

CAMPUS PARK WEST PROJECT

APPENDIX P

MINERAL RESOURCE TECHNICAL REPORT

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FINAL SUBSEQUENT
ENVIRONMENTAL IMPACT REPORT

June 18, 2014

MINERAL RESOURCE TECHNICAL REPORT,
CAMPUS PARK WEST PROPERTY, Tract 5424
SAN DIEGO COUNTY, CALIFORNIA
(GPA 05-003, SPA 05-001, REZ 05-005,
TM 5424, ER 05-02-009)

Prepared for:

**COUNTY OF SAN DIEGO,
DEPARTMENT OF LAND USE**

c/o Pappas Investments
2020 L Street, 5th Floor
Sacramento, California 95814

Project No. 042410-001

September 2, 2009



Leighton and Associates, Inc.

A LEIGHTON GROUP COMPANY



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Project No. 042410-001

To: County of San Diego Department of Land Use
c/o Pappas Investments
2020 L Street, 5th Floor
Sacramento, California 95814

Attention: Mr. Thad Johnson

Subject: Mineral Resource Technical Report, Campus Park West Property, Tract 5424, San Diego County, California
(Environmental Log No. _____)

In accordance with your request, we have performed a review and prepared this Mineral Resource Technical Report for the Campus Park West, (Tract 5424) property located in San Diego County, California. This report has been prepared for the County of San Diego, per the County of San Diego Land Use and Environment Group's Guidelines for Mineral Resource Technical Report Format and Content requirements.

If you have any questions regarding our report, please contact this office. We appreciate this opportunity to be of service.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.

Michael R. Stewart, CEG 1349
Principal Geologist, Vice President



Distribution: (4) Addressee

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1.0 EXECUTIVE SUMMARY

In accordance with your request and authorization, this report presents the results of our review and assessment of the mineral resources for the approximately 118-acre Campus Park West property (County of San Diego Tract 5424) in northern San Diego County, Site Location Map Figure 1. This report has been prepared for the County of San Diego, per the County of San Diego Land Use and Environment Group's Guidelines for Mineral Resource Technical Report Format and Content requirements. The scope of services included review of the site location relative to the current Mineral Resource Zonation (MRZ) and designations per the California Surface Mining and Reclamation Act (SMARA) of 1975.

Topographically, north of State Route 76 (SR76) the site consists of a series of gently sloping terraces that are bisected by two relatively narrow drainages. The northern drainage flows to the east to a broad southerly flowing drainage. The drainage in the southwest drains to the south and the San Luis Rey River valley. The 3 parcels south of SR-76, which are separated by existing roadways, are primarily located within the southwesterly flowing San Luis Rey River Valley.

The majority of the site geology consists of older alluvium or terrace deposits. The lower elevations and southern portion include accumulations of more recent alluvial soils that include loose clays, silts, sands and lesser amounts of gravels. The San Luis Rey River Valley located along the southern border contains known mineral deposits that have been locally mined nearby. As a result, this offsite area is designated as MRZ-2 by the California Geological Survey. A majority of the three parcels located south of SR-76 are located within this known mineral resource zone. The portions of the Campus Park West site north of SR-76, and a small portion to the south, have been mapped as a MRZ-3 mineral resource zone, which means it is an area containing mineral significance of which cannot be completely evaluated from existing data. The property boundaries and extent of mapped mineral resource zones are shown on Figure No. 2, State Mapped Mineral Resource Zones.

No mining operations were observed during our site visit nor are we aware of any previous onsite mining operations. However, successful sand and gravel mining operations are well documented along the San Luis Rey River drainage, and at least 5 sites have historically been mined within a few miles of the Campus Park West property. All but one (the Pankey Ranch/Rosemary Mountain site) have been terminated when they were unable to get permits to continue to mine primarily due to environmental reasons.



2.0 INTRODUCTION

2.1 Purpose and Scope

This report presents the results of our review and assessment of the mineral resources for the approximately 118-acre Campus Park West property in the Fallbrook area of northern San Diego County. The scope of services included:

- A review of in-house geotechnical reports and aerial photographs pertinent to the area (Appendix A, rear of text).
- Review of readily available geotechnical reports for properties in the same general area.
- A reconnaissance of the site.
- Review of the site location relative to the current Mineral Resource Zonation (MRZ) and designations per the California Surface Mining and Reclamation Act (SMARA) of 1975.
- Preparation of this report summarizing the results of our technical study, including:
 - A discussion of the MRZ's located on, adjacent, and within the vicinity of the project site.
 - A discussion of all mine; quarries, and gemstone deposits (both historic and existing) within the vicinity of the project.
 - A discussion of the regional and local geologic setting as it pertains to any mineral resources identified.
 - Analysis of onsite and offsite impacts to the mineral resource, including indication of whether any mineral resources on the project are now or would be minable, processable, and marketable in the near future. This analysis includes both existing and proposed conditions.
 - A discussion of the economic value and significance of any impacts (if present) considering land-use compatibility with the proposed project.
 - A discussion of any appropriate mitigation measures and project design considerations.



2.2 Project Location and Description

The property is located northeast of the interchange of the Pala Road (SR-76) and the Interstate 15 (Figure 1) in the Fallbrook area of San Diego County. The Campus Park West Land Plan as it currently exists proposes to develop fourteen planning areas integrating light industrial, planned office, commercial, 355 residential units, and open space land uses within the 118-acre area.

It is anticipated the development of the site will be accomplished with mass grading, with cuts in the higher elevations and fill areas anticipated in lower site areas. Figure 3 (rear of text) illustrates approximate parcel boundaries, over an aerial photographic base. Figure 4 is a composite land plan showing proposed land usage in the area including the adjacent Campus Park, Palomar Community College District, and Meadowood properties.



3.0 EXISTING CONDITIONS

3.1 Topographic Setting

The site is located within the coastal subprovince of the Peninsular Ranges Geomorphic Province, near the western edge of the southern California batholith. The topography at the edge of the batholith changes from the rugged landforms developed on the batholith to the more subdued landforms, which typify the softer sedimentary formations of the coastal plain. Primarily, the site is underlain by the Quaternary-aged Older Alluvium/Terrace deposit over granitic rocks of the southern California batholith with younger alluvial deposits south of SR-76 and in the relatively narrow drainages in the northern portion. Erosion and regional tectonic uplift created the valleys and ridges of the area.

Natural drainage in the area is controlled by a broad canyon that borders the east side of the northern portion of the site and drains in a south westward direction into the southwest flowing San Luis Rey River Valley. The narrow onsite drainages flow into these bigger features.

Vegetation on the site is generally sparse with localized chaparral and sage scrub in the upper elevations with localized portions of the alluvial areas thickly vegetated. Some portions of the site have previously cultivated and vegetation is sparse in these areas.

3.2 Land Use

Existing developments on the northern portions of the site include some on site dirt roads, a paved "airfield" utilized for model airplanes, and a few small scattered structures. To the south, the parcels are undeveloped but separated by a series of paved roads that are to remain.

The proposed land use will consist of a residential community with a mix of Single-family and multi-family housing, light industrial, professional office, and highway commercial, and park with supporting infrastructure and open space.

Adjacent developments will include the proposed Palomar College, Campus Park, and Meadowood Developments. The extent of these adjacent developments are shown on the attached Figure No. 4. In addition to the planned interior roads, Pala Mesa Drive will be extended from the existing bridge which crosses I-15 the fire station just west of the freeway.



3.3 Geology

Based on our site visit and review of our referenced geologic maps (Appendix A), the site is mantled Older and younger alluvial deposits. These units are underlain at depth by what has been mapped as Cretaceous-aged Granitic Rock (Tonalites and Granodiorites). The generalized geologic map units are illustrated as shown on Figure 5, based on mapping published by the California Geologic Survey (CGS, 2000a and 2000b). The following is a discussion of the generalized geologic units underlying and adjacent to the site.

3.3.1 Active (younger) Alluvium (Map Symbol-Qa)

Holocene-aged (younger than 10,000 years old), alluvial deposits are mapped in the low-lying drainages of the property, generally in the southern portion of the site and in the narrow drainages and along the edge in the northern portion. These unconsolidated (loose) clays, silts, sands have accumulated in the lower-most drainages. The southern portions of the site have been mapped as MRZ-2 by the State. The entire northern portion of the site (north of SR-76) has been mapped as MRZ-3 by the State. however, the areas of younger alluvium in this area is generally the same geologic unit within the San Luis Rey River Valley which has been mapped as MRZ-2. For purposes of this report, the active (younger) alluvium in this area is assumed to be of MRZ-2 quality.

3.3.2 Older Alluvium/Terrace Deposits (Map Symbol-Qoa)

Older alluvium/Terrace Deposits (younger than 500,000 years old) mantle a majority of the northern portions of the site. These sediments are differentiated from the younger deposits due to a greater degree of consolidation. For example, these deposits tend to be weakly cemented and poorly sorted, commonly containing interfingering silts, clays, and fine sands that have been consolidated with age. Such deposits are also mapped to the west of the site in the area of Pala Mesa.

These deposits commonly support such developments, as they traditionally form relatively flat terraces of gently topographic relief elevated above the alluvial valley bottoms. Older alluvial deposits are generally not classified as MRZ-2 outright due to their variable composition, and fine-grained component. These areas are currently mapped as MRZ-3 (Figure No. 2).



3.3.3 Granitic Rocks (Map Symbols- Ki, Kt, and Kgb)

Based on the regional geologic map (Figure 5) areas to both the east and west of the site are underlain by granitic rock. These units are not anticipated to be encountered as part of the site development process. These units which are not mapped on the site but which are anticipated to underlie at depth the alluvial soils of the site consist of granodiorites, tonalities and gabbro.

The closest mapped granitic rock is the hill area immediately west of the southern portion of the site. This area has been mapped as a tonalite.

The area to the east is underlain by a gabbroic unit (Kgb) which comprises Monserate Mountain, as well as much of the San Marcos Mountains, to the south. These units are typically highly weathered and because they contain low amounts of silica (quartz) no significant aggregate extraction operations are known to have operated in this unit.

3.4 Mineral Resource Potential

As mandated by the Surface Mining and Reclamation Act of 1975, the California State Mining and Geology Board classifies California mineral resources with the Mineral Resource Zones (MRZ's) system. These zones have been established based on the presence or absence of significant sand and gravel deposits and crushed rock source area, e.g., products used in the production of cement. The classification system emphasizes Portland Cement Concrete (PCC) aggregate, which is subject to a series of specifications to ensure the manufacture of strong durable concrete. The following guidelines are presented in the mineral land classification for the region (CGS, 1982 and 1996b).

- MRZ-2 - Areas where adequate information indicates that significant mineral deposits are present or where it is judged that there is a high likelihood for their presence.
- MRZ-3 - Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- MRZ-4 - Areas where available information is inadequate for assignment to any other MRZ zone.



3.4.1 MRZ-2 Mapped Areas

The extent of zones classified as MRZ-2 in the vicinity of the Campus Park West site are identified on the Figures 2 and 6 (Rear of Text). It generally corresponds with the east-west trending to the San Luis Rey River drainage area. This material includes a relatively thick accumulation of alluvial deposits, with an irregular, organic boundary defined by the low-lying topographic drainage margin. Geologically, this area is generally characterized by the presence of younger (Quaternary-aged) river channel, floodplain, and terrace deposits that have been eroded from the older (Tertiary to Cretaceous-aged) bedrock units, transported, and re-deposited. They consist of naturally loose mixtures of sands and rounded gravels.

The greater San Luis Rey River Valley has been identified as a resource area contains an estimated 1.6 billion tons of sand and 1.2 billion tons of coarse aggregate through the 14,607 acre drainage basin (CGS, 1982). The Campus Park West site is located northwest of what are identified as Sectors C and D of the San Luis Rey Resource area (Figure 6). Sector C comprises the middle reaches of the San Luis Rey River Channel which includes Bonsall eastward to less than 1 mile east of the Interstate 15, covering about 2,160-acres. Sector D is a 3,740 acre area mapped between the Pauma Valley on the upstream end, to the Interstate 15/Highway 395 corridor on the downstream end. The DMG has estimated 990 million tons of quality (PCC Grade) aggregate resources in Sectors C and D, including 660 million tons of sand and 330 million tons of gravel (CGS, 1982).

In the northern portion of the site, because the mapped active alluvial (younger) areas are correlative geologically to MRZ-2 mineral resources (Sectors C and D), they are considered as such for this report. These areas are easily identifiable on the site geologic map and are labeled as “Younger Alluvium” on Figure 5.

- Fenton Sand Mine

A short distance southwest of the Campus Park West site is the Fenton Sand Mine which originated as a 27 acre sand mine initially permitted in 1969 (Chester, 2000). In 1975 a 30-year Major Use Permit (74-088) was granted to allow extraction from an expanded 211-acre area. It was operated by the H.G. Fenton Company (CGS, 1983) through November of 1998, when Hanson Aggregates assumed responsibility of the operation. They continued to mine and process sand and gravel from the 10331 Pala Road address through 2000. The discovery of endangered species in areas bordering the operation, including the Arroyo Toad, the Least Bell’s Vireo, and the Southwestern Willow flycatcher, evidently limited Hanson’s ability to expand the mine (Chester, 2000). Hanson closed the



sand and gravel processing plant as of September 15, 2005 (CRWCCB, 2006). Although the plans for long-term usage of the site have been debated, the site does include a 207-acre conservation easement established by Hanson in accordance with their Clean Water Act Section 404 permit. The site has therefore been adopted back into the San Luis Rey fluvial ecosystem as overseen by the U.S. Fish and Wildlife Service, the Army Corps of Engineers, and the California Department of Fish and Game.

- Pankey Pits

The closest known historical aggregate extraction operation is located to the southeast of the site, closer to the San Luis Rey River. This property was originally known as the Pankey Pits, where the Marron Brothers extracted sand and gravel from the San Luis Rey river drainage (CGS, 1983). Like many in-stream operations, permitting processes and regulations became increasingly difficult, and the site was entirely inactive by the early 1990's (CGS, 1996). However, an adjacent parcel known as the Pankey Ranch was acquired by Palomar Aggregates in 1997.

- Pankey Ranch/Rosemary's Mountain

In the late 1980's Palomar Grading and Paving acquired a lease on the Pankey Ranch, an elevated hillside immediately north of the Pankey Pits historically operated within the San Luis Rey River. The approximate 100-acre site is a small peak known as Rosemary's Mountain, ranging in elevation of approximately 300 to 990 feet (Figure 6). In 1989, Palomar submitted a petition to the State of California Division of Mines and Geology for a reclassification of the MRZ-3 zoned property to MRZ-2. Based on data provided by Palomar, and confirmed by the CDMG Staff, aggregate from the site met the published Caltrans Standards for Portland cement concrete, asphaltic concrete, base, and sub-base. The mixed aggregate resources demonstrated far exceeded the minimum threshold value of 9.2 million 1988 dollars established by the SMARA and the petition was granted by the State Division of Mines and Geology (CGS, 1989).

The Granite Construction Company has since partnered with Palomar on the project, and a Major Use permit has been obtained. Plans for the rock crushing, extraction of aggregate and operation of an asphalt plant on 38 acres of the 94-acre site are in progress. The operation also includes plans for the improvement/widening of the Pala Road (SR-76). The exact



status of the operation is unknown at the time of the production of this report; however, the widening of the SR-76 is evidently underway (NC Times, 2007b).

3.4.2 MRZ-3 Mapped Areas

Site specific laboratory testing has not confirmed the physical and chemical characteristics of the onsite older alluvial deposits. However, PCC-grade aggregate, successful sand and gravel mining operations are well documented along the San Luis Rey River, drainage in the younger alluvium and designated MRZ-2 areas. Documented historical aggregate extraction operations are identified on Figure 6 and all but one (the Pankey Ranch/Rosemary Mountain site) has been terminated when the operators were no longer able to obtain a permit due to environmental constraints.

Portions of the Campus Park West site and immediately surrounding area are mapped as MRZ-3 by the California Geological Survey and explanation is provided below (CGS, 1983 and 1996). In contrast to MRZ-2 areas where it has been judged that there is a high likelihood of minable, marketable mineral deposits (notably Portland cement and asphaltic concrete aggregate), MRZ-3 areas are areas where the data is not sufficient to evaluate the significance of any potential aggregate deposit. According to explanations presented by the California Division Mines and Geology (CGS, 1982) geologic formations or deposits that do not or have not been utilized for aggregate commonly do not have test data and studies are not available. Such areas mapped as MRZ-3 include a wide variety of areas across all of San Diego County.

The northern portion of Campus Park West Property contains geologic formations mapped as MRZ-3, because these units are in general, more weathered, contain more fines and are less minable and marketable than adjacent known deposits. This area of older alluvial terrace deposits are well differentiated from adjacent areas known to be MRZ-2, such as the San Luis Rey alluvium.

In summary, the majority of the Campus Park West property is not underlain by geologic units traditionally known as desirable, marketable sources units of sand or aggregate suitable for asphaltic concrete or Portland Cement Concrete. However, the areas south of the existing SR-76 have been mapped as MRZ-2. Material within the narrow drainages within the northern portion consists of what appear to be relatively minor deposits of younger alluvium that could be considered to be correlative with the alluvium identified as MRZ-2 in Sectors C and D to the south.



4.0 MINERAL RESOURCE IMPACT ANALYSES

4.1 Methodology for Determination of Significance

Considering the site characteristics described above, their significance is measured against the County of San Diego Department of Land Use Guidelines (DPLU, 2007). These are based on the State CEQA Guidelines, and establish a measurable standard for determining when an impact will be considered significant pursuant to CEQA.

4.1.1 Marketability and Minimum Dollar Value

Portions of the Campus Park West project are situated on areas classified as MRZ-3. The acreage generally includes the northern portions of the site and encompasses approximately 81 acres.

The three parcels south of SR-76 which are separated by existing roadways are mapped as MRZ-2. These areas total approximately 18.2 acres. In addition, the four localized areas north of SR-76 which have been mapped as Qa and also “Younger Alluvium” on the Regional Geologic Map (Figure 5) are mapped as MRZ-3 but could possibly be considered generally similar in composition to the San Luis Rey River areas mapped as MRZ-2. In total this area (north of SR-76) is approximately 16.6 acres and has been assumed to be MRZ-2 material for this report. The remainder of the 118 acres consists of existing roadways south of SR-76.

4.1.2 Land Use Compatibility

With regard to land-use compatibility, we first looked at what existing onsite or offsite uses are present that currently impact the proposed land use and the feasibility of a mining operation. Secondly, we looked at what resource areas may be impacted in the future by the proposed development if they are within a 1,300 foot buffer zone. The remaining guideline for significance determination involves whether or not the deposit is minable or compatible with the present conditions. In order to be minable, it must be considered compatible with existing land uses.

As shown on Figure 4, surrounding land uses include the Interstate 15 Corridor to the west and the SR-76 corridor which crosses the southern portion. In addition, the existing roads on the southern portion of the site are to remain.

To the east, in general land usage is generally rural (with a few scattered residences). In this area however will be the future Campus Park Project, Palomar



College, and Meadowood properties all of which we understand to be nearly through the planning process. There are also the existing nurseries, agricultural plots, and the past sand mines in the upper San Luis Rey drainage (Figure 6). To west, residential usage predominates, with the Pala Mesa golf club and resort is situated opposite the site. To the south are also scattered residences around the perimeter of the site.

Based on cursory review of Environmental Impact Studies performed for the Rosemary's Mountain operation, specific conditions made the Rosemary's Mountain site suitable as a quarry site. These include location on the east-facing flank of Rosemary's Mountain, essentially shielding it from the view and impacts to the Pala Mesa resort and Interstate 15 corridor. The Campus Park West Property is more akin to the Pala Mesa resort, well exposed within clear site and view shed of surrounding areas.

Based on the County of San Diego Guidelines, 1,300 feet has generally been considered the buffer from residences necessary to achieve adequate separation from noise, dust and other characteristics generated by aggregate extraction and processing. Figure 7 also includes a 1,300-foot buffer shown in cross hatching from the existing adjacent residential development. Areas on the Campus Park West site that are within this 1,300 buffer zone are not suitable for reclamation. In addition, Figure 7 includes a 1300 foot buffer from the proposed development of Campus Park West. This figure illustrates what MRZ-2 quality materials may be lost in the future as a result of the development of Campus Park West.

4.2 Conclusions

4.2.1 Significance of Impacts

All of the State mapped MRZ-2 material on site, and most of the assumed MRZ-2 quality material on the site are already within 1300 feet of existing residential developments as shown on Figure No. 7. As a result these materials have already effectively been lost. The remaining area within the site that has been assumed to be of MRZ-2 quality consists two areas each of approximately 3.4 acres in size.

The data regarding the MRZ-3 material to the north is not sufficient to confirm that it is of sufficient quality to warrant extraction. The areas identified as Older Alluvium/Terrace Deposits have been investigated on the adjacent parcel by others (Geocon, 2006) and been found to contain "over 60 feet of medium-dense to dense reddish brown silty to clayey fine to coarse sand." Because of the fine-grained nature and weathered condition of this material it has not been a suitable candidate for extraction on other similar properties.



In conclusion, because of the very limited amount of MRZ-2 quality material on the site and constrains of existing roadways, there is not sufficient available resources to meet the level of significance for mineral resources in the sites existing condition. There are adjacent offsite deposits of MRZ-2 quality material that are within 1,300 feet of the proposed development; however, there are already existing offsite residential properties for which a 1,300 foot buffer again already eliminates the potential for possible future extraction of these areas.

The two areas which remain are both 3.4 acres in size (Figure 7). In order to evaluate the significance of these 6.8 total acres of assumed MRZ-2 material within the site that is potentially recoverable, for conservatism, we have assumed the total area to be recoverable and a potential depth of recovery of 20 feet due to probable groundwater constraints. Even with these conditions, the value of this material is slightly less than eight-million dollars which is well below the County's threshold value of fifteen million dollars (15,000,000.00) and as a result, is not considered a significant impact. In reality because of the irregular shape of each of the parcels and because the depth of alluvium along the borders is likely less the actual value would be even less.



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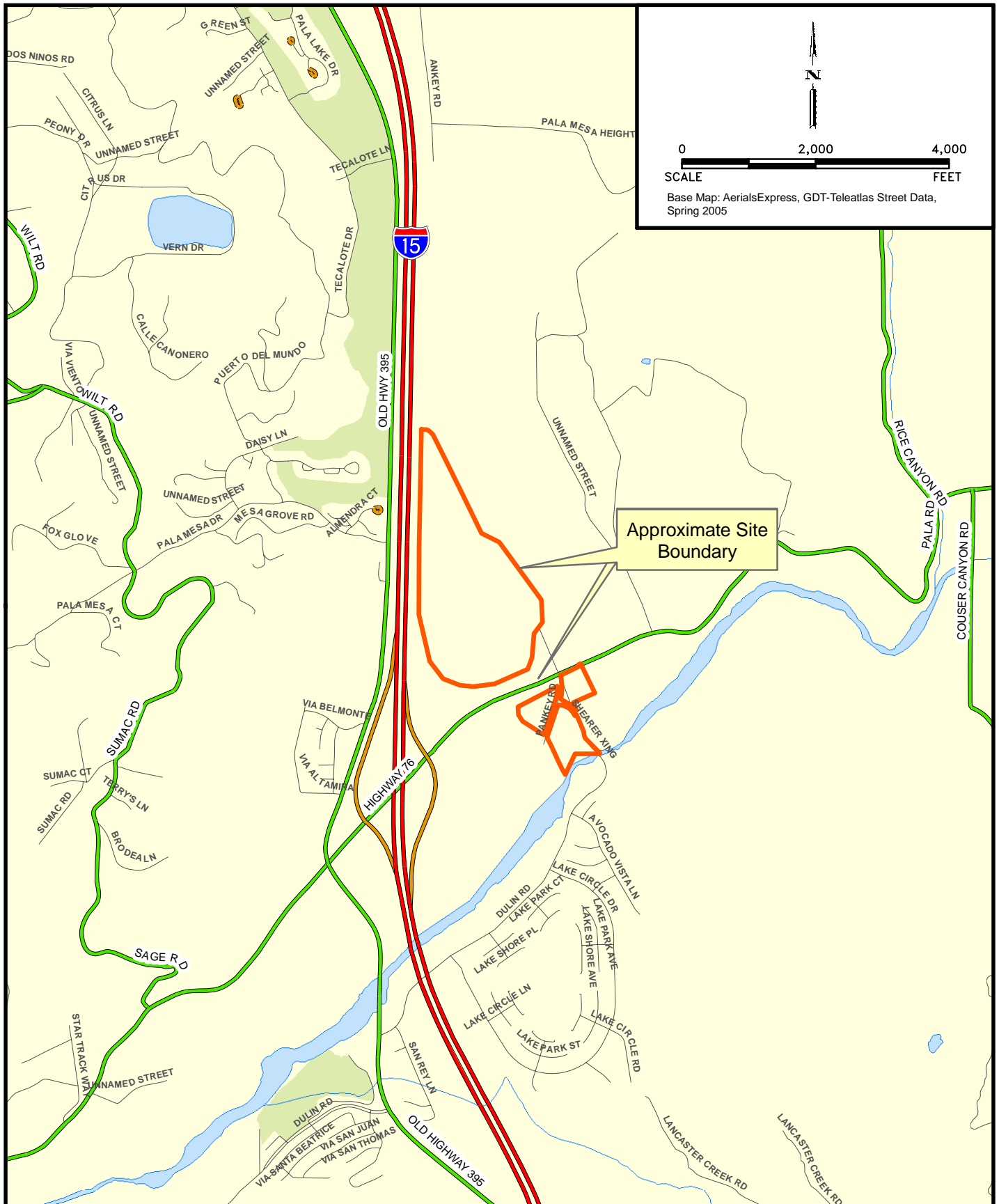
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Aerial Photographs

Date	Source	Flight/Scale	Photo No(s)
5/17/2006	Aerials Express	Digital Files	N/A



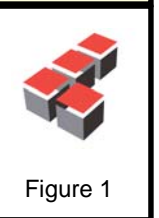


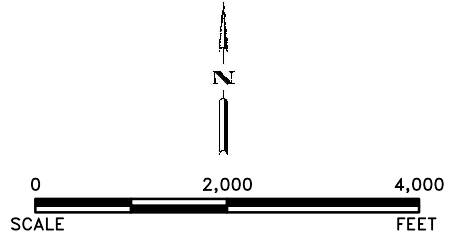
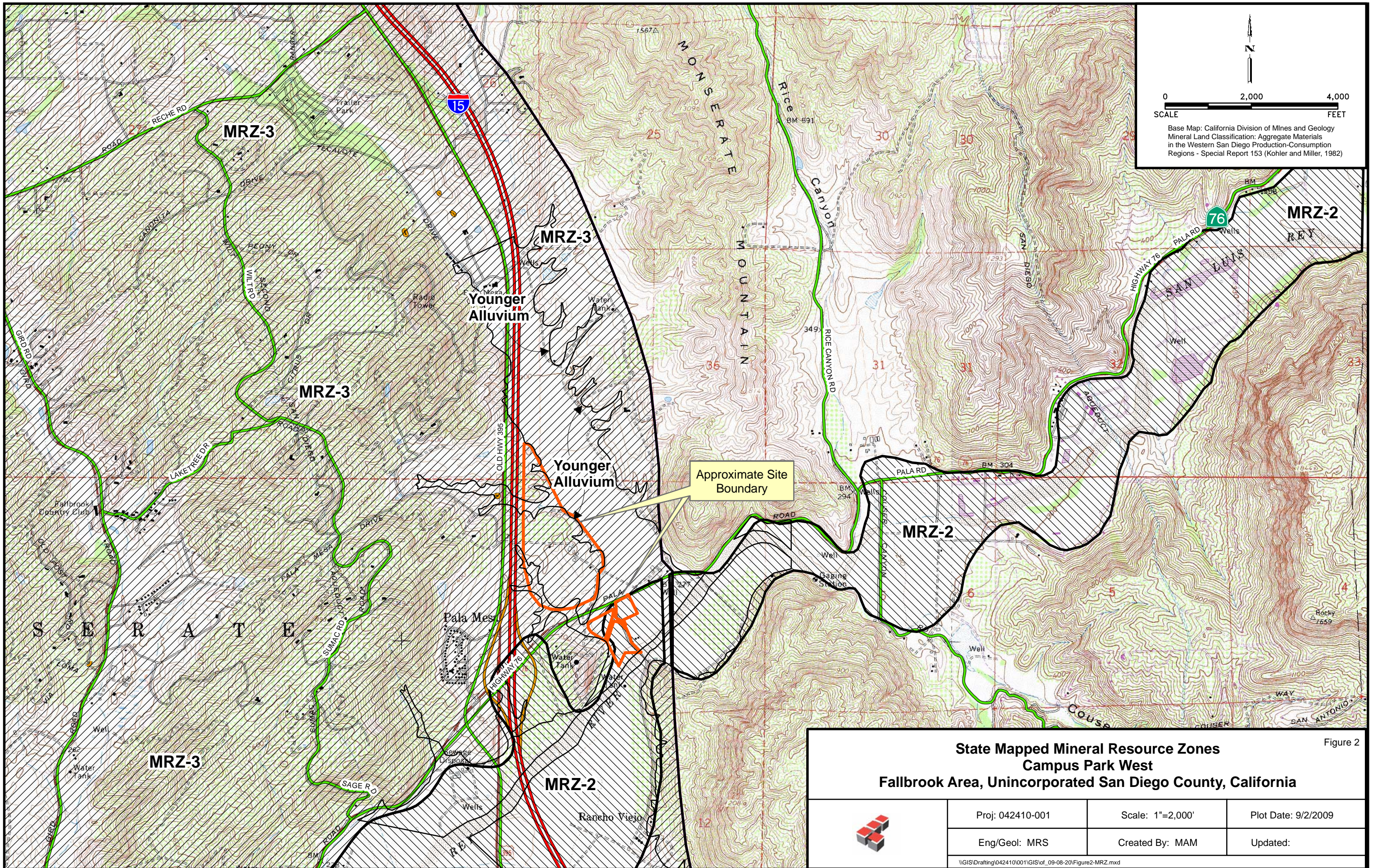
**Campus Park West
Project and Surrounding Area
Fallbrook Area, Unincorporated
San Diego County, California**

**SITE LOCATION
MAP**

Project No.
042410-001

Date
September 2009





Base Map: California Division of Mines and Geology
 Mineral Land Classification: Aggregate Materials
 in the Western San Diego Production-Consumption
 Regions - Special Report 153 (Kohler and Miller, 1982)

State Mapped Mineral Resource Zones
Campus Park West
Fallbrook Area, Unincorporated San Diego County, California


Figure 2



Proj: 042410-001	Scale: 1"=2,000'	Plot Date: 9/2/2009
Eng/Geol: MRS	Created By: MAM	Updated:

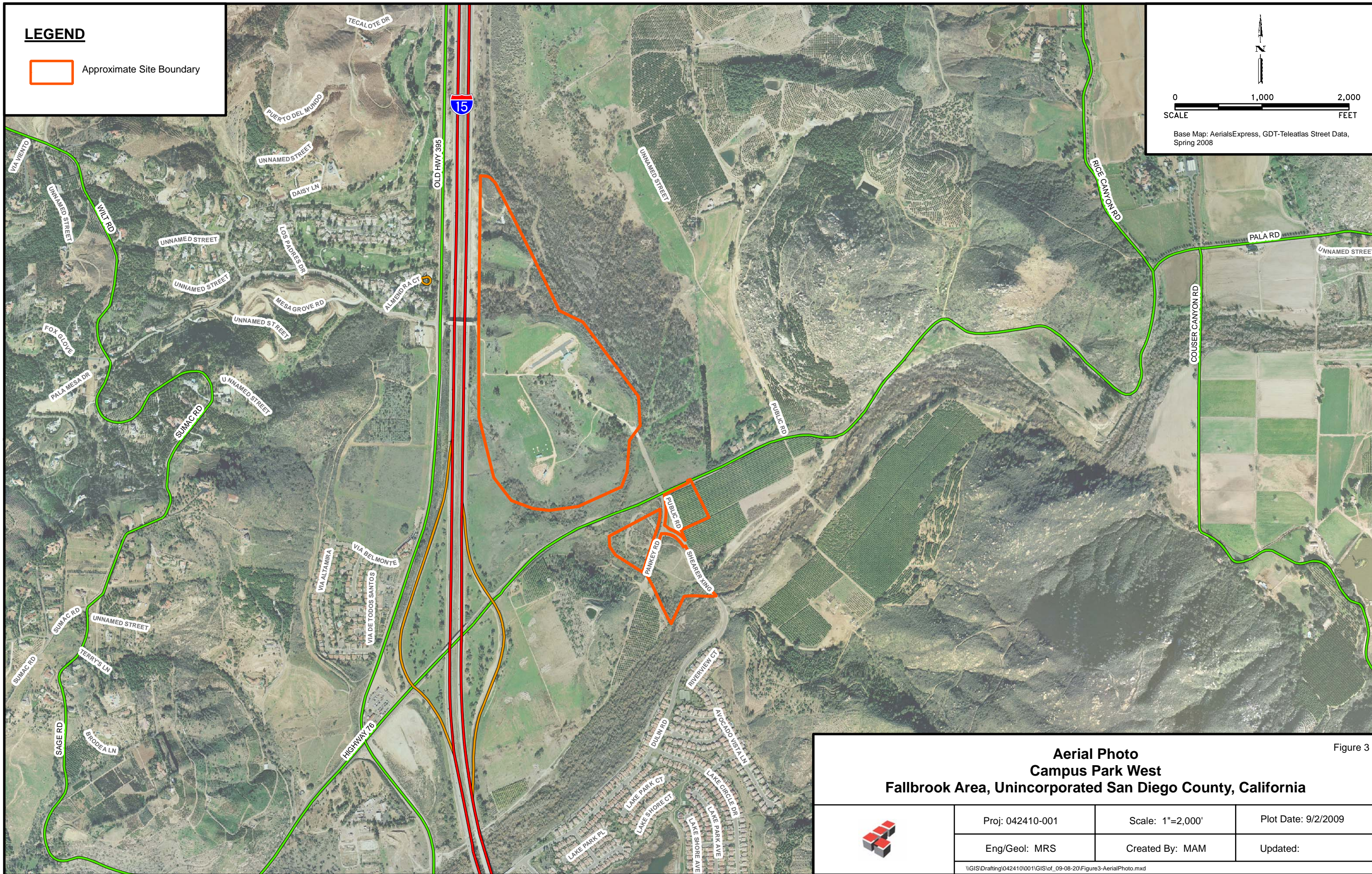
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LEGEND

 Approximate Site Boundary

0 1,000 2,000
SCALE FEET

Base Map: AerialsExpress, GDT-Teleatlas Street Data, Spring 2008



**Aerial Photo
Campus Park West
Fallbrook Area, Unincorporated San Diego County, California**

Figure 3



Proj: 042410-001	Scale: 1"=2,000'	Plot Date: 9/2/2009
Eng/Geol: MRS	Created By: MAM	Updated:

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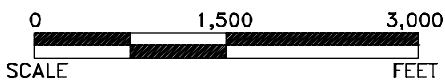
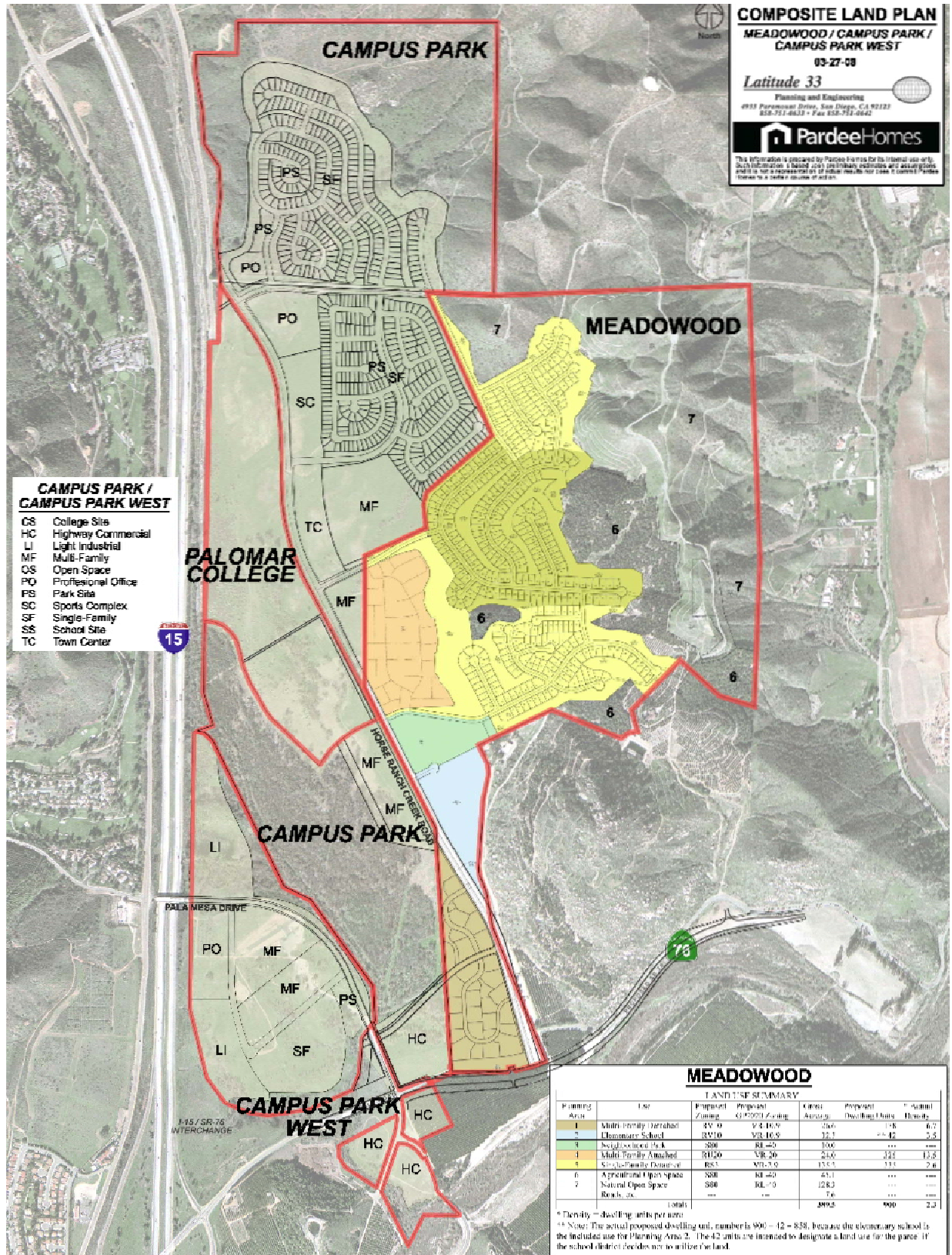


Figure 4

COMPOSITE LAND MAP
 PALOMAR COLLEGE/MEADOWOOD/
 CAMPUS PARK/CAMPUS PARK WEST
 SAN DIEGO, CALIFORNIA

Proj: 042410-001

Date: 09/2009

Eng/Geol: MRS

Scale: 1"=1,500'



Leighton

LEGEND

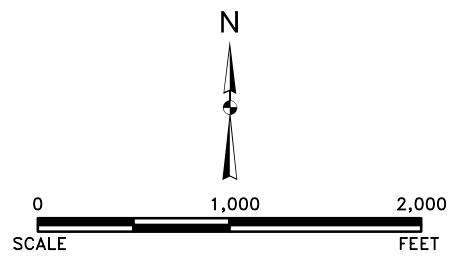
Surficial Units

- Qa** Active alluvial flood plain deposits (late Holocene) - Unconsolidated to locally poorly consolidated sand and gravel deposits in active alluvial flood plains.
- Qoa** Older alluvial flood plain deposits (Pleistocene, younger than 500,000 years) - Mostly moderately well consolidated, poorly sorted, permeable flood plain deposits.

Bedrock Units

- Ki** Granodiorite of Indian Mountain (Cretaceous) - Biotite leucocratic granodiorite; white, fine to medium grained and massive.
- Kt** Tonalite undivided (Cretaceous) - Mostly hornblende-biotite tonalite; coarse grained, light gray.
- Kgb** Gabbro undivided (Cretaceous) - Mostly biotite-hornblende-hypersthene gabbro; coarse grained, dark gray massive.
- KJm** Metavolcanic and metasedimentary rocks undivided (Cretaceous and Jurassic) - Low grade (greenschist facies) rocks that are in part coeval with and in part older than the Cretaceous plutonic rocks they lie in contact with.
- Approximate Site Boundary

Pegmatite dike



Base Map: CGS Preliminary Map Series; Geologic Map of the Bonsall and Pala Quadrangles (Kennedy 2000a and 2000b)

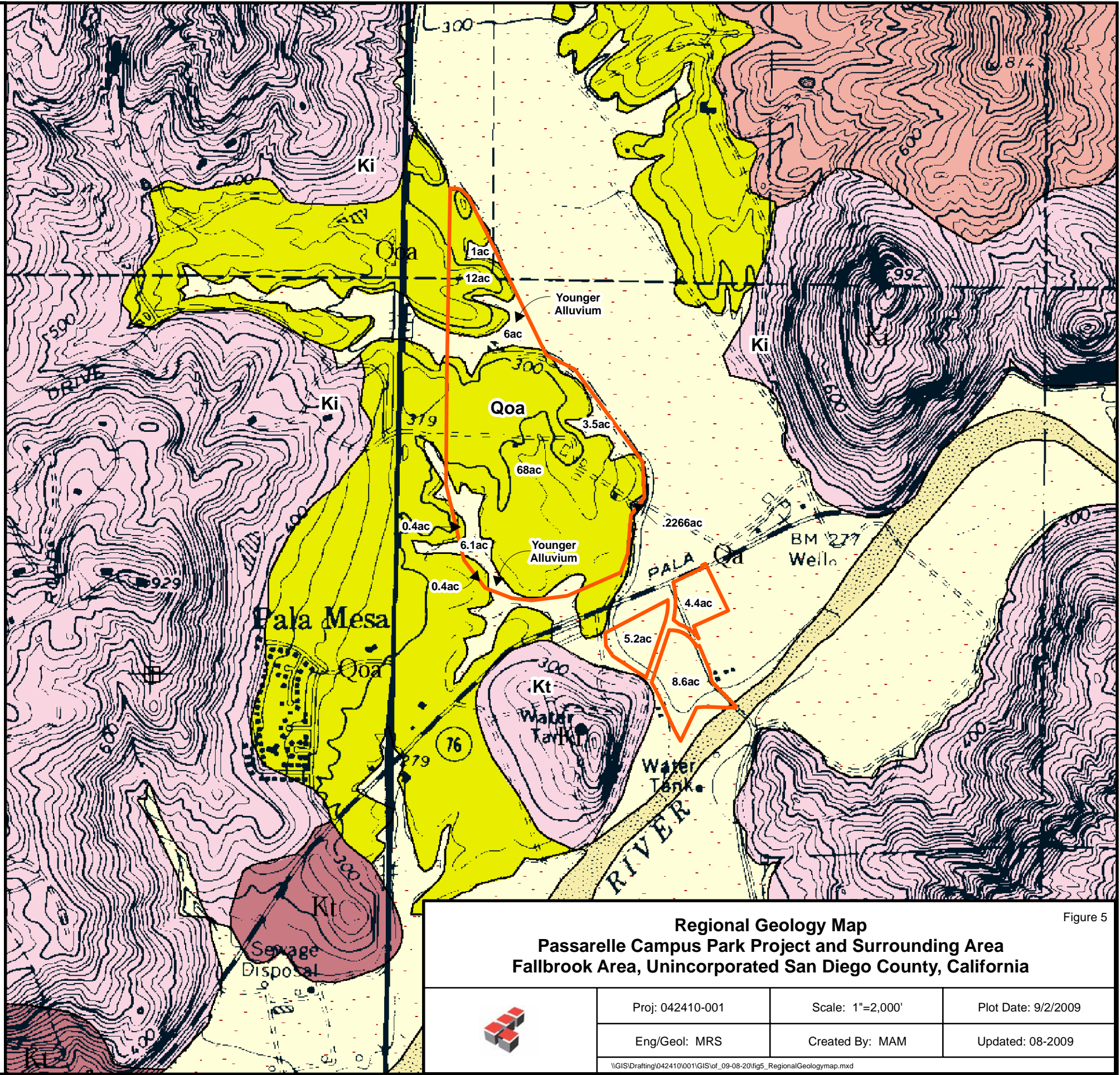

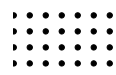


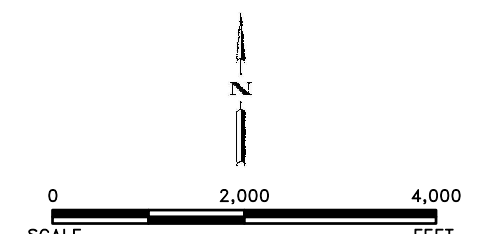
Figure 5

Regional Geology Map
Passarelle Campus Park Project and Surrounding Area
Fallbrook Area, Unincorporated San Diego County, California

	Proj: 042410-001	Scale: 1"=2,000'	Plot Date: 9/2/2009
	Eng/Geol: MRS	Created By: MAM	Updated: 08-2009
\\GIS\Drafting\042410\001\GIS\of_09-08-20\fig5_RegionalGeologymap.mxd			

LEGEND

-  Generalized Outline of Urbanized and/or Developed Area
-  Area of Historically Operated Aggregate Pit Lease/Ownership



0 2,000 4,000
SCALE FEET

Base Map: California Division of Mines and Geology
Mineral Land Classification: Aggregate Materials
in the Western San Diego Production-Consumption
Regions - Special Report 153 (Kohler and Miller, 1982)

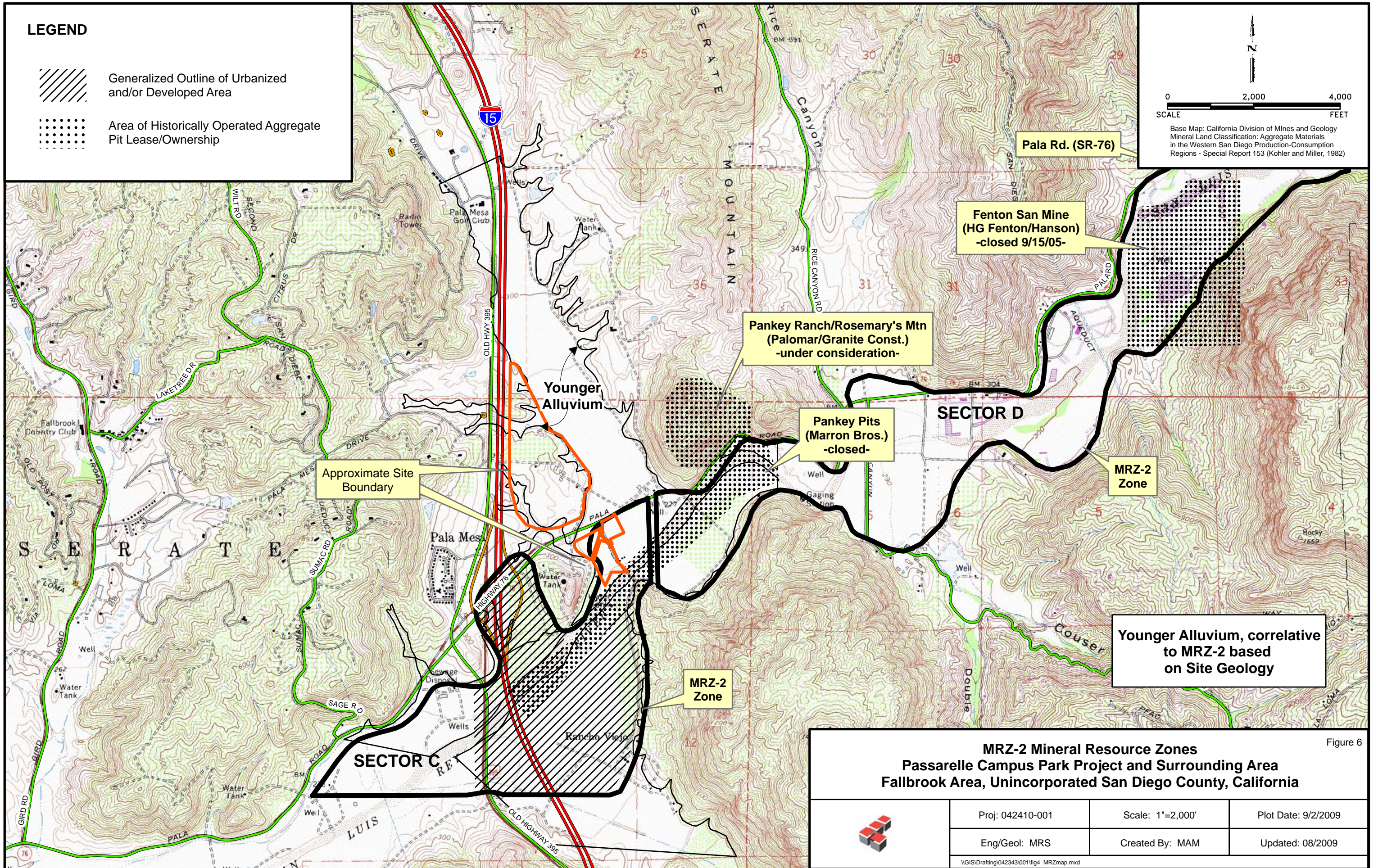







Figure 6

	Proj: 042410-001	Scale: 1"=2,000'	Plot Date: 9/2/2009
	Eng/Geol: MRS	Created By: MAM	Updated: 08/2009
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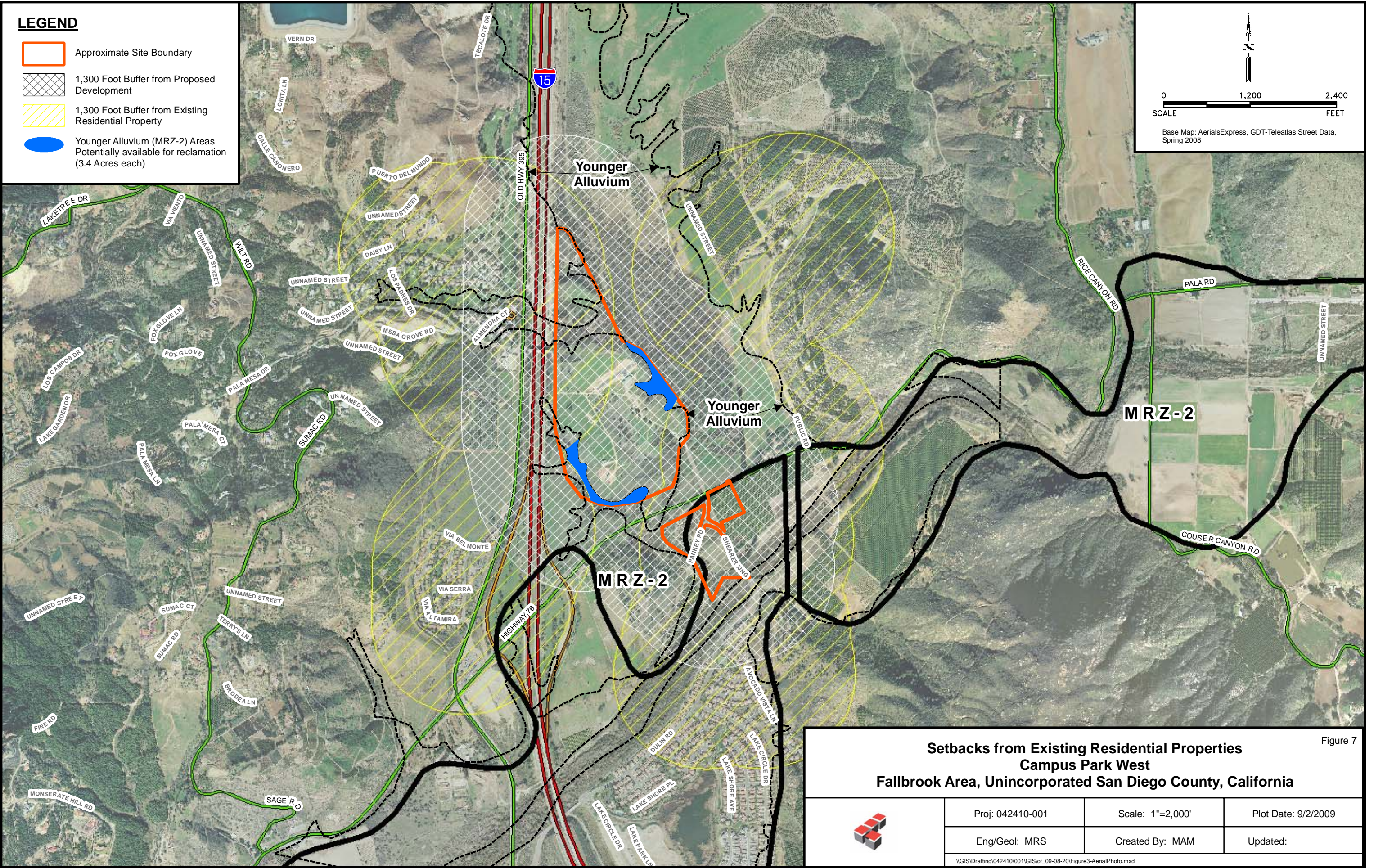
LEGEND

-  Approximate Site Boundary
-  1,300 Foot Buffer from Proposed Development
-  1,300 Foot Buffer from Existing Residential Property
-  Younger Alluvium (MRZ-2) Areas Potentially available for reclamation (3.4 Acres each)




SCALE
0 1,200 2,400
FEET

Base Map: AerialsExpress, GDT-TeleAtlas Street Data, Spring 2008



**Setbacks from Existing Residential Properties
Campus Park West
Fallbrook Area, Unincorporated San Diego County, California**

Figure 7

	Proj: 042410-001	Scale: 1"=2,000'	Plot Date: 9/2/2009
	Eng/Geol: MRS	Created By: MAM	Updated:
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