



Technical Memorandum Re: Crestview Mutual Water Company Alternatives Siting Study for New Well

To: Crestview Mutual Water Company

From: Heather O'Connell, PE, CFM, QSD

Date: July 14, 2021

EXECUTIVE SUMMARY AND RECOMMENDATION

Crestview Mutual Water Company (Crestview/CMWC) is proposing to drill a replacement water supply well for Well #5, which will be abandoned. The proposed new Well #7 will supplement the water supply from Well #4, within the operating Pressure Zone 3 boundary. Well #4 is currently waning due to prolonged drought, resulting in a historic decrease to groundwater levels.

This alternatives siting study was prepared to review, consider, and evaluate each of the alternative sites for possible construction of Well #7. This report presents each alternative site and evaluates each possible location. **Based on the siting criteria, the operational characteristics of Crestview's system, and the existing regulatory parameters, 191 Alviso Drive is the most reasonable, responsible and viable location for the new Well #7 production facility.**

All other possible locations vetted in this report have limitations or significant disruptions associated with their locations, making them not viable alternatives.

A. Background

Crestview Mutual Water was formed in March 1950. Since that time, Crestview has drilled 6 production wells, roughly one every 15-years. In 1985, Well #4, (located at 6 Alviso Drive) was drilled to a depth of 1,400 ft, and it quickly became the primary source of water for the district. In the summer of 1993, Crestview drilled Well #5, located at 602 Valley Vista Drive, to a depth of 1,800 ft. In May 1995, Well #5 commenced production.

By the fall of 1995, Crestview water quality started to degrade; it is now known that Well #5 was drilled close to the fault zone and into the Pleasant Valley Basin. Between 1996 and 2003, Crestview invested approximately \$500,000 to identify the source of the poor water quality and investigate options to treat or seal specific water producing zones that were causing problems. Unfortunately, all options to add additional treatment were cost prohibitive due to the lack of available space at the existing facility. Additionally, the available options to seal poor water quality zones would decrease production to a point where Well #5 would no longer be viable to meet the required system demands.

In the spring of 2006, Crestview drilled Well #6 at 241 Crestview to a depth of 800 ft, and properly abandoned Well #3 that was drilled in 1966 and located at 589 Avocado Place. Once Well #6 proved operational and a good source, Well #5 was removed from service in October 2007. Since that time, Well #5 has been in “Stand-by” status and has not produced any water to meet system demands.

Well #4 and Well #6 draw their water supply from the West Las Posas Basin. Historically, the source of recharge to the basin was located behind Moorpark, in Grimes and Fox Canyon, and along South Mountain. More recent studies (LPUG 2015, Groundwater Sustainability Plan/GSP) have identified that the majority of recharge for Crestview’s service area comes from the Santa Clara River and river water diverted at the Freeman Diversion, directed into spreading ponds along Highway 118, commonly referred to as the Saticoy Spreading Grounds (SSG).

B. Need for Additional Well

There are two primary factors governing and driving the need for an additional Crestview well, as described below:

1. Unsustainable Dependency on Existing Wells.

Currently, each year between April and November, Crestview is solely dependent on two (2) local groundwater sources, Well #4 and Well #6. If either well experiences a failure or diminishing supply during that time, Crestview would experience significant increases in production costs and/or the cost of imported water due to seasonal peaking charges based on time of use. Associated increased costs would be realized because Well #4 or Well #6 by themselves do not generate enough capacity to meet all system demands during summer months; water quality from Well #5 is so poor it can reasonably be used only during the most drastic of emergency situations.

Crestview requires at least 2 operational wells to maintain sufficient supply to each pressure zone to meet both normal seasonal demands and meet the minimum water supply standards as set forth in Section 2 of the Ventura County Waterworks Manual (VCWWM or WWM).

Additionally, Crestview does not have any production capacity in the event of a power outage, and is dependent upon water available in storage to meet all demands until power is restored, unless additional supply is purchased from CMWC's emergency connection suppliers.

In detriment to the critical component of well replenishment to support Crestview water storage, SCE has increased prolonged outages. To date, five (5) Public Safety Power Shut-offs (PSPS) have occurred within the Crestview service area since October 2018; the longest PSPS event being 48 hours. In one month, over 108 hours of production were lost due to PSPS.

Further adding to this unsustainable reliance on only Well #4 and Well #6, the pump assembly for Well #4 was originally set at 580 feet below ground surface (bgs). In February 2015, due to decreasing water levels, Crestview lowered Well #4's pump assembly 40 feet to 620 feet bgs. This necessary adjustment placed Well #4's pump in the perforations zone, exposing the pump to potential water cascading causing aeration and cavitation of the pump bowls. As of July 8, 2021, if water levels drop another 12 feet, the pump will have to be taken offline to prevent breaking suction and damaging the pump assembly. At that time, the facility would be offline until the water table returns to its historic levels. With Well #4 offline and Well #5 offline, there is no source of groundwater supply to replenish Reservoir #3.

Connections to Calleguas and the City of Camarillo are located in Pressure Zone 2 with no capability in the system to transfer water during power outages such as PSPS to pressure Zone 3, 3B and 3E as discussed below. The connection to Cal-Am has relatively minor capacity, 500 gallons per minute, (gpm) and usage is only allowed by Cal-Am for short, temporary maintenance periods, not as a long-term supply. Furthermore, the WWM considers Calleguas to be the only firm source of supply (Section 2.4.1.3) in this situation, and only to the extent as determined by the District itself.

2. Insufficient Zone #2 Water Distribution Lines.

The water distribution lines in Crestview's system range in size from 4 inches to 10 inches. The rated capacity for a 10-inch water line is 1,250 gallons per minute (gpm) (at industry standard 5 feet per second velocity). The current capacity of Well #6 is 1,150 gpm. This capacity limitation prevents the siting of a new well in Zone 2 to enhance Well #4 supply. Any new production added to the Zone 2 will result in a lead / lag rotation without increasing the production capacity of the Zone.

The distribution pipeline located in Ramona Place maintains a normal system pressure of 130 psi. This pressure increases to 142 – 145 psi when Well #6 is online and supplying 1,150 gpm. It is reasonable to anticipate that by adding any additional flow and increased pressure characteristics to Zone 2 to move water to Zone 3, these actions will increase the operating pressure above the 150 psi operational rating of the water lines in that area.

Besides risk of pipeline failure, operational pressures above 125 psi at the service (services on Ramona Place) are not allowed, see VCWWM Section 2.6.2, System Operational Pressures.

As stated previously, if Well #4 is non-operational or is not producing to design standards under current system conditions, Crestview will not have current, verified Water Availability documentation and may not meet current WWM requirements, nor the purveyor approval criteria as dictated by the Ventura County Public Works Agency. As a result, Crestview may not be able to issue will-serve letters to current or future customers. Existing customers may be unable to obtain building permits or clearances required through the Ventura County Fire Department to expand their existing residences or add additional dwelling units. In summary, to maintain and augment existing system operations without incurring extensive infrastructure improvement costs as well as extensive system study and redesign, a new (replacement) well should be located in Zone 3.

C. Analysis of Potential New Well Sites

In accordance with the above analysis, this Technical Memorandum evaluated well locations within pressure Zone 3/3B, using siting elements and criteria provided by Crestview, in order to develop a baseline comparison of each site. Site locations are depicted on Attachment 1, Well 7 Site Alternatives Exhibit, which includes 5-foot contour intervals and County topographical LiDAR used to electronically evaluate site slope and developable areas. Critical items considered include the following siting criteria:

- Located within required pressure zone(s) and accessibility to Zone 2 infrastructure;
- Lot size, including slope and usable developable lot area for ease of construction, operations and deliveries;
- High probability of large water production zones;
- Ability to discharge and dispose of well production and development water;
- Reasonable certainty of water quality;
- Minimize disruption of citizens and neighbors with infrastructure improvements and installation;
- Availability of Edison power/proximity to site;
- Proximity to existing septic/seepage pit systems; and
- Construction/operational affordability to shareholders/rate payers.

The site suitability matrix, Attachment 2, outlines and ranks each location based on the above siting criteria. This matrix was completed using County publicly available data (Countyview GIS online portal); the Las Posas Valley Groundwater Sustainability Plan (GSP) to evaluate each site as well as for research; and operational criteria and parameters provided by Crestview.

Attachment 3 summarizes data reviewed for each site using the Countyview electronic portal data, which outlines County documented hazards at each location. Attachment 4 includes the well drillers log, as referenced in the matrix, associated with the existing well at Site 6, at 2711 Goldenspur.

C.1 Viable Site Summary and Discussion

Several sites were removed from serious consideration due to various issues associated with extreme grading requirements, most probably requiring discretionary grading approval, probability of large retaining walls, and inability to manage acceptable site approach grades. Additionally, sites were eliminated because they could not accommodate periodic truck deliveries as well as functional aspects of the pump building, including needed area to roll-apart, ability to maneuver maintenance vehicles to allow for proper pump facility, and appurtenance maintenance.

The alternative site analysis also demonstrated that four sites were inappropriate for consideration as they did not meet the regulatory or potential water production requirements or posed challenges due to developable lot size.

Of the remaining five sites, four were also determined to be unsuitable for the following reasons.

Site 1: 489 Avocado Place

Currently the western portion of the property is undeveloped. It maintains a reasonable location, size (vacant land area) and favorable slope characteristics. However, the property would require a lot split or easement and it is unknown if the current property owner will be receptive to discussions. Both a lot split or easement will require permitting through the County, legal lot determination, planning approval and survey and map recordation. Further, the property has no location for discharge of well development water and necessary infrastructure improvements would require approximately 830 L.F. of 10" pipeline for access to Reservoir 2.

Site 2: 82 Lopaco Court

There is the potential for purchase of this property, which is also located within the Las Posas HOA. The estimated price per Zillow is ~\$410,000. However, the property is not on the market. More significant, the entrance slope is steep to access the central portion of the parcel, requiring extensive fill to achieve acceptable entrance grades from Lopaco Ct. due to the parcel configuration. The site drops-off steeply at the southwesterly property line. Development of the property itself would require extensive grading to accommodate access grades and acceptable slopes, as the overall natural slope is over 18% which limits developable area and presents constructability concerns. Deliveries are challenging due to terminus of the property and cul-de-sac. Infrastructure required to reach Zone 2 is approximately 700-L.F. of 10" pipeline.

Site 4: 640 Fairway Drive

The property is occupied by a residence with the remainder built out with a planted orchard. The property has a favorable slope; however, lot or easement size would be limited to the owner's discretion. As with Site 1, either a lot split or easement would require County permitting, legal descriptions, survey, recordation and County approval. Further, this location does not have a discharge location to accommodate well development water and over 1,400 L.F. of 10" line is required to access the Zone 2 reservoir.

Site 6: 2711 Goldenspur

This location shows substantial available area (57-acre parcel) which can accommodate access, deliveries, and maintenance. Slope and access are reasonable; however, a lot split or easement would be required. The property has an existing agricultural well, which has not been in use for approximately a decade. The well drillers log, Attachment 3, is not favorable with poor drawdown and yield characteristics; the well water level dropped almost double within the 6-hour testing period and maintained a nominal 350 gpm flow rate. Additionally, the property is located very near the Springville Fault, along the margins of the groundwater basins (between Las Posas Valley Basin and the Pleasant Valley Basin). Wells located in these regions tend to maintain poor water quality and low capacity. The County recognizes these marginal regions as questionable and potentially not characterized as firm well supply zones which require extensive well testing (Category 1 Wells per the VCWWM Section 2.12).

D. Conclusion

As contrasted with the proposed 191 Alviso Drive location, all other possible new well locations vetted within Crestview's service boundaries have limitations or significant disruptions associated with their locations, making them not viable alternatives.

Upon review of the siting criteria and the site alternatives matrix, it is my professional opinion that Site 9 at Alviso Drive maintains the highest level of acceptable criteria and is the most operationally feasible and fiscally efficient location for the replacement Well #7 Project.

Please feel free to contact me if you have any questions regarding the enclosed.

Sincerely,

Heather O'Connell, PE, CFM, QSD
President/Principal Engineer
Dreaming Tree Civil, A Ca. Professional Corporation



7/14/21

Attachments following

List of Attachments and References:

1. Attachment 1 – Well 7 Site Alternatives Exhibit
2. Attachment 2 – Site Suitability Matrix
3. Attachment 3 – Countyview Printouts Alternative Sites 1 through 9
4. Attachment 4 – Department of Water Resources Water Well Drillers Report
June 21, 1984 by Floyd V. Wells, Inc.

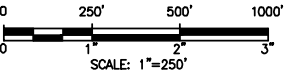
Attachment 1 – Well 7 Site Alternatives Exhibit



#	ADDRESS	APN	ACERAGE
1	489 AVOCADO PL.	152-0-050-165	1.00
2	82 LOPACO CT.	152-0-352-055	1.14
3	191 MARINE VIEW DR.	152-0-110-015	1.27
4	640 FAIRWAY DR.	152-0-062-185	3.00
5	64 VIENTOS RD.	152-0-061-295	1.38
6	2711 GOLDENSPUR DR.	158-0-020-065	57.15
7	651 CORRIENTE CT.	158-0-091-055	1.12
8	167 ESTABAN DR.	158-0-110-065	0.81
9	191 ALVISO DR.	152-0-341-065	0.56

LEGEND

- REDLINE CHANNEL
- PARCEL LINES
- EXISTING TOPOGRAPHY
(VENTURA COUNTY 2005 LIDAR,
NAD 83 ZONE V 5 FOOT INTERVALS)



SCALE AT FULL SIZE = 24" x 36"
REDUCED SIZE NOT TO SCALE
IN MEMORANDUM

By: DREAMING TREE CIVIL
1143 E. MAIN STREET • VENTURA, CA 93001 • 805.701.8755
HEATHER O'CONNELL, R.C.E. 73119 DATE

SPEC. NO.
PROJ. NO.

WELL 7 SITE
ALTERNATIVES EXHIBIT

SHEET 1
OF 1
DRAWING NO.

Attachment 2 – Site Suitability Matrix

SITE SUITABILITY MATRIX

Site Alternative		Selection Criteria					Good		Poor	Not Viable
Location		1	2	3	4	5	6	7	8	9
Map #	Address	Size/Access for Operations & Deliveries (Usable SF), Slope % ¹	Water Production Zone Availability Zone 2 and 3	Discharge Location for Well Development Water	Reasonable Assurance of Regulatory Approval	Reasonable Assurance of Water Quality	Infrastructure Improvements	Proximity to Edison Power (480V) ³	Construction & Operational Affordability to Shareholders	Proximity to Septic/Seepage Pits ⁴
1	489 Avocado	~19,400 SF, 7.2%	830-ft to Zone 2 Res.	None	Yes, no CCRs and with obtaining easement	Yes, and closer to Replenishment SSG	830 L.F. of 10" to Res. 2	Yes, at parcel	Requires Lot Split/Easement Agreement, questionable lot area allowed by Owner	Systems within 600-ft
2	82 Lopaco	~38,000 SF, 18.1%	700-feet to Zone 2 Res.	Yes	Moderate, CCRs, possibly require discretionary grading and/or retaining walls	Yes, and closer to Replenishment SSG	700 L.F. of 10" to Res. 2 Electrical to site ~225 L.F	North Side of La Patera ~225 LF	Truck access for delivery capability limited, infrastructure costs for power, pipeline and grading	Systems within 600-ft
3	191 Marine View	~41,000, 27%	1,200-ft to Zone 2 Res.	Yes	Moderate, possbily require discretionary grading and/or retaining walls	Moderate, further from Replenishment SSG	1,200 L.F. of 10" to Res. 2 Electrical to site ~425 L.F.	~425 LF away from parcel	No truck access to deliver DDW required disinfection	Systems within 600-ft
4	640 Fairway	~48,800, 2.9%	1,400-ft to Zone 2 Res.	None	Yes, no CCRs and with obtaining easement	Moderate, further away from Replenishment SSG	1,400 L.F. of 10" to Res. 2	Yes, at parcel	Requires Lot Split/Easement Agreement, questionable lot area allowed by Owner	Systems within 600-ft
5	64 Vientos	~43,800, 22.7%	1,400-ft to Zone 2 Res. , 550-ft to Zone 3 Res.	Yes	Moderate, no CCRs, possibly require discretionary grading and/or retaining walls	Highly questionable water quality due to proximity of Springville Fault	1,400 L.F. of 10" to Res. 2 550 L.F. to Res. 3	Yes, at parcel	Property purchase for small usable lot area with extensive grading, infrastructure costs	Systems within 600-ft
6	2711 Goldenspur ²	~50,300, 11.2%	No Direct Access to Zone 2, indirectly by 1,470-ft to Res. 3, 1,400-ft on Valley Vista to Res. 2	Yes, Large Dispersal Area	Moderate, no CCRs and with obtaining easement, no neighbors within close proximity. Based on Well Drillers log concern with regulatory approval of only Category 1 Well	Highly questionable, well drillers log not favorable for development water and well recharge, proximity to Springville Fault and edge of Basin	1,470 L.F. of 8" to Res. 3 1,400 L.F of 8" on Valley Vista to feed Res. 2 Electrical to site ~1,950 L.F.	~1,950 LF away from parcel	Requires Lot Split/Easement Agreement, questionable lot area allowed by Owner, significant infrastructure costs including SCE	None found within 600-ft of Existing Well
7	651 Corriente	~14,200, 10.9%	No Direct Access to Zone 2, 1,900-ft to Res. 3	Yes	Moderate, no CCRs but questionable water quality may allow only Category 1 Well approval	Highly questionable, close to Springville Fault and edge of Basin	1,900 L.F. of 8" to Res. 3 Electrical to site ~400 L.F.	~1,650 LF away from parcel	Property purchase for small lot with limited delivery capability, high infrastructure costs for SCE and pipeline	Systems within 600-ft
8	167 Estaban	~28,600, 26.4%	No Direct Access to Zone 2, 3,700-ft to Zone 3 Res.	None	Require Extensive grading to gain access to site. Discretionary grading with retaining walls.	Highly questionable, close to Springville Fault and edge of Basin	3,700 L.F. of 10" to Res 3 Electrical to site ~3,200 L.F.	~3,200 LF away from parcel	No truck access to deliver DDW required disinfection	Systems within 600-ft
9	191 Alviso	~18,150, 14.6%	Lines to both Zones within 50-ft of parcel	Yes	Yes, CCRs	Yes, and closer to Replenishment SSG	Minimal, interconnections to both Zones in street at parcel	Yes, at parcel	Power, Infrastructure near site, closer to replenishment SSG, availability to both zones, CMWC owned.	Systems within 600-ft

1 Natural Slope in developable lot area as defined in Ventura County Building Code 2019.
2 Flatt area assumed as roadway into parcel and surrounding area around existing well. Department of Water Resources well drillers log included as Attachment 3.
3 Based on research provided by CMWC.
4 Based on online ISDS records from publically available sources.

Attachment 3 – Countyview Printouts Alternative Sites 1 through 9



County View

489 Avocado Place

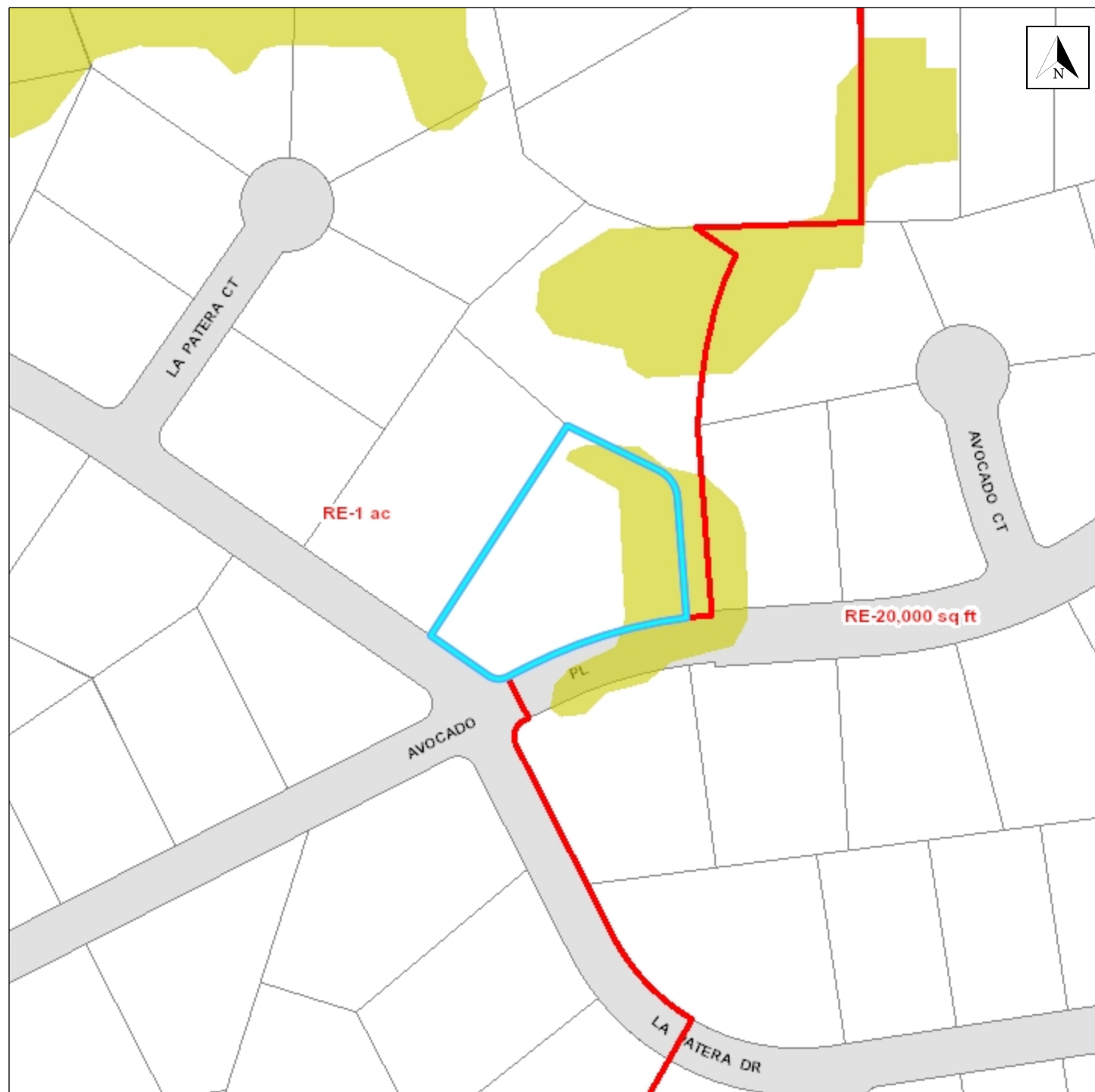
Legend

- Community Business District
- Critical Wildlife Passage Areas
- Habitat Connectivity Corridors
- Mineral Resource
- Ojai Valley Dark Sky
- Santa Monica Mountains
- Scenic Resource
- Temporary Rental Units
- Zone Designation
- CWPA Boundaries
- Wildlife Corridors
- Wildlife Crossing Structures
- Surface Water Features
- 100 Year Floodplain
- 500 Year Floodplain
- Actual and Potential Landslides
- All Faults
- Earthquake Fault Hazard Zones
- Fire Severity Zones
 - Very High
 - High
 - Moderate
- Liquefaction
- Potential EQ-Induced Landslides
- Subsidence Zone
- Parcels
- 1:9k

0 188.08 Distance Feet

1: 2,257

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County View

82 Lopaco Court

Legend

- Community Business District
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- Fire Severity Zones**
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- Subsidence Zone

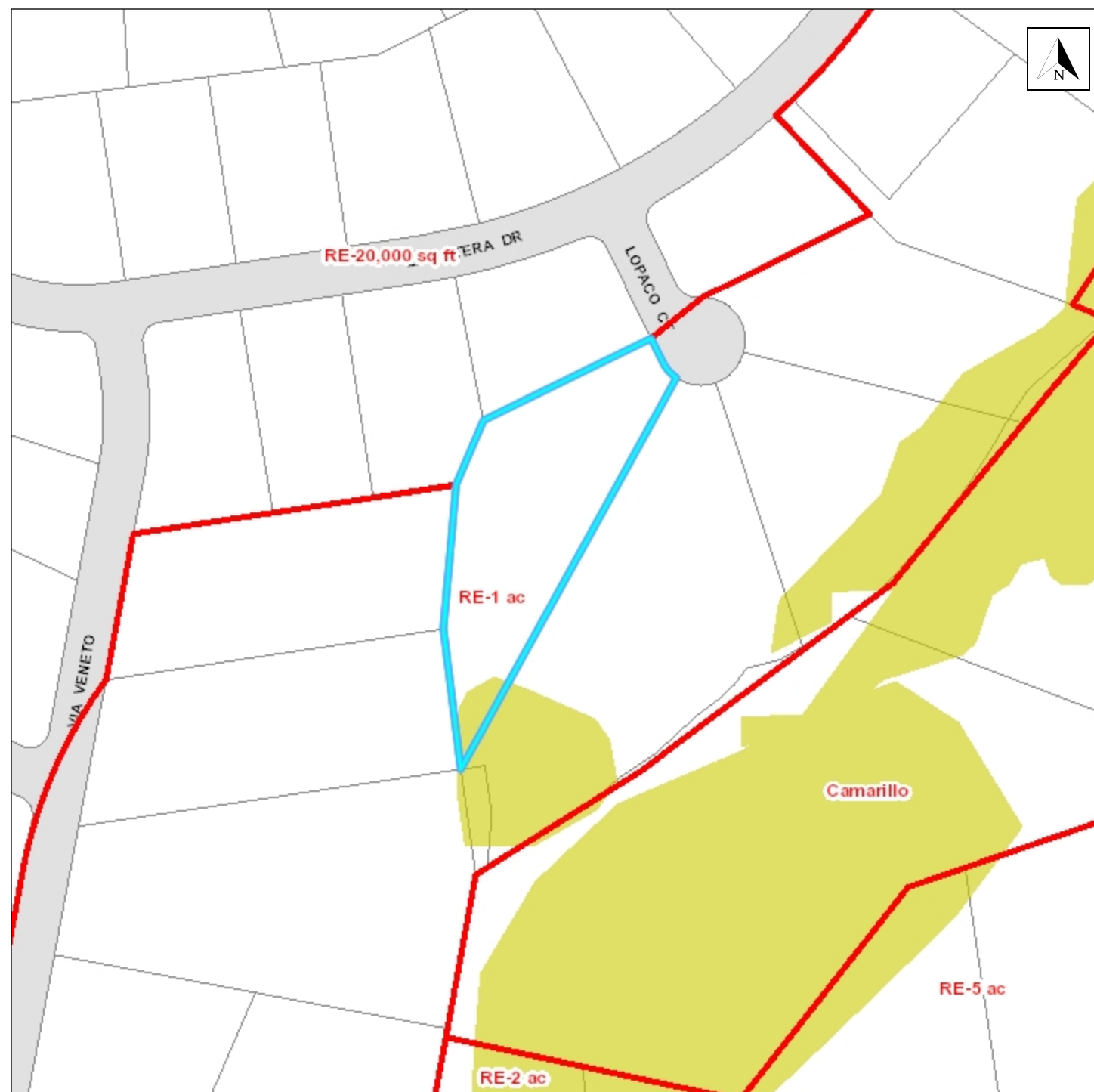
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County View

191 Marine View

Legend

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- Ojai Valley Dark Sky
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- Temporary Rental Units
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- Liquefaction
- Potential EQ-Induced Landslides
- Subsidence Zone
- Tsunami Evacuation Routes
- Tsunami Inundation

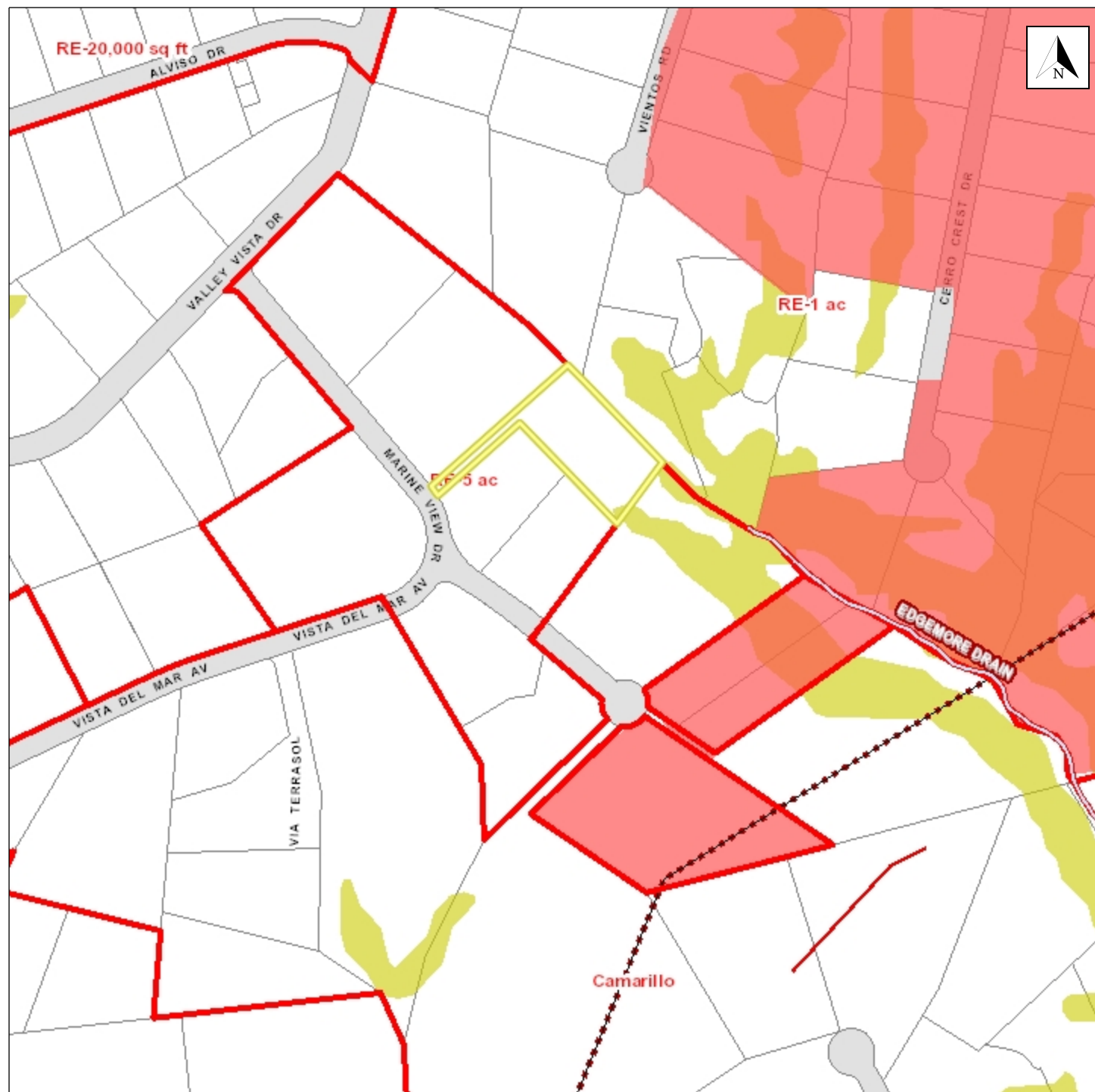
Parcels

1:9k

0 376.17 Distance Feet

1:4,514

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County View

640 Fairway Drive

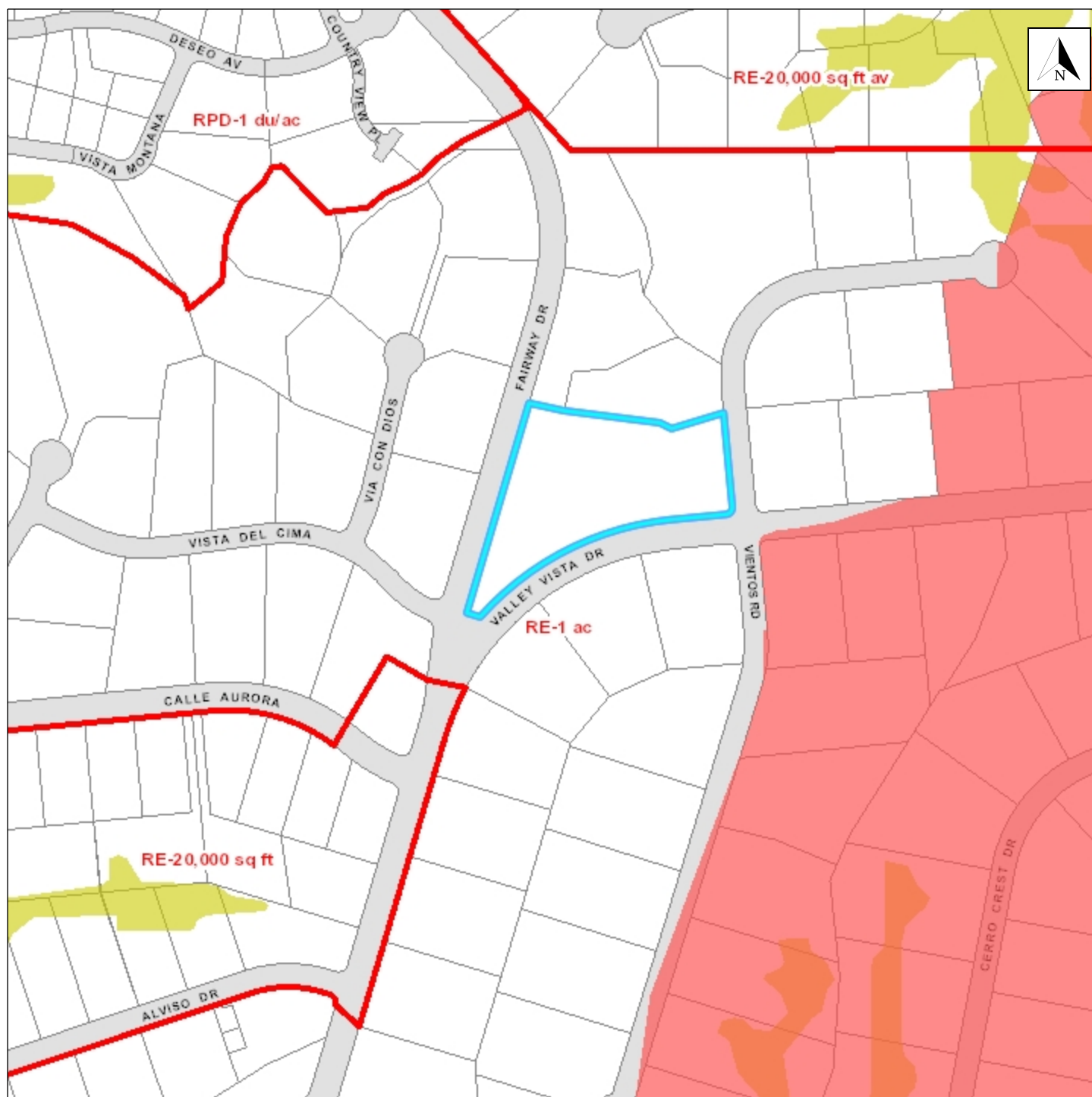
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- Installation Boundary
- Military Influence Area
- Military Training Routes
- Military Training Routes
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0 376.17 Distance Feet

1:4,514

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County View

64 Vientos

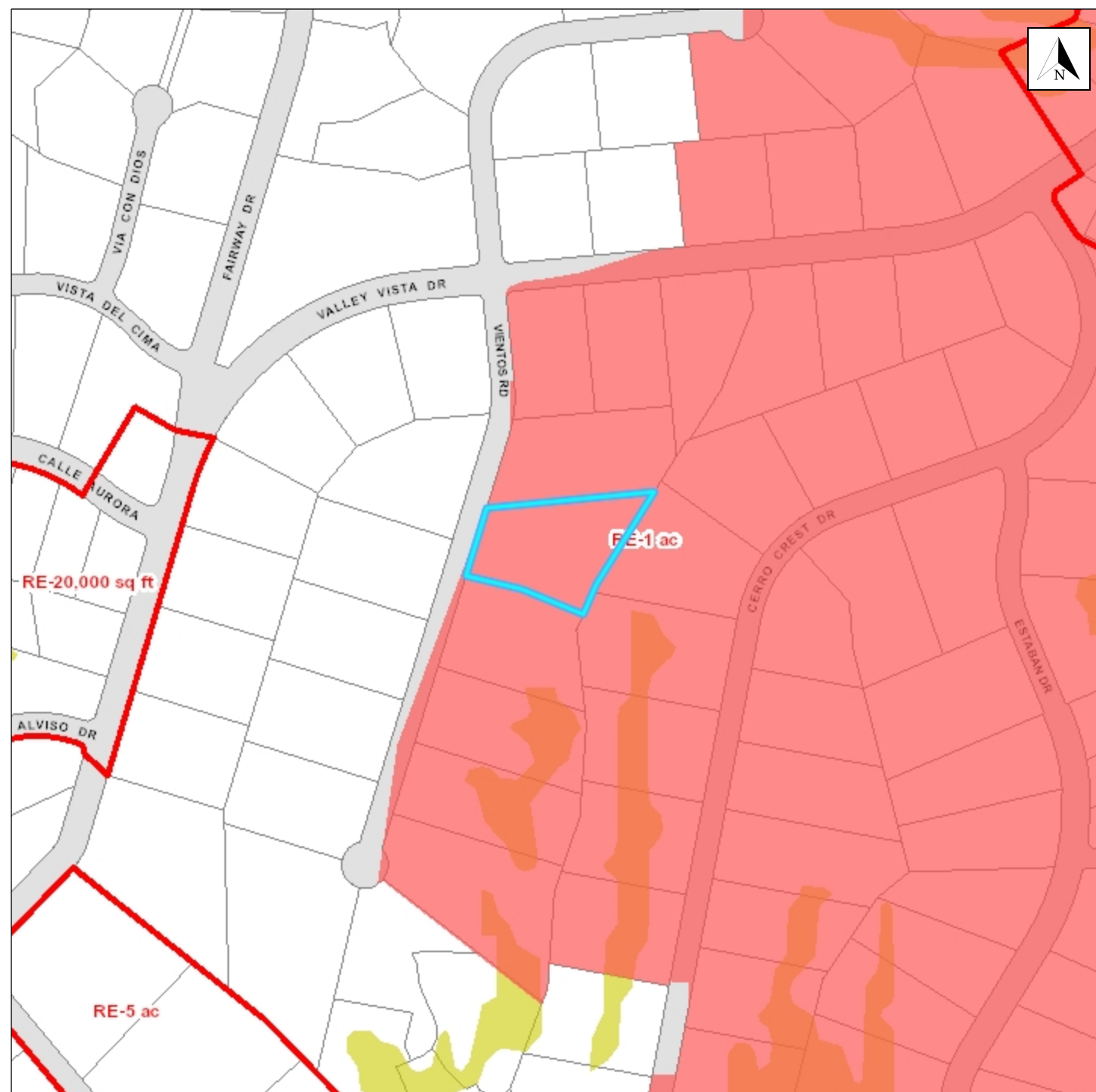
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2711 Goldenspur

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0	752.33	Distance Feet
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1: 9,028

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County View

651 Corriente Court

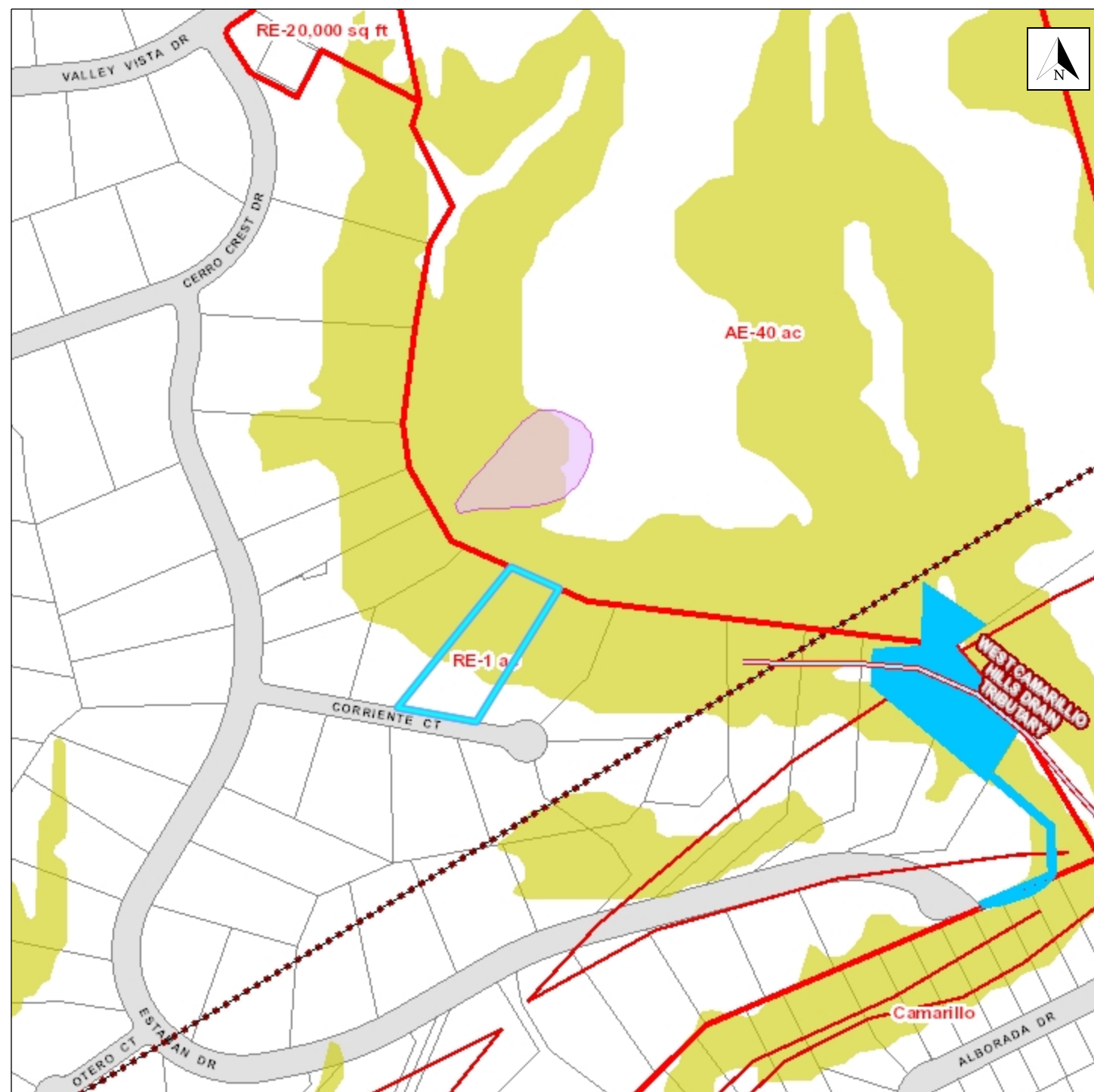
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County View

167 Estaban Drive

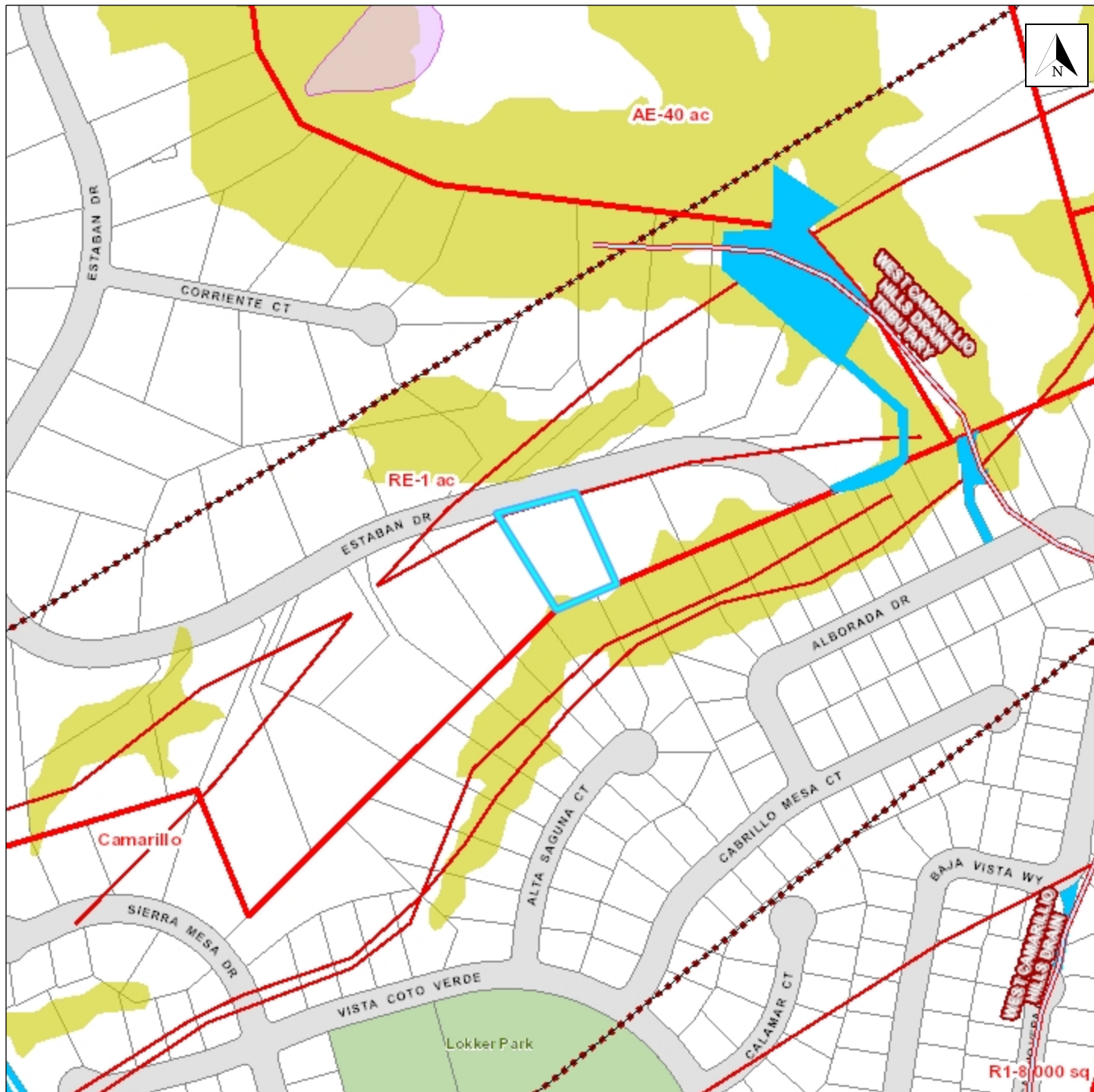
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- Installation Boundary
- Military Influence Area
- Military Training Routes
- Military Training Routes
- Military Training Routes
- Military Training Routes
- Potential EQ-Induced Landslides
- Subsidence Zone
- Tsunami Evacuation Routes

0 376.17 Distance Feet

1:4,514

Disclaimer: The information contained on this web site and in this application was created by the Ventura County Geographical Information System (GIS), which is designed and operated solely for the convenience of the County and related contract entities. The County does not warrant the accuracy of this information, and no decision involving a risk of economic loss or physical injury should be made in reliance thereon.





County View

191 Alviso

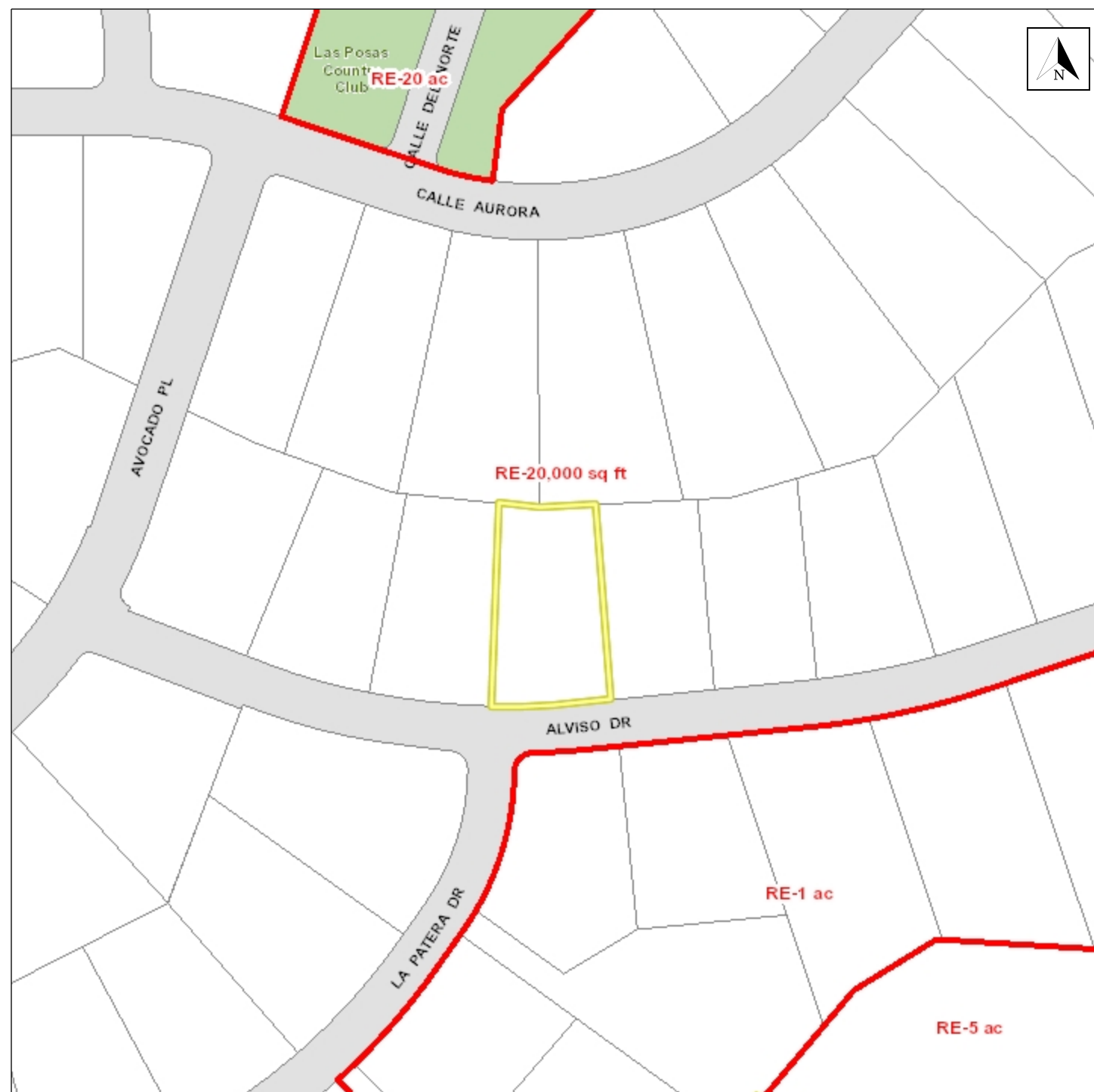
Legend

- Community Business District
- Critical Wildlife Passage Areas
- Habitat Connectivity Corridors
- Mineral Resource
- Ojai Valley Dark Sky
- Santa Monica Mountains
- Scenic Resource
- Temporary Rental Units
- Redline
- Right of Way
- Zone Designation
- CWPA Boundaries
- Wildlife Corridors
- Wildlife Crossing Structures
- Surface Water Features
- 100 Year Floodplain
- 500 Year Floodplain
- Actual and Potential Landslides
- All Faults
- Earthquake Fault Hazard Zones
- Fire Severity Zones
 - Very High
 - High
 - Moderate
- Liquefaction
- Potential EQ-Induced Landslides
- Subsidence Zone
- Parcels

0 188.08 Distance Feet

1: 2,257

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Attachment 4 – Department of Water Resources Water Well Drillers Report, June
1984 by Floyd V. Wells, Inc.

21 JUN 84 2:39

pg 1 of 3

TRIPLICATE
Owner's CopySTATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in

No. 222817

State Well No. 2N/21W-23D1

Other Well No. Permit # 1393

Not of Intent No.

Local Permit No. or Date Ventura County #1393

(1) OW				(12) WELL LOG: Total depth <u>1289</u> ft. Depth of completed well <u>1207</u> ft.			
Address _____				from ft. to ft. Formation (Describe by color, character, size or material)			
City _____				-			
(2) LOCATION OF WELL (See instructions):				-			
County <u>Ventura</u> Owner's Well Number <u>1</u>				-			
Well address if different from above <u>Camarillo, Calif. Area</u>				- See Attached Log			
Township <u>2N</u> Range <u>21W</u> Section <u>22H</u>				-			
Distance from cities, roads, railroads, fences, etc. <u>600' From End Of</u>				-			
<u>Golden Spur Dr., 300' S.E. To Stable Exercise</u>				-			
<u>Area, Well Is In North West Corner Of Exercise</u>				-			
<u>Area.</u>				-			
See Attached Maps				(3) TYPE OF WORK:			
				New Well <input checked="" type="checkbox"/> Deepening <input type="checkbox"/>			
				Reconstruction <input type="checkbox"/>			
				Reconditioning <input type="checkbox"/>			
				Horizontal Well <input type="checkbox"/>			
Destruction <input type="checkbox"/> (Describe destruction materials and procedures in Item 12)				-			
(4) PROPOSED USE:				-			
Domestic <input type="checkbox"/>				-			
Irrigation <input checked="" type="checkbox"/>				-			
Industrial <input type="checkbox"/>				-			
Test Well <input type="checkbox"/>				-			
Stock <input type="checkbox"/>				-			
Municipal <input type="checkbox"/>				-			
Other <input type="checkbox"/>				-			
WELL LOCATION SKETCH							
(5) EQUIPMENT:				(6) GRAVEL PACK: <u>Lapis Star</u>			
Rotary <input checked="" type="checkbox"/> Reverse <input type="checkbox"/>				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Size <u>20"</u>			
Cable <input type="checkbox"/> Air <input type="checkbox"/>				Diameter of bore <u>120'</u>			
Other <input type="checkbox"/> Bucket <input type="checkbox"/>				Packed from <u>120'</u> to <u>1207</u> ft.			
(7) CASING INSTALLED:				(8) PERFORATIONS: <u>035 Full Flow</u>			
Steel <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/>				Type of perforation or size of screen <u>Johnson Screen</u>			
From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size	
0	662	10 1/4	.279	662	902	.035	Johnson x-Hvy. Well Screen W/Collars
902	1082	"	.279	1082	1202	.035	Johnson x-Hvy Well Screen W/Collars
1202	1207	"	.279	1082			Bull Nosed On Bottom
(9) WELL SEAL:							
Was surface sanitary seal provided? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, to depth <u>120'</u> ft.							
Were strata sealed against pollution? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Interval _____ ft.							
Method of sealing <u>27' Of 24" Surface Pip & 120' Cement</u>							
(10) WATER LEVELS:							
Depth of first water, if known <u>450' Approx.</u> ft.							
Standing level after well completion <u>365'</u> ft.							
(11) WELL TESTS:							
Was well test made? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, by whom? <u>Floyd V. Wells, Inc.</u>							
Type of test <u>Pump</u> <input checked="" type="checkbox"/> Bailor <input type="checkbox"/> Air lift <input type="checkbox"/>							
Depth to water at start of test <u>365</u> ft. At end of test <u>603</u> ft.							
Discharge <u>350</u> gal/min after <u>6</u> hours Water temperature _____							
Chemical analysis made? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, by whom? <u>Fruit Growers Lab.</u>							
Was electric log made? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, attach copy to this report							

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED

s, Inc.

NAME

Floyd V. Wells, Inc.

(Person, firm, or corporation) (Typed or printed)

Address

P.O. Box 1007

City

Santa Maria, Calif.

Zip 93456

License No.

C57-229570

Date of this report

June 18, 1984

JUN 25 1984

WATER WELL DRILLING LOG

Owner: Roland Vazquez Enterprises Company: Rancho Vazquez SWN: 2N/21W-23D1

Well No.: 1 Rig: 5

Location of Well: 600 Ft. In From End Of Golden Spur Dr. 300 Ft. South East To Stable Exercise Area.

Well In North West Corner Of Exercise Area, Township 2N, Range 21W, Section 22H

Camarillo Area, Ventura County

Surface Pipe or Seal: Seal In 20" Hole, Cemented Surface Pipe - 27' In 30" Hole Size: 24" OD Depth: 120' Total Seal Gauge: .250

Well Bore Diameter: 20" Depth of Casing Set: 1207 Ft.

Casing Size: 10 3/4" OD Gauge: .279 (Blank) Type: Steel

Perforations: Size: .032, .035 Type: Johnson Screen Number: Full Flow

Perforation Location from Ground Level: 662' From: 0' To: 662' Blank,

662'-902' Screen, 902'-1082' Blank, 1082'-1202' Screen, 1202'-1207' Blank W/Bull Nose

On Bottom

Pack: Type: Pumped Size: Lone Star Lapis #3 Quantity: 99.75 Ton

Bits: No Used: 8 Size: 4-9 7/8, 1-11, 1-14, 1-20

Drilling Method: Air: Foam: Mud: X

Material Used: Gel: 192-50# Super Gel P-95-288-50# Premium Gel Foam: Quick Seal 7 bags Loss Circ Material.

Well Started: 5/14/84 Well Completed: 6/12/84 Driller: Joe-Tony

TEST PUMPING INFORMATION:

Production Test:

Standing Water Level

Pumping Level:

G.P.M.:

Pumping Level

REMARKS: Cement Plug Poured In Bottom Of Test Hole, (Approx. A 50' Plug) To 1240'

