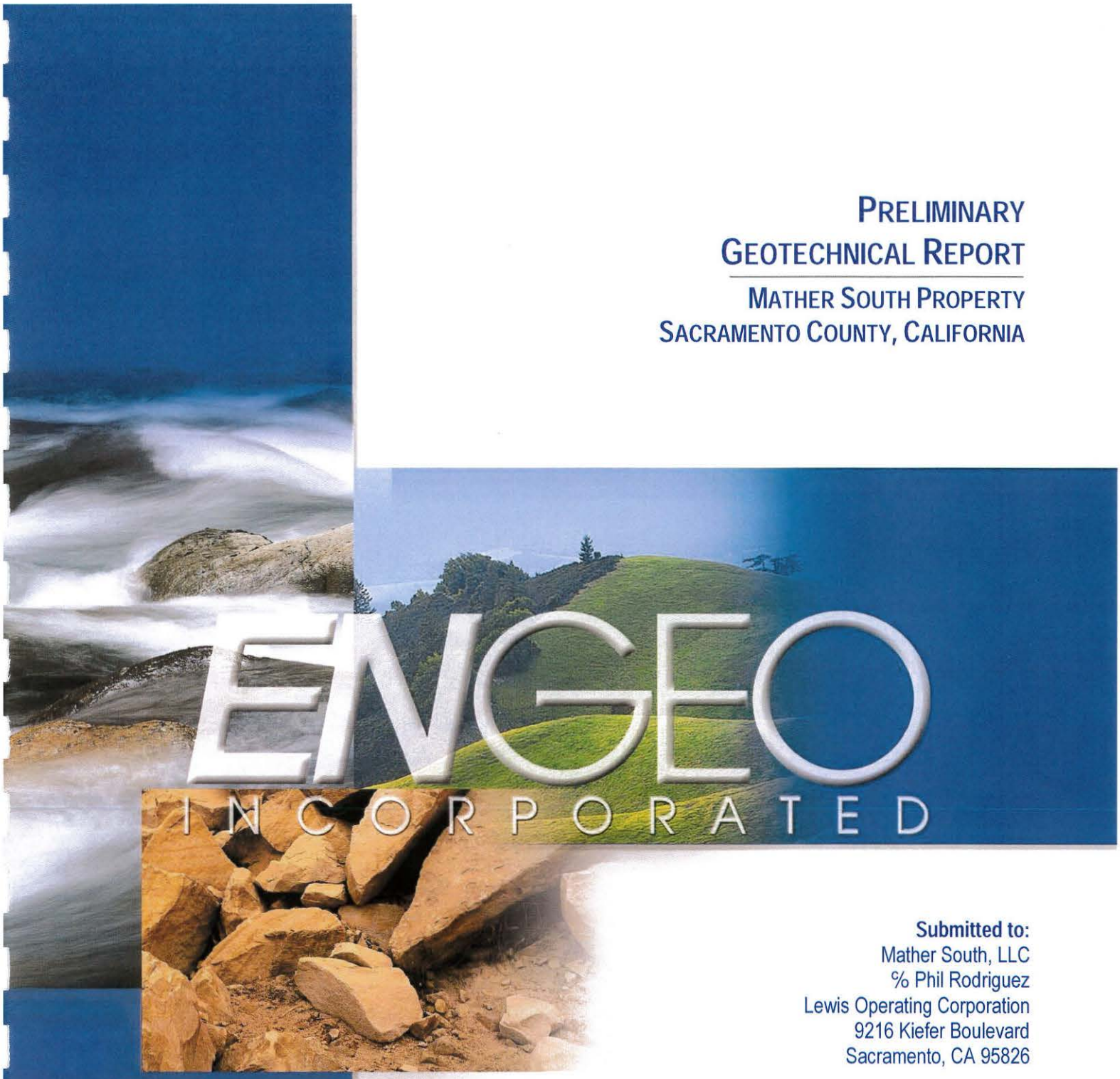
Appendix GS-1

Preliminary Geotechnical Report

PRELIMINARY GEOTECHNICAL REPORT

MATHER SOUTH PROPERTY
SACRAMENTO COUNTY, CALIFORNIA



Submitted to:
Mather South, LLC
% Phil Rodriguez
Lewis Operating Corporation
9216 Kiefer Boulevard
Sacramento, CA 95826

Prepared by:
ENGEO Incorporated

August 29, 2012

Project No:
9546.000.000

- Expect Excellence -

ENGEO INCORPORATED

GEOTECHNICAL
ENVIRONMENTAL
WATER RESOURCES
CONSTRUCTION SERVICES

Project No.
9546.000.000

August 29, 2012

Mather South, LLC
% Mr. Phil Rodriguez
Lewis Operating Corporation
9216 Kiefer Boulevard
Sacramento, CA 95826

Subject: Mather South Property
Douglas Road and Eagle's Nest Road
Sacramento County, California

PRELIMINARY GEOTECHNICAL REPORT

Dear Mr. Rodriguez:

ENGEO prepared this preliminary geotechnical report for the Mather South property as outlined in our agreement dated July 17, 2012. We characterize the site conditions and provide the enclosed preliminary geotechnical recommendations.

As you and the project team move forward with the project, we are ready to assist you with design-level geotechnical reports for various improvements onsite. Please let us know when conceptual development plans are nearing completion and we will be glad to discuss these future services with you.

If you have any questions or comments regarding this preliminary report, please call and we will be glad to discuss them with you.

Sincerely,

ENGEO Incorporated

Jonathan C. Boland, GE

Mark M. Gilbert, GE

jcb/mmg/jf:pgex

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1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

ENGEO prepared this preliminary geotechnical report for the Mather South property in Sacramento County, California. We prepared this report as outlined in our agreement dated July 17, 2012. Mather South, LLC authorized ENGEO to conduct the following scope of services:

- Service plan development
- Site visit
- Document and map review
- Data analysis and conclusions
- Report preparation

For our use, we received the following from you via email:

1. EOD Technology Incorporated, "Final OE Characterization Report – Weapons Storage Area, Mather Air Force Base", Contract Number DACA87-97-D-0005, dated December 1998.

2. Army Corps of Engineers, "Work Plan – Military Munitions Response Actions", Job No. W9128F-10-D-0092-0003, dated August 2011.

3. US Air Force, "Superfund Record of Decision – Mather AFB", dated April 29, 1996.

4. Cabrera Services, "Munitions Response Completion Report, Site AOC 601 Suspected Burial Site, Former Mather AFB", Cabrera Project No. 03-5100.19, dated February 2011.

5. Air Force Real Property Agency, "Explosives Safety Submission – AOC 597, Mather Lake Practice Grenade Range", dated January 2011.

We also reviewed in-house geotechnical reports for the general vicinity of the property.

This report was prepared for the exclusive use of our client and their consultants for the Mather South project. This document may not be reproduced in whole or in part by any means whatsoever, nor may it be quoted or excerpted without our express written consent.

1.2 PROJECT LOCATION AND DESCRIPTION

Figure 1 displays a Site Vicinity Map. The approximately 900-acre site is located west of Sunrise Boulevard and south of Douglas Road in Sacramento County, California. Access is provided via a gate off Eagles Nest Road on the west side of the property.

Figure 2 shows a general site plan for the approximately 900-acre property. The Folsom South Canal borders the site to the east. Kiefer Boulevard defines the southern boundary, Eagles Nest Road generally defines the western boundary, and Douglas Road defines the northern boundary.

Mather Golf Course is located northwest of the property, near the intersection of Douglas and Eagles Nest Roads.

Based on our discussions with you, we understand it is desired to develop the site as a master-planned community, which may include single- and multi-family residential construction, parks, schools, paved streets, underground utilities, and other associated improvements. The current development concept includes leaving Mather Lake as an open space and recreation area.

2.0 FINDINGS

2.1 SITE BACKGROUND

The Mather South property is a part of the larger historic Mather Air Force Base (AFB) located in Sacramento County, California. Mather Field was officially activated in 1918 and was primarily used as a combat pilot training school. The initial 872-acre base was increased to 4,418 acres in 1941. Substantial new construction on the base was performed during World War II when the facility became a port of embarkation to support the war in the Pacific. In 1956, the facility was expanded to accommodate Strategic Air Command B-52 operations, including storage of substantial ordinance and bombs (conventional and nuclear) in protected bunkers. The facility was officially decommissioned as an active air base on May 12, 1993. In 1995, Mather Airport reopened as a cargo airport. Other areas of the base have successfully been developed into housing, a business park, medical center, and open space.

The approximately 900-acre Mather South property, located east of Eagle's Nest Road, was primarily used as a weapons and munitions storage area. Mather Lake is located at the northern end of the property on a tributary to Morrison Creek. The lake was created in the 1950s when the Air Force placed excavated soil from other areas of the base across the tributary, thus impounding water. Based on our document review, the dam was not engineered or compacted during fill placement. The normal storage volume of the lake is reported to be approximately 288 acre-feet and has a maximum discharge of 300 cubic feet per second. We understand the Air Force is currently working with the State of California to improve the dam and bring it to current design standards.

Multiple underground concrete bunkers and smaller storage buildings are located onsite, generally in the central portion of the property. Several environmental and unexploded ordinance investigations have been performed, generally focusing on an 'open burn' area in the south, ordinance burial near the center of the property, and a possible grenade practice range at Mather Lake.

Based on aerial photographs (see below), in the late 1960s and early 1970s the Folsom South Canal was constructed parallel to the eastern border of the site. Excavation spoils from the canal appeared to have been spread on the Mather South property. The approximate lateral extents of that fill is shown on the Site Plan, Figure 2.

2.2 AERIAL PHOTOGRAPH REVIEW

The following aerial photographs, provided by EDR, were reviewed for information regarding past conditions and land use at the property and in the immediate vicinity. We summarized the photos and our review below.

TABLE 2.2-1
Aerial Photographs

Flyer	Year	Scale
Laval	1937	1:800
USGS	1944	1:800
Pacific Air	1952	1:800
Cartwright	1961	1:800
Cartwright	1971	1:800
Cartwright	1981	1:800
USGS	1993	1:800
USGS	1998	1:800

1937: The site was generally undeveloped and appeared to be used for non-irrigated farming and cattle grazing. There was a structure located near the Mather Golf Course clubhouse and what appeared to be a cattle feeding/watering area near the eastern central portion of the property. Eagles Nest Road, Kiefer Boulevard, and Douglas Road were all visible in this image.

1947: The site is essentially unchanged from the 1937 image.

1952: The site is essentially unchanged from the previous aerial photos reviewed.

1961: The ordinance storage buildings, concrete bunkers and other improvements have been constructed in the central portion of the site. Mather Golf Course is visible to the northwest along with the dam impounding Mather Lake. Many unimproved roads cross the entire site in both east-west and north-south directions. The small arms range is visible at the southwest corner of the site.

1971: The Folsom South Canal is visible at the east boundary of the site along with what appears to be fill (excavation spoils from the canal) spread across large portions of the site. Mather Lake is filled to essentially its current state. A large fill area is located just south of Mather Lake trending in a northeast-southwest direction. The Sacramento Rendering Company facility is visible on the south side of Kiefer Boulevard.

1981: Additional structures are visible in the central portion of the site supporting the bunker storage area. The radio-controlled airstrip is visible off of Eagles Nest Road. The "open pit" area

(AOC 601) is visible in the central portion of the site, south of the concrete bunker area. The Folsom South Canal and water bridges bringing the natural drainages across the canal onto the Mather South property have been constructed.

1993: The site is essentially unchanged from the 1981 image.

1998: More trees are visible, generally on the southern and eastern portions of the site. The northern California Terminal Radar Approach Control (TRACON) facility is under construction on the north site of Douglas Road.

2.3 REVIEW OF IN-HOUSE GEOTECHNICAL REPORTS

To supplement our review of aerial photographs and outside reports, we reviewed in-house reports for projects in the general vicinity of the project, as listed below:

1. ENGEO, "Preliminary Geotechnical Report – Anatolia 4 Residential Development", Project No. 6011.5.004.01, dated July 8, 2005.

2. ENGEO, "Geotechnical Report – Sundance Residential Development", Project No. 7200.5.001.01, dated July 7, 2006.

3. ENGEO, "Geotechnical Report – Sunrise Boulevard Widening", Project No. 8290.000.000, dated July 2009.

4. ENGEO, "Geotechnical Report – Seismic Retrofit of Two Elevated Water Storage Tank Sites", Project No. 8449.000.000, dated August 22, 2008.

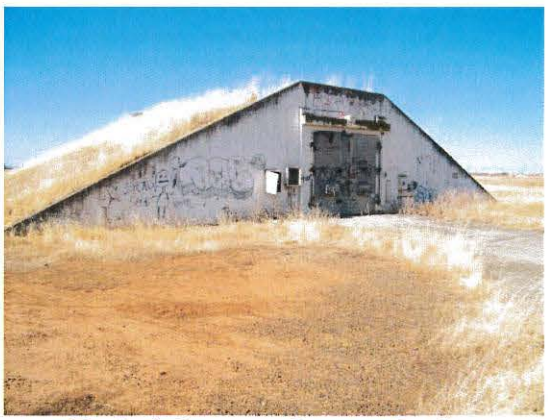
2.4 SURFACE CONDITIONS

Surface topography generally includes gently rolling areas and low drainages crossing the property, generally in an east-west direction. Site elevations range from approximate elevation +170 feet (Datum: 0 feet = Mean Sea Level) in the east to approximate elevation +130 feet on the western boundary, just south of Mather Golf Course.

We observed the following site features during our July 2012 site reconnaissance:

- Multiple locked gates provide access to the property off Eagles Nest Road.
- The majority of the property is undeveloped and includes weeds, grasses and scattered trees.

- The central portion of the property includes fencing, asphalt concrete pavements, and multiple abandoned CMU buildings, concrete bunkers and shop areas associated with the former Mather Air Force Base.



Typical Concrete Storage Bunker

Overview of Structures

- Multiple large tree trunks are stockpiled near the southern bank of concrete bunkers in the central area of the property.

- Mather Lake is located on the northern portion of the property, adjacent to the offsite Mather Golf Course.

- Several seasonal drainages cross the site and were generally dry during our July 2012 site visit. The drainages appear to be fed by several concrete bridges that convey the natural drainage water across the Folsom South Canal onto the Mather South property.

- A collapsed wooden structure and multiple wooden observation platforms are located in the north-central portion of the site.

- Active and abandoned overhead electrical lines cross the site, generally on the northern half of the site.

- A radio-controlled model air field is located in the southwestern portion of the site along Eagles Nest Road, including a shade structure, paved runway and other associated improvements.

- Various soil fill and debris piles are located across the site. The most notable are near Mather Lake to the north and another near the intersection of Kiefer Road and Eagles Nest Road at the southwest corner of the site. Additionally, large volumes of fill were placed onsite during construction of the Folsom South Canal.

Fill berms south of Mather Lake

Soil piles at southwest corner of site

- What appeared to be a well standpipe was observed near the southwest corner of the property.

Please refer to Figures 2, 3a and 3b for more information and images of specific areas of the site.

2.5 GEOLOGY

The site is located in the Great Valley geomorphic province. The Great Valley is an elongate, northwest-trending structural trough bound by the Coast Range on the west and the Sierra Nevada on the east. The Great Valley has been and is presently being filled with sediments primarily derived from the Sierra Nevada.

The site is mapped as Tertiary Laguna Formation (Wagner 1987). The Laguna Formation is described as interbedded alluvial gravels, sand, and silt. The gravels and cobbles of this formation are dominated by quartz and the matrix of the gravelly units are finer sediments and generally contain more than 25 percent feldspar. The estimated thickness of the Laguna formation generally exceeds about 60 meters near Oroville and thins to about 20 meters south of Sacramento.

2.6 SEISMICITY

Figure 4 shows the site location relative to known, mapped active faults. Generally, a fault is considered active if it has ruptured within the Holocene epoch (last 11,700 years). The following table summarizes the distances to mapped, active regional faults within approximately 60 miles that are shown on the California Geological Survey Fault Activity Map (2010).

TABLE 2.6-1
Approximate Distances to Regional Active Faults

Fault	Distance (miles)	MCE Magnitude[1]
Dunnigan Hills	41	6½
Green Valley	53	6¾
Clayton/Marsh Creek	56	No Data
Concord	58	6½
West Napa	60	6½
Cleveland Hill	60	6½

[1]Estimated Maximum Credible Earthquake Magnitude, Mw

2.7 SUBSURFACE CONDITIONS

Though our scope of work did not include subsurface explorations, we reviewed several ENGEO reports (see Section 2.3) that included nearby subsurface data. Based on the site geology and the nearby subsurface data in the same geologic formation, we anticipate the subsurface will be dominated by stiff to hard, low plasticity silts and clays. Gravel lenses, cemented sands and pockets of relatively highly expansive clays may also be expected at variable locations and depths across the site. With our understanding of the Laguna formation, we would anticipate these conditions extending to a depth of approximately 50 to 60 feet.

Future design-level geotechnical reports will include subsurface explorations and specific laboratory testing to determine the actual soil conditions.

2.8 GROUNDWATER CONDITIONS

Below we present groundwater elevation data from the California Department of Water Resources website for several nearby wells within approximately one mile of the site.

TABLE 2.8-1
Groundwater Level Data[1]

Well ID	Approximate Depth to Groundwater (feet)	Approximate Groundwater Elevation (feet)	Date of Last Reading
08N07E18E002M	136.8	-9.3	October 2011
08N07E07K001M	116	27	March 1993
08N06E25J002M	158.4	-16.9	October 2011
08N07E20J001M	131.3	35.2	March 2004

[1]From DWR Website: http://www.water.ca.gov/waterdatalibrary/index.cfm

Based on this data and other in-house reports we have for the vicinity of the site, we estimate the depth of free groundwater is over 100 feet below the ground surface. Fluctuations in the level of groundwater may occur due to variations in rainfall, irrigation practice, and other factors not evident at the time measurements were made.

3.0 CONCLUSIONS

Based on our research and site observations, we did not find any significant geotechnical constraints that would preclude development. The primary geotechnical concerns that could affect development include existing fills, expansive soils, perched groundwater, and to a lesser extent, seismicity. We summarize our conclusions below.

3.1 EXISTING FILL

We recommend that existing fill be removed to competent native soil, as determined by ENGEO. As described in Section 2.1, Site Background, fill was spread across a large portion of the site during construction of the Folsom South Canal in the late 1960s and early 1970s. According to Sacramento County representatives, much of the fill may have been placed in a layer less than 1 foot thick. Estimated fill extents, based on a 1971 aerial photograph, are shown on Figure 2. The lateral extent and depth of fill will vary. Future design-level geotechnical work, including subsurface explorations, will help to further identify fill areas and depths and provide specific details for remedial earthwork.

Non-engineered fills can undergo excessive settlement, especially under new fill or building loads. Without proper documentation of existing fill placed on the site, we recommend complete removal and recompaction of the existing fill. As development plans are formalized, subsurface exploration would be necessary to delineate the type, limits, and quality of the fill. We present preliminary fill removal recommendations in Section 4.1.

3.2 EXPANSIVE SOIL

The clayey soil in this region can have medium to high expansion potential with variations in moisture content. Expansive soils shrink and swell as a result of seasonal moisture fluctuations or changes in irrigation practices. This can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Building damage due to volume changes associated with expansive soils can be reduced through proper compaction, selective grading and proper foundation design. The design-level exploration should include soil sampling and laboratory testing to evaluate the expansion potential of the site soil.

3.3 STATIC AND PERCHED GROUNDWATER

It does not appear that the static groundwater level beneath the site will affect the proposed development. However, perched water can:

1. Impede grading activities.

2. Cause moisture damage to sensitive floor coverings.

3. Transmit moisture vapor through slabs causing excessive mold/mildew build-up, fogging of windows, and damage to computers and other sensitive equipment.

4. Cause premature pavement failure if hydrostatic pressures build up beneath the section.

The design-level geotechnical report should provide details to mitigate construction and performance issues associated with perched water.

3.4 2010 CBC SEISMIC DESIGN PARAMETERS

For preliminary consideration, we provide the 2010 California Building Code (CBC) seismic parameters in Table 3.4-1 below.

TABLE 3.4-1
2010 CBC Seismic Design Parameters

Parameter	Design Value
Site Class	D
0.2 second Spectral Response Acceleration, S_S	0.45
1.0 second Spectral Response Acceleration, S_1	0.21
Site Coefficient, F_A	1.44
Site Coefficient, F_V	1.98
Maximum considered earthquake spectral response accelerations for short periods, S_{MS}	0.65
Maximum considered earthquake spectral response accelerations for 1-second periods, S_{M1}	0.42
Design spectral response acceleration at short periods, S_{DS}	0.43
Design spectral response acceleration at 1-second periods, S_{D1}	0.28
Long period transition-period, T_L	12

3.5 GEOLOGIC HAZARDS

Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be classified as primary and secondary. The primary effect is ground rupture, also called surface faulting. The common secondary seismic hazards include ground shaking and ground lurching. The following sections present a discussion of these hazards as they apply to the site. Based on topographic and lithologic data, the risk of regional subsidence or uplift, soil liquefaction, lateral spreading, landslides, tsunamis, flooding or seiches is considered low to negligible at the site.

3.5.1 Ground Rupture

Since there are no known active faults crossing the property and the site is not located within an Earthquake Fault Special Study Zone, it is our opinion that ground rupture is unlikely at the subject property.

3.5.2 Ground Shaking

An earthquake of moderate to high magnitude generated within the Northern California region could cause considerable ground shaking at the site, similar to that which has occurred in the past. To mitigate the shaking effects, all structures should be designed using sound engineering judgment and the 2007 California Building Code (CBC) requirements, as a minimum.

3.5.3 Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. Loose sands were not encountered in previous borings along Sunrise Boulevard just to the east of the site. In addition, regional groundwater is at a depth of more than 100 feet. For these reasons and based upon engineering judgment, it is our opinion that the potential for liquefaction at the site is low during seismic shaking. This preliminary finding should be confirmed by subsurface explorations and laboratory during future design-level geotechnical investigations.

4.0 PRELIMINARY RECOMMENDATIONS

The preliminary recommendations included in this report, along with other sound engineering practices, should be incorporated as a part of planning for the project. Once detailed development plans have been prepared, we should be retained to provide a design-level geotechnical exploration report for the site.

4.1 EXISTING FILL MITGATION

Existing non-engineered fills should be removed to competent native soil, as determined by ENGEO. Future design-level geotechnical work, including subsurface explorations, will help to identify specific fill areas and depths and provide details for remedial earthwork. Preliminary earthwork recommendations are presented in Section 4.4.

4.2 EXPANSIVE SOILS

Based on the geologic formation and other explorations we have conducted in the general vicinity of the project, we anticipate that isolated pockets of expansive clay will be encountered at various locations across the site. Because expansive soils can cause distress to foundations, floor slabs, pavements, sidewalks, and other improvements that are sensitive to soil movement, mitigation will be required. It may be practical, in our opinion, to selectively grade the site so that no expansive

clay is placed in the upper 1 to 2 feet of building pads. This would sufficiently mitigate expansive soil issues and allow the use of conventional shallow footings for one- and two-story single-family structures.

If future exploration reveals a greater abundance of expansive soils such that selective grading is not practical, we would recommend the use of properly designed post-tensioned mat foundations, where practical.

4.3 EXISTING WELL

We observed at least one existing well standpipe during our site reconnaissance. Unless the well will become a part of the future development, it should be abandoned by a licensed well drilling contractor in accordance with Sacramento County Environmental Health Department regulations. Removal of wells will likely require permitting through Sacramento County.

4.4 EARTHWORK

We recommend scarification, moisture conditioning and compaction of the soil prior to fill placement, following cutting operations, and in areas left at grade. For relatively low expansion potential native or import soil, we recommend compaction of fill to at least 90 percent relative compaction (ASTM D-1557) and compaction of the upper 6 inches of finish pavement subgrade to at least 95 percent relative compaction prior to aggregate base placement. Soil should be compacted at a minimum of 1 percentage point over optimum moisture content. Where expansive native or import soil is used, we recommend that fill be compacted within a range of 87 to 92 percent relative compaction at a moisture content at least 4 percentage points above optimum.

Landscape fills can generally be compacted to minimum 85 percent relative compaction.

We recommend that the design-level report include sampling and testing to determine the expansion potential of near-surface soil and soil that will be used as engineered fill. In general, we anticipate the onsite soil should be suitable as fill material provided it is processed to remove concentrations of organic material, debris, and particles greater than 6 inches in maximum dimension. Imported fill should meet the above requirements and have a plasticity index less than 12.

4.5 RESIDENTIAL FOUNDATIONS

Based on our understanding of the proposed improvements, we present below our preliminary recommendations for single- and multi-family residential structures under three stories in height.

4.5.1 Conventional Footings with Slab On Grade

Conventional footings with slab on grade may be appropriate for areas with non-expansive soils or import fills. On a preliminary basis, we anticipate approximately 1 to 2 feet of non-expansive

soils may be necessary to mitigate the effects of expansive soils. In these areas, the minimum depth of continuous or isolated spread footings would generally be 12 inches below lowest adjacent grade. Interior floor slabs should be underlain by a minimum of 4 inches of crushed rock and have a minimum thickness of 5 inches and be adequately reinforced to resist minor soil movement.

4.5.2 Post-Tensioned Mat Foundations

From a structural performance standpoint, post-tensioned (PT) foundations are superior for limiting structural damage resulting from expansive soil movement. In addition, PT slabs reduce problems with non-geotechnical issues such as shrinkage cracking and slab moisture transmission. We anticipate the site soil conditions would likely result in a 10- to 12-inch-thick post-tensioned mat. PT mats should be designed based on the procedure presented by the Post-Tensioning Institute "Design of Post-Tensioned Slabs-on-Ground" Third Edition, including appropriate addenda.

4.6 RETAIL AND COMMERCIAL BUILDING FOUNDATIONS

We anticipate typical one- to three-story wood, steel-frame or concrete tilt-up retail and commercial construction may be supported on continuous and isolated shallow footings in combination with 1 to 2 feet of non-expansive engineered fill. Alternatively, a 12- to 18-inch-thick layer of chemically treated soil may be utilized in areas with expansive subgrade soils. The footing and concrete slab recommendations presented in Section 4.5.1 would apply to retail and commercial construction. If unusually high structural loads or other unique designs are incorporated, deeper footings or alternative recommendations may be needed.

4.7 FLEXIBLE PAVEMENT

On a preliminary basis, we judged an R-value of 5 appropriate for preliminary design. The design-level report should verify this value as appropriate. The following preliminary pavement sections have been determined for a Traffic Index of 5 to 8, an assumed R-value of 5, and in accordance with the design methods contained in Topic 630 of Caltrans Highway Design Manual.

TABLE 4.7-1
Preliminary Pavement Sections

Traffic Index	Hot Mix Asphalt (inches)	Class 2 Aggregate Base (inches)
5	3	10
6	3	14
7	4	16
8	4½	19

The above preliminary pavement sections are provided for estimating only. We recommend the Traffic Index and minimum pavement sections be confirmed by the Civil Engineer and with Sacramento County.

5.0 DESIGN GEOTECHNICAL REPORT

This report presents preliminary geotechnical findings, conclusions, and recommendations intended for preliminary planning purposes only. Design-level geotechnical explorations and assessments should be performed when development plans are finalized. Design-level exploration should be performed to further evaluate the presence of undocumented fill, the potential for expansive soils, liquefaction and other geotechnical hazards. Soil samples should be obtained and tested for engineering properties to evaluate geotechnical hazards and corrosion potential of the onsite soil. Specific recommendations for site grading and the design and construction of foundations and utilities should be included in the design-level report.

6.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

This report presents preliminary geotechnical recommendations for design of the improvements discussed in Section 1.2 for the Mather South project. It is the responsibility of the owner to transmit the information and recommendations of this report to the appropriate organizations or people involved in design of the project, including but not limited to developers, owners, buyers, architects, engineers, and designers. The conclusions and recommendations contained in this report are solely professional opinions and are valid for a period of no more than 2 years from the date of report issuance.

We strived to perform our professional services in accordance with generally accepted geotechnical engineering principles and practices currently employed in the area; no warranty is expressed or implied. There are risks of earth movement and property damages inherent in building on or with earth materials. We are unable to eliminate all risks or provide insurance; therefore, we are unable to guarantee or warrant the results of our services.

This report is based upon field observations, photos, and review of documents available at the time of report preparation. This document must not be subject to unauthorized reuse, that is, reusing without written authorization of ENGEO. Such authorization is essential because it requires ENGEO to evaluate the document's applicability given new circumstances, not the least of which is passage of time.

FIGURES

Figure 1 – Vicinity Map
Figure 2 – Site Plan
Figure 3a – Site Photographs
Figure 3b – Site Photographs
Figure 4 – Regional Geologic Map
Figure 5 – Regional Faulting and Seismicity

FIGURES

BASE MAP SOURCE: GOOGLE EARTH

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VICINITY MAP

MATHER SOUTH

RANCHO CORDOVA, CALIFORNIA

PROJECT NO.: 9546.001.000		FIGURE NO. 1
SCALE: AS SHOWN		
DRAWN BY: SRP	CHECKED BY: MG	

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ORIGINAL FIGURE PRINTED IN COLOR

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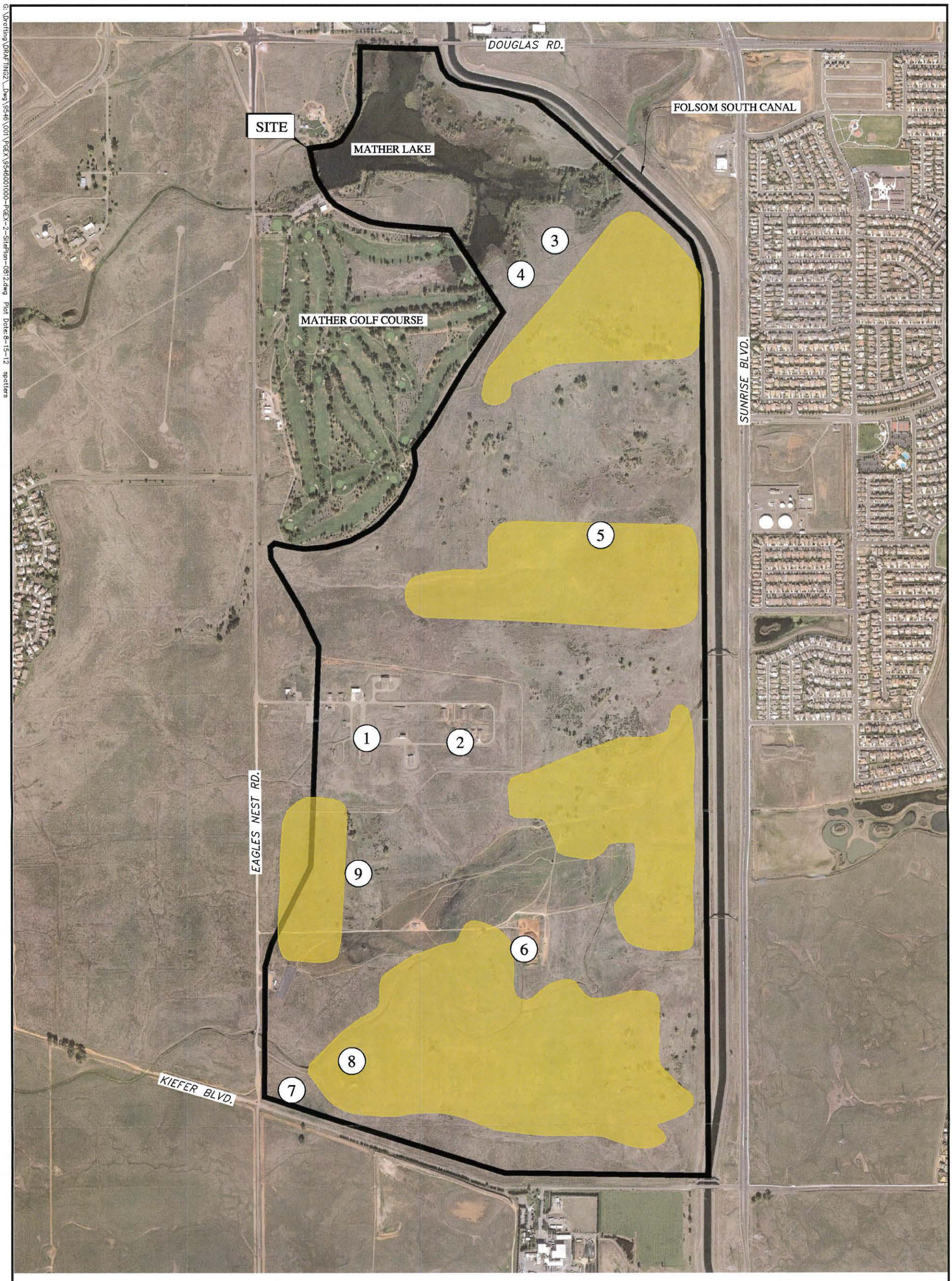

EXPLANATION

ESTIMATED UNDOCUMENTED FILL EXTENT BASED ON 1971 AERIAL PHOTO

9 APPROXIMATE LOCATION OF PHOTOGRAPH

N

0 FEET 1000

0 METERS 500

BASE MAP SOURCE: GOOGLE EARTH, 2011

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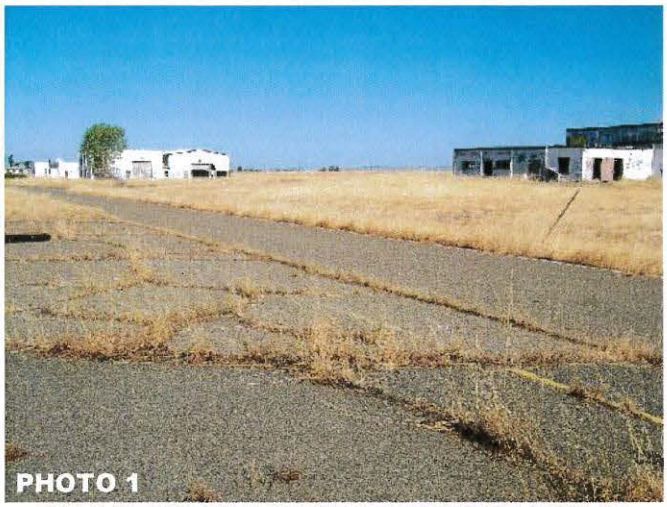
SITE PLAN

MATHER SOUTH

RANCHO CORDOVA, CALIFORNIA

PROJECT NO.: 9546.001.000		FIGURE NO. 2
SCALE: AS SHOWN		
DRAWN BY: SRP	CHECKED BY: MG	

ORIGINAL FIGURE PRINTED IN COLOR



CENTRAL PORTION OF THE FORMER WEAPONS STORAGE AREA

TREES SOUTH OF CONCRETE BUNKERS

CIRCULAR BERM FEATURE ADJACENT TO MATHER LAKE

MATHER LAKE LOOKING NORTH

MATHER LAKE LOOKING NORTHEAST

OBSERVATION PLATFORM

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SITE PHOTOGRAPHS

MATHER SOUTH

RANCHO CORDOVA, CALIFORNIA

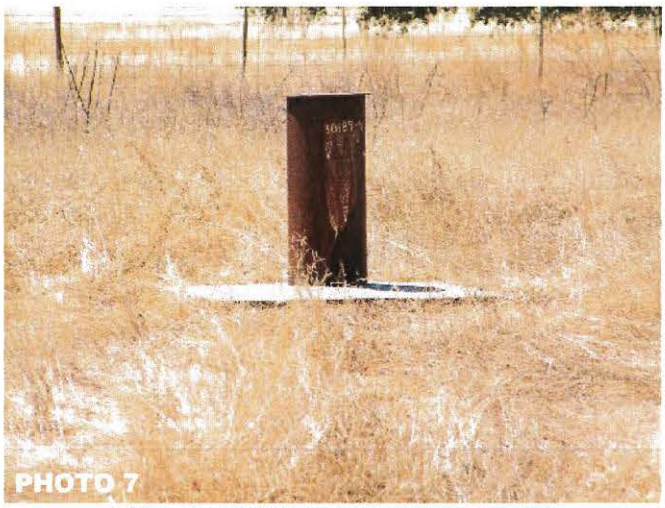
PROJECT NO.: 9546.001.000		FIGURE NO. 3A
SCALE: AS SHOWN		
DRAWN BY: SRP	CHECKED BY: MG	

G:\Drafting\DRAFTING2_Dwg\9546\001\PGEX\9546001000-PGEX-3A-SitePhotos-0812.dwg Plot Date: 8-15-12 spotters

ORIGINAL FIGURE PRINTED IN COLOR

FORMER ORDNANCE BURNING AND
DETONATION AREA XE404 - OT-69

FORMER ORDNANCE BURNING AND
DETONATION AREA XE404 - OT-69



WELL STANDPIPE AT SOUTHWEST CORNER

FORMER SMALL ARMS FIRING RANGE AREA OT-86

9 MODEL PLANE FIELD LOOKING SOUTH

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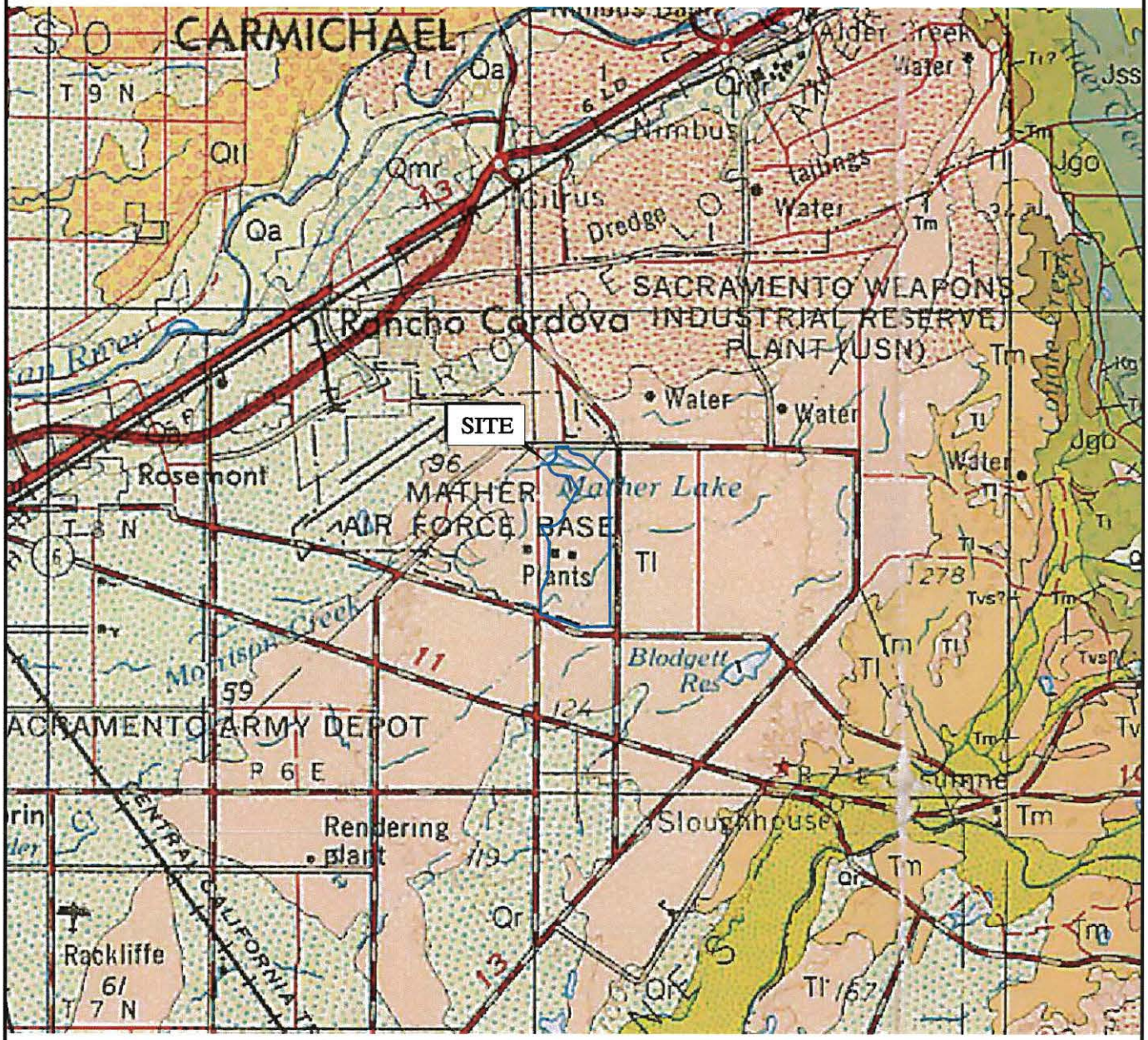
SITE PHOTOGRAPHS
MATHER SOUTH
RANCHO CORDOVA, CALIFORNIA

PROJECT NO.: 9546.001.000		FIGURE NO. 3B
SCALE: AS SHOWN		
DRAWN BY: SRP	CHECKED BY: MG	

G:\Drafting\DRAFTING2_Dwg\9546\001\PGEX\9546001000-PGEX-3B-SitePhotos-0812.dwg Plot Date: 8-15-12 spatters

ORIGINAL FIGURE PRINTED IN COLOR



EXPLANATION

Tl LAGUNA FORMATION

BASE MAP SOURCE: WAGNER 1981

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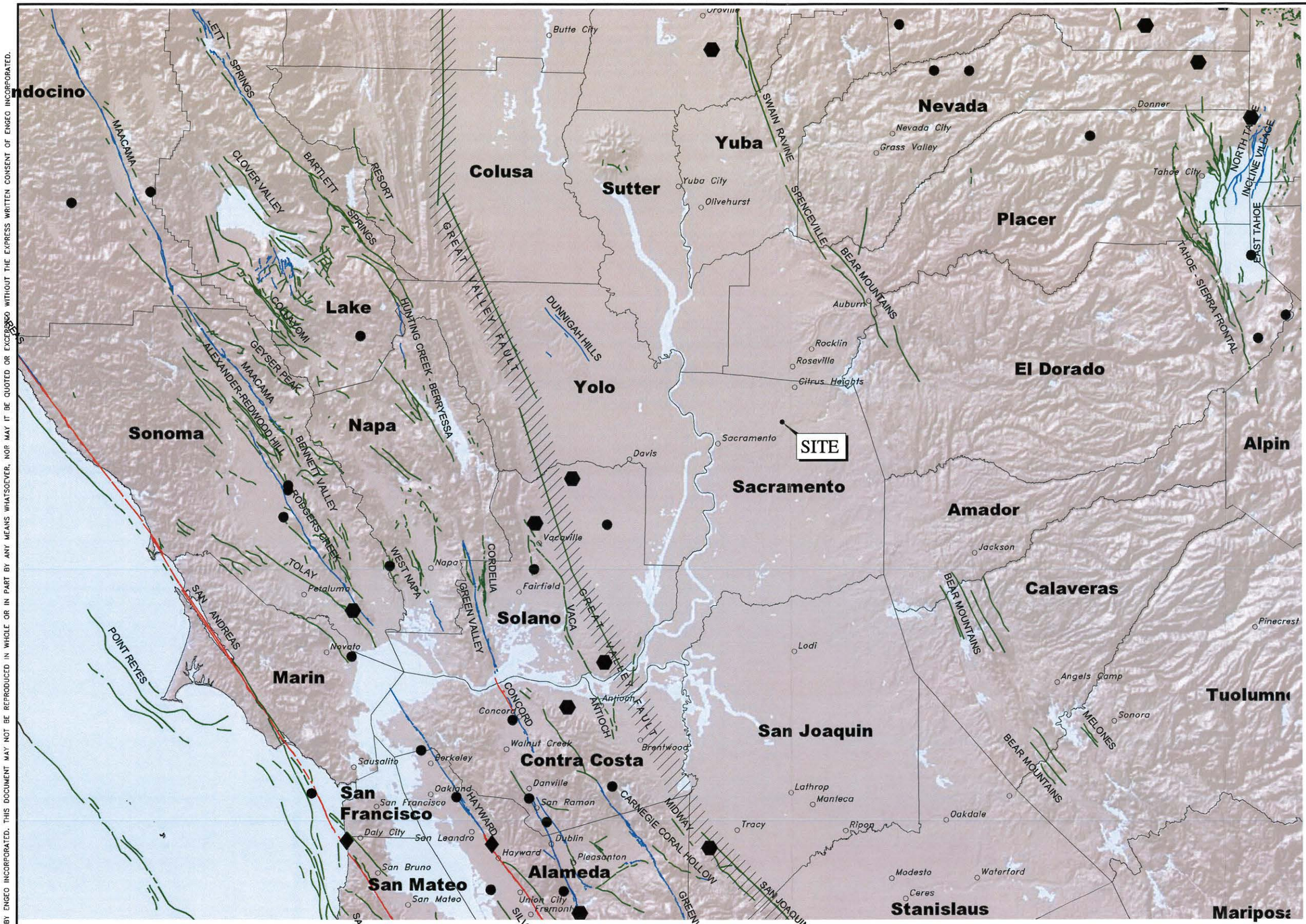
REGIONAL GEOLOGIC MAP
MATHER SOUTH
RANCHO CORDOVA, CALIFORNIA

PROJECT NO.: 9546.001.000	FIGURE NO. 4
SCALE: AS SHOWN	
DRAWN BY: SRP	CHECKED BY: MG

G:\Drafting\DRAFTING2_Dwg\9546\001\PGEX\9546001000-PGEX-4-TopographicMap-0812.dwg Plot Date: 8-15-12 spatters

ORIGINAL FIGURE PRINTED IN COLOR



BASE MAP SOURCE:
U.S.G.S. 1-ARC SECOND S.R.T.M. DATABASE
U.S.G.S. QUATERNARY FAULT DATABASE, MARCH, 2006
U.S.G.S. HISTORIC EARTHQUAKE DATABASE (1800-2000)

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RANCHO CORDOVA, CALIFORNIA

PROJECT NO.: 9546.001.000		FIGURE NO 5
SCALE: AS SHOWN		
DRAWN BY: SRP	CHECKED BY: MG	

G:\Drafting\DRAFTING2_Dwg\9546\001\PGEX\9546001000-PGEX-5-FaultMap-0812.dwg Plot Date:8-15-12 spatters

ORIGINAL FIGURE PRINTED IN COLOR