If the Public Record is not of sufficient accuracy or scale that a reasonable person can determine if the Property is within a delineated hazard area or zone, "IN" or "YES" will be reported for the corresponding disclosure.

### **C. NOT AN INSPECTION REPORT**

FANHD does not perform a physical examination or any testing of the Property. This Report only provides information electronically derived from the specific Public Record identified for each disclosure in the Disclosure Explanation (Sections 1 through 4, inclusive) of this Report. This Report should not be considered a substitute for an on-site environmental and/or geological or engineering assessment. If additional information is desired, the Parties are encouraged to investigate other sources and to consult an environmental expert, a geologist, an engineer or other expert.

### **D. CHANGES TO PUBLIC RECORD AFTER REPORT DATE**

The Parties are advised that the Public Records may change after the Report Date and FANHD is not responsible for advising the Parties of any changes to the determinations that may occur after the Report Date. As a courtesy, FANHD will update this Report at no cost during the transaction process for which this Report was issued, if requested.



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## **E. ONLY THE PARTIES MAY RELY ON THIS REPORT**

This Report is valid, the Parties may rely on the Report, and a contract is formed with FANHD, **only** upon receipt by FANHD of payment of the full price of the Report. This Report cannot be relied upon (a) by any persons or entities other than the Parties, (b) for any other real property, or (c) for any future transactions involving the Property. The price paid for the Report does not include any amounts for protection of such other parties.

## **F. ERRORS AND OMISSIONS INSURANCE**

FANHD maintains errors and omissions insurance. As of the Report Date, FANHD has \$20M aggregate in errors and omissions insurance.

## **G. LIMITATIONS ON FANHD'S LIABILITY**

FANHD is not responsible for:

- Any inaccuracies or incompleteness of the information in the Public Records.
- Inaccurate address information provided for the Property.
- Any other information not contained in the specified Public Records as of the Report Date.
- Any information which would be disclosed by a physical inspection of the Property.
- Any information known by one of the Parties.
- The health or risk to humans or animals that may be associated with any of the disclosed hazards.
- The costs of investigating or remediating any of the disclosed hazards.

***This Report is not an insurance policy*** and does not provide the same protections as an insurance policy. The price of this Report has been established with the understandings of the responsibilities of FANHD as set forth in this Section. The premium for an insurance policy would be significantly greater than the cost of this Report. The Parties acknowledge that claims for damages beyond actual losses can significantly increase the costs of Reports and make prompt resolution of claims more difficult. In order to induce FANHD to provide this Report for the price charged, and to help streamline the process of resolving any disputes between the Parties and FANHD, the Parties agree that if there is a material error or omission in this Report:

- **The Party who suffers damages as a result of such error or omission shall be entitled at most to recover from FANHD the price paid for this Report. The Party making such claim must notify FANHD promptly of such claim, take no action which adversely affect FANHD's liability or defenses to such claim and the Party must fully cooperate with FANHD in the defense of such claim. The Party shall cooperate with providing reasonable evidence of the claim as requested by FANHD.**
- **FANHD shall not be liable for indirect, consequential, personal injury, physical damage or punitive damages (including, but not limited to, emotional distress or pain and suffering).**
- **FANHD will defend the Parties regarding a claim made in accordance with the foregoing provisions. FANHD shall have the right to choose the legal counsel and control the defense of such claim as it reasonably determines.**
- **FANHD shall be subrogated to all rights of the claiming Party against anyone including, but not limited to, another Party who had actual knowledge of a matter and failed to disclose it to the other Parties in writing.**

## **H. PARTY'S RESPONSIBILITY OF FULL DISCLOSURE**

Regardless of the information in this Report, if a Party has any actual knowledge of hazards potentially affecting the Property, that information must be disclosed.



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## **I. OTHER AGREEMENTS**

This Report sets forth the complete, integrated agreement between FANHD and the Parties. Evidence of prior or contemporaneous statements, representations, promises or agreements shall not be admissible to vary the terms of this written agreement. This agreement may not be changed or amended except by a written document signed by an authorized representative of FANHD and the Parties. In the event that any dispute arises between FANHD and any Parties arising out of or relating to this Report or its subject matter, or any act or omission of FANHD, the prevailing party shall be entitled to recover his, her or its reasonable costs, including attorneys' fees, from the losing party.

## **J. CANCELLATION FEE**

Recipient agrees that a cancellation fee equal to the Report price shall be remitted to FANHD if this Report is cancelled for any reason.

