

Appendix F

Limited Geotechnical Evaluation

Limited Geotechnical Evaluation

Stetson Corner Project

3145 and 3255 W Stetson Avenue
Hemet, California

Dudek

605 Third Street | Encinitas, California 92024

March 13, 2020 | Project No. 109003001



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

March 13, 2020
Project No. 109003001

Ms. Dawna Marshall
Dudek
605 Third Street
Encinitas, California 92024

Subject: Limited Geotechnical Evaluation
Stetson Corner Project
3145 and 3255 W Stetson Avenue
Hemet, California

Dear Ms. Marshall:

In accordance with your request, Ninyo & Moore has performed a Limited Geotechnical Evaluation for the Stetson Corner Project located in Hemet, California. The attached report presents our methodology, findings, and recommendations regarding the geology and soils conditions at the project site.

We appreciate the opportunity to be of service to you on this important project.

Respectfully submitted,
NINYO & MOORE



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Distribution: (1) Addressee (via e-mail)

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1 INTRODUCTION

In accordance with your request, Ninyo & Moore has completed a limited geotechnical evaluation for the proposed Stetson Corner Project in Hemet, California (Figure 1). Our evaluation is based on a geologic field reconnaissance, review of published and non-published reports, aerial photographs, and in-house data, and the assessment of the potential geologic hazards in the project area. The purpose of this study was to evaluate the potential for existing environmental impacts related to geologic or soils conditions to affect the project site and adjoining areas, and to discuss measures that can be implemented to reduce or mitigate the potential impacts with respect to the design and construction of the proposed project.

2 SCOPE OF SERVICES

Our scope of services included the following:

- Review of readily available regional, local, and site-specific geologic and geotechnical reports.
- Review of readily available background information including topographic, soils, mineral resources, geologic, and seismic and geologic hazard maps, and aerial photographs.
- Performance of a geologic field reconnaissance of the site vicinity.
- Compilation and analysis of the data obtained from our background review and field reconnaissance.
- Preparation of this Limited Geotechnical Evaluation report presenting our findings, conclusions, and preliminary recommendations regarding the project.

3 SITE AND PROJECT DESCRIPTION

The project site includes two adjacent parcels of land located south of W Stetson Avenue and east of S Sanderson Avenue in Hemet, California (Figure 1). Much of the site is currently developed and occupied by McCrometer, an industrial manufacturing company. Existing site improvements supporting the McCrometer facility are generally located in the central portion of the property and include several single-story buildings and warehouses, various storage structures, and asphalt parking lots and driveways (Figure 2). Based on our review of historic topographic and aerial photographs, the existing improvements were constructed in the 1970's. Prior to that time, the site was generally used for agricultural purposes. The western portion of the site generally consists of a dated decomposed-granite (DG) lot that serves as an overflow parking and storage area. The eastern portion of the project consists of an unimproved gated field. Based on our review of historic topographic and aerial photographs, two residential buildings and associated outbuildings were present in the northern portion of the field area until approximately 2013. The site is relatively

level with a very gentle gradient down towards the west. Elevations across the site range from approximately 2,525 feet above mean sea level (MSL) in the western portion of the site to approximately 2,530 feet MSL in the eastern portion.

We understand that the project will consist of the subdivision of the existing parcels, relocation of the existing McCrometer parking area on the west portion of the site to a new parking lot in the field area on the east side of the site, and the construction of new commercial developments on the west side of the site. The new commercial developments will include a gas station with a convenience store building, a drive-thru fast food restaurant building, and a car wash building. Additional improvements are anticipated to include new canopy structures, sign posts, Portland cement concrete and asphalt concrete pavements, roadway and driveway improvements, utilities, landscaping, and bioretention structures. A geotechnical investigation report was prepared for the project by Sladden Engineering in 2017. As part of the Sladden investigation, site soils were evaluated by subsurface exploration including six exploratory borings, and geotechnical laboratory testing. The results of the geotechnical investigation are incorporated herein, where appropriate.

4 GEOLOGIC AND SUBSURFACE CONDITIONS

The following sections present our findings relative to regional and site geology, geologic hazards such as landslides, subsidence, groundwater, faulting, seismicity and expansive soils.

4.1 Regional Geologic Setting

The project site is situated in the Peninsular Ranges Geomorphic Province. The province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California (Norris and Webb, 1990; Harden, 2004). The province varies in width from approximately 30 to 100 miles. In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the southern California batholith.

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest (Jennings and Bryant, 2010). Several of these faults are considered active. The San Jacinto and San Andreas faults are active fault systems located northeast of the project area and the Elsinore and Newport-Inglewood-Rose Canyon faults are active faults located west of the project site (Figure 3). Major tectonic activity associated with these and other faults within the regional tectonic framework consists primarily of right-lateral, strike-slip movement. Specifics of faulting are discussed in following sections of this report.

4.2 Site Geology

Based on our review of published geologic maps and the project geotechnical investigation report (Sladden Engineering, 2017) and our field reconnaissance, soils at the project site consist of fill and alluvium (Dibblee and Minch, 2003). A geologic map of the project area is presented in Figure 4. A brief description of these units, as described in the cited literature or as observed on the site, is presented below.

4.2.1 Fill

Fill soils are anticipated to underlie much of the site due to previous land use and burial of utility lines. As encountered in the geotechnical investigation by Sladden Engineering (2017), the fill material extended to depths of up to 5 feet and consisted of dark yellowish brown, loose, silty sand, sandy silt, and clayey silt. Scattered amounts of gravel were also encountered in the fill materials.

4.2.2 Alluvium

Surficial alluvium including silt, sand and gravel of valley areas (Qa) is mapped at the site (Figure 4) and is anticipated to underlie the fill soils. As described in the geotechnical investigation by Sladden Engineering (2017) alluvium encountered below the fill consisted of dark yellowish brown, loose to medium dense, sand, silty sand, clayey sand and gravelly sand, and stiff to very stiff, clayey silt. The alluvium extended to the total depths explored of approximately 51½ feet in the borings performed by Sladden Engineering.

4.3 Groundwater

Groundwater was not encountered at depths up to approximately 51½ feet during geotechnical investigation of the site (Sladden Engineering, 2017). Sources provided by the State of California Department of Water Resources (CDWR) Water Data Library and the California State Water Resources Control Board (SWRCB) were reviewed for information pertaining to groundwater data in the vicinity of the project. According to the reviewed groundwater data, the groundwater depth in a well located approximately 0.2 miles northwest of the project site is approximately 175 feet (CDWR, 2020). Existing utility trench lines may act as conduits for perched conditions and seepage should be anticipated. Fluctuations in the level of groundwater may occur due to variations in ground surface topography, subsurface stratification, rainfall, irrigation practices, groundwater pumping, and other factors which may not have been evident at the time of our field evaluation.

4.4 Faulting and Seismicity

The subject site is not located within a State of California Earthquake Fault Zone (formerly known as Alquist-Priolo Special Studies Zone) (Hart and Bryant, 2007). However, the site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project areas is considered significant during the design life of the proposed improvements. The approximate locations of major faults in the region and their geographic relationship to the site are shown on Figure 3.

Based on our document review, the active Anza segment of the San Jacinto Fault is located approximately 3.3 miles northeast of the site. Table 1 lists selected known principal active faults mapped within approximately 40 miles that may affect the subject site and the maximum moment magnitude (M_{max}) as published by the United States Geological Survey (USGS, 2020a). The approximate fault-to-site distances were calculated using the USGS fault parameters web-based design tool (USGS, 2020a).

Fault	Approximate Fault-to-Site Distance miles (kilometers)	Maximum Moment Magnitude (M_{max})
San Jacinto (Anza Segment)	3.3 (5)	7.3
San Jacinto (San Jacinto Valley Segment)	6 (10)	7.0
Elsinore (Temecula Segment)	16 (26)	7.1
Elsinore (Glen Ivy Segment)	17 (28)	6.9
San Andreas (South San Bernardino Segment)	19 (31)	7.0
San Andreas (Banning/Garnet Hill Segment)	19 (31)	7.1
San Jacinto (San Bernardino Valley Segment)	24 (39)	7.1
Elsinore (Julian Segment)	27 (43)	7.4
Pinto Mountain	28 (45)	7.3
San Andreas (North San Bernardino Segment)	32 (51)	6.9
San Jacinto (Coyote Creek Segment)	32 (52)	7.0
San Jacinto (Clark Segment)	33 (53)	7.1
Chino	33 (53)	6.8
Whittier	34 (55)	7.0
Burnt Mountain	38 (61)	6.8
San Joaquin Hills	40 (64)	7.1
Cleghorn	40 (64)	6.8
Cucamonga	40 (64)	6.7

In general, hazards associated with seismic activity include surface ground rupture, strong ground motion, liquefaction, and tsunamis. A brief description of these hazards and the potential for their occurrences on site are discussed below.

4.4.1 Surface Ground Rupture

Based on our review of the referenced literature and our field reconnaissance, no active faults are known to cross the project site. Therefore, the probability of damage from earthquake surface ground rupture is considered to be low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

4.4.2 Ground Motion

The 2019 California Building Code (CBC) specifies that the potential for liquefaction and soil strength loss be evaluated, where applicable, for the Maximum Considered Earthquake Geometric Mean (MCE_G) peak ground acceleration with adjustment for site class effects in accordance with the American Society of Civil Engineers (ASCE) 7-16 Standard. The MCE_G peak ground acceleration is based on the geometric mean peak ground acceleration with a 2 percent probability of exceedance in 50 years. The MCE_G peak ground acceleration with adjustment for site class effects (PGA_M) was calculated as 0.78g using the OSHPD (SEAOC and OSHPD, 2020) seismic design tool that yielded a mapped MCE_G peak ground acceleration of 0.71g for the site and a site coefficient (F_{PGA}) of 1.1 for Site Class D.

4.4.3 Liquefaction and Seismically Induced Settlement

Liquefaction of cohesionless soils can be caused by strong vibratory motion due to earthquakes. Research and historical data indicate that loose granular soils and non-plastic silts that are saturated by a relatively shallow groundwater table are susceptible to liquefaction. The site is located in an area designated by the City of Hemet General Plan (2020) as having a moderate potential for liquefaction. However, based on our review of the project geotechnical investigation report (Sladden Engineering, 2017) as well as groundwater data in the site vicinity, groundwater is anticipated at depth greater than 100 feet. As such, liquefaction is not a design consideration for the project based on the absence of shallow groundwater. However, based on our review of the project boring logs (Sladden Engineering), site soils are generally sandy and in a loose to medium dense condition. Relatively dry soils (e.g., soils above the groundwater table) with low density or softer consistency tend to undergo a degree of compaction during a seismic event. Volumetric changes in dry soils can occur from earthquake shaking that induces a significant shear strain in a soil mass. It is the

responsibility of the geotechnical engineer of record to verify the potential for liquefaction and dynamic settlement and to provide appropriate design recommendations to mitigate the potential hazards.

4.4.4 Tsunamis and Seiches

Tsunamis are long wavelength seismic sea waves (long compared to the ocean depth) generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. Based on the inland location and elevation of the project, the potential for a tsunami to impact the site is not a design consideration.

Seiches are oscillations of enclosed or partially enclosed bodies of water often generated by seismic activity. Based on the elevation of the site and the absence of nearby bodies of water, the potential for seiches to impact the site is considered low.

4.5 Landsliding and Slope Stability

Based on our review of published geologic literature, aerial photographs, and our field reconnaissance, the project site is located on relatively level terrain and no landslides or related features, including topographic breaks and hummocky hills, are known to underlie or be adjacent to the project site. Therefore, the potential for landslides at the project site is considered low. Furthermore, global slope stability is not anticipated to be a design consideration at the project due to the relatively level ground surface across much of the project site as well as the generally competent nature of the subsurface materials.

4.6 Regional Land Subsidence

Land subsidence is characterized as a shrinking of the ground surface relative to surrounding areas, and can generally occur where deep alluvial deposits are present in valley areas. Subsidence in alluvial valley areas is typically associated with groundwater withdrawal or other fluid withdrawal from the subsurface such as oil and/or natural gas. Extraction of these geologic fluids can cause subsidence, which can result in the development of surface ground cracks and fissures, particularly near valley margins. Cracks and earth fissures can cause damage to improvements including roads, utilities, foundations, structures, and pipelines. According to the USGS (2020b), the site is not located within a mapped area of observed subsidence.

4.7 Flood Hazards

According to review of the Federal Emergency Management Agency Flood Insurance Rate Map for the project area (FEMA, 2008), the site is located outside of mapped 100- and 500-year flood zones. Based on this review, the potential for flooding of the site is considered low.

4.8 Expansive Soils

Expansive soils generally result from specific clay minerals that have the capacity to shrink or swell in response to changes in moisture content. Shrinking or swelling of foundation soils can lead to damage to slabs, foundations, and other engineered structures, including tilting and cracking. Expansive soils are classified as ranging from very low to very high according to expansion index criteria established by Table 18-1-B of the Uniform Building Code (ICBO, 1994). Based on our review of laboratory testing performed on on-site soils (Sladden Engineering, 2017) site soils have a low potential for expansion (i.e., expansion index of 50 or less).

4.9 Corrosive Soils

California amended (Caltrans, 2019) AASHTO (2017) corrosion criteria defines corrosive soils as those possessing an electrical resistivity of 1,100 ohm-cm or less, a chloride content of 500 ppm or greater, a sulfate content of 0.15 percent (1,500 ppm) or greater, and/or a pH equal to or less than 5.5. Corrosivity testing performed on on-site soils (Sladden Engineering, 2017) indicates an electrical resistivity of 2,000 ohm-cm, a soil pH of 8.5, a chloride content of 50 parts per million (ppm), and a sulfate content of 0.002 percent (i.e., 20 ppm). Based on a comparison with the California amended (Caltrans, 2019) AASHTO (2017) corrosion criteria, the onsite soils would not be classified as corrosive.

4.10 Agricultural Soils

Based on the interactive map using the Web Soil Survey website (USDA, 2020), two different agricultural soil units have been noted on the project site. These soil types include San Emigdio Fine Sandy Loam and Chino Silt Loam. Due to the site developments, much of the preexisting native soils are anticipated to have been removed and/or disturbed on the project site.

4.11 Erosion

In general, erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur in the project area where bare soil is exposed to wind or moving water (both rainfall and surface runoff). The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, surface drainage conditions, wind velocity, and general land use. Review of geologic maps and soil data indicate that surface soils are generally comprised of silt, sand, and gravel. Based on the gentle gradients across the project site, the potential for water erosion is low.

5 CONCLUSIONS

Based on our geologic field reconnaissance and background study, it is our opinion that geologic and geotechnical considerations for the project include the following:

- The site is underlain by fill and alluvium. Near-surface fill and alluvial soils are generally loose and considered unsuitable in their current condition for structural support.
- In general, excavation of the fill and alluvial material should be achievable with heavy duty earthmoving equipment in good operation condition.
- Fill and alluvial soils are anticipated to be erodible.
- Groundwater in the project vicinity is anticipated at depths greater than 100 feet. The depth to groundwater varies due to seasonal precipitation, subsurface conditions, irrigation, and other factors. Seepage due to the presence of utility trenches on site should be anticipated.
- Based on the anticipated depth to groundwater at the site, liquefaction is not a design consideration for the project. However, based on the loose to medium dense nature of site soils, the site may be susceptible to dynamic compaction of dry soils.
- The site is not located within a State of California Earthquake Fault Zone. Based on our review of published geologic maps and aerial photographs, no known active faults underlie the site. The probability of surface fault rupture at the site is considered to be low.
- The site is located in a seismically active area and the potential for strong ground motion in the project area is considered significant during the design life of the proposed improvements.

6 RECOMMENDATIONS AND IMPACT ANALYSIS

The potential geologic and seismic impacts that may affect the Stetson Corner project can be mitigated by employing sound engineering practice in the planning, design, and construction of the proposed improvements. Based on the California Environmental Quality Act (CEQA) Guidelines and the results of our evaluation, our opinions and recommendations relative to Geology and Soils (Guideline items A through D) are discussed below.

A. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of known fault?

The project site is not located within a mapped Alquist-Priolo Earthquake Fault Zone and no active faults are known to cross or trend toward the project site. Therefore, ground surface rupture due to active faulting is not anticipated at the project site. According to the project geotechnical investigation report (Sladden Engineering, 2017), risks associated with primary surface ground rupture should be considered “low”. Lurching or cracking of the ground surface as a result of nearby seismic events is possible. This risk should be evaluated by a design-level geotechnical evaluation performed for the specific development of the project that conforms to the requirements of Chapter 18 of the 2019 California Building Code. Risks associated with fault rupture can be addressed by appropriate engineering design for the project based on such a design-level geotechnical evaluation. This impact is less than significant.

ii. Strong seismic ground shaking?

The project has a high potential for strong ground motions due to earthquakes on nearby active faults. Discussion regarding seismic design parameters is provided in the project geotechnical investigation report (Sladden Engineering, 2017). Seismic analysis and project design performed in accordance with the requirements of Chapter 16 of the 2019 California Building Code and the American Society of Civil Engineers (ASCE) 7-16 Standard can be expected to mitigate risks due to ground shaking. Structural elements can then be designed by the project structural engineer to resist or accommodate anticipated ground motions and to conform to the current seismic design standards. This impact is considered less than significant with mitigation incorporated.

iii. Seismic-related ground failure, including liquefaction?

The project site is not situated within a mapped liquefaction zone and groundwater is anticipated at depths greater than 100 feet. According to the project geotechnical investigation report (Sladden Engineering, 2017), risks associated with liquefaction should be considered “low”. Accordingly, liquefaction is not anticipated to be a design concern for the project and liquefaction impacts are considered less than significant. However, based on our review of the project geotechnical investigation report (Sladden Engineering, 2017), site soils are generally sandy and in a loose to medium dense condition. Relatively dry soils (e.g., soils above the groundwater table) with low density or softer consistency tend to undergo a degree of compaction during a seismic event. Volumetric changes in dry soils occurs from earthquake shaking that induces a significant shear strain in a soil mass. Potential settlements induced by such dynamic compaction should be further evaluated by a design-level geotechnical evaluation performed for the specific development of the project that conforms to the requirements of Chapter 18 of the 2019 California Building Code. Where dynamic compaction hazards are identified, appropriate mitigating engineering measures specified in the design-level geotechnical evaluation should be employed. Such measures may include removal and recompaction of the upper site soils, or use of engineered foundation design (i.e., grade beams or mat foundations) to accommodate the expected effects of anticipated settlements. This impact is considered less than significant with mitigation incorporated.

iv. Landslides?

Based on our review of published geologic literature, aerial photographs, and our site reconnaissance, the project site is located on relatively flat terrain and no landslides or related features are known to underlie or be adjacent to the project site. According to the project geotechnical investigation report (Sladden Engineering, 2017), risks associated with slope instability should be considered “negligible”. Accordingly, the project is anticipated to have no impacts related to landsliding. This impact is considered to be less than significant.

B. Would the project result in substantial soil erosion or the loss of topsoil?

Construction for the proposed project is anticipated to create the potential for soil erosion during excavation, grading, and trenching activities. With the implementation of common prudent practices during construction, water and wind related soil erosion can be reduced within the construction site boundaries. Such procedures may include appropriate surface drainage measures for erosion due to water, the use of erosion prevention mats or geofabrics, silt fencing, sandbags and plastic sheeting, and temporary drainage devices. To mitigate wind-related erosion, wetting of soil surfaces and/or covering exposed ground areas and soil stockpiles could be considered during construction operations, as appropriate. In addition, the use of tackifiers may be considered to reduce the potential for water-and wind-related soil erosion.

Long-term erosion potential can be mitigated through prudent site design and maintenance practices. While much of the site is anticipated to be covered by buildings and/or pavements, standard design procedures can be performed to reduce soil erosion in landscaped/bare areas such as appropriate surface drainage to provide for positive surface runoff. Design would address reducing concentrated run-off conditions that could cause erosion and affect the stability of project improvements. The use of erosion control fabrics and drainage devices can be designed and maintained to reduce erosion processes. As appropriate, a Storm Water Pollution Prevention Plan or similar protocol that would include the use of Best Management Practices should be developed for the project site. This impact is considered less than significant with mitigation incorporated.

C. Would the project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Based on our review of background data and our understanding of the project construction, site soils are not susceptible to on- or off-site landslides, lateral spreading, or liquefaction as a results of the project. As such, the project is not anticipated to have significant impacts to on-site or off-site landslides, lateral spreading, subsidence, or liquefaction.

Based on our review of the project geotechnical investigation report (Sladden Engineering, 2017), soil settlement as a result of anticipated foundation loads is estimated to be less than one inch. Potential soil settlement at the site should be evaluated by a design-level geotechnical evaluation performed for the project that conforms to the requirements of the 2019 California Building Code. Where soil settlements are identified, appropriate mitigating engineering measures should be employed as recommended in the design-level geotechnical evaluation or by the project structural engineer. Such measures may include use of engineered foundation design to accommodate the anticipated settlements of site buildings. This impact is considered less than significant with mitigation incorporated.

D. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Based on our review of regional geologic maps and the project geotechnical investigation report (Sladden Engineering, 2017), as well as our site reconnaissance, site soils are generally sandy in nature and are anticipated to have very low to low potential for expansion. Laboratory testing performed on on-site soils (Sladden Engineering, 2017) indicate a low potential for expansion (i.e., expansion index of 50 or less). The presence of expansive soils should be assessed by a design-level geotechnical evaluation performed for the specific development of the project that conforms to the requirements of Chapter 18 of the 2019 California Building Code. Mitigation techniques for expansive soils include overexcavation and replacement with non-expansive soil, moisture control, soil mixing, lime treatment and/or development of specific structural design for expansive soil condition. In following recommendations of the design-level geotechnical evaluation, project risks with respect to expansive soils can be adequately mitigated. However, based on our assessment of site soils, this impact is considered less than significant.

7 LIMITATIONS

The field evaluation and geotechnical analyses presented in this report have been conducted in accordance with current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No warranty, implied or expressed, is made regarding the conclusions, recommendations, and professional opinions expressed in this report. Variations may exist and conditions not observed or described in this report may be encountered. Our conclusions and recommendations are based on an analysis of the observed conditions and the referenced background information.

The purpose of this study was to evaluate the potential for existing environmental impacts related to geologic or soils conditions to affect the project site and adjoining areas, and to discuss measures that can be implemented to reduce or mitigate the potential impacts with respect to the design and construction of the proposed project. This report has been requested to support the preparation of a CEQA document for the project. A comprehensive geotechnical evaluation report prepared in accordance with the requirements of the 2019 CBC and the ASCE 7-16 Standard should be incorporated into the design and construction of structural improvements.

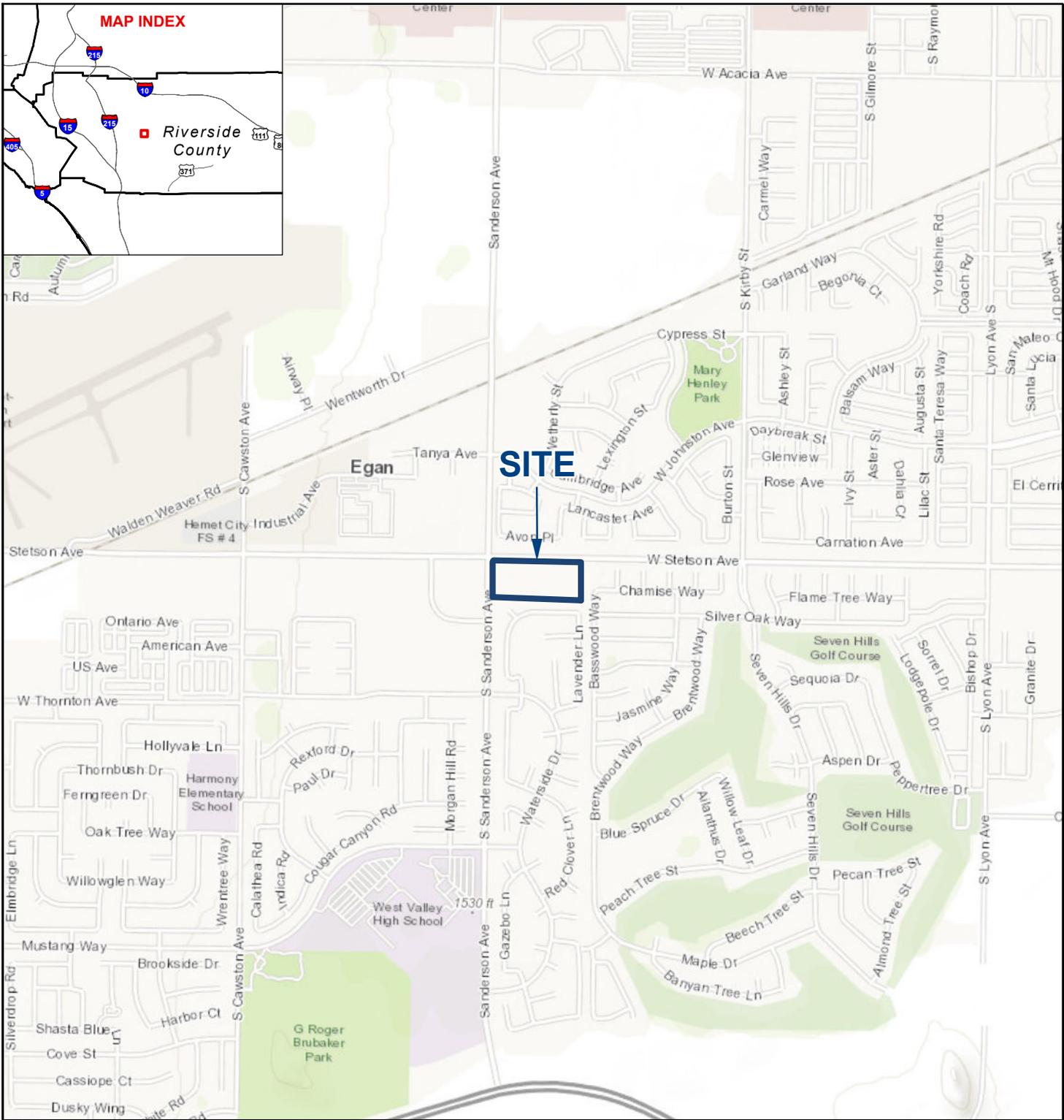
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FIGURES



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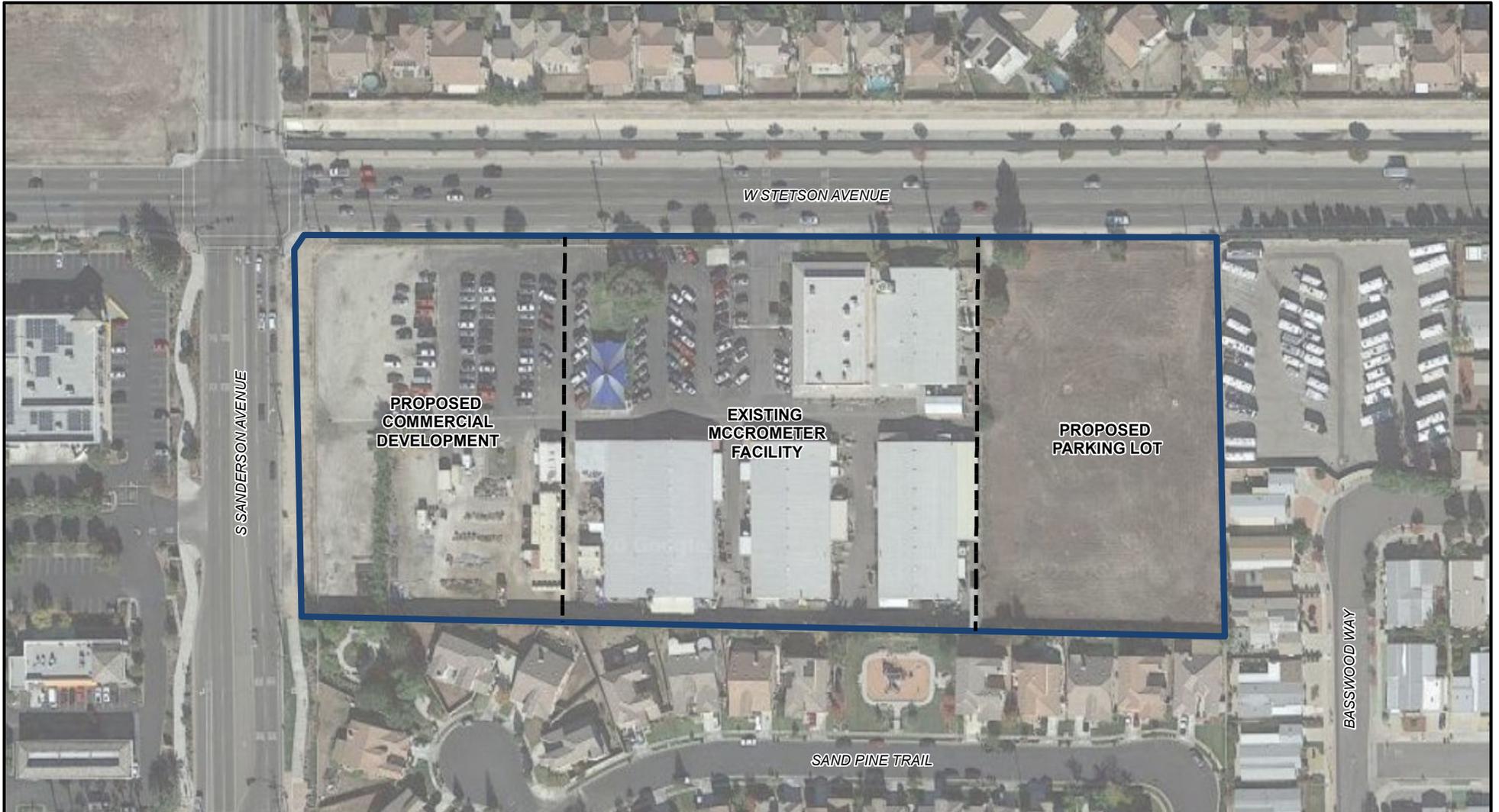
NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: ESRI WORLD TOPO, 2017

FIGURE 1

SITE LOCATION

STETSON CORNER PROJECT
 3145 AND 3255 W STETSON AVENUE, HEMET, CALIFORNIA

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LEGEND

 SITE BOUNDARY

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: GOOGLE EARTH, 2017

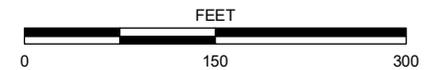
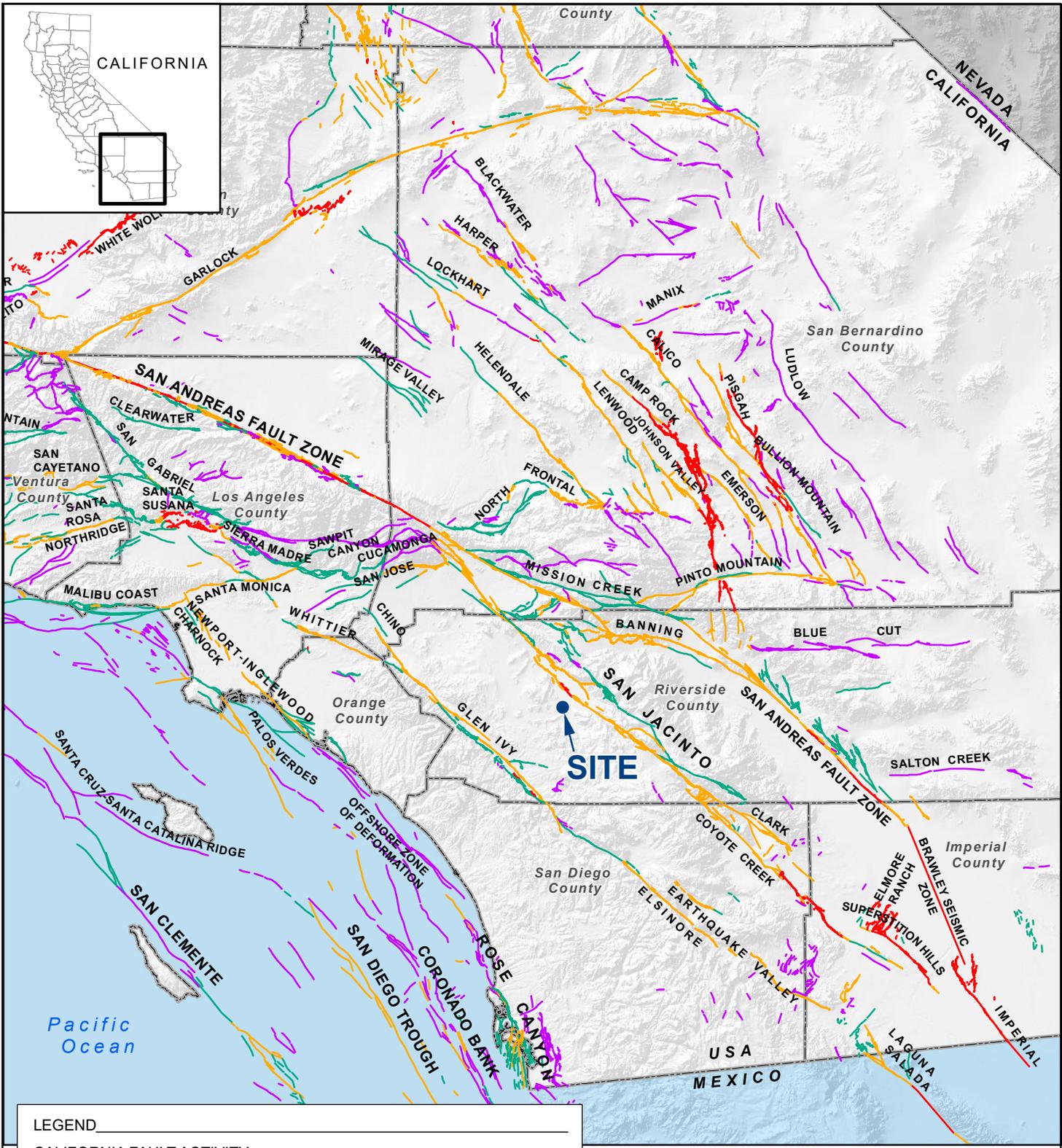


FIGURE 2

AERIAL SITE PLAN

STETSON CORNER PROJECT
 3145 AND 3255 W STETSON AVENUE, HEMET, CALIFORNIA

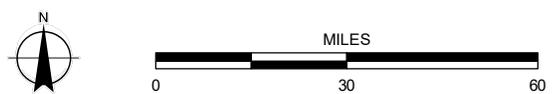
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LEGEND

HISTORICALLY ACTIVE	QUATERNARY (POTENTIALLY ACTIVE)
HOLOCENE ACTIVE	STATE/COUNTY BOUNDARY
LATE QUATERNARY (POTENTIALLY ACTIVE)	

SOURCE: U.S. GEOLOGICAL SURVEY AND CALIFORNIA GEOLOGICAL SURVEY, 2006. QUATERNARY FAULT AND FOLD DATABASE FOR THE UNITED STATES.



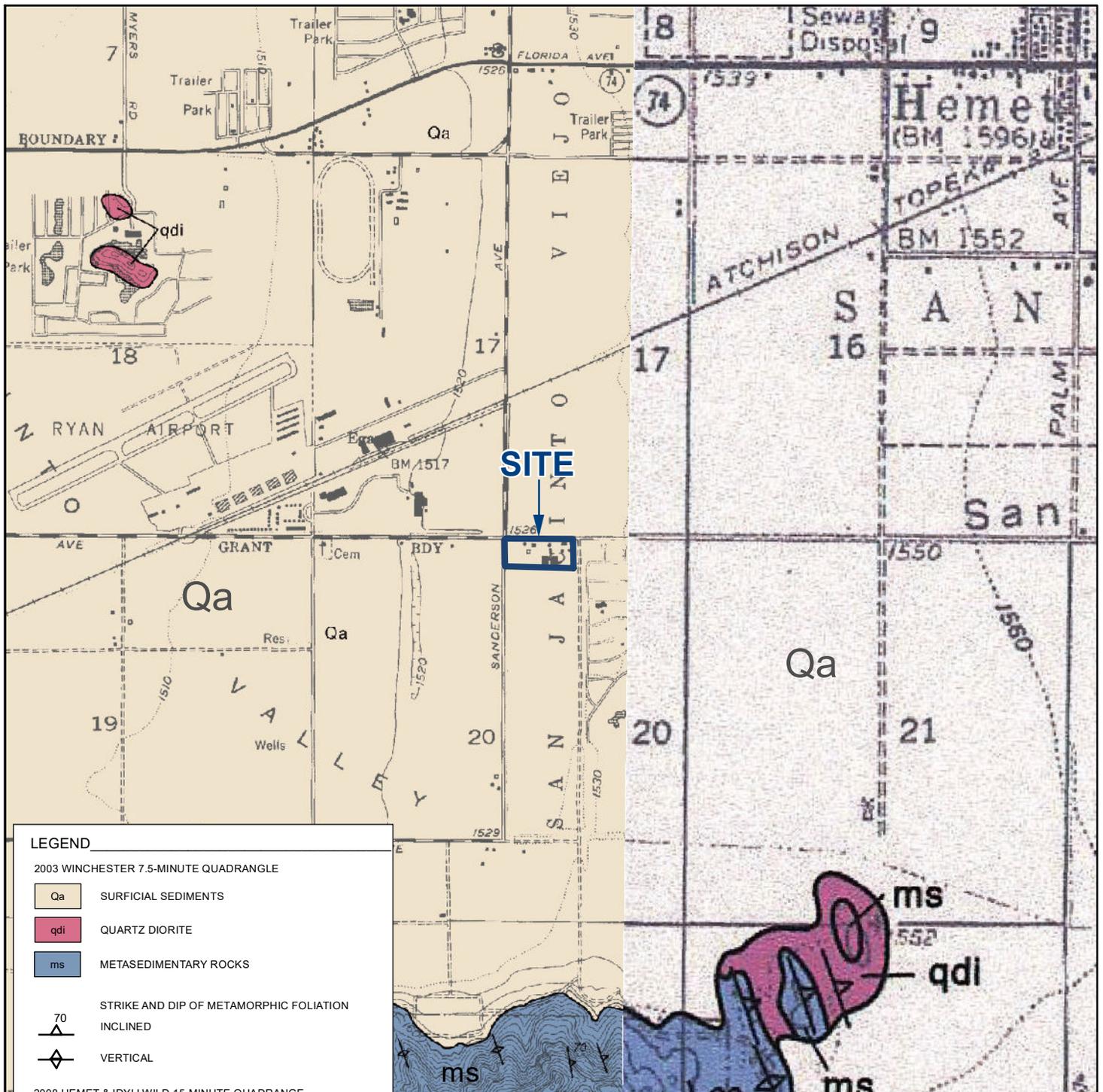
NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

FIGURE 3

FAULT LOCATIONS

STETSON CORNER PROJECT
3145 AND 3255 W STETSON AVENUE, HEMET, CALIFORNIA

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LEGEND

2003 WINCHESTER 7.5-MINUTE QUADRANGLE

- Qa SURFICIAL SEDIMENTS
- qdi QUARTZ DIORITE
- ms METASEDIMENTARY ROCKS

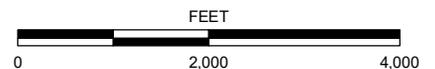
- STRIKE AND DIP OF METAMORPHIC FOLIATION INCLINED
- VERTICAL

2008 HEMET & IDYLLWILD 15-MINUTE QUADRANGLE

- Qa SURFICIAL SEDIMENTS
- qdi QUARTZ DIORITE
- ms METASEDIMENTARY ROCKS

- STRIKE AND DIP OF METAMORPHIC FOLIATION INCLINED
- VERTICAL

REFERENCE: DIBBLEE, T.W., 2003, GEOLOGIC MAP OF THE WINCHESTER 7.5-MINUTE QUADRANGLE, RIVERSIDE COUNTY, CALIFORNIA.
 DIBBLEE, T.W., 2008 GEOLOGIC MAP OF THE HEMET & IDYLLWILD 15-MINUTE QUADRANGLES, RIVERSIDE COUNTY, CALIFORNIA.



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

FIGURE 4

GEOLOGY

STETSON CORNER PROJECT
 3145 AND 3255 W STETSON AVENUE, HEMET, CALIFORNIA



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