

**REZONING SITE ANALYSIS
FOR
JACKSON PROPERTY
P16RZ00003**

JN 4226

April, 2016

RICK
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JACKSON PROPERTY

REZONING SITE ANALYSIS P16RZ00003

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April, 2016

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- Appendix A Biological Impact Report and Update Letter**
- Appendix B Arizona Game & Fish Department Online Review Tool Report**
- Appendix C Preliminary Integrated Water Management Plan (PIWMP)**
- Appendix D P.A.S.T. Cultural Resources Report**

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PART I SITE INVENTORY

I-A. EXISTING LAND USES

1. Location and Regional Context

The subject property is approximately 58.6 acres in size and is composed of two areas, which will be designated northern and southern parcels for the purposes of this site analysis. The subject property is located approximately 1,300 feet west of La Cañada Boulevard, south of Overton Road in Section 27, Township 12 South, Range 13 East, Pima County, Arizona. (See **Exhibit I-A.1: Location Map**).

2. Existing On-Site Land Uses

a. Existing On-Site Land Uses

The site is vacant and there are no existing uses.

b. Existing On-Site Easements

There are two existing easements running along the northern property boundary. A 10-foot wide electric transmission facilities easement recorded in Docket 940, Page 330 and a 10-foot wide waterline easement recorded in Docket 4123, Page 510. (See **Exhibit I-A.2.b: Existing On-Site Easements Map**).

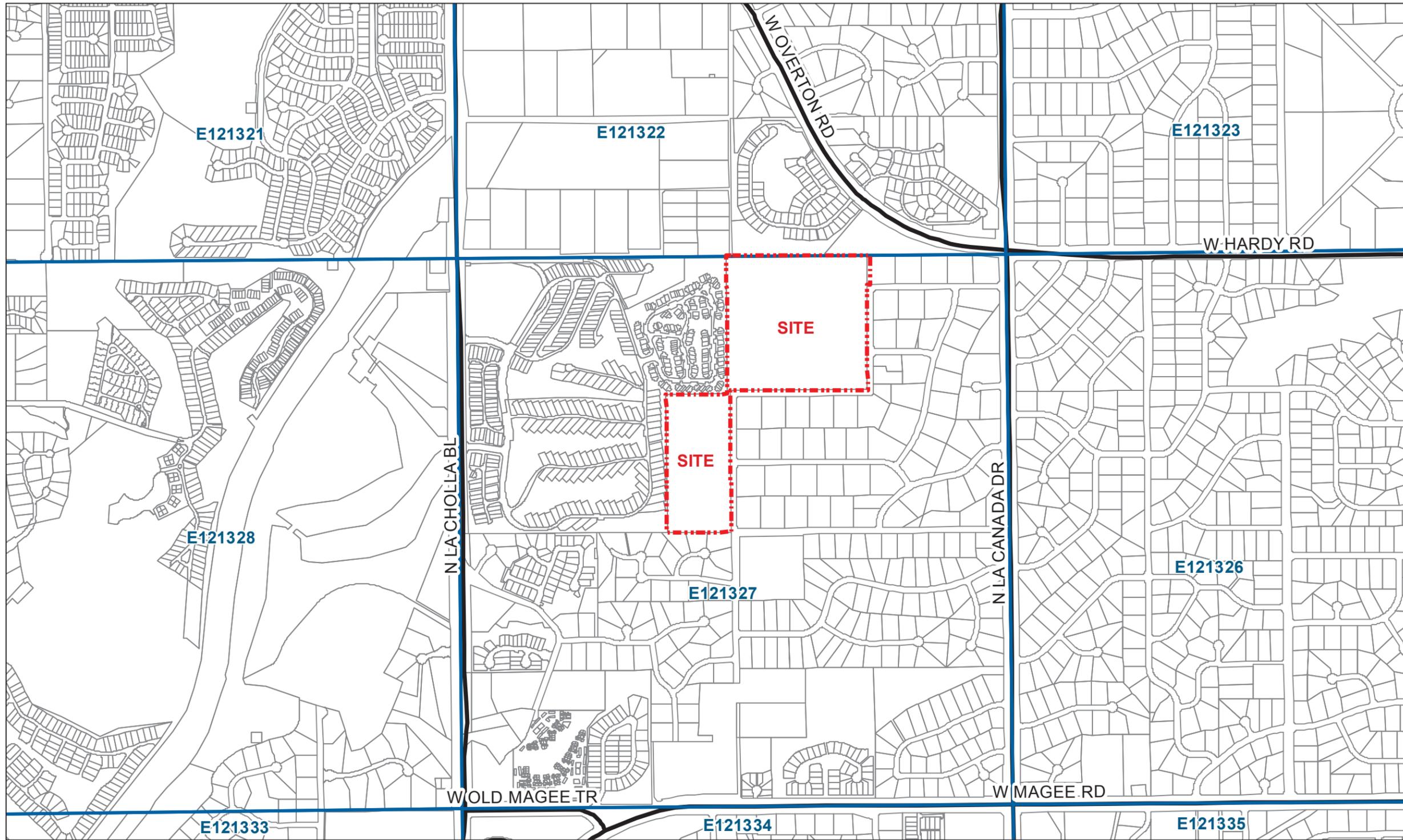
c. Comprehensive Plan Designations and Rezoning Policies

The Pima Prospers Comprehensive Plan Tortolita Planning Area identifies this area as Medium Density Urban and Low Intensity Urban 3.0. There are no rezoning policies identified for this property. (See **Exhibit I-A.2.c: Comprehensive Plan Map**).

3. Surrounding Properties Within 600 Feet

Please refer to **Exhibit I-A.3: Aerial Photo** which shows the subject property and surrounding properties within 600 feet of the subject property.

Exhibit I.A.1:
Location Map



Legend

-  Site Boundary
-  Township, Range, Section

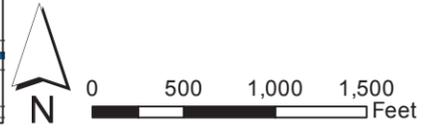
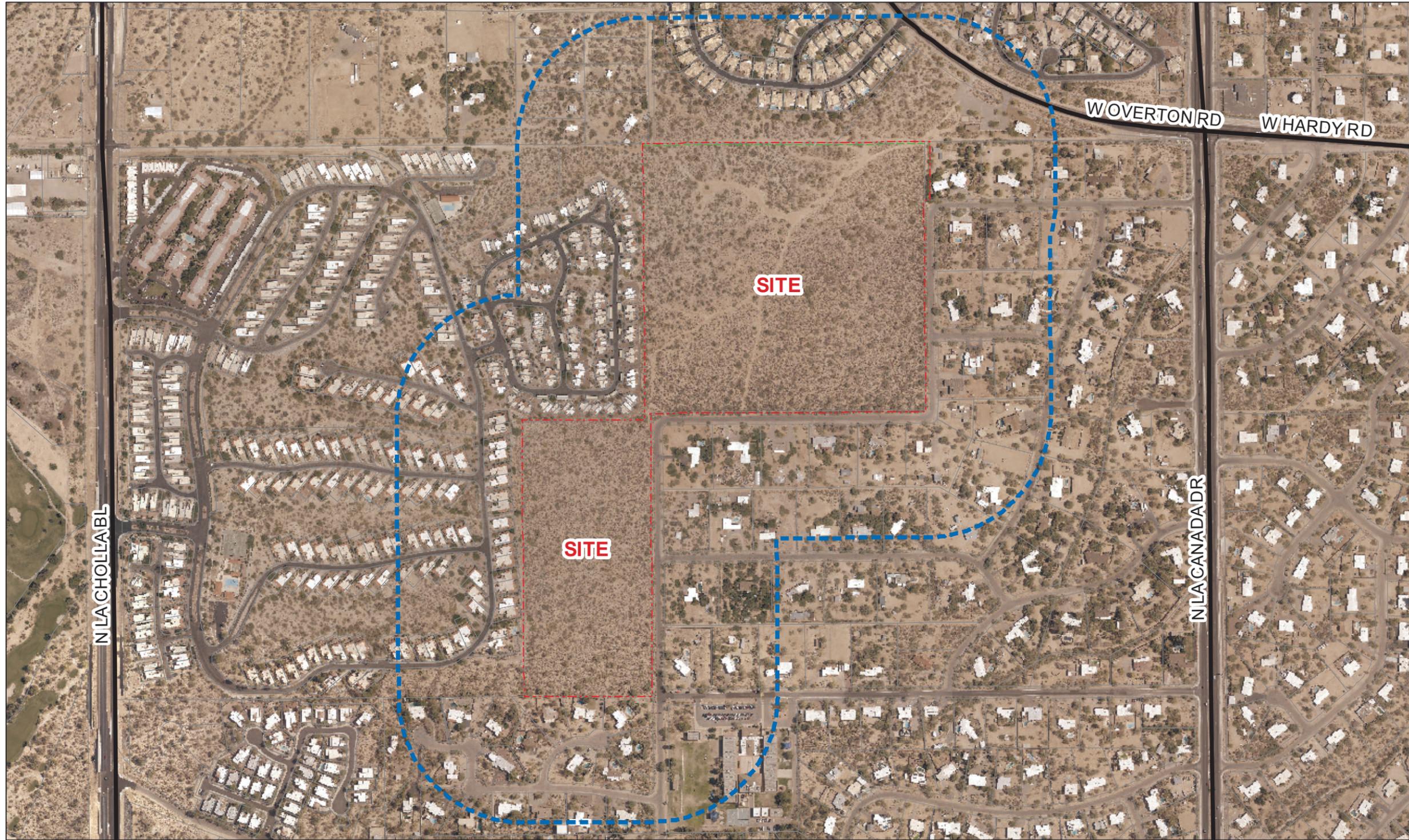


Exhibit I.A.2.b:
Existing On-Site Easements Map



Legend

-  600 Foot Radius
-  Site Boundary
-  Existing 10' Electric and Water Easement



Exhibit I.A.2.c:
Comprehensive Plan Map

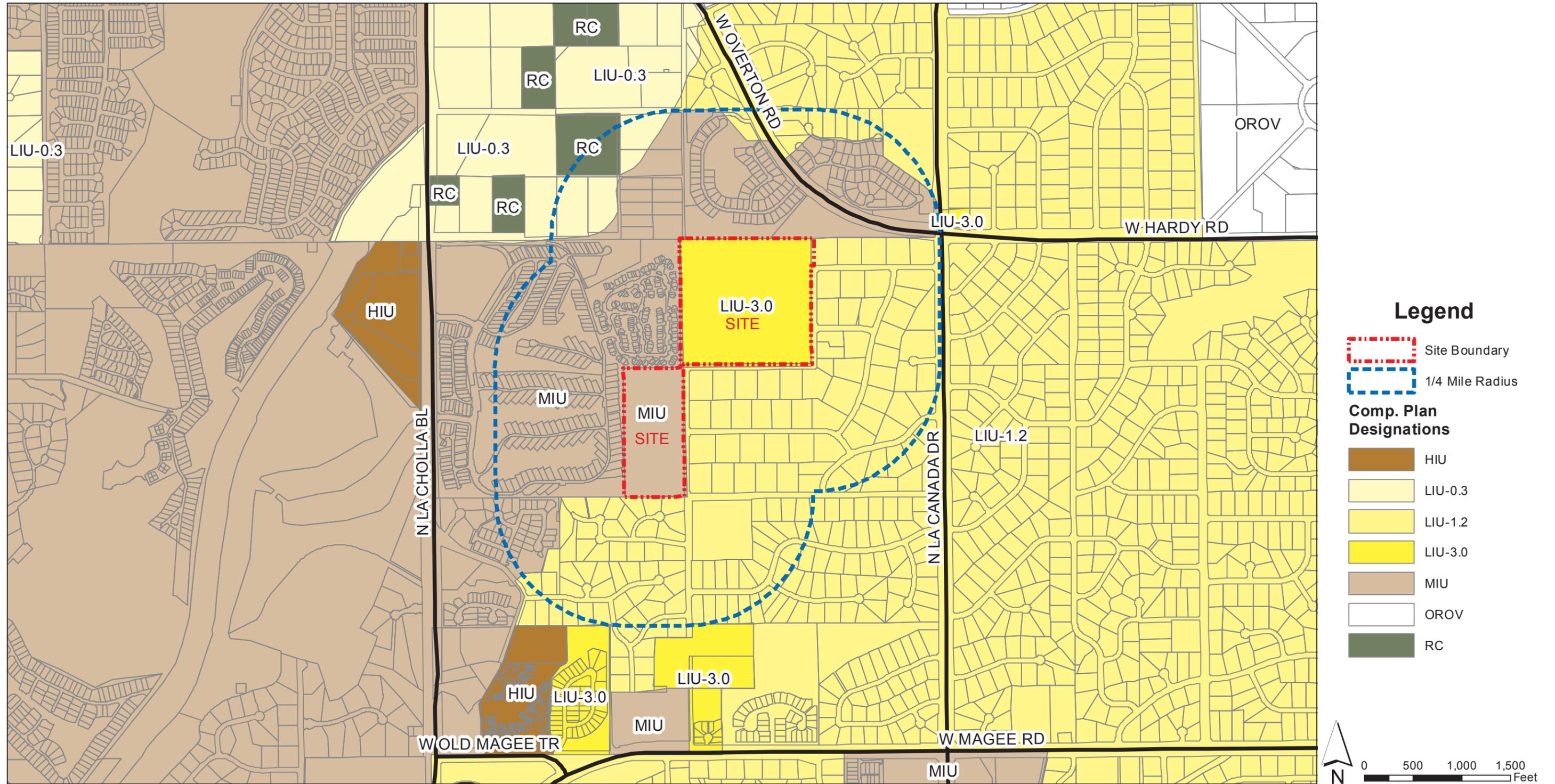


Exhibit I.A.3:
Aerial Photo



Legend

-  600 Foot Radius
-  Site Boundary



4. Properties within ¼ Mile

a. Existing On-Site and Off-Site Zoning

**Table I-A.4.a
Existing Zoning and Comprehensive Plan Designation**

	Zoning	Comprehensive Plan Designation
Project Site	SR	LIU – 3.0 and MIU
North	CR-1 and CR-5	MIU
East	SH	LIU – 3.0
South	SH and CR-1	LIU – 3.0
West	CR-5	MIU

(See Exhibit I-A.4.a: Existing Zoning Map and Exhibit I.A.2.c: Comprehensive Plan Map).

b. Existing Off-Site Land Uses

**Table I-A.4.b
Existing Off-Site Land Uses**

	Land Use	Residential Density	Business Type
North	SFR Subdivision	2.4 RAC	-----
	Religious Use	-----	Church
East	SFR Subdivision	<1 RAC	-----
South	SFR Subdivision	1 RAC	-----
West	SFR Subdivision	4.07 RAC	-----

(See Exhibit I-A.4.b: Off-Site Land Uses)

c. Number of Stories of Existing Off-Site Structures

**Table I-A.4.c
Number of Stories of Existing Off-Site Structures**

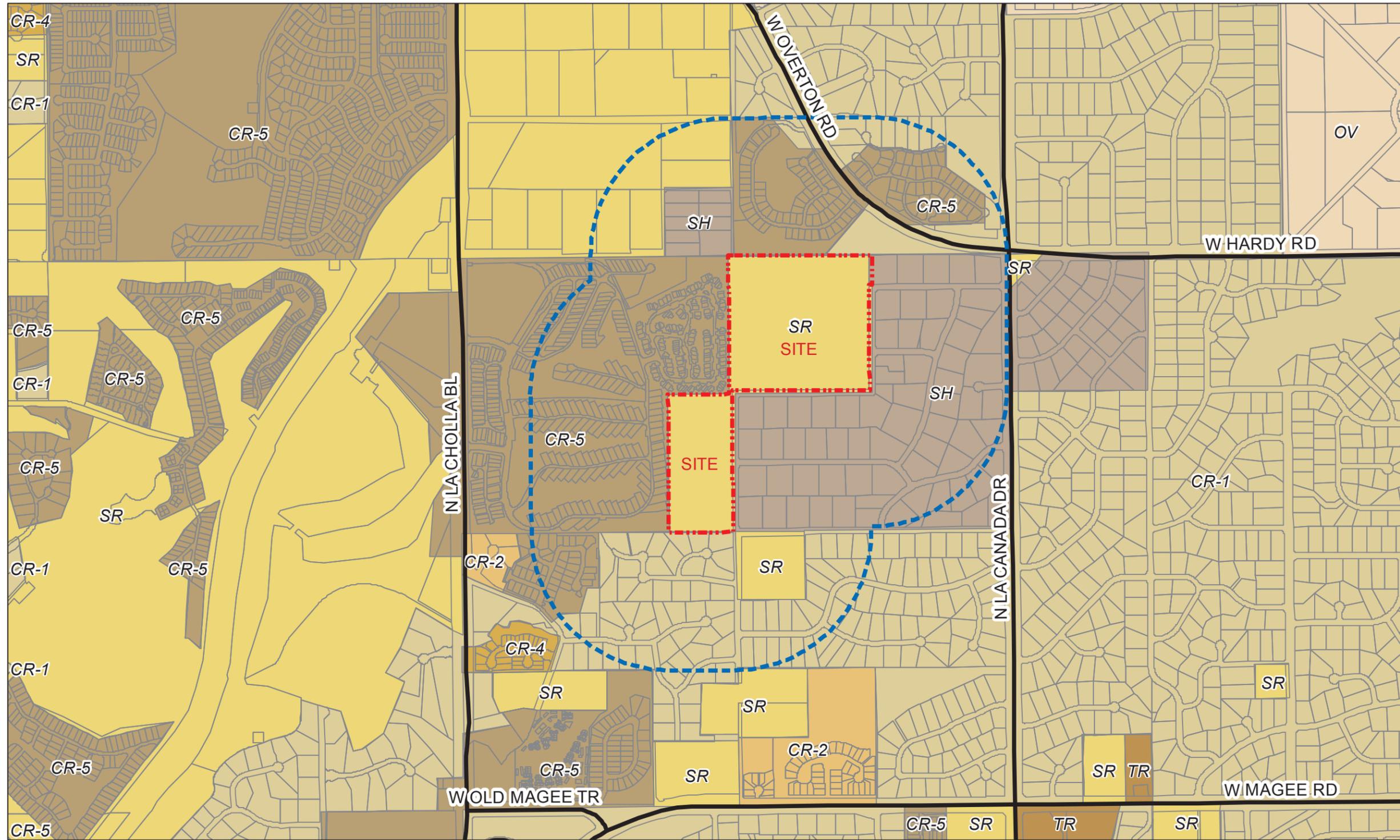
	No. of Stories
North	One
East	One
South	One
West	One and Two

(See Exhibit I-A.4.b: Off-Site Land Uses)

d. Pending or Conditionally-Approved Rezonings and Subdivisions

There are no pending or conditionally approved rezonings, development plans or subdivisions under review within $\frac{1}{4}$ mile of the site.

Exhibit I.A.4.a:
Existing Zoning Map



Legend

- Site Boundary
- 1/4 Mile Radius

**Pima County
Zoning**

- SR
- SH
- TR
- CR-1
- CR-2
- CR-4
- CR-5
- OV

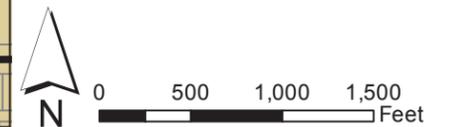
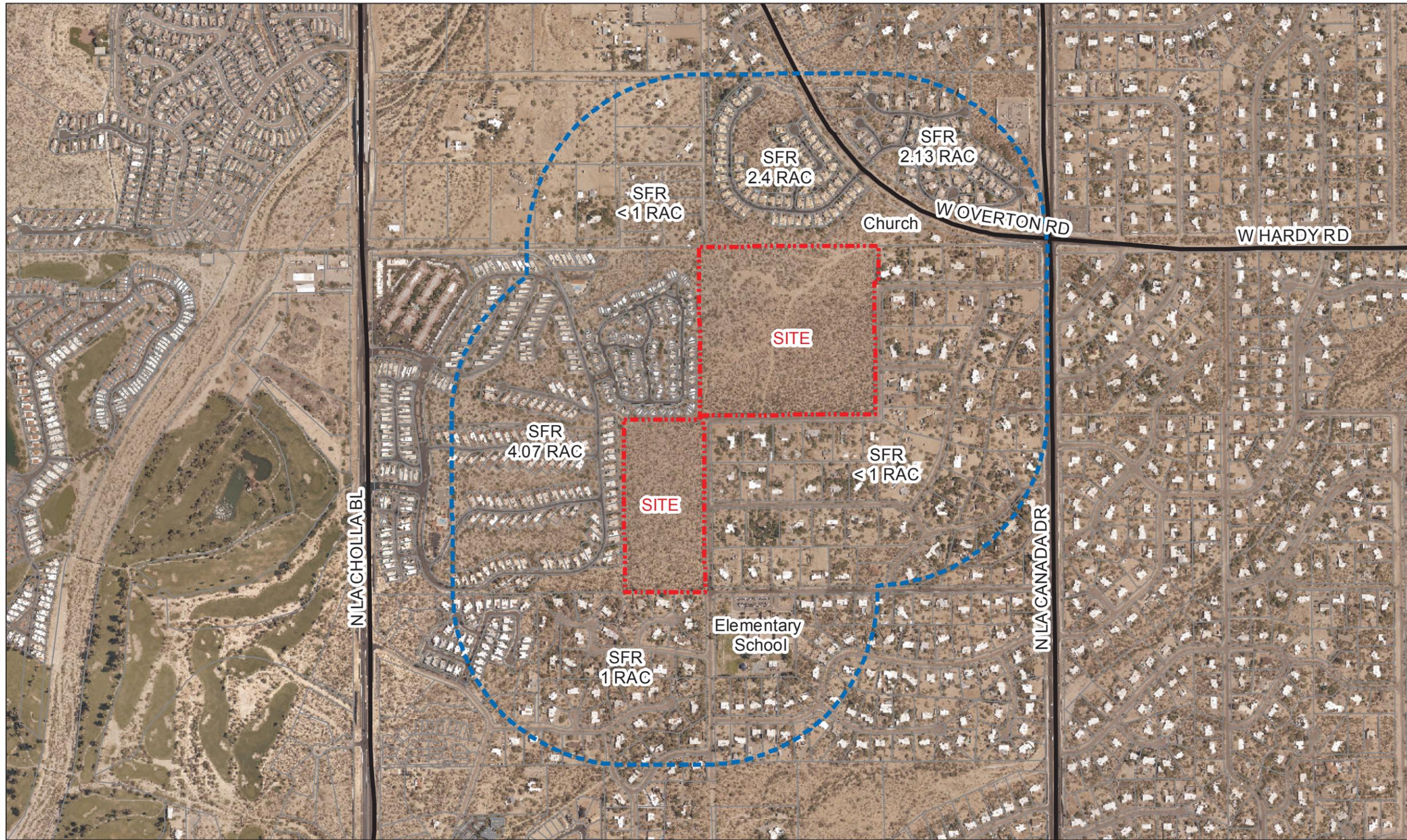


Exhibit I.A.4.b:
Existing Off-Site Land Uses Map



Legend

-  Site Boundary
-  1/4 Mile Radius



I-B. TOPOGRAPHY AND GRADING

1. Topographic Characteristics of the Site

The topography at the site ranges in elevation from 2,508 along the northern boundary to 2,459, which equates to a 1.5% slope. An area in the northwest portion of the site slopes steeply away. (See Exhibit I-B.1: Topography Map).

a. Restricted Peaks and Ridges or Rock Outcrops

There are no restricted peaks or ridges.

b. Rock Outcrops

There are no rock outcrops.

c. Slopes of 15% or Greater

Approximately 7 acres along the west and north property boundaries of the northern parcel contain slopes greater than 15%.

Any Other Significant Topographic Features

There are no other significant topographic features on the site.

d. Existing Grading and Ground Disturbance

The site is vacant and the majority of the site is undisturbed.

2. Pre-Development Average Cross Slope Calculations

The average cross slope of the site is 5.71percent.

The following equation, as per Pima County Zoning Code Section 18.61.051, was used to determine the average cross slope utilizing 2-foot contours:

$$\text{Average Cross Slope} = \frac{I \times L \times 0.0023}{A}$$

$$\text{Average Cross Slope} = \frac{5 \times 29,068 \times 0.0023}{58.6}$$

$$\text{Average Cross Slope} = 5.71 \text{ percent}$$

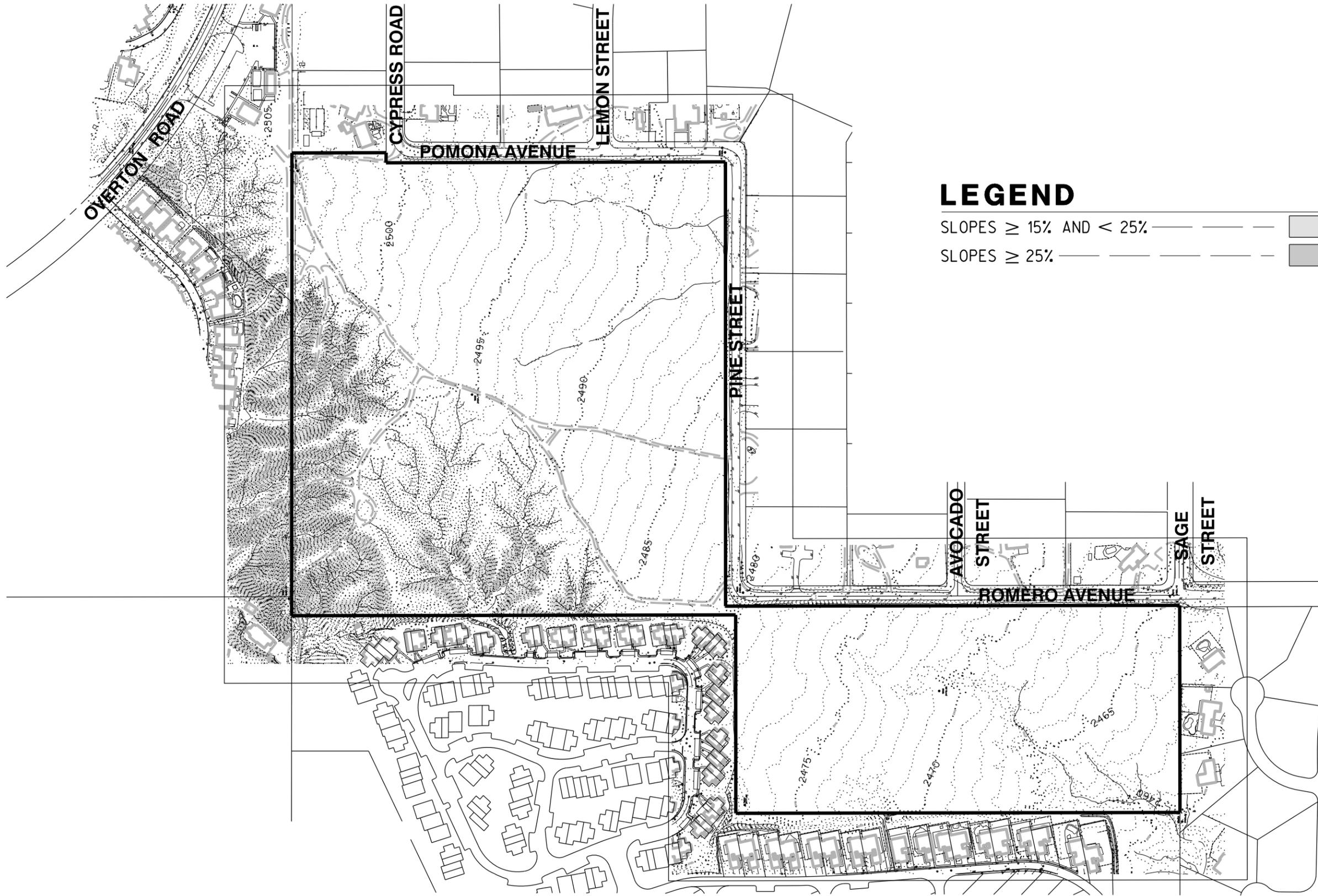
Exhibit I-B.1:
Topography Map



SCALE: 1" = 300'
CONTOUR INTERVAL: 1'

LEGEND

- SLOPES $\geq 15\%$ AND $< 25\%$ [Symbol: Dashed line with light gray fill]
- SLOPES $\geq 25\%$ [Symbol: Dashed line with dark gray fill]



I-C. HYDROLOGY

1. Off-Site Watersheds

There are four existing off-site watersheds affecting the development of this site. Off-site watersheds OS-1 through OS-3 are located northeast of the north portion of the property. Watershed OS-1 is located on the northeast side of Overton Road, flows convey underneath Overton Road through a 30-inch RCP where they commingle with flows from OS-2. Watershed OS-2 is split into two sub-watersheds. The existing church site and associated detention basin make up OS-2a. Flows from the detention basin commingle with flows from OS-2b. Watersheds for OS-2b and OS-3 are made up of steep slopes and defined drainage channels and generally flow in a northwest direction. Off-site watershed OS-4 consists of a small area along the east side of the north portion of the property which conveys south to the southeast corner of the north portion of the property. Off-site flows along Pomona Avenue and Romero Avenue are contained in the swales in the right of way and do not affect the property. All off-site watersheds are mapped on Exhibit I.C.1. Hydrologic information for the off-site watersheds is located in Table 1 on **Exhibit I-C.1:Pre-Development Off-Site Drainage Map**.

2. Off-Site Natural or Man-Made Features

A 30-inch RCP located to the north of the property under Overton Road conveys a minor amount of runoff southwest under Overton Road. The peak flow rate generated by OS-1 through the RCP is approximately 7 cfs. Photos of the 30-inch RCP are shown below (Photo 1 and Photo 2).



Photo 1: Upstream end of culvert on north side of Overton Road, looking downstream



Photo 2: Downstream end of culvert on south side of Overton Road, looking upstream

3. Upstream Off-Site Watersheds with 100-year Discharges Greater than 100 CFS

There are no off-site watersheds with 100-year discharges greater than 100cfs.
(See Exhibit I-C.1: Pre-Development Off-Site Drainage Map).

Exhibit I-C.1:
Pre-Development Off-Site



SCALE: 1" = 300'

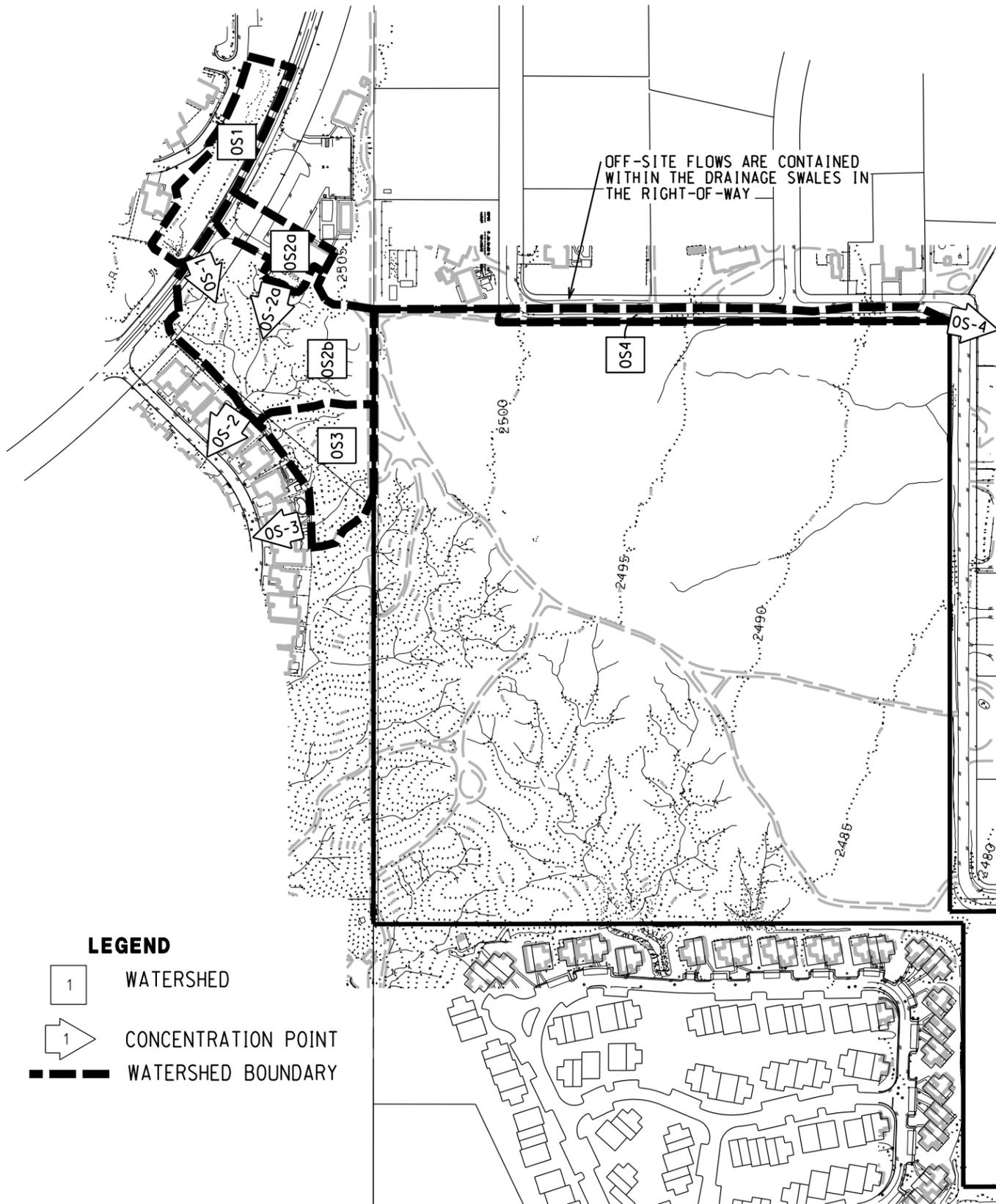


TABLE 1: PRE-DEVELOPMENT OFFSITE PEAK FLOWS

WATERSHED	AREA	LENGTH	SLOPE	Tc	Q100	CUMULATIVE WATERSHED CPs	CUMULATIVE Q100
CPs	[ac]	[ft]	[%]	[min]	[cfs]		[cfs]
OS-1	1.1	540	0.6	5.0	7	-	-
OS-2a	-	-	-	-	3.3*	-	-
OS-2b	2.8	440	4.0	5.0	17		
OS-2	-	-	-	-	-	OS-1 + OS-2a + OS-2b	27.3**
OS-3	1.2	446	5.0	5.0	7	-	-
OS-4	0.7	990	1.3	5.0	5	-	-

* From Private Detention Basin per approved Improvement Plans titled 'Proposed Modular and Parking Lot, Assessor's Parcel: #225-06-0470,' P14BS00012, Approved 02/06/2015, Rev #1, by Perry Engineering
** Calculated by direct summation

- LEGEND**
- 1 WATERSHED
 - 1 CONCENTRATION POINT
 - WATERSHED BOUNDARY

4. On-Site Hydrology

Please refer to **Exhibit I-C.4.a: Pre-Development On-Site Drainage Map.**

a. 100-year floodplains with a discharge greater than or equal to 100 cfs.

The site is comprised of 12 watersheds, none of which have discharges greater than 100 cfs; therefore, no 100-year floodplains have been delineated.

b. Sheet-flooding areas with their average depths

Local existing watershed runoff conveys through the site via defined drainage channels and cannot be defined as sheet flow. Discharges on-site are considerably less than one foot in depth; therefore no sheet flow areas are mapped.

c. Federally-mapped floodways and floodplains

There are no federally-mapped floodways and floodplains within the site. Per FIRM Panels 04019C1610K and 04019C1630K (February 8, 1999), the entire project is located in an Unshaded Zone X designated area, as shown on Exhibit I-C.4.c.

d. Peak discharges both entering and leaving the site for 100-year events which exceed 100 cfs.

No peak discharges both entering and leaving the site for the 100-year event exceed 100 cfs.

e. All mapped, regulated riparian habitat classifications adopted by the 2005 floodplain and erosion hazard management ordinance amendment; and provide acreages.

Mapped and regulated riparian habitat is as shown on **Exhibit I.C.4.a.** The acreage is approximately 3.5-acres. This area appears to be mapped in error and we are meeting with FCD to properly map the riparian habitat.

f. Existing drainage infrastructure (i.e. culverts, basins, etc.)

There is no existing infrastructure on-site.

g. Any lakes, ponds, wetlands, springs, or other source(s) of perennial surface water.

There are no sources of perennial surface water on-site.

- h. Erosion hazard setbacks, as required by the floodplain and erosion hazard management ordinance; also include a description of the methodology used to determine them, and provide the data in an appendix.**

There are no federally mapped floodways and floodplains within the site; therefore, no erosion hazard setbacks are required by the floodplain and erosion hazard management ordinance.

5. Existing Drainage Conditions along the Downstream Property Boundary.

In the existing condition, the north portion of the property is generally separated diagonally into two triangular areas from the northeast corner to the southwest corner. The northwest triangular area of the property flows to the north or west through steep slopes and defined drainage channels, while the southeast triangular area flows in a southeasterly direction through defined channels with flatter slopes.

Existing runoff generated by the south portion of the property flows in a southeasterly direction generally to the southeast corner of the property.

Existing runoff from the north and south portions of the property ultimately convey to Cañada del Oro Wash. All pre-development on-site watersheds are mapped on Exhibit I-C.4.a. Hydrologic information for the pre-development watersheds is located in Table 2 on **Exhibit I-C.4.a.:Pre-Development On-Site Drainage Map.**

Exhibit I-C.4.A:
Pre-Development On-Site Drainage Map



SCALE: 1" = 300'

TABLE 2: PRE-DEVELOPMENT PEAK FLOWS

WATERSHED CP's	AREA [ac]	LENGTH [ft]	SLOPE [%]	Tc [min]	Q100 [cfs]
1E	3.8	438	5.5	5.0	22
2E	0.6	266	7.9	5.0	4
3E	0.9	220	13.6	5.0	5
4E	1.4	360	12.2	5.0	8
5E	9.4	848	3.4	5.0	54
6E	18.5	2,266	1.0	13.1	69
7E	3.2	900	1.3	5.9	17
8E	1.8	784	1.3	5.5	10
9E	0.4	300	1.2	5	2
10E	2.8	824	1.1	5.9	15
11E	14.5	1,564	1.3	8.6	67
12E	1.4	624	1.3	5	8

LEGEND

-  WATERSHED
-  CONCENTRATION POINT
-  WATERSHED BOUNDARY
-  RIPARIAN HABITAT

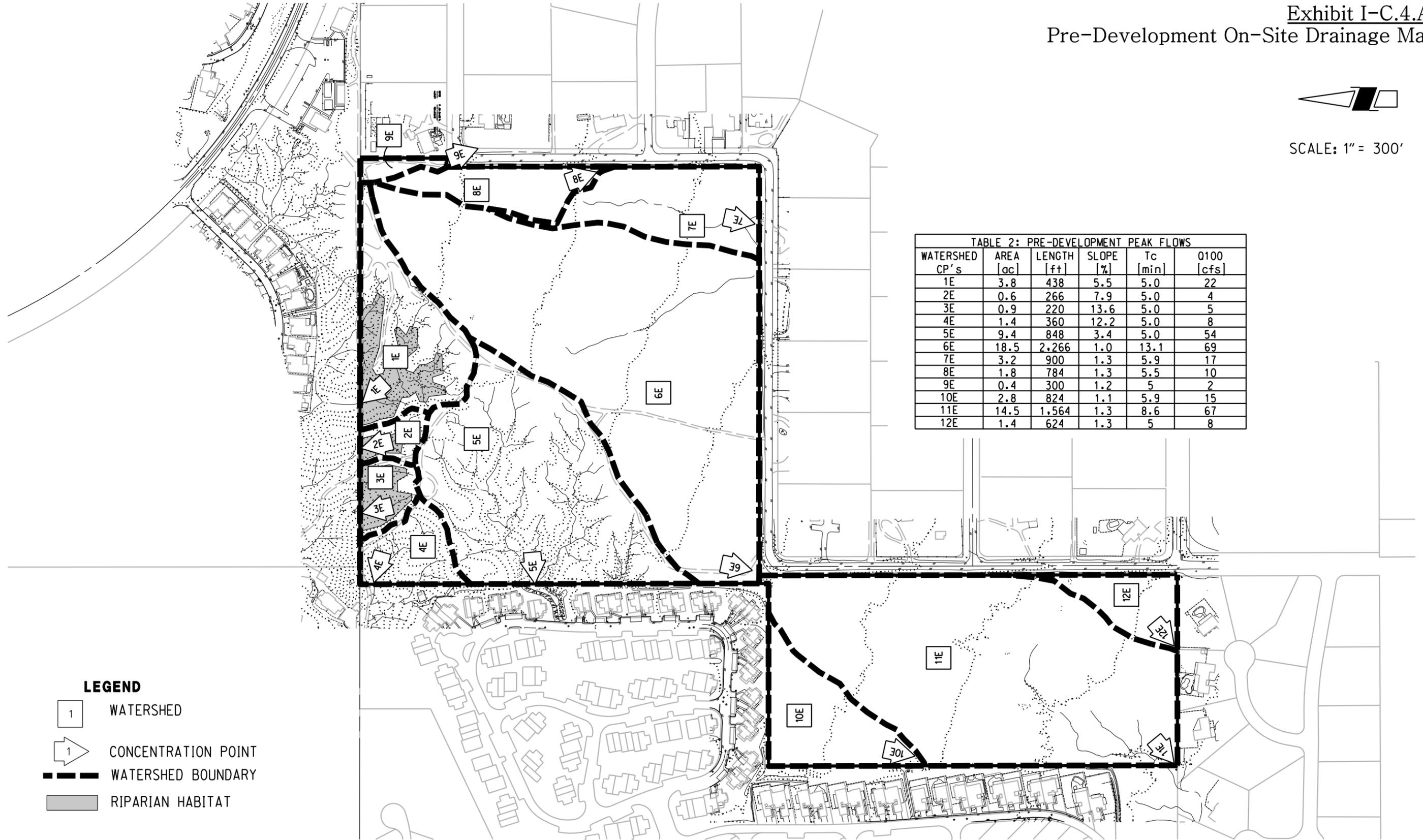
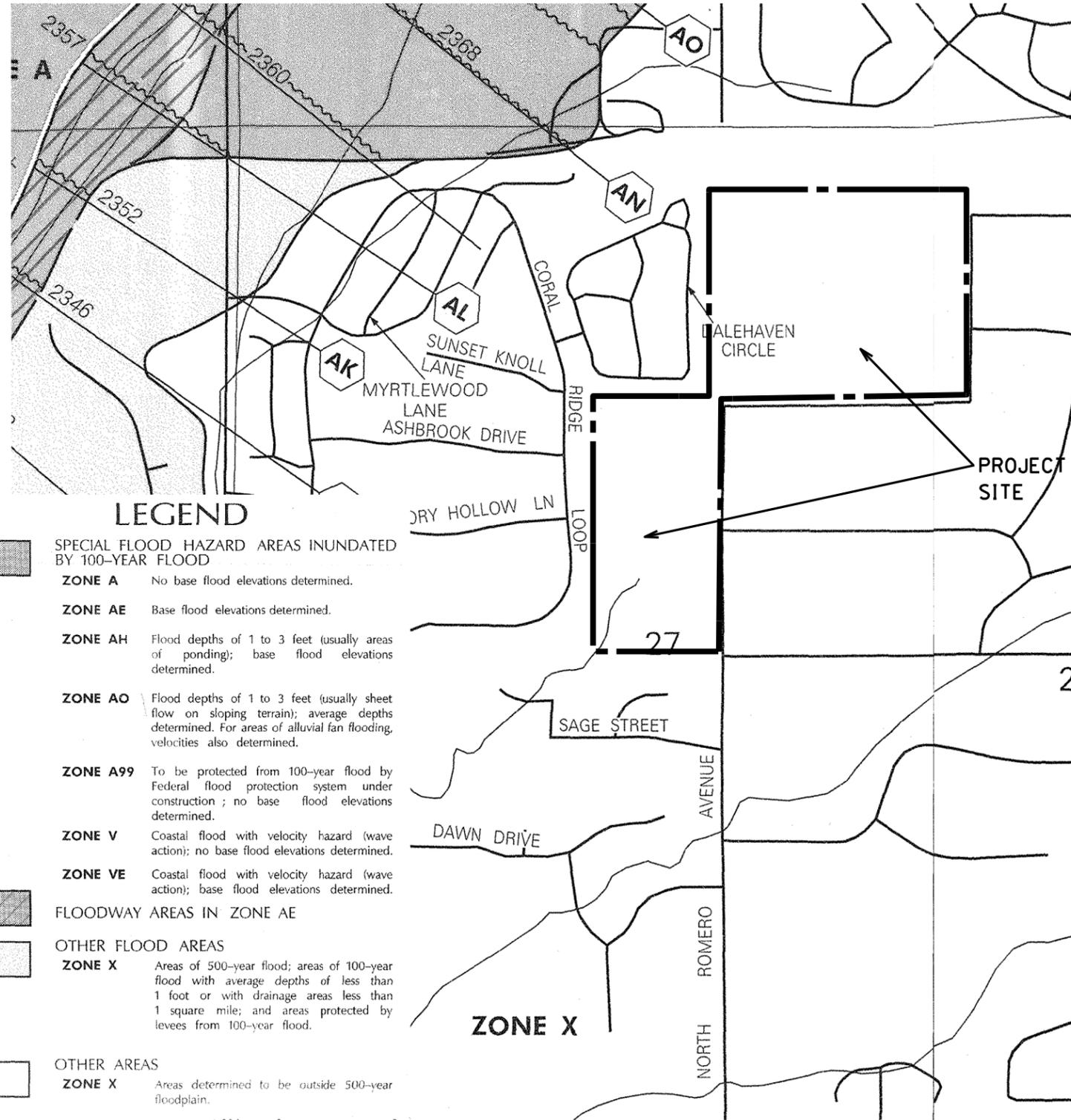


Exhibit I-C.1.4.C:
Firm Map



NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

PIMA COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 1630 OF 4700
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	NUMBER	PANEL	SUFFIX
COMMUNITY			
ORO VALLEY TOWN OF	040109	1630	K
PIMA COUNTY UNINCORPORATED AREAS	040073	1630	K

MAP NUMBER 04019C1630 K

EFFECTIVE DATE: FEBRUARY 8, 1999

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

PIMA COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 1610 OF 4700
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	NUMBER	PANEL	SUFFIX
COMMUNITY			
MARANA TOWN OF	040118	1610	K
ORO VALLEY TOWN OF	040109	1610	K
TUCSON, CITY OF	040076	1610	K
PIMA COUNTY UNINCORPORATED AREAS	040073	1610	K

MAP NUMBER 04019C1610 K

EFFECTIVE DATE: FEBRUARY 8, 1999

Federal Emergency Management Agency

I-D. BIOLOGICAL RESOURCES

A Biological Impact Report prepared by Novak Environmental, Inc. dated March 10, 2005 and update letter dated January 15, 2016 is provided in **Appendix A**.

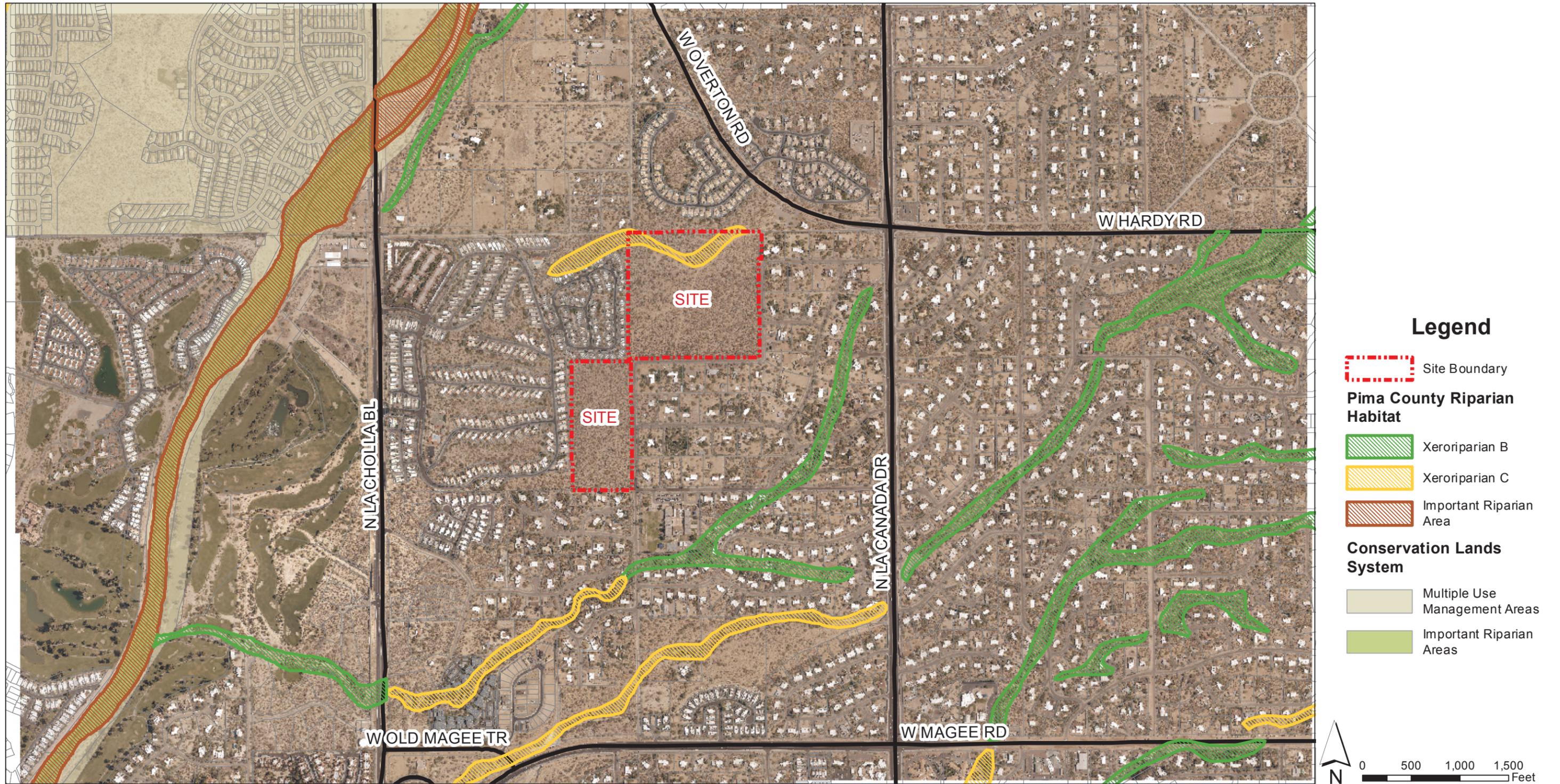
1. Conservation Lands System

The site is located outside the Conservation Land System (CLS) area per Pima County's online MapGuide. The closest CLS Important Riparian Area and Multiple Use Management Area are over one-half mile to the west. (See **Exhibit I-D.1: Conservation Lands System Map**).

2. CLS Critical Landscape Connections

The project site is not located in the vicinity of any of the six general areas identified as Critical Landscape Connections (CLC).

Exhibit I.D.1.:
Conservation Lands System Map



3. Pima Pineapple Cactus

Per the Pima County SDCP MapGuide, the project site is not within the Priority Conservation Area for the Pima Pineapple.

4. Needle-Spined Pineapple Cactus

Per the Pima County SDCP MapGuide, the project site is not within the Priority Conservation Area for the Needle-Spined Pima Pineapple.

5. Priority Conservation Areas

a. Cactus Ferruginous Pygmy-Owl

Per the Pima County SDCP MapGuide, the project site does occur within Survey Zone 1 for the Cactus Ferruginous Pygmy Owl.

b. Western Burrowing Owl

Per the Pima County SDCP MapGuide, the project site is not within the Priority Conservation Area for the Western Burrowing Owl.

6. Special Status Species

The Arizona Game and Fish Department's online information tool was used to identify special status species and habitat information for the project vicinity. See inquiry results in **Appendix B: Arizona Game and Fish Department On-Line Review Tool Report**.

7. Saguaros and Ironwoods

a. Saguaros

A site visit conducted January 15, 2016 confirms that the status of the property has changed very little over time. The Saguaro are substantially in the same condition as previously observed, accounting for natural life cycle changes that occurred over a ten year period. Saguaro growth appears to have occurred at a consistent rate across the site resulting in an increase in height ranging from 3-4 feet. There has been no significant regeneration of Saguaro

across the site except for a small area observed in the northwest corner of the property. (See Exhibit I-D.10: Vegetation Map).

b. Ironwoods

No Ironwoods were observed on this site.

8. Habitat Protection/Community Open Space Priority Acquisition

Per Pima County SDCP MapGuide, the property is not designated a Habitat Protection or Community Open Space Priority.

9. Important Vegetation

The important vegetation that exists on site is located on the southern edge of the main parcel, north of Pine Street. It consists of large healthy mesquites, palo verdes and three large saguaros. The vegetation is currently screening the entire site from the five existing homes that reside on the south side of Pine Street and is functioning as a natural buffer. No other vegetation on site is providing scenic value, screening and buffering or facilitating significant soil stabilization.

(See Exhibit I-D.10: Vegetation Map).

10. On-Site Vegetative Communities

This site, for the most part, is undeveloped and vacant; therefore, existing vegetation is native. The small parcel to the north currently contains a church with parking lots, out buildings and some non-native landscape plants. There are dirt roads and paths crisscrossing the midsection of the site with numerous signs of previous disturbance and wildcat dumping throughout.

Existing native vegetation within undeveloped areas of this site can be classified as Sonoran Desertscrub- Arizona Upland with a strong association of cholla cacti. In general, native vegetation is diverse and in good health; however, the site is dominated by cholla (*Opuntia* sp.) of which both staghorn cholla and chain fruit cholla are found throughout the site at various densities.

Scattered trees occur across the entire site with the largest specimens occurring along Pine Street on the southern boundary of the northern parcel. The dominant tree species is foothills palo verde (*Cercidium microphyllum*) with an occasional occurrence of mesquite (*Prosopis velutina*). Mid-story species include whitethorn acacia (*Acacia constricta*), catclaw acacia (*Acacia greggii*), creosotebush (*Larrea tridentata*) and desert hackberry (*Celtis palifida*). Ground covers consist of triangle-leaf bursage (*Ambrosia deltoidea*), limber bush (*Jatropha cardiophylla*), and brittlebush (*Encelia farinosa*).

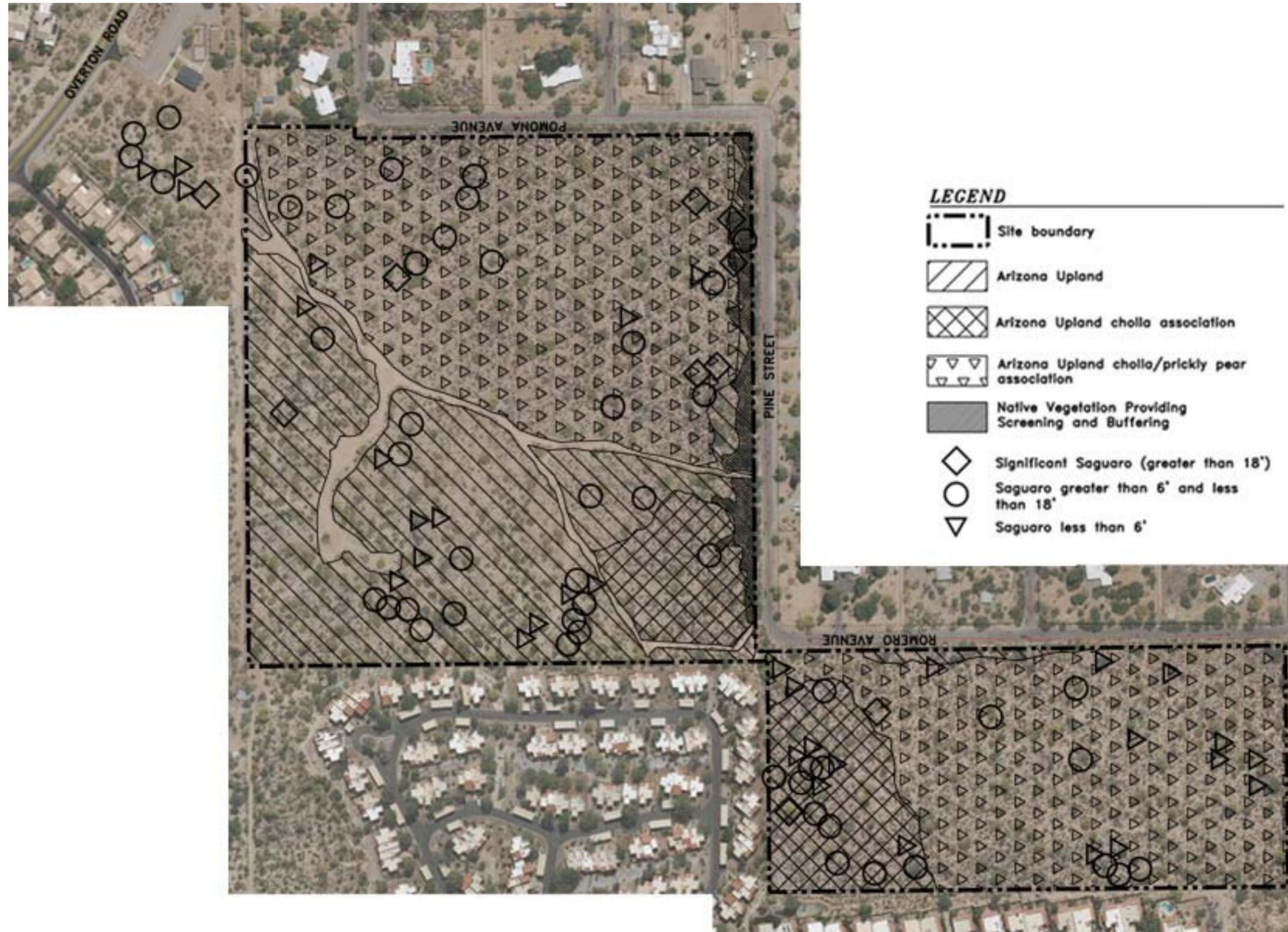
Other species found on site include prickly pear (*Opuntia* Sp.), saguaro (*Carnegiea gigantea*) and barrels (*Ferocactus* sp.) with an occasional pincushion cactus (*Mammillaria* sp.), hedgehog (*Echinocereus* sp.) or Ocotillo (*Fouquieria splendens*). Several larger Saguaros, over eighteen feet tall, were observed along Pine Street.

Although the entire site is Arizona Upland vegetative community, three slightly different communities are recognized due to their variations in plant composition and diversity:

- Arizona Upland with a relatively even ratio of cacti and woody plants
- Arizona Upland with high occurrence of cholla cacti (cholla association)
- Arizona Upland with a high occurrence of cholla/prickly pear cacti (cholla/prickly pear association).

Vegetative communities with cholla or cholla/prickly pear association occur on a majority of the site. The only areas where cholla and/or cholla/prickly pear cannot be considered the dominant plant is in the far northern portion of the site, the northwest corner and in two narrow strips along Pine Street and Romero Avenue. Prickly pear occurs with the cholla in the eastern and southern portions of the site. (See **Exhibit I-D.10: Vegetation Map**).

**Exhibit I-D.10:
Vegetation Map**



I-E. VIEWSHEDS

1. Looking Onto and Across the Site from Areas Around the Site

Not applicable, this project is not being developed under the Cluster Development Option of the Zoning Code.

2. Site Photos

Refer to **Exhibit I-E.2: Site Photos Key Map** for location of ground-level photos looking onto the site from various points surrounding the project site.

Photo 1: Looking Southwest across North Parcel



Photo 2: Looking South across North Parcel



Photo 3: Looking Southeast across North Parcel



Photo 4: Looking East across North Parcel



Photo 5: Looking Northeast across North Parcel



Photo 6: Looking North across North Parcel



Photo 7: Looking Northwest across North Parcel



Photo 8: Looking West across North Parcel



Photo 9: Looking Southwest across South Parcel



Photo 10: Looking Southeast across South Parcel



Photo 11: Looking East across South Parcel



Photo 12: Looking Northeast across South Parcel



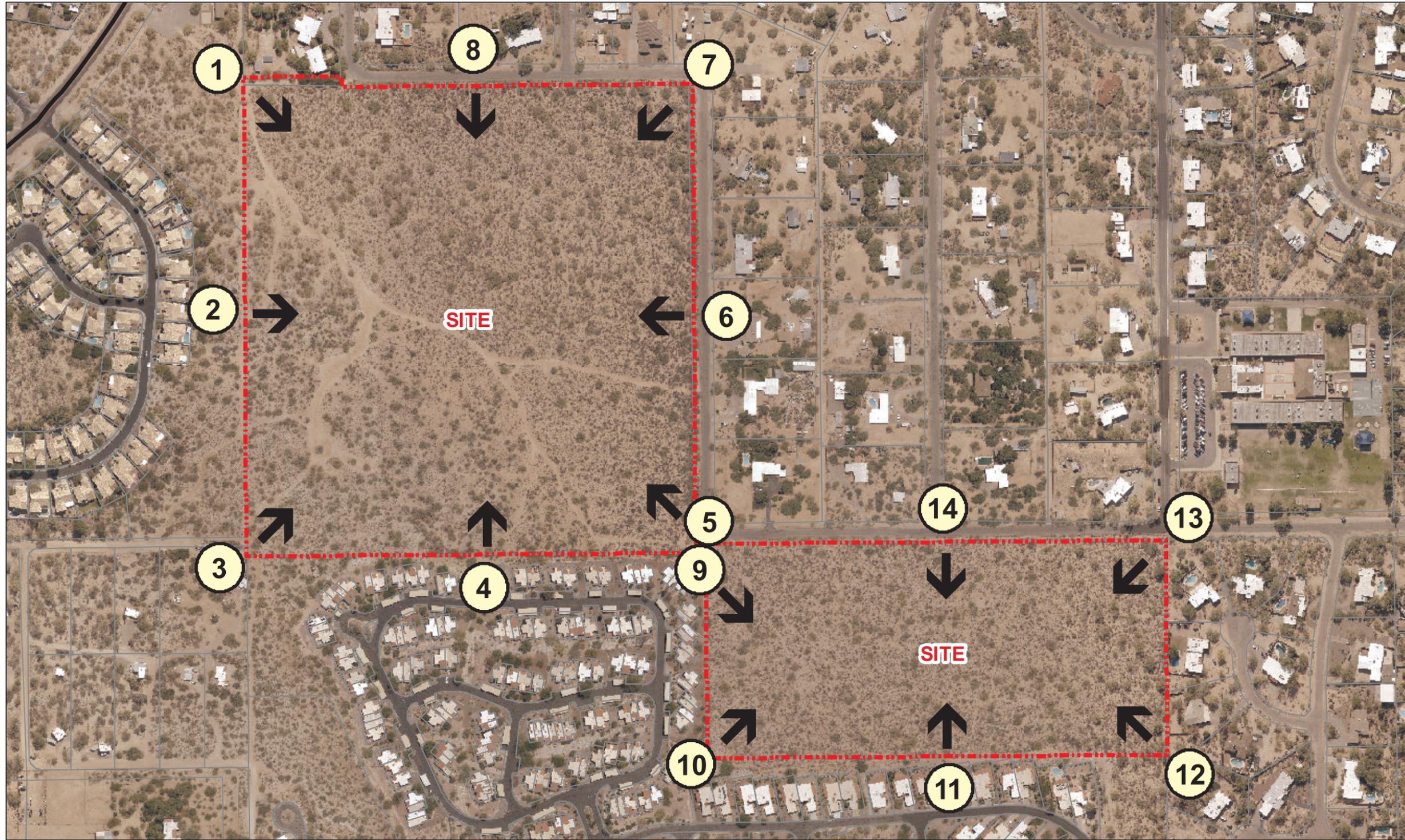
Photo 13: Looking Northwest across South Parcel



Photo 14: Looking West across South Parcel



Exhibit I.E.2:
Site Photos Key Map



Legend

-  Site Boundary
-  Photo Point



I-F. TRANSPORTATION

1. Existing and Proposed Off-Site Streets

The primary access to the site will be directly to and from Overton Road, which is designated as a low volume arterial and Scenic Major Route in the Pima County Major Street and Scenic Routes Plan, updated October 7, 2014. Secondary access to southern lots will be provided to Romero Avenue. As shown on **Exhibit I.F.1**, Overton Road intersects with La Cholla Boulevard 1 mile west of the site entrance, and intersects with Hardy Road and La Cañada Drive approximately ¼ mile east of the site entrance. In turn, La Cholla and La Cañada intersect with Magee Road approximately 1 mile south of the site. La Cholla and La Cañada are both designated as Major Routes, and Overton, Hardy, and Magee are designated as Scenic Major Routes. (See **Exhibit I-F: Major Streets Map**).

a. Existing Rights-Of-Way

The approximate rights-of-way for Major Streets and Routes within 1 mile of the development are shown in **Table I-F.1.c**.

b. Whether these rights-of-way meet Pima County width standards

As shown on **Table I-F.1.c**, all streets with the exception of the segment for Overton Road between Rancho Feliz Drive and La Cholla Boulevard meet the Pima County width standards.

c. Whether the rights-of-way are continuous or whether they shift from one side to the other

As shown in **Table I.F.1.c**, all streets with the exception of the segment for Overton Road between Rancho Feliz Drive and La Cholla Boulevard have continuous right-of-way.

Table I-F.1.c: Right-of-Way

Major Street or Route	From Road	To Road	Future ROW (Feet)	Existing ROW (Feet)	ROW Standards	Contin. ROW
Overton Road	La Cañada Drive	Rancho Feliz Drive	90	150	Yes	Yes
	Rancho Feliz Drive	La Cholla Blvd.	90	60 - 150	No	No
Hardy Road	La Cañada Drive	Camino Loma Linda	90	150	Yes	Yes
La Cañada Drive	Magee Road	N. of Dutton Place	150	150	Yes	Yes
La Cholla Blvd.	Old Magee Trail	N. of Overton Road	150	150+	Yes	Yes
Magee Road	La Cañada Drive	Old Magee Trail	150	150+	Yes	Yes

d. The rights-of-way for all proposed off-site roads

There will be a 45-foot right-of-way needed to cross the parcel to the north. This off-site road will provide access from the northern parcel to Overton Road.

e. The number of travel lanes, capacity, and posted speed limit on existing roads and proposed off-site streets

The capacity numbers listed below are based on Florida DOT Capacity Urbanized Areas Level of Service D Non-State Signalized Roadways. The rest of the information in **Table I-F.1.e** is based on Pima County MapGuide information found online.

Table I-F.1.e: Roadway Characteristics

Street Name	Travel Lanes	Capacity	Speed Limit (mph)	Paved Edge	Bicycle Route	Pedestrian Way
Overton Road	2	15,930	45	No	No	No
Hardy Road	2	15,930	45	No	No	No
La Cañada Drive	4	35,820	45	Yes	Yes	Yes
La Cholla Blvd.	4	35,820	45	Yes	Yes	Yes
Magee Road	4	35,820	45	Yes	Yes	Yes

f. The present average daily trips (ADT) for existing streets.

Pima County Department of Transportation and Pima Association of Governments (PAG) ADT counts for existing major streets are listed in **Table I.F.1.f** for the area within 2 miles of the subdivision.

Table I-F.1.f: Average Daily Trips

Major Street or Route	From Road	To Road	ADT (Source, Year)
Overton Road	La Cañada Drive	La Cholla Blvd	6,239 (PC DOT, 2015)
Hardy Road	La Cañada Drive	Cmo. Loma Alta	6,803 (PC DOT, 2011)
La Cañada Drive	Magee Road	Overton/Hardy Road	17,695 (PC DOT, 2011)
La Cholla Blvd.	Overton Road	Magee Road	17,589 (PAG, 2013)
Magee Road	La Cholla Blvd.	La Cañada Drive	17,100 (PAG 2012)
Ina Road	Magee Road	La Cholla Blvd	33,385 (PC DOT, 2011)

g. Existing bicycle and pedestrian ways

There are existing bicycle routes with striped shoulders along La Cañada Drive, La Cholla Boulevard, and Magee Road. There is also a bicycle route along Sage Street and Romero Avenue both of which are designated local streets near the project site.

2. Existing Driveways and Intersections

The project site does not abut a major street and there are no existing driveways into the project site from the adjacent local streets. (See **Exhibit I-F: Major Streets Map**).

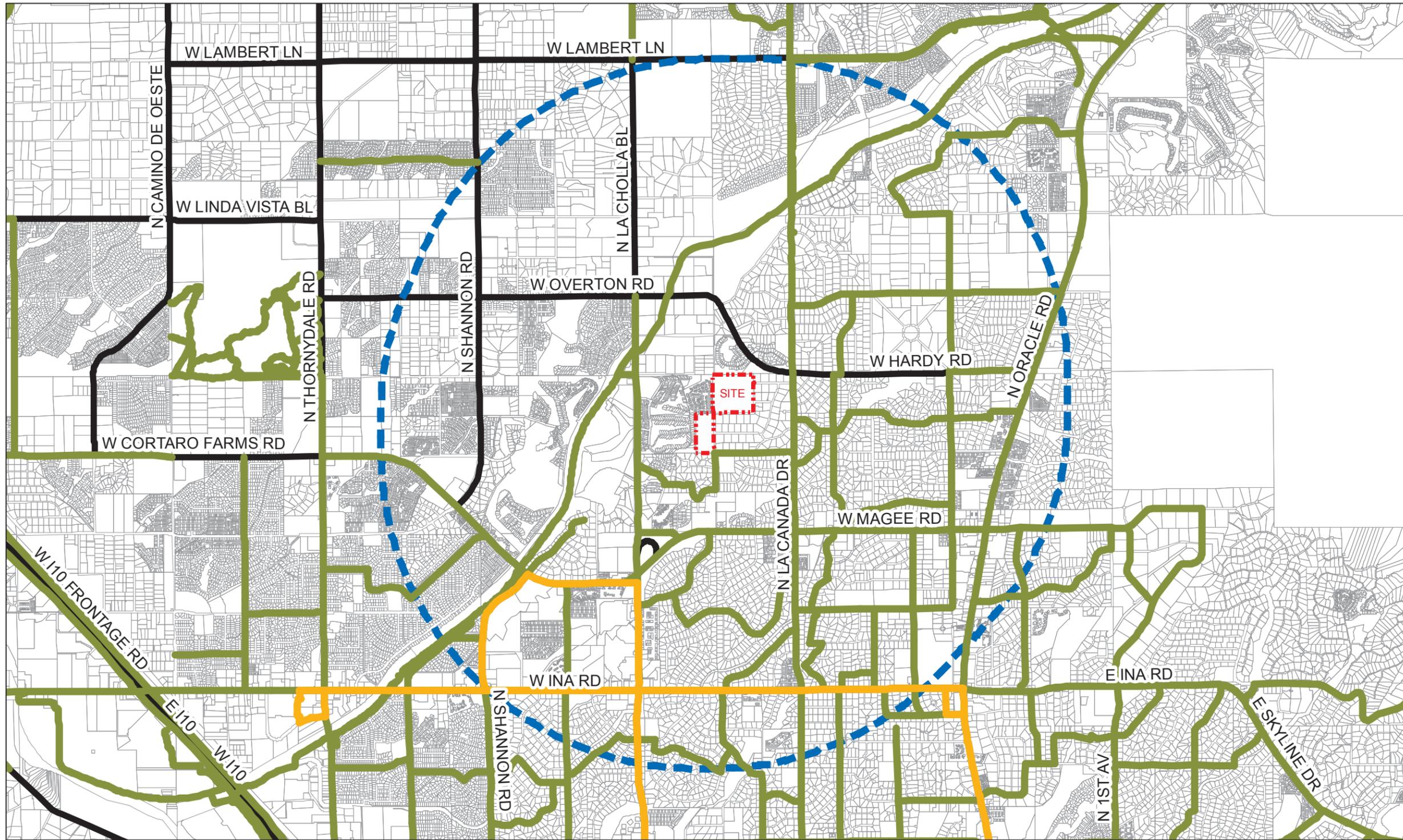
3. Transit Routes within One-Half Mile of Site

There are two Sun Tran bus routes along La Cañada Drive. Route number 107X – Oro Valley Downtown Express and route number 203X – Oro Valley Aero Park Express. (See **Table I-F.3**) An existing bus stop is located at the southwest corner and another bus stop is located at the northeast corner of the Hardy Road/La Cañada Drive intersection. (See **Exhibit I-F: Major Streets Map**).

Table I-F.3: Bus Transit Routes

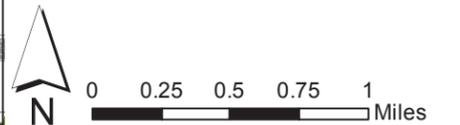
Bus Route Number	Starting Point	Ending Point	Hours of Operation
107X Southbound	Rancho Vistoso Park and Ride	6 th Avenue at Pennington	Monday – Friday 5:57 a.m. – 7:45 a.m.
107X Northbound	6 th Avenue at Pennington Rancho	Vistoso Park and Ride	Monday – Friday 5:57 a.m. – 7:45 a.m.
203X Southbound	Rancho Vistoso Park and Ride	Raytheon Bldg. 840	Monday – Friday 5:26 a.m. – 7:45 a.m.
203X Northbound	Raytheon Gate C	Rancho Vistoso Park and Ride	Monday – Friday 3:40 p.m. – 6:54 p.m.

Exhibit I.F.:
Major Streets Map



Legend

-  Bus Routes
-  Bike Routes
-  2 Mile Radius
-  Site Boundary



I-G. SEWERS

1. Existing Public Sewer

Refer to **Exhibit I-G: Sewer Map** for the size and location of the existing public sewer lines in relation to the project site.

2. Sewer Constraints

The project site has no known site constraints and can be served by public sewer.

Exhibit I.G:
Sewer Map



I-H. RECREATION AND TRAILS

1. Parks, Recreation Areas, Public Trails

Pima County GIS Maps does not show a park within one-mile of the site. The Cañada del Oro River Park trail is located approximately ½ mile to the west of the project site. There are no other parks or public trails within one mile of the site. (See Exhibit I-H: Recreation and Trails Map).

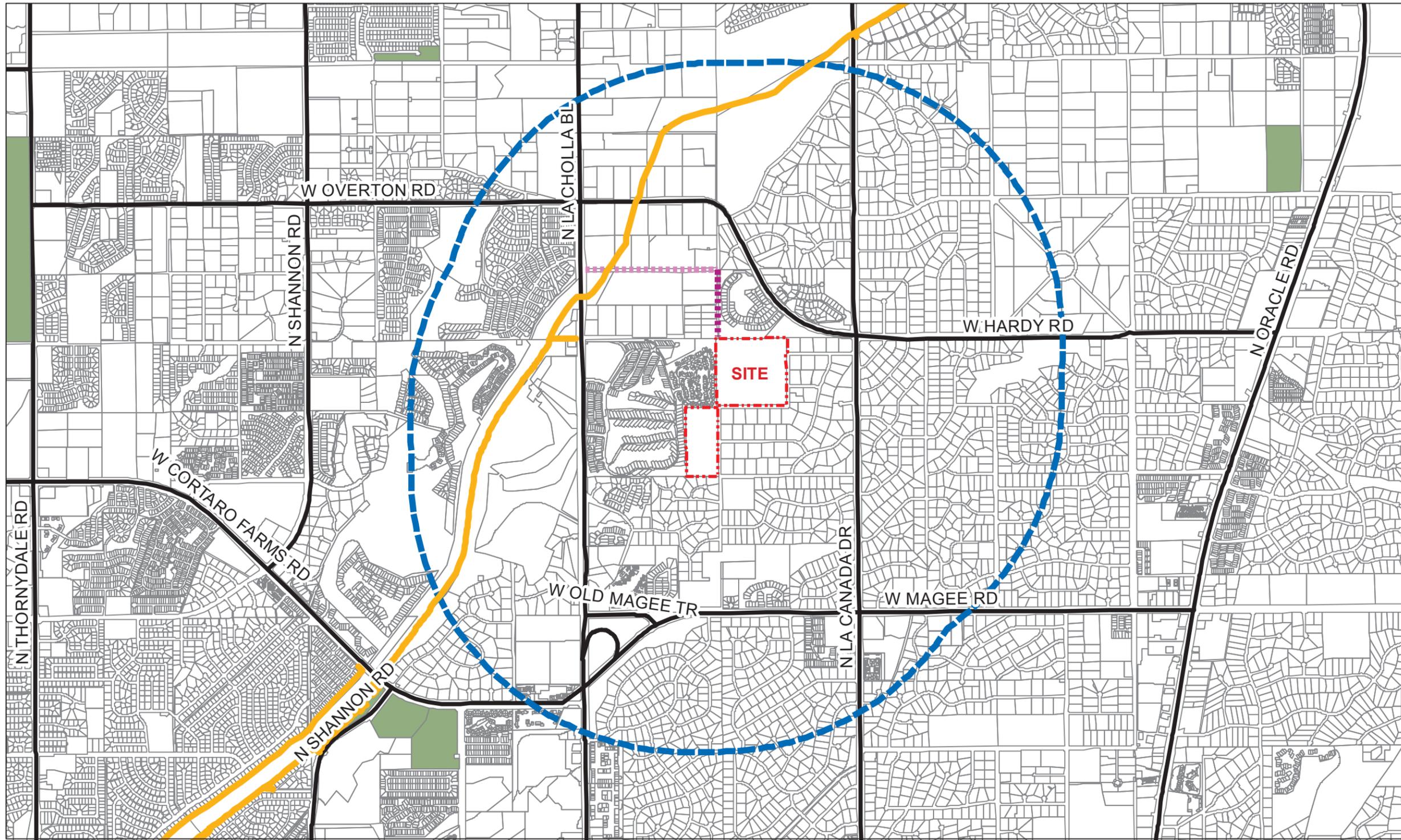
2. Proposed Trail Rights-of-Way

The Pima Regional Trail System Master Plan (PRTSMP) updated February 27, 2015, identifies the following trail rights-of-way within one mile of the site.

Table I-H.2: PRTSMP Trails

Trail Number	Trail Name	Trail Type
TH001	La Cañada/Rancho Feliz	Trailhead
TH002	CDO Overton Arts Center	Trailhead
T020	La Cañada Trail	Trail
RP002	Cañada Del Oro River Park	Road ROW
160	Hardy Wash	Wash
183	Carmack Wash	Wash
215	Birch Way Alignment	Road ROW
217	Calle Loma Linda Alignment	Road ROW
225	La Oeste/Pine St/Morningview Drive	Road ROW
236	Verch Way	Road ROW
428	Calle Concordia	Cross Country

Exhibit I.H:
Recreation and Trails Map



Legend

-  CANADA DEL ORO RIVER PARK
-  Proposed Trail #215
-  Proposed Trail #236
-  Park
-  1 mile radius
-  Site Boundary



I-I. CULTURAL RESOURCES: ARCHAEOLOGICAL AND HISTORIC SITES

1. Arizona State Museum Letter:

a. Determine whether the site has been field surveyed for cultural resources

A copy of the letter from the Arizona State Museum dated February 18, 2005 is attached as **Exhibit I-I**. The letter indicates that no surveys have been performed in the project area.

b. Identify any previously-recorded archaeological or historic resources known to exist on the property

No previously recorded archaeological or historic resources are known to exist on the property.

c. State the probability that buried archaeological resources not visible from the surface would be discovered on the site

Based on surveys in the surrounding area, the probability is low that buried archaeological resources not visible from the surface would be discovered on the site.

d. Make an informed recommendation as to whether an archaeological survey of the site is needed

On January 12, 2016 P.A.S.T. Archaeological Consulting Firm conducted an on-foot archaeological survey of the project site and identified no cultural resources and 1 isolated artifact. The current fieldwork was an update of a prior project survey conducted on October 6-13, 2004 with additional fieldwork conducted and archival research brought current.

2. Field Survey Results

The quantity of artifacts within the study area and data about known sites in the area suggests the undertaking will impact no cultural resources. Based on the fieldwork and archival documentation, the project sponsor should be allowed to develop the subject property without further cultural resource studies.

Exhibit I-I:
Arizona State Museum Letter

Arizona State Museum
P.O. Box 210026
Tucson, AZ 85721-0026
(520) 621-6302
FAX: (520) 621-2976



Pima County Archaeological Records Check Form

Date of Request: 2/18/05 **Date Completed:** 2/21/05
Request came in by: Mail Phone Fax Email

Requested by:
Name and Title Valerie Feuer, Land Planning Project Manager
Company MMLA PSOMAS
Address 800 E. Wetmore Rd, Suite 110
State and zip code Tucson, Arizona 85719
Phone and Fax 520-292-2300 FAX 520-292-1290

Project Name and/or Number Pulte at Overton/ Job # 04071-03-18 **Project Description** Site Analysis for rezoning
Location of Project Area: (General description such as street intersections)
Three parcels totaling approx. 64 acres located south of Overton, between La Canada and LaCholla.
Legal Description:
T12S R13 E, portions of the NW ¼ NE ¼ & E ½ of the NW ¼ Sect 27; and a portion of the S ½ SE ¼ Sect 22.
Size of Buffer: ¼ mile
Results of Search
Surveys in Project Area? No Sites in Project Area? Not Known
Surveys in Buffer Area? Yes 1979-30(ASM); 1984-08 (asm-only 50% coverage); 1994-279(WCRM); 2004-565(SRI).
Sites in Buffer Area? AZ BB:5:123(ASM)-historic Rd—La Canada.,

The Pima County Cultural Resources Staff will make recommendations based on these and other results. A list of qualified archaeological contractors is available on our website at <http://www.statemuseum.arizona.edu/profsvcs/permits/permittees.asp> should the County require further investigation.

If you have any questions, please feel free to contact me.

Su Benaron
Assistant Permits Administrator
(520) 621-2096 FAX (520) 621-2096
sbenaron@email.arizona.edu



EXHIBIT I.L.1

I-J. AIR QUALITY

Due to the non-industrial nature of this project, no information on air quality is provided.

I-K. COMPOSITE MAP

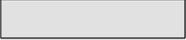
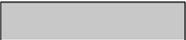
The thorough site analysis presented in this section has determined that the northern parcel is constrained by slopes greater than 15% and the presence of Xeroriparian Class C habitat in the northwest area and electric transmission and waterline easements along the northern property line. There are also a number of Saguaros located throughout the project site. This information has been combined to form the composite map displayed as **Exhibit I-K: Composite Map**. Each constraint depicted on the Composite Map will be taken into account as the future development of this property is planned.

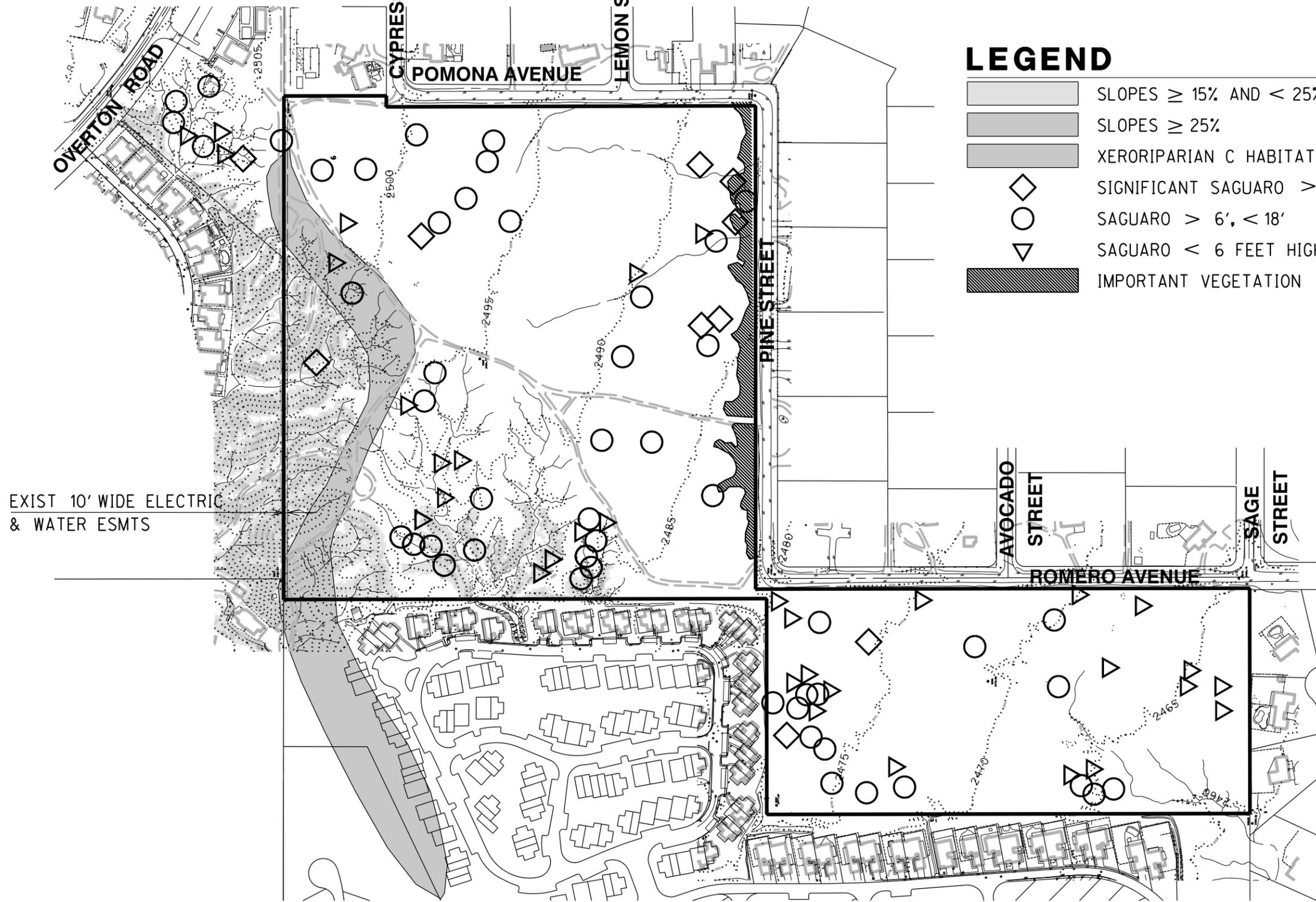
Exhibit I-K:
Composite Map



SCALE: 1" = 300'

LEGEND

-  SLOPES $\geq 15\%$ AND $< 25\%$
-  SLOPES $\geq 25\%$
-  XERORIPARIAN C HABITAT
-  SIGNIFICANT SAGUARO $> 18'$
-  SAGUARO $> 6'$, $< 18'$
-  SAGUARO < 6 FEET HIGH
-  IMPORTANT VEGETATION



PART II LAND USE PROPOSAL

II-A. PROJECT OVERVIEW

The proposal is to rezone the property from SR Suburban Ranch to CR-3 Single Residence Zone. The CR-3 designation is consistent with the existing CR-5 zoned subdivisions to the north and west and provides for an appropriate transition zone to the SR zoned subdivisions to the east and south of the subject property.

Upon approval of the rezoning, the existing 58.6 acre property will be developed to accommodate a total of 106 single-family residences. The development will maintain natural open spaces along the perimeters of the site.

This infill project, with its proposed land use intensity, natural bufferyards as well as landscape and architectural standards, will enhance the surrounding neighborhoods.

1. Proposed Zoning Boundaries

The entire site is proposed to be rezoned to CR-3 (Single Residence Zone) therefore there is no need to create a map.

2. Characteristics of the Proposed Development

a. Best Design and Use

The site plan does respond to site constraints by the avoidance of a majority of the slopes that are 15% or greater and riparian habitat areas. In addition, large buffers have been provided on all perimeters of the project to create a greater distance between the abutting residential developments.

Since the project site is surrounded by higher density residential development to the north and west and lower residential development to the south and east, the proposed density provides for an appropriate

transition between the higher density to the west and the lower densities to the south and east.

The project will have access from Overton Road, a designated scenic major arterial street. An emergency/fire access is proposed at the southernmost end of the project site.

b. Conformance to Comprehensive Plan

The *Comprehensive Plan* designates the northern parcel as Low Intensity Urban (LIU-3.0), with a maximum residential density of 3 RAC. The proposed density under the proposed CR-3 zone is 2.2 RAC, which conforms to the *Plan*.

The southern parcel is designated as Medium Intensity Urban (MIU) with a minimum density of 5 RAC and maximum residential density of 13 RAC. The proposed density of 1.1 RAC for the southern parcel does not conform to the *Plan*. The applicant will submit a request to the Planning Director to allow the reduced density, based on environmental issues, as allowed by the *Plan*.

c. Neighborhood Meetings

A neighborhood public meeting has not been held. The intent is to have a formal meeting with the neighborhood after receipt of the first review comments from staff and reviewing agencies. The proposed project has been designed based on the neighborhood concerns with the initial rezoning application. Neighborhood information and meeting notes will be provided to planning staff by separate cover.

d. Impacts to On-site and Off-site Land Uses

The site is currently vacant, and therefore there will be no impacts to existing onsite land uses. Perimeter open space buffers ranging from 100 feet to more than 150 feet are provided to minimize the impact to surrounding development's viewsheds across the project site. In addition, these larger buffers will provide for more natural open spaces to remain on the site.

The project will have access from Overton Road, a designated scenic major arterial street. An emergency/fire access is proposed at the southernmost end of the project site.

e. Smart Growth

The development will contribute to smart growth principles by providing appropriate development for the area and compact building patterns that are more energy efficient. The project also will promote improving residents' health by providing access to a variety of transportation options, such as safe and reliable public transportation, sidewalks, bike paths, and walking trails.

f. Solar

The plan proposes to orient the buildings and windows to take advantage of passive solar heating and cooling. Dwelling units will be configured to allow solar access to adjacent structures. In addition, the site design has allowed for passive solar when practical. Homes will be adaptable for solar systems.

3. Compliance with Pima County Zoning Code Ordinances

a. Buffer Overlay Zone (Section 18.67.050)

Not Applicable

b. Gateway Overlay Zone (Section 18.78.010)

Not Applicable

c. Hillside Development Overlay Zone (Sections 18.61.050 and 18.61.060.B)

The project site contains slopes that are greater than 15% and will conform to HDZ requirements for mass grading.

d. Cluster Development Option (Section 18.09.040)

Not Applicable

e. Native Plant Preservation (Chapter 18.72)

A Native Plant Preservation Plan will be submitted at time of subdivision plat review.

f. Historic Zone (Chapter 18.63)

Not Applicable

g. Airport Environs and Facilities (Chapter 18.57)

Not Applicable

II-B. PRELIMINARY DEVELOPMENT PLAN (PDP)

1. Preliminary Development Plan

The PDP is included as **Exhibit II-B: Preliminary Development Plan**. A removable overlay of the PDP is included in a pocket following this section. In accordance with section 18.91.030E of the Pima County Zoning Code, the PDP shows surveyed property boundaries and dimensions, lot layout, internal circulation, adjacent public rights-of-way, bufferyards and landscape areas, common areas, natural drainage features, and adjoining vacant and developed properties.

2. Project Data

a. Gross Floor Area

Not applicable since this is a proposed residential subdivision.

b. Building Heights

A maximum building height of 19 feet.

c. Total Number of Dwelling Units

106 dwelling units.

Lot sizes on the north parcel range from 8,044 SF – 10,170 SF with an average lot size of approximately 9,000 SF. Lot sizes on the south parcel range from 10,150 SF – 11,900 SF with an average lot size of approximately 10,200 SF.

d. Maximum Residential Density

1.81 RAC

e. Total Number of Parking Spaces

Each single family home will provide for two vehicle parking spaces in the garage and another two parking spaces in the driveway.

f. Landscaping

The proposed 60' wide HDZ natural bufferyards will preserve the natural desert vegetation identified in these areas. Landscape areas will be provided along the entry road providing access to Overton Road and in the front yards of the residential homes.

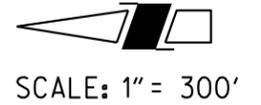
g. Open Space

The proposed concept will preserve a minimum of approximately 30 percent of the property as open space. Open space provided around the perimeter of the project, as shown on **Exhibit II-B: Preliminary Development Plan**, will be left natural subject to infrastructure improvements. Any revegetation for the disturbance caused by infrastructure improvements will follow the adopted landscape and other county ordinances.

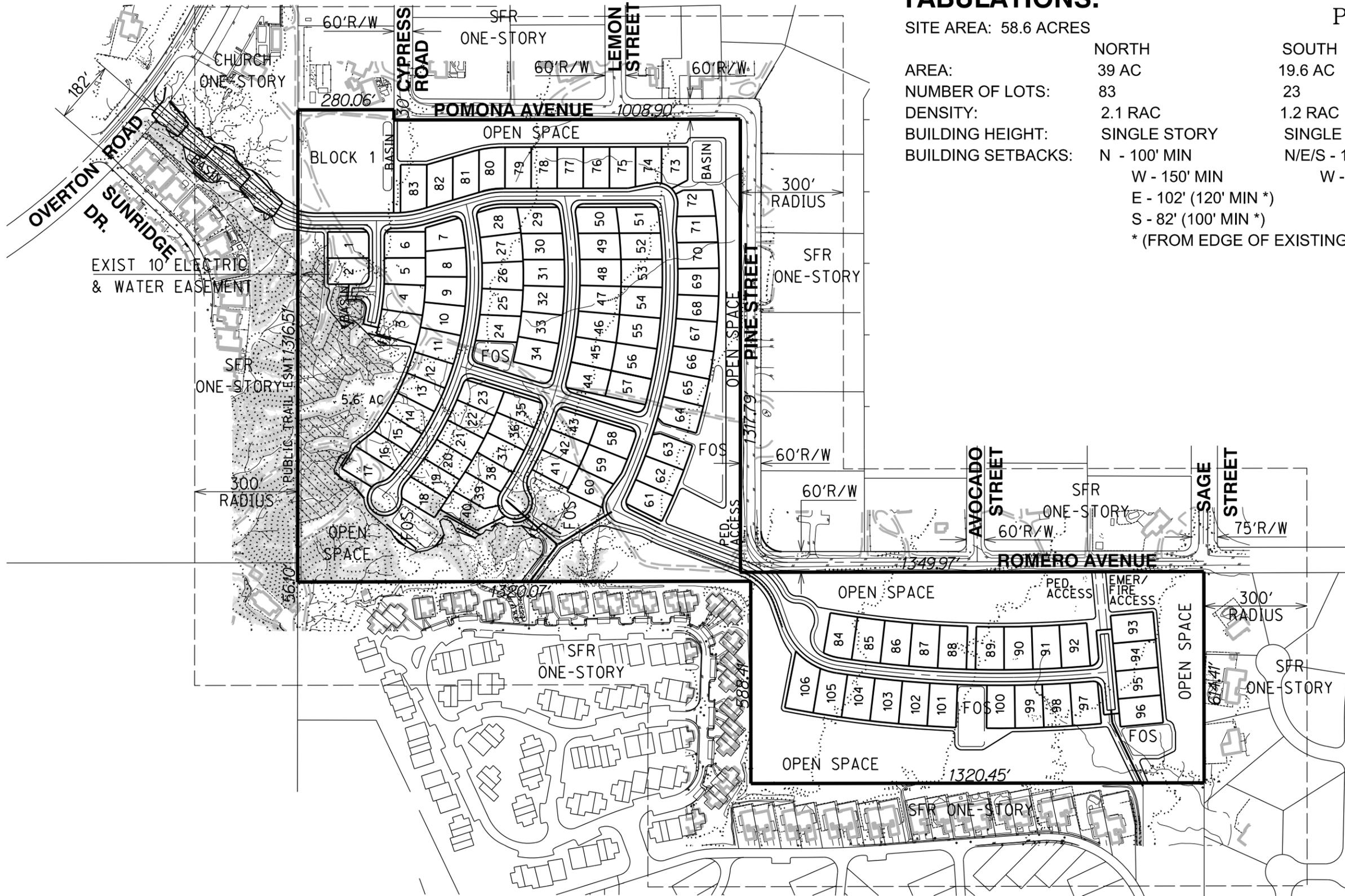
TABULATIONS:

SITE AREA: 58.6 ACRES

AREA:	NORTH	SOUTH
NUMBER OF LOTS:	39 AC	19.6 AC
DENSITY:	83	23
BUILDING HEIGHT:	2.1 RAC	1.2 RAC
BUILDING SETBACKS:	SINGLE STORY	SINGLE STORY
	N - 100' MIN	N/E/S - 100' MIN
	W - 150' MIN	W - 150' MIN
	E - 102' (120' MIN *)	
	S - 82' (100' MIN *)	
	* (FROM EDGE OF EXISTING PAVEMENT)	



SCALE: 1" = 300'



LEGEND:



RIPARIAN HABITAT

II-C. TOPOGRAPHY AND GRADING

1. Development on Slopes of 15% or Greater

The project will be sensitive to maintaining the slopes in their existing condition to the greatest extent possible. While most of the natural ridges and slopes at the northwest corner of the northern parcel will remain natural, some fill areas are indicated along the north and west side of the site.

The slopes along the entry road from Overton Road and at the west side of the site will consist of a combination of retaining walls and vegetated slopes 3:1 or flatter. Areas of drainage will incorporate riprap erosion control measures.

2. Hillside Development Zone Allowances

See **Exhibit II.B.**

3. Area to be Disturbed

As the subdivision will be mass graded, the majority of the site will be graded for roadways, building pads and functional open space (70%). Open space provided around the perimeter of the project, as shown on **Exhibit II-B: Preliminary Development Plan**, will be left natural (30%). All grading and revegetation will follow the adopted grading and landscape ordinances. (See **Exhibit II-C.3: Preliminary Grading Plan**).

4. Change in Natural Grade of more than 5 feet

There will be several areas with more than five feet of cut or fill. Along the north and west side of the project, at existing natural ravines, the proposed home sites will require fill. These areas will be lower than existing grade as much as possible. The minimum elevation at this location will be dictated by the drainage and roadway design requirements. The maximum fill at this location will be eight feet. The depth of cut in the basins will be kept to a minimum, depending on the final detention/retention design for the project. (See **Exhibit II-C.3: Preliminary Grading Plan**).

5. Engineering and Design Features for Cluster Projects

Not applicable since this is not proposed as a cluster project.

Exhibit II-C.3
Preliminary Grading Plan



SCALE: 1" = 300'

TABULATIONS:

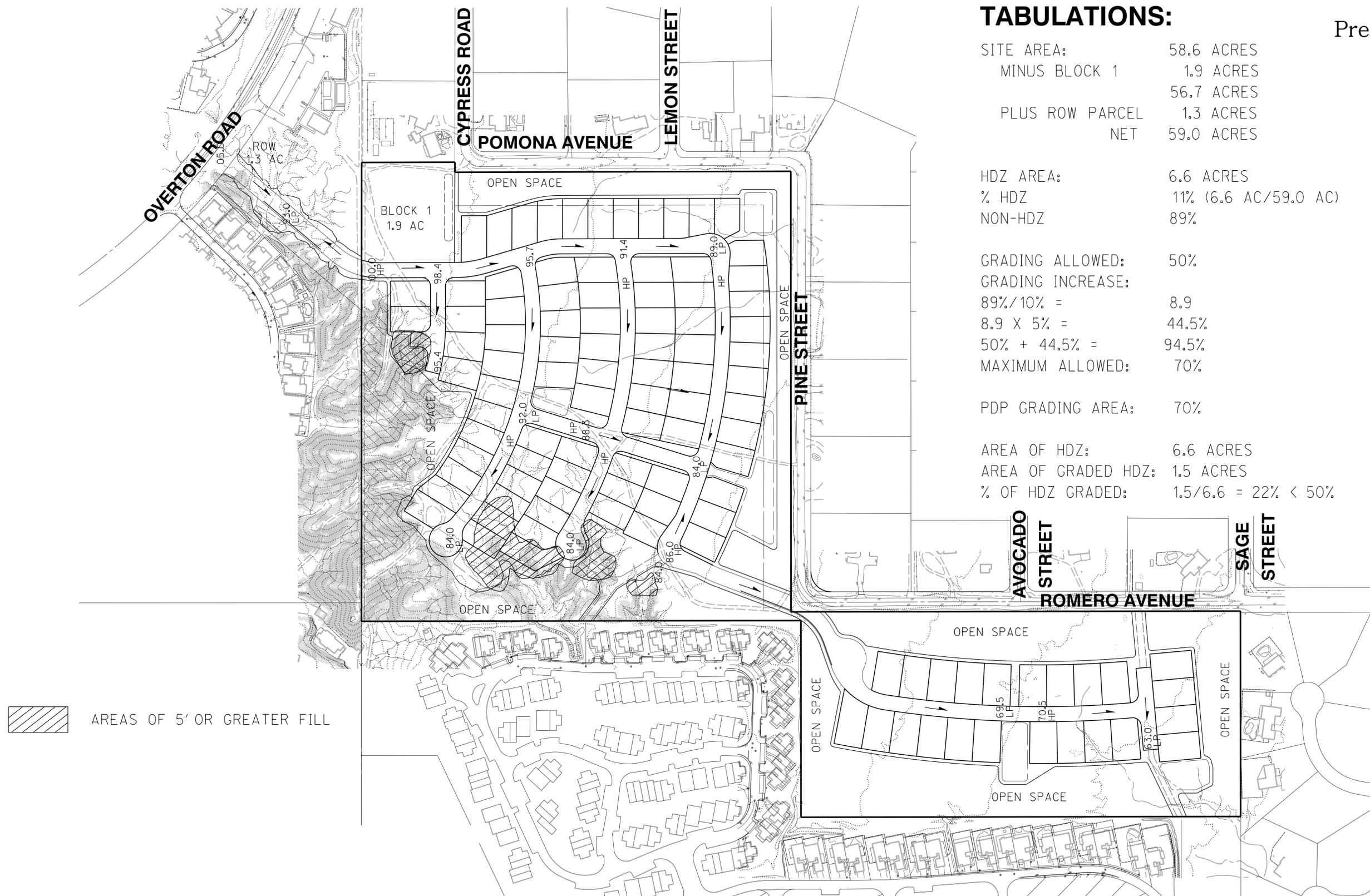
SITE AREA: 58.6 ACRES
MINUS BLOCK 1 1.9 ACRES
PLUS ROW PARCEL 1.3 ACRES
NET 59.0 ACRES

HDZ AREA: 6.6 ACRES
% HDZ 11% (6.6 AC/59.0 AC)
NON-HDZ 89%

GRADING ALLOWED: 50%
GRADING INCREASE:
89%/10% = 8.9
8.9 X 5% = 44.5%
50% + 44.5% = 94.5%
MAXIMUM ALLOWED: 70%

PDP GRADING AREA: 70%

AREA OF HDZ: 6.6 ACRES
AREA OF GRADED HDZ: 1.5 ACRES
% OF HDZ GRADED: 1.5/6.6 = 22% < 50%



 AREAS OF 5' OR GREATER FILL

II-D. HYDROLOGY

1. Hydrologic Characteristics of the PDP

The project will consist of 106 total lots (83 lots in the north portion of the property, and 23 lots in the south portion of the property), associated infrastructure, and open space. The property is not located within a critical basin area within unincorporated Pima County and will be analyzed as a balanced basin type. The Preliminary Development Plan (PDP) will not change the off-site or on-site drainage patterns. Flows will be accepted and discharged in their current locations. Detention and retention facilities will be provided to mitigate the increased run-off due to the development of the site.

An access road from Overton Road to the site will be located off-site, north of the north portion of the property. Off-site watersheds OS-1 through OS-3 are located northeast of the north portion of the property and will impact the proposed access street. A retention/detention basin will be located west of the access road to mitigate for increased post-project peak flow rates. During the design phase, it is our anticipation that this retention/detention basin will reduce flows to less than the current condition and help control the sediment currently settling on Sunridge Drive.

All post-development on-site watersheds and proposed retention/detention basin locations are mapped on **Exhibit II.D**. Hydrologic information for the post-development off-site and on-site watersheds is located in Table 3 and 4, respectively, on **Exhibit II.D: Post-Development Drainage Plan**.

2. Encroachment Mitigation

There are no 100-year floodplains onsite.

3. Post-Development Discharges

The post-development off-site and on-site water discharges leaving and entering the site are listed in Table 3 and 4, respectively, on **Exhibit II.D: Post-**

Development Drainage Plan. Concentration point locations and post-development watersheds are depicted on **Exhibit II.D**

4. Potential Drainage Impacts to Off-Site Land

No upstream or downstream impacts to off-site land uses are anticipated due to the proposed development. The developed site will continue to receive the off-site flows and will mitigate the peak discharges exiting from the downstream property boundary with the required retention/detention basins. The location of each proposed retention/detention basin is depicted on **Exhibit II-D: Post-Development Drainage Plan.**

5. Engineering and Design Features

Retention/detention basins will be sized to accommodate the first flush retention requirement and detain post-development flows to mitigate any drainage increases due to post-development discharge. The location of each proposed retention/detention basin is depicted on **Exhibit II-D: Post-Development Drainage Plan.**

6. Conformance with Applicable Plans

The PDP conforms to all applicable area plan policies, the Pima County Floodplain Management Ordinance, and Pima County drainage development design criteria.

Exhibit II-D:
Post-Development Drainage Plan



SCALE: 1" = 300'

TABLE 3: POST-DEVELOPMENT OFFSITE PEAK FLOWS

WATERSHED CPs	AREA [ac]	LENGTH [ft]	SLOPE [%]	Tc [min]	Q100 [cfs]	CUMULATIVE CPs	CUMULATIVE Q100 [cfs]
OS-1	1.1	540	0.6	5.0	7	-	-
OS-2a	-	-	-	-	3.3*	-	-
OS-2b	3.1	440	3.6	5.0	20	-	-
OS-2	-	-	-	-	-	OS-1 + OS-2a +	27.3**
OS-3	0.9	300	4.0	5.0	5	-	-
OS-4	0.7	990	1.3	5.0	5	-	-

* From Private Detention Basin per approved Improvement Plans titled 'Proposed Modular and Parking Lot, Assessor's Parcel: #225-06-0470,' P14BS00012, Approved 02/06/2015, Rev #1, by Perry Engineering

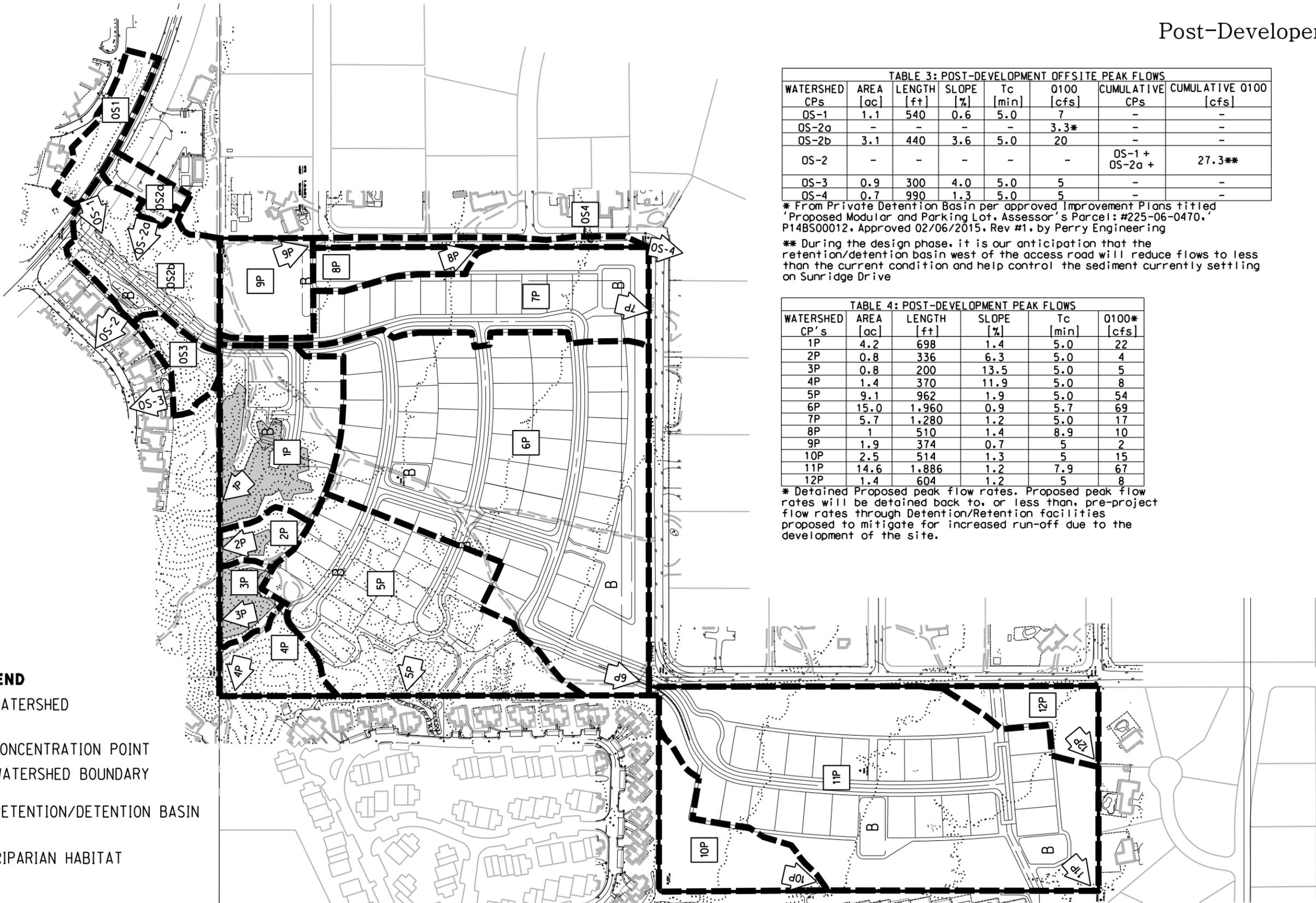
** During the design phase, it is our anticipation that the retention/detention basin west of the access road will reduce flows to less than the current condition and help control the sediment currently settling on Sunridge Drive

TABLE 4: POST-DEVELOPMENT PEAK FLOWS

WATERSHED CP's	AREA [ac]	LENGTH [ft]	SLOPE [%]	Tc [min]	Q100* [cfs]
1P	4.2	698	1.4	5.0	22
2P	0.8	336	6.3	5.0	4
3P	0.8	200	13.5	5.0	5
4P	1.4	370	11.9	5.0	8
5P	9.1	962	1.9	5.0	54
6P	15.0	1,960	0.9	5.7	69
7P	5.7	1,280	1.2	5.0	17
8P	1	510	1.4	8.9	10
9P	1.9	374	0.7	5	2
10P	2.5	514	1.3	5	15
11P	14.6	1,886	1.2	7.9	67
12P	1.4	604	1.2	5	8

* Detained Proposed peak flow rates. Proposed peak flow rates will be detained back to, or less than, pre-project flow rates through Detention/Retention facilities proposed to mitigate for increased run-off due to the development of the site.

- LEGEND**
-  WATERSHED
 -  CONCENTRATION POINT
 -  WATERSHED BOUNDARY
 -  RETENTION/DETENTION BASIN
 -  RIPARIAN HABITAT



II-E. BIOLOGICAL RESOURCES

1. Impact to Important Vegetation

The significant vegetation identified on site will be preserved to the best extent possible. Significant Saguaro specimens will be either transplanted or preserved in place in accordance with the Native Plant Preservation Ordinance (NPPO). The significant vegetation located along Pine Street will be mostly being preserved via the minimum 40' natural buffer being used along this street. **(See Exhibit I-K: Composite Map)**

2. Conservation Land System

The site is not considered an Important Riparian Area or located within the Conservation Lands System.

II-F. LANDSCAPE AND BUFFER PLAN

1. Bufferyards

A 60' natural desert bufferyard is proposed along the east and south perimeter of the southern parcel. A 40' natural bufferyard with 40" high open fence is proposed along small portions of the east and north perimeter of the northern parcel. See the Preliminary Development Plan (PDP) for the locations of the proposed bufferyards. **(See Exhibit II-F: Landscape and Bufferyard Plan).**

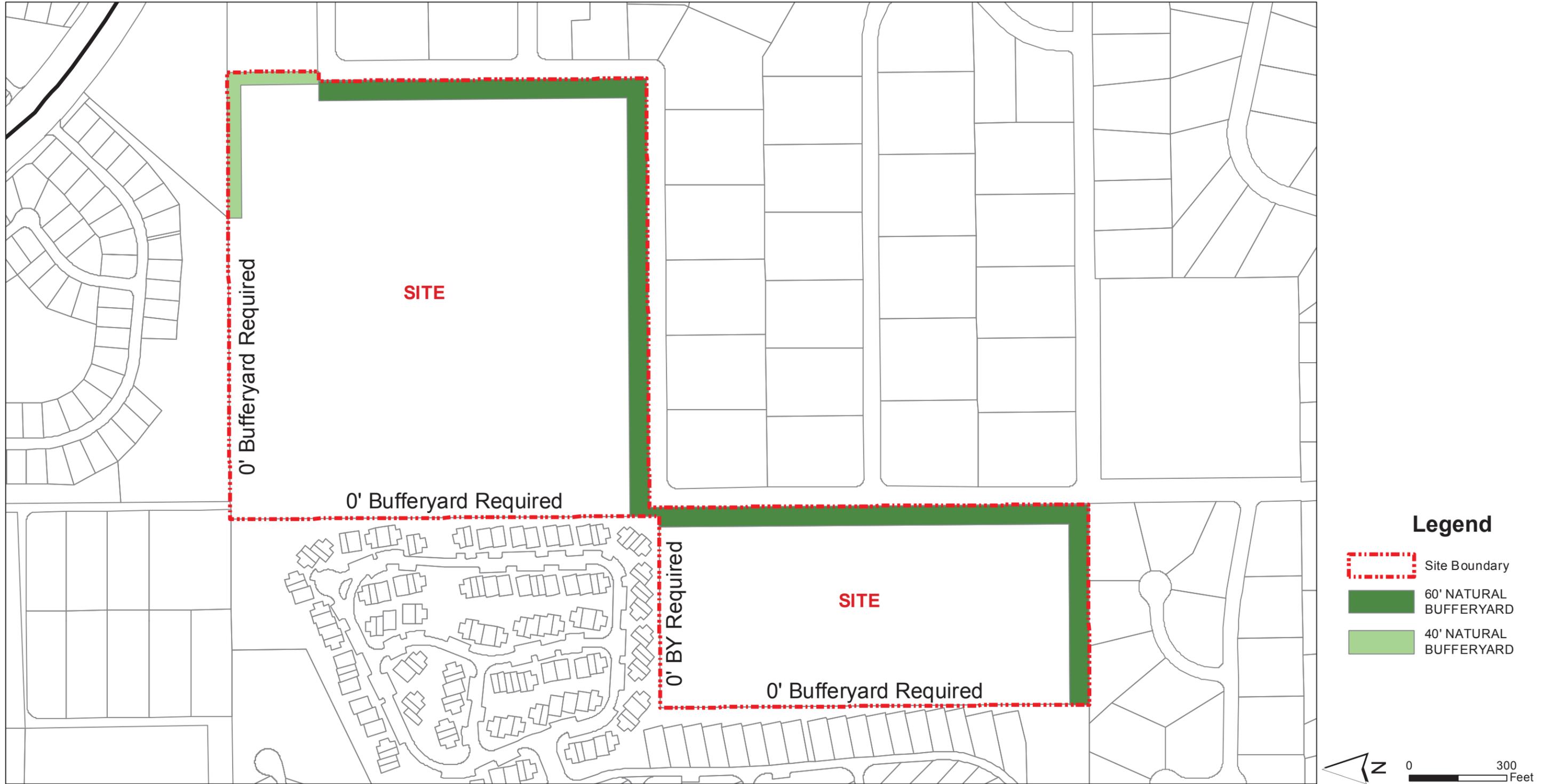
2. Potential Conflicts in Bufferyards

Other than the street and sewer lines crossing the bufferyards, we do not anticipate any conflicts. **(See Exhibit II-F: Landscape and Bufferyard Plan).**

3. Transplanted Vegetation

Vegetation will be transplanted in accordance with the Native Plant Preservation Ordinance method selected for this site.

Exhibit II.F:
Landscape and Buffer Map



II-G. VIEWSHEDS

1. Impacts to Views

Views of the Santa Catalina Mountains to the east and Tortolita Mountains to the north will not be negatively affected due to the vegetated buffers to the homes. Views across the site from Overton Road, a Scenic Major Route will not be affected since the closest building sites are located approximately 600 feet south of Overton Road. (See **Exhibit II-G: Viewshed Impact Map**).

2. Mitigation of Visual Impacts

Mitigation measures will be used to minimize any visual impacts from offsite land uses. These include the use of natural buffers along the entire perimeter which exceed minimum standards. The setbacks to the lots also exceed the minimum setback for two-story residences.

II-H. TRANSPORTATION

1. Access Points

The project will have access from Overton Road, a designated scenic major arterial street. Approval for one access point was approved by the Building Official in conformance with the 2005 Pima County Subdivision and Development Street Standards (SDSS). An emergency/fire access is proposed at the southernmost end of the project site. (See **Exhibit II-B: Preliminary Development Plan**).

2. Future Off-Site Road Improvements

Access from Overton Road will be made possible through the construction of a new residential street crossing the parcel to the north. The entry road from Overton Road will consist of a 45' right-of-way with 24 feet of pavement, vertical curb, sidewalk, and landscaping on both sides, in conformance with Detail 4.3 of the SDSS. No on-street parking will be allowed along the entry road.

3. Changes to ADT and LOS

The trip generation proposed for this project is based on values listed in ITE's Trip Generation, 9th edition. The 106 homes is estimated to generate 1,108 ADT on a daily basis with 84 AM peak hour trips and 111 PM peak hour trips.

4. Traffic Impacts on Local Streets

Traffic impacts to local streets will be minimized because traffic to and from the homes will travel on Overton Road and the access street.

5. Bicycle and Pedestrian Pathways

No bicycle paths are proposed. In addition to the sidewalks along both sides of all roadways within the subdivision, right-of-way will be provided for an extension of Pima County Trail #220 along the north perimeter of the project site.

6. Proposed On-Site Road Rights-of-Way

The proposed on-site rights of way will be public. There will be one roadway section utilized with this project, taken directly from the Subdivision and Development Street Standards (SDSS).

The entry road from Overton Road will consist of a 45' right-of-way with 24 feet of pavement, vertical curb, sidewalk, and landscaping on one side, in conformance with Detail 4.3 of the SDSS. No on-street parking will be allowed along the entry road.

The remaining subdivision streets will consist of a 45' right-of-way with 24 feet of pavement, wedge curb, and sidewalk on both sides, in conformance with Detail 4.1 of the SDSS.

7. Transportation Concurrency

Since there is capacity on the existing roadway facilities adjacent to the property and from the access street to the nearest arterial, there are no concurrency concerns for this project.

8. Traffic Impact Study (TIS) Requirement

Per Pima County Subdivision and Development Street Standards, a Traffic Impact Study is not required for this rezoning site analysis but will be provided at the subdivision platting stage.

9. Reduction in Automobile Dependency

The project intends to reduce automobile dependency by providing internal street sections that allow for pedestrian and bicycle connectivity to Overton Road and the nearest bus stops located at the Hardy Road/La Cañada intersection.

II-I. ON-SITE WASTEWATER TREATMENT DISPOSAL

On-site wastewater treatment/disposal facilities are not proposed for this project.

II-J. SEWERS

1. Sewer Capacity Response Letter

Under existing conditions, there is conveyance capacity for this proposed project. Refer to the letter from Pima County Regional Wastewater Reclamation Department. (See **Exhibit II-J: Sewer Capacity Letter**)

2. Sewer Service Method

The on-site sewer system will connect into the existing public sewer system at two manholes located along the western property line, (G-85-073).

3. Collection or Transmission Sewers

At both points of connection with the public sewer system, the new sewer lines will traverse in private common area within a 20-foot public sewer easement outside of pavement.

4. Gravity Sewer Constraints

There are no gravity sewer constraints for this project.

**Exhibit II.J:
Sewer Capacity Letter**



REGIONAL WASTEWATER RECLAMATION DEPARTMENT
201 NORTH STONE AVENUE
TUCSON, ARIZONA 85701-1207

JACKSON JENKINS
DIRECTOR

PH: (520) 724-6500
FAX: (520) 724-9635

January 25, 2016

Dan Casto
Rick Engineering Company
3945 E Ft Lowell Rd., Ste 111
Tucson, AZ 85712

Sewerage Capacity Investigation No. 2016-9 Type I

**RE: Jackson Property Rezoning, Parcel 225210010
Estimated Flow 22,032 gpd (ADWF).
P16WC00009**

Greetings:

The above referenced project is tributary to the Tres Rios Water Reclamation Facility via the Cañada Del Oro Interceptor.

Capacity is currently available for this project in the public sewer G-85-073, downstream from manholes 4386-58 and 4386-59.

This letter is not a reservation or commitment of treatment or conveyance capacity for this project. It is not an approval of point and method of connection. It is an analysis of the system as of this date and valid for one year. Allocation of capacity is made by the Type III Capacity Response.

If further information is needed, please feel free to contact us at (520) 724-6642.

Reviewed by: Kurt Stemm, CEA Sr.

II-K. WATER

The Preliminary Integrated Water Management Plan (PIWMP) is provided in **Appendix C** of this document.

II-L. SCHOOLS

1. Access to Schools within or abutting Property

Vehicular access will be provided from both portions of the project site. There are no existing sidewalks along Romero Avenue but pedestrians do have room to walk along the unpaved shoulders.

2. School Capacity Analysis Response Letter

Refer to Amphitheater School District Capacity Letter in **Exhibit II-L: School Capacity Analysis Letter**.

a. Present and Projected Enrollment Numbers

The present enrollment numbers for school year 2015-2016 for Mesa Verde Elementary School - 386, for Cross Middle School - 650, and for Canyon Del Oro High School - 1,600. Projected enrollment numbers for school year 2016-2017 are not available at this time and will become available in April 2016.

b. Anticipated Increase in Enrollment Numbers

The anticipated increase in enrollment as a result of the proposed residential development is 21 elementary school students, 22 middle school students, and 13 high school students. The multipliers used by the school district are 0.0275 elementary students per household, 0.2197 middle school students per household, and 0.1282 high school students per household.

c. Under(Over) Capacity

Using the 2015-2016 present enrollment numbers since the projected enrollment numbers for school year 2016-2017 has yet to be calculated by the district, all three of the schools will continue to be under capacity as a result of the proposed development: elementary school by 293 students (58%

capacity); middle school by 228 students (75% capacity); high school by 887 students (65% capacity).

d. Projected Enrollment & Under(Over Capacity) for Each School Service Area

No information was provided.

e. School Facilities Improvements

No information was provided.

3. Mitigation of Impacts to School

There are ongoing discussions with the school district regarding a Developer Donation Agreement.

Exhibit II-L:
School Capacity Analysis Letter



OFFICE OF LEGAL COUNSEL
Todd A. Jaeger, J.D.
Associate to the Superintendent
(520) 696-5156
FAX (520) 696-5074

701 W. Wetmore Road • Tucson, AZ 85705 • (520) 696-5000 • TDD (520) 696-5055

GOVERNING BOARD MEMBERS

Deanna M. Day, M.Ed.
President

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Vice President

Kent Paul Barrabee, Ph.D.

Julie Cozad, M.Ed.

Scott A. Leska

SUPERINTENDENT
Patrick Nelson

January 14, 2016

Via electronic mail

Dan Castro
Assistant Project Planner
Rick Engineering Company, Inc.
3945 E Ft Lowell Rd Ste 111
Tucson AZ 85712-1046

RE: Proposed Development of 102 single family homes on approximately 58.6 acres within the Amphitheater District West of La Cañada Drive and South of Overton Road

Dear Mr. Castro:

I am responding to your request for information regarding the capacity of Amphitheater schools impacted by your proposed development.

Using 2000 demographic multipliers developed by the U.S. Department of Census, Bureau of Census, and adjusted for Amphitheater District's school organizational patterns, we project the following student populations to result from this project when built:

<u>Academic Level</u>	<u>102 Single Family Homes</u>
Elementary	21
Middle	22
High School	13

The census multipliers we use to obtain these projections are 0.2075 elementary students per household, 0.2197 middle school students per household and 0.1282 high school students per household.

The capacity of our schools noted below is based on our last confirmed enrollment calculations. The schools which would be impacted by this population are listed below, along with the physical capacity available at each school *presently*. Please note that these schools will also be impacted by other developments in this area which may have already been approved by the County but which are not yet built.

Amphitheater High • Canyon del Oro High • Ironwood Ridge High
Amphitheater Middle School • Coronado K-8 School • Cross Middle School • La Cima Middle School • Wilson K-8 School
Copper Creek Elementary • Donaldson Elementary • Harelson Elementary • Holaway Elementary • Keeling Elementary • Mesa Verde Elementary
Nash Elementary • Painted Sky Elementary • Prince Elementary • Rio Vista Elementary • Walker Elementary • Rillito Center

Developer Letter
January 14, 2016
Page 2

<u>School Name</u>	<u>School Capacity</u>	<u>Spaces Currently Available</u>
Mesa Verde Elementary	700	314
Cross Middle	900	250
Canyon del Oro High	2500	900

If I can provide any additional information, please feel free to contact me.

Sincerely,

Connie R. McFarland

Connie R. McFarland
Legal Assistant to Todd A. Jaeger, J.D.

II-M. RECREATION AND TRAILS

1. Recreation Areas to be Provided

The area for recreation required for the subdivision will be provided on-site or be met by a combination of recreation areas and in-lieu fees as allowed by the Code. The areas on the site include the multiple basins throughout the subdivision and the open space areas that will be left undisturbed. (See **Exhibit II-B: Preliminary Development Plan**).

2. Proposed Ownership of Open Space

The Homeowner's Association will be responsible for maintenance of the functional open space, open space, and landscaping. (See **Exhibit II-B: Preliminary Development Plan**).

3. Proposed Trails

Trail #220 Hardy Road alignment is within the project boundaries and a public trail easement will be dedicated.

II-N. CULTURAL RESOURCES: ARCHAEOLOGICAL AND HISTORIC SITES

1. Mitigation Measures for Archaeological and Historic Resources

An on-foot archaeological survey of the project site by P.A.S.T. identified no cultural resources and 1 isolated artifact. The current fieldwork was an update of a prior project with additional fieldwork conducted and archival research brought current. Mitigation measures are not required. See **Appendix D: P.A.S.T. Cultural Resources Report**.

2. Archaeological Field Survey

A Class III Intensive Field Survey was prepared by P.A.S.T. and found the quantity, nature and integrity of archaeological materials within the APE and data about known sites in the vicinity indicate that the undertaking will not have an adverse effect on important cultural resources or a historic property.

Consequently, further cultural resource studies do not appear warranted for the study area. **See Appendix D: P.A.S.T. Cultural Resources Report.**

3. Cultural Resources Mitigation Plan

No important or register eligible cultural resources including historical period or prehistoric sites, features or isolated objects greater than 50 years of age were found therefore a mitigation plan is not required.

II-O. ENVIRONMENTAL QUALITY

1. Dust Control Measures

Dust control measures will be done during construction and will be in accordance with requirements of the Arizona Department of Environmental Quality. All graded areas will be re-vegetated for dust control, slope-stability and visual aesthetics.

2. Department of Environmental Quality

Not applicable since this is a proposed residential development.

II-P. AGREEMENTS

There will be an agreement with the owners of the parcel to the north to allow a new street across the western portion of their property. The new street will provide access to the subdivision from Overton Road.

**APPENDIX A:
BIOLOGICAL IMPACT REPORT
AND UPDATE LETTER**

Novak Environmental, Inc.

4574 North First Avenue

Suite 100

Phone 520.206.0591

Fax 520.882.3006



January 28, 2016

Pima County Development Services
201 N. Stone Ave
Tucson, AZ 85701

Subject: Jackson Property Rezoning (formerly Pulte at Overton Road Co9-05-08)
Biological Impact Report

To Whom It May Concern:

I have reviewed our Biological Impact Report for the Jackson Property rezoning (formerly Pulte at Overton Road C09-05-08) prepared by NE, Inc. March 10, 2005 and find no significant differences in the site today as presented in our previous reports.

The site visit conducted January 15, 2016 confirms that the status of the property has changed very little over time. The vegetation and cacti are substantially in the same condition as previously observed, accounting for natural life cycle changes that occurred over a ten year period. Saguaro growth appears to have occurred at a consistent rate across the site resulting in an increase in height ranging from 3-4 feet. There has been no significant regeneration of Saguaro across the site except for a small area observed in the northwest corner of the property.

Please let me know if you need more information.

Sincerely,

Karen Cesare, RLA
President
Novak Environmental, Inc.

Novak Environmental, Inc.

4574 North First Avenue

Suite 100

Phone 520.206.0591

Fax 520.882.3006



**Biological Impact Report
Jackson Property Rezoning
(Formerly Pulte at Overton Road Co9-05-08)**

NE#0520

Prepared by:
Novak Environmental, Inc.

January 28, 2016

Original Date:
March 10, 2005

**Biological Impact Report
Jackson Property Rezoning
(Formerly Pulte at Overton Road Co0-05-08)
NE#0520**

**Prepared for:
Rick Engineering Company**

**Originally Prepared for:
MMLA/PSOMAS, Inc.**

**Prepared by:
Novak Environmental, Inc.
4574 N. 1st Avenue
Tucson, Arizona 85718
(520) 206-0591**

January 28, 2016

**Original Date:
March 10, 2005**

For questions regarding this report please contact: Karen Cesare
karen@novakenvironmental.com

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III. FEDERALLY LISTED THREATENED/ENDANGERED SPECIES 4

IV. SUMMARY 6

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II. LANDSCAPE RESOURCES

1. Identify whether the proposed project site occurs within any Conservation Lands System (CLS) Category or contains any portion of an Important Riparian Area or any wash with a discharge of 250 cubic feet per second or greater.

Pulte at Overton Road occurs wholly outside the Conservation Lands System per Pima County's online MapGuide. The closest Important Riparian Area and Multiple Use Management Area are over one-half mile to the west.

There are currently no Regulated Riparian Habitats on the site. The Pima County MapGuide indicates Proposed Xeroriparian C Habitat on the site; however, aerial photography and a site visit have confirmed that no riparian habitat exists on site.

Per Pima County Flood Control District, there are no washes with discharge 250 cubic feet per second or greater on the site.

2. For each CLS Category identified in the response to Question No. 1, explain how the proposed project accomplishes the associated level of conservation per the Comprehensive Plan.

The entire site falls within the CLS category of Outside Conservation Lands System, which has no associated level of conservation per the Comprehensive Plan.

3. Identify any Special Elements that may occur on or in the immediate vicinity of the project site. Explain the nature of any impacts to these resources and any mitigation measures taken to reduce these impacts.

Per Pima County's MapGuide there are no Special Elements on this site.

4. Identify whether the proposed project occurs in the vicinity of any of the six general areas identified as Critical Landscape Linkages.

The project site is not located in the vicinity of any of the six general areas identified as Critical Landscape Linkages.

III. FEDERALLY LISTED THREATENED/ENDANGERED SPECIES

Cactus Ferruginous Pygmy-owl

1. Does the proposed project site occur within Survey Zone 1 for the cactus ferruginous pygmy-owl?

Yes, the project site does occur within Survey Zone 1 for the cactus ferruginous pygmy-owl.

2. In 2002, the U.S. Fish and Wildlife Service proposed Critical Habitat and draft Recovery Areas for the cactus ferruginous pygmy-owl. Does the proposed project site occur in an area identified as Proposed Critical Habitat (11/27/02) or Draft Recovery Area for the cactus ferruginous pygmy-owl? Please specify which area(s) the proposed project site occurs in.

Pulte at Overton Road does not occur in an area identified as Proposed Critical Habitat (11/27/02) for the cactus ferruginous pygmy-owl, nor is it in the Pygmy-owl Draft Recovery Area.

Per the Pima County MapGuide,

3. Has the proposed project site been surveyed for pygmy-owls?

a. If yes, disclose the dates when surveys were done and provide a summary of the results.

b. If no, are surveys planned in the future?

Arizona Owl Surveys, LLC has completed three surveys in two consecutive years for the presence/absence of cactus ferruginous pygmy-owl on the project site. Surveys were conducted February 3, March 13 and May 6, 2003 and on January 24, February 15 and March 20, 2004. No pygmy-owls were detected either aurally or visually during any of the surveys.

4. If your proposed project occurs within Survey Zone 1, Proposed Critical Habitat, or a Draft Recovery Area, please explain how your project design conserves resources important to the cactus ferruginous pygmy-owl's nesting habitat and dispersal activities.

The project site occurs within Survey Zone 1 for the cactus ferruginous pygmy-owl. The project design for this site is such that there will be no encroachment into habitat on the northern edge of the property, thus maintaining the vegetative integrity of the area, as well as maintaining open space on site and conserving the only large saguaros on site, a resource important to the owl's nesting habitat and dispersal activities. In addition, the owner will utilize native plant species for on-site vegetation and employ revegetation schemes with native plant species that maintain vertical diversity.

Pima Pineapple Cactus

1. Does the proposed project site occur within Modeled Potential Habitat for the Pima pineapple cactus?

Per Pima County's MapGuide, Pulte at Overton Road does not occur within Modeled Potential Habitat for the Pima pineapple cactus.

2. Have Pima pineapple cactus been found on the proposed project site?

No Pima pineapple cacti have been found on the project site.

3. Has the proposed project site been surveyed for Pima pineapple cactus?

a. If yes, disclose the date when surveys were done and provide a summary of the results.

b. If no, are surveys planned in the future?

The project site has not been surveyed for Pima pineapple cactus. A survey specific to Pima pineapple cactus is not planned; however the owner does plan to conduct a native plant survey in accordance to Pima County Native Plant Preservation Ordinance (Section 18.72) which includes Pima pineapple cactus.

IV. SUMMARY

This report presents a Biological Impact Report for Pulte at Overton Road, a 64.4-acre site located in Pima County south of Overton Road and west of La Canada Drive. This Biological Impact Report, required as part of a request for changes in zoning conditions, presents responses to all questions set forth in the Pima County Development Services Biological Impact Report Guidelines, April 2003. The findings of this report indicate that the site currently contains only limited biological resources located in the northern section of the site. The proposed development of this site will protect this area from encroachment.

V. REFERENCES

Fonseca, J. and N. Connolly. 2002. Representation of vegetation communities and special elements in reserve design. Prepared for the Sonoran Desert Conservation Plan.

Pima County Department of Transportation and Flood Control District. Regulatory Discharge Maps for Pima County, AZ. 1988.

Pima County MapGuide. 2005.

<http://www.dot.co.pima.az.us/gis/maps/mapguide/mgmap.cfm?path=/cmo/sdcpmaps/sdcp.mwf>

APPENDIX B:
ARIZONA GAME AND FISH DEPARTMENT
ONLINE REVIEW TOOL REPORT

Arizona Environmental Online Review Tool Report



*Arizona Game and Fish Department Mission
To conserve Arizona's diverse wildlife resources and manage for safe, compatible outdoor recreation
opportunities for current and future generations.*

Project Name:
Jackson Property

User Project Number:
JN 4226

Project Description:
Proposed residential subdivision.

Project Type:
Development Within Municipalities (Urban Growth), Residential subdivision and associated infrastructure,
New construction

Contact Person:
Dan Castro

Submitted By:
Mark Fellingner

Organization:
Rick Engineering Co.

On Behalf Of:
CONSULTING

Project ID:
HGIS-02868

Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.

Disclaimer:

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Department's review of site-specific projects.
3. The Department's Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. HabitatMap Arizona data, specifically Species of Greatest Conservation Need (SGCN) under our State Wildlife Action Plan (SWAP) and Species of Economic and Recreational Importance (SERI), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

Locations Accuracy Disclaimer:

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

Recommendations Disclaimer:

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:
Project Evaluation Program, Habitat Branch
Arizona Game and Fish Department
5000 West Carefree Highway
Phoenix, Arizona 85086-5000
Phone Number: (623) 236-7600
Fax Number: (623) 236-7366
Or
PEP@azgfd.gov
6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies.

Jackson Property Aerial Image Basemap With Locator Map



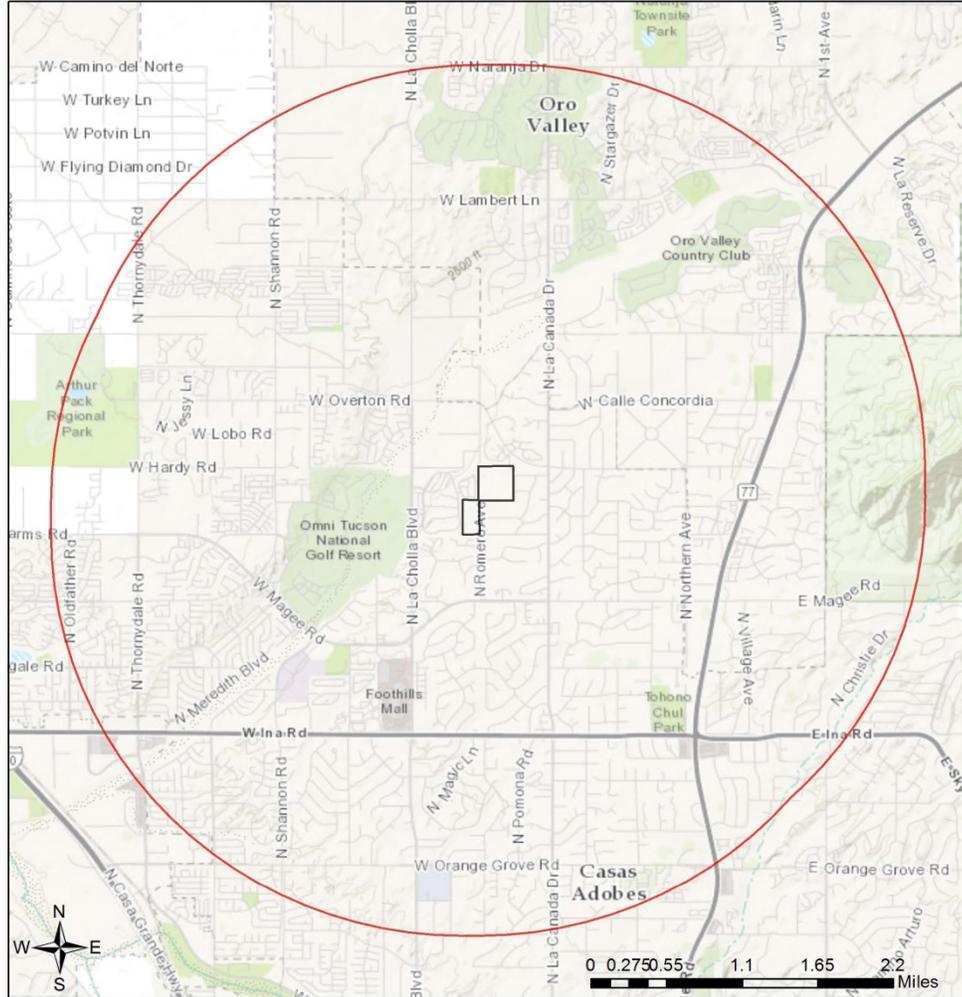
- Project Boundary
- Buffered Project Boundary

Project Size (acres): 62.12
Lat/Long (DD): 32.3634 / -111.0033
County(s): Pima
AGFD Region(s): Tucson
Township/Range(s): T12S, R13E
USGS Quad(s): JAYNES; TUCSON NORTH

Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong),



Jackson Property Web Map As Submitted By User



- Project Boundary
- Buffered Project Boundary

Project Size (acres): 62.12
Lat/Long (DD): 32.3634 / -111.0033
County(s): Pima
AGFD Region(s): Tucson
Township/Range(s): T12S, R13E
USGS Quad(s): JAYNES; TUCSON NORTH

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Special Status Species and Special Areas Documented within 3 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Glaucidium brasilianum cactorum</i>	Cactus Ferruginous Pygmy-owl	SC	S	S		1B
<i>Leptonycteris curasoae yerbabuenae</i>	Lesser Long-nosed Bat	LE				1A
<i>Opuntia versicolor</i>	Stag-horn Cholla					SR

Note: Status code definitions can be found at http://www.azafd.gov/w_credits/hdms_status_definitions.shtml.

Species of Greatest Conservation Need
 Predicted within Project Vicinity based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Aix sponsa</i>	Wood Duck					1B
<i>Amazilia violiceps</i>	Violet-crowned Hummingbird		S			1B
<i>Ammodramus savannarum perpallidus</i>	Western Grasshopper Sparrow					1B
<i>Ammospermophilus harrisi</i>	Harris' Antelope Squirrel					1B
<i>Anaxyrus retiformis</i>	Sonoran Green Toad			S		1B
<i>Anthus spragueii</i>	Sprague's Pipit	C*				1A
<i>Antrostomus ridgwayi</i>	Buff-collared Nighthawk		S			1B
<i>Aquila chrysaetos</i>	Golden Eagle	BGA		S		1B
<i>Aspidoscelis flagellicauda</i>	Gila Spotted Whiptail					1B
<i>Aspidoscelis stictogramma</i>	Giant Spotted Whiptail	SC	S			1B
<i>Athene cucularia hypugaea</i>	Western Burrowing Owl	SC	S	S		1B
<i>Botaurus lentiginosus</i>	American Bittern					1B
<i>Buteo regalis</i>	Ferruginous Hawk	SC		S		1B
<i>Chilomeniscus stramineus</i>	Variable Sandsnake					1B
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo (Western DPS)	LT	S			1A
<i>Colaptes chrysoides</i>	Gilded Flicker			S		1B
<i>Coluber bilineatus</i>	Sonoran Whipsnake					1B
<i>Corynorhinus townsendii pallescens</i>	Pale Townsend's Big-eared Bat	SC	S	S		1B
<i>Crotalus cerberus</i>	Arizona Black Rattlesnake					1B
<i>Crotalus tigris</i>	Tiger Rattlesnake					1B
<i>Cynanthus latirostris</i>	Broad-billed Hummingbird		S			1B
<i>Cyprinodon macularius</i>	Desert Pupfish	LE				1A
<i>Dipodomys spectabilis</i>	Banner-tailed Kangaroo Rat			S		1B
<i>Euderma maculatum</i>	Spotted Bat	SC	S	S		1B
<i>Eumops perotis californicus</i>	Greater Western Bonneted Bat	SC		S		1B
<i>Falco peregrinus anatum</i>	American Peregrine Falcon	SC	S	S		1A
<i>Glaucidium brasilianum cactorum</i>	Cactus Ferruginous Pygmy-owl	SC	S	S		1B
<i>Glaucidium gnoma gnoma</i>	Northern Pygmy-owl					1B
<i>Gopherus morafkai</i>	Sonoran Desert Tortoise	CCA	S			1A

Species of Greatest Conservation Need
 Predicted within Project Vicinity based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Haliaeetus leucocephalus</i>	Bald Eagle	SC, BGA	S	S		1A
<i>Heloderma suspectum</i>	Gila Monster					1A
<i>Hypsiglena sp. nov.</i>	Hooded Nightsnake					1B
<i>Incilius alvarius</i>	Sonoran Desert Toad					1B
<i>Kinosternon sonoriense sonoriense</i>	Desert Mud Turtle			S		1B
<i>Lampornis clemenciae</i>	Blue-throated Hummingbird					1B
<i>Lasiurus blossevillii</i>	Western Red Bat		S			1B
<i>Lasiurus xanthinus</i>	Western Yellow Bat		S			1B
<i>Leopardus pardalis</i>	Ocelot	LE				1A
<i>Leptonycteris curasoae yerbabuenae</i>	Lesser Long-nosed Bat	LE				1A
<i>Lepus alleni</i>	Antelope Jackrabbit					1B
<i>Lithobates yavapaiensis</i>	Lowland Leopard Frog	SC	S	S		1A
<i>Macrotus californicus</i>	California Leaf-nosed Bat	SC		S		1B
<i>Megascops trichopsis</i>	Whiskered Screech-owl		S			1B
<i>Melanerpes uropygialis</i>	Gila Woodpecker					1B
<i>Meleagris gallopavo mexicana</i>	Gould's Turkey		S			1B
<i>Melospiza lincolni</i>	Lincoln's Sparrow					1B
<i>Melospiza aberti</i>	Abert's Towhee		S			1B
<i>Micruroides euryxanthus</i>	Sonoran Coralsnake					1B
<i>Myiarchus tuberculifer</i>	Dusky-capped Flycatcher					1B
<i>Myiodynastes luteiventris</i>	Sulphur-bellied Flycatcher		S			1B
<i>Myotis occultus</i>	Arizona Myotis	SC		S		1B
<i>Myotis velifer</i>	Cave Myotis	SC		S		1B
<i>Myotis yumanensis</i>	Yuma Myotis	SC				1B
<i>Nyctinomops femorosaccus</i>	Pocketed Free-tailed Bat					1B
<i>Odocoileus virginianus</i>	White-tailed Deer					1B
<i>Ovis canadensis nelsoni</i>	Desert Bighorn Sheep					1B
<i>Panthera onca</i>	Jaguar	LE				1A
<i>Passerculus sandwichensis</i>	Savannah Sparrow					1B
<i>Perognathus amplus</i>	Arizona Pocket Mouse					1B
<i>Peucaea botterii arizonae</i>	Arizona Botteri's Sparrow			S		1B
<i>Peucaea carpalis</i>	Rufous-winged Sparrow					1B
<i>Phrynosoma solare</i>	Regal Horned Lizard					1B
<i>Phyllorhynchus browni</i>	Saddled Leaf-nosed Snake					1B
<i>Picoides arizonae</i>	Arizona Woodpecker		S			1B
<i>Poecilopsis occidentalis occidentalis</i>	Gila Topminnow	LE				1A

**Species of Greatest Conservation Need
 Predicted within Project Vicinity based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Progne subis hesperia</i>	Desert Purple Martin			S		1B
<i>Sciurus arizonensis</i>	Arizona Gray Squirrel					1B
<i>Setophaga petechia</i>	Yellow Warbler					1B
<i>Strix occidentalis lucida</i>	Mexican Spotted Owl	LT				1A
<i>Tadarida brasiliensis</i>	Brazilian Free-tailed Bat					1B
<i>Terrapene ornata</i>	Ornate Box Turtle					1A
<i>Thomomys umbrinus intermedius</i>	Southern Pocket Gopher					1B
<i>Troglodytes pacificus</i>	Pacific Wren					1B
<i>Vireo bellii arizonae</i>	Arizona Belts Vireo					1B
<i>Vulpes macrotis</i>	Kit Fox					1B

Species of Economic and Recreation Importance Predicted within Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Callipepla gambelii</i>	Gambel's Quail					
<i>Odocoileus hemionus</i>	Mule Deer					
<i>Odocoileus virginianus</i>	White-tailed Deer					1B
<i>Ovis canadensis mexicana</i>	Mexican Desert Bighorn Sheep					1B
<i>Pecari tajacu</i>	Javelina					
<i>Puma concolor</i>	Mountain Lion					
<i>Zenaida asiatica</i>	White-winged Dove					

Project Type: Development Within Municipalities (Urban Growth), Residential subdivision and associated infrastructure, New construction

Project Type Recommendations:

Fence recommendations will be dependant upon the goals of the fence project and the wildlife species expected to be impacted by the project. General guidelines for ensuring wildlife-friendly fences include: barbless wire on the top and bottom with the maximum fence height 42", minimum height for bottom 16". Modifications to this design may be considered for fencing anticipated to be routinely encountered by elk, bighorn sheep or pronghorn (e.g., Pronghorn fencing would require 18" minimum height on the bottom). Please refer to the Department's Fencing Guidelines located on the home page of this application at <http://www.azgfd.gov/hgis/guidelines.aspx>.

During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife.

Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, centered, or cut to ensure that light reaches only areas needing illumination.

Minimize potential introduction or spread of exotic invasive species. Invasive species can be plants, animals (exotic snails), and other organisms (e.g., microbes), which may cause alteration to ecological functions or compete with or prey upon native species and can cause social impacts (e.g., livestock forage reduction, increase wildfire risk). The terms noxious weed or invasive plants are often used interchangeably. Precautions should be taken to wash all equipment utilized in the project activities before leaving the site. Arizona has noxious weed regulations (Arizona Revised Statutes, Rules R3-4-244 and R3-4-245). See Arizona Department of Agriculture website for restricted plants, <https://agriculture.az.gov/>. Additionally, the U.S. Department of Agriculture has information regarding pest and invasive plant control methods including: pesticide, herbicide, biological control agents, and mechanical control, <http://www.usda.gov/wps/portal/usdahome>. The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information http://www.azgfd.gov/h/hunting_rules.shtml

The construction or maintenance of water developments should include: incorporation of aspects of the natural environment and the visual resources, maintaining the water for a variety of species, water surface area (e.g., bats require a greater area due to in-flight drinking), accessibility, year-round availability, minimizing potential for water quality problems, frequency of flushing, shading of natural features, regular clean-up of debris, escape ramps, minimizing obstacles, and minimizing accumulation of silt and mud.

Minimization and mitigation of impacts to wildlife and fish species due to changes in water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods) should be evaluated. Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing of the project in order to minimize impacts to spawning fish and other aquatic species (include spawning seasons), and to reduce spread of exotic invasive species. We recommend early direct coordination with Project Evaluation Program for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

Based on the project type entered, coordination with State Historic Preservation Office may be required (<http://azstateparks.com/SHP/CI/index.html>).

Trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herpetofauna (snakes, lizards, tortoise) from entering ditches.

Communities can actively support the sustainability and mobility of wildlife by incorporating wildlife planning into their regional/comprehensive plans, their regional transportation plans, and their open space/conservation land system programs. An effective approach to wildlife planning begins with the identification of the wildlife resources in need of protection, an assessment of important habitat blocks and connective corridors, and the incorporation of these critical wildlife components into the community plans and programs. Community planners should identify open spaces and habitat blocks that can be maintained in their area, and the necessary connections between those blocks to be preserved or protected. Community planners should also work with State and local transportation planning entities, and planners from other communities, to foster coordination and cooperation in developing compatible development plans to ensure wildlife habitat connectivity. The Department's guidelines for incorporating wildlife considerations into community planning and developments can be found on the home page of this application at <http://www.azgfd.gov/hgis/guidelines.aspx>.

Design culverts to minimize impacts to channel geometry, or design channel geometry (low flow, overbank, floodplains) and substrates to carry expected discharge using local drainages of appropriate size as templates. Reduce/minimize barriers to allow movement of amphibians or fish (e.g., eliminate falls). Also for terrestrial wildlife, washes and stream corridors often provide important corridors for movement. Overall culvert width, height, and length should be optimized for movement of the greatest number and diversity of species expected to utilize the passage. Culvert designs should consider moisture, light, and noise, while providing clear views at both ends to maximize utilization. For many species, fencing is an important design feature that can be utilized with culverts to funnel wildlife into these areas and minimize the potential for roadway collisions. Guidelines for culvert designs to facilitate wildlife passage can be found on the home page of this application at <http://www.azgfd.gov/hgis/guidelines.aspx>.

Based on the project type entered, coordination with Arizona Department of Environmental Quality may be required (<http://www.azdeq.gov/>).

Based on the project type entered, coordination with Arizona Department of Water Resources may be required (<http://www.azwater.gov/azdwr/default.aspx>).

Based on the project type entered, coordination with U.S. Army Corps of Engineers may be required (<http://www.usace.army.mil/>).

Based on the project type entered, coordination with County Flood Control district(s) may be required.

Development plans should provide for open natural space for wildlife movement, while also minimizing the potential for wildlife-human interactions through design features. Please contact Project Evaluation Program for more information on living with urban wildlife.

Vegetation restoration projects (including treatments of invasive or exotic species) should have a completed site-evaluation plan (identifying environmental conditions necessary to re-establish native vegetation), a revegetation plan (species, density, method of establishment), a short and long-term monitoring plan, including adaptive management guidelines to address needs for replacement vegetation.

The Department requests further coordination to provide project/species specific recommendations. please contact Project Evaluation Program directly. PEP@azgfd.gov

Project Location and/or Species Recommendations:

HDMS records indicate that one or more native plants listed on the Arizona Native Plant Law and Antiquities Act have been documented within the vicinity of your project area. Please contact

Arizona Department of Agriculture

1688 W Adams St.

Phoenix, AZ 85007

Phone: 602.542.4373

<https://agriculture.az.gov/environmentalservices/no1>

HDMS records indicate that one or more listed, proposed, or candidate species or Critical Habitat (Designated or Proposed) have been documented in the vicinity of your project. The Endangered Species Act (ESA) gives the US Fish and Wildlife Service (USFWS) regulatory authority over all federally listed species. Please contact USFWS Ecological Services Offices at <http://www.fws.gov/southwest/es/arizona/> or:

Phoenix Main Office
2321 W. Royal Palm Rd, Suite 103
Phoenix, AZ 85021
Phone: 602-242-0210
Fax: 602-242-2513

Tucson Sub-Office
201 N. Bonita Suite 141
Tucson, AZ 85745
Phone: 520-670-6144
Fax: 520-670-6155

Flagstaff Sub-Office
SW Forest Science Complex
2500 S. Pine Knoll Dr.
Flagstaff, AZ 86001
Phone: 928-556-2157
Fax: 928-556-2121



APPENDIX C:
PRELIMINARY INTEGRATED WATER
MANAGEMENT PLAN

Appendix A: Preliminary Integrated Water Management Plan

1. Water Context

The subject property is approximately 58.6 acres in size and is located approximately 1,300 feet west of La Cañada Boulevard, south of Overton Road in Section 27, Township 12 South, Range 13 East, Pima County, Arizona. The parcel associated with this project is 225-21-0010.

Surrounding Land Use within ¼ Mile

	Land Use	Residential Density	Business Type
North	SFR Subdivision	2.4 RAC	-----
	Religious Use	-----	Church
East	SFR Subdivision	<1 RAC	-----
South	SFR Subdivision	1 RAC	-----
West	SFR Subdivision	4.07 RAC	-----

The project site is within the boundaries of Metro Water District, which is expected to supply water service for the project. Metro Water District has been designated by the state of Arizona Department of Water Resources (ADWR) as having an assured water supply; therefore, water supply is assured. A water service agreement is required to establish service to the property. (See Exhibit A.1: Water Context Map)

2. Onsite Existing and Historic Water Use

The project site is undeveloped and has never had any previous development that would have required water use.

3. Onsite Proposed Water Use

The subject property is planned for a 107 lot single-family detached residential subdivision. The development will feature native, drought-tolerant landscaping, and water harvesting.

4. Water Supply and Delivery

A. Municipal Water Provider

1) Access to Renewable and Potable Water Supply

The Metropolitan Domestic Water Improvement District (MDWID) is certified to provide water to this property and is designated as having a 100-year assured water supply.

2) Capacity Letter

A request to ensure that capacity exists to serve the project is included as **Exhibit A.4.A.2: Metro Water District Letter.**

3) Points of Connection

The site will likely connect to the existing 8-inch water line running along the north property boundary. **Exhibit A.4.A.3: Water Facilities Map** shows the surrounding waterlines.

B. This Section is Not Applicable

5. Water Demand Projections

A. Estimated Baseline Water Demand

The planned zoning for the property is: CR-3. Therefore, for this site, with the aforementioned proposed residential zoning, the hypothetical build-out would be as shown:

Zoning	Land Use	Acres	Lots	Demand per home (acre-feet)	Net Estimated Demand (acre-feet/year)
CR-3	SFR Subdivision	58.6	107	0.34	36.38

Based upon Table A: Estimated Baseline Water Demand for Residential Land Uses, the estimated water demand for the anticipated 107 residential lots: (107 x 0.34 acre/feet/home = 36.38 acre/feet per year).

B. Water Conservation Measures

The following water conservation measures from “Table B – Water Conservation Measures Indoor and Outdoor Options” will be utilized for this project: (**See Exhibit A.5.B: Water Conservation Measures**)

- Install lavatory faucets that contain the label "WaterSense," a program sponsored by the EPA, or have a maximum flow rate of 1.5 gpm.

- Install toilets that meet the EPA's "WaterSense" rating, or have a maximum flow rate of 1.6 gallons per flush.
- Install a rainwater harvesting system capable of retaining and storing 50% or more of the average annual available rainfall on the catchment surface (minimum Catchment Area of 500 feet).
- Provide for water recharge/retention plan for rainwater.
- Install a high efficiency irrigation system that uses:
 - "Smart Controllers" & high efficiency nozzles
 - Separate sprinkler zones for beds, with plants grouped based on watering needs (hydrozoning)
 - Timer/controller that irrigates during the hours of 1 pm – 8 am
 - Drip irrigation for all planting beds

6. Proximity to Renewable and Potable Water Supplies

This section does not apply for the following reasons: (1) the project does not equal or exceed 50 acre-feet/year, (2) the project is being served by Metro Water, and (3) existing water mains sufficient to serve the site are located adjacent to the site.

Per the Preliminary Integrated Water Management Plan requirements, **Sections 7-11** of the PIWMP are not applicable due to an existing Municipal Provider providing legal access to renewable and potable water to this development, no new wells will be drilled within one-quarter mile of the boundary of the property to serve this development, and there will be no increase in pumping of any existing wells within one-quarter mile of the boundary of the property to serve this development.

Exhibit A.1:
Water Context Map

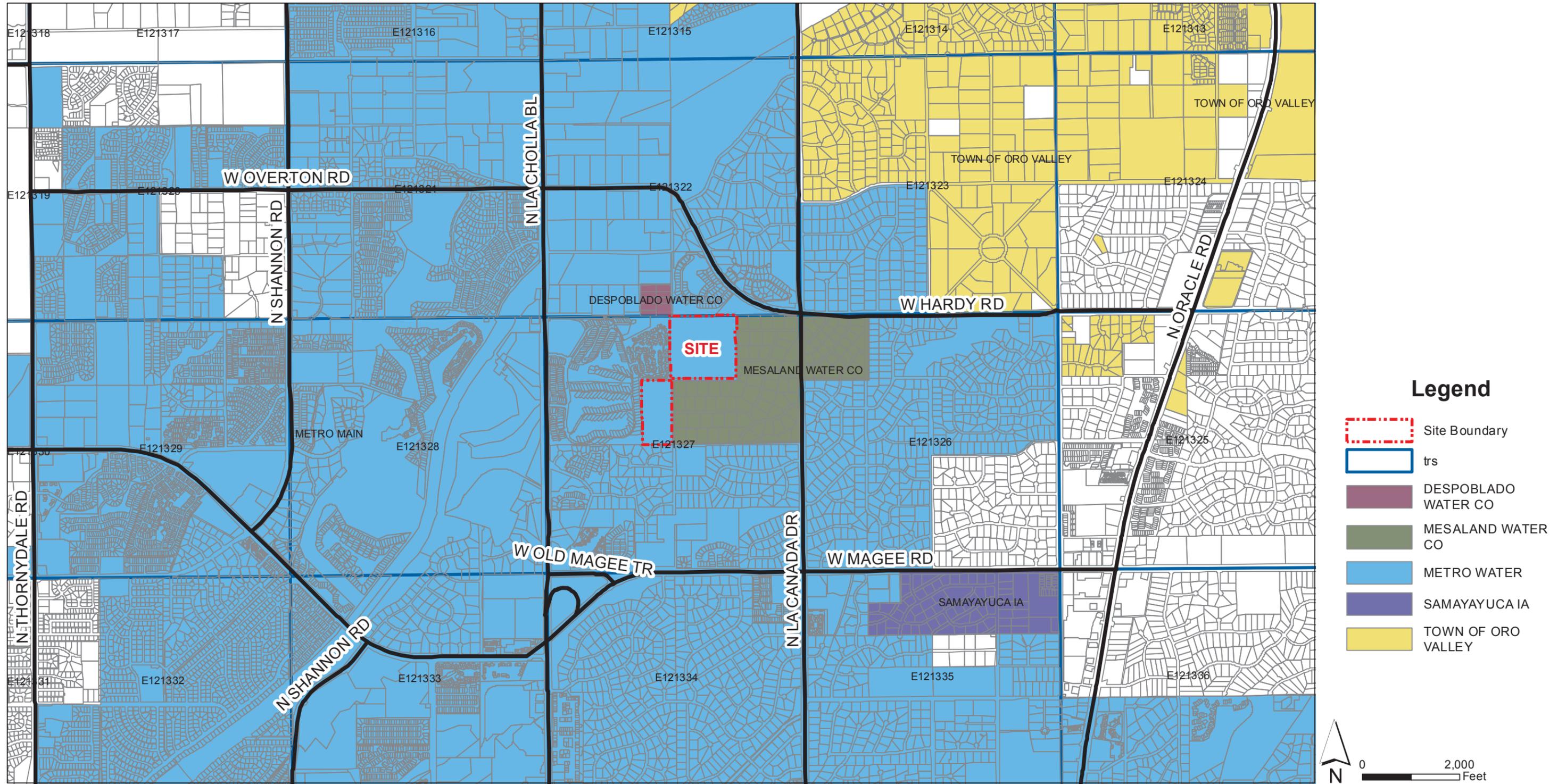


Exhibit A.4.A.2:
Metro Water District Letter



January 27, 2016

Daniel Castro
Rick Engineering Company, Inc.
3945 E. Fort Lowell Road, Suite 111
Tucson, AZ 85712-1046

**Re: ±58.6 Acres at the SWC and NEC or Romero Ave. and Pine St. (PN 225-21-001)
CAP16-01**

Dear Mr. Castro,

The Metropolitan Domestic Water Improvement District (MDWID) is certified to provide water to the above referenced development and is designated as having a 100-year assured water supply.

Any onsite or offsite requirements deemed necessary to provide the domestic and fire flow water supply will be determined at the time of improvement plan submittal or whenever application for water service is received, and will be the financial responsibility of the owner or those developing the property. Pipe sizing and system augmentation, if necessary, will be based on calculated demand for both domestic and fire flows as needed to adequately supply this area.

If an improvement plan has not been submitted within 2 years after the date of this letter, a reevaluation and reissuance of this will-serve letter will be necessary.

Please let me know if you have any questions or concerns at 575-8100.

Sincerely,

A handwritten signature in blue ink, appearing to read "Timothy Dinkel", is written over a horizontal line.

Timothy Dinkel
Development Supervisor

Enclosure

c: Project File / Charlie A. Maish, District Engineer
Signature File



Table B - Water Conservation Measures
Indoor and Outdoor Options
 (15-point Minimum; Must include at least one Outdoor Conservation Measure)

Indoor Options	Possible Points	Points Achieved
I-1	1	
I-2	1	
I-3	2	
I-4	2	
I-5	3	
I-6	3	3
I-7	3	
I-8	3	3
I-9	3	
I-10	2	
I-11	2	
I-12	0.5	
I-13	3	
I-14	1	
Outdoor Options		
O-1	6	6
O-2	4	
O-3	2	
O-4	2	
O-5	2	
O-6	2	
O-7	1	
O-8	2	
O-9	2	
O-10	3	
O-11	3	
O-12	4	
O-13	1	1
O-14	1	
O-15	0.5	0.5
	0.5	0.5
	0.5	0.5
	0.5	0.5

APPENDIX D:
P.A.S.T. CULTURAL RESOURCES REPORT

**STATE HISTORIC PRESERVATION OFFICE
SURVEY REPORT SUMMARY FORM**

I. REPORT INFORMATION

Project Title: Jackson 58 Archaeological Survey
Report Title: Update to the Archaeological Survey of the Jackson 58 Project Near Oro Valley, Pima County, Arizona
Report Author(s): David Stephen, Ph.D. **Date:** 1/27/2016
Report No.: 162052 **Checked if this submittal is SRSF for a null findings survey**

II. AZSITE & SHPO INFORMATION

ASM Accession No.: AAA **Permit No.:** 2016-059bl **SHPO-20__-____** (if known)
Project Locator UTM: Zone 12 499997 mE 3581036 mN **Map Datum:** NAD 83
USGS 7.5' Quadrangle Name: Jaynes

III. ARCHAEOLOGICAL CONSULTING FIRM INFORMATION

Organization/Consulting Firm: P.A.S.T.
 (Professional Archaeological Services of Tucson dba Professional Archaeological Services & Technologies)
Internal Project Number: 162052
Contact Name (Responsible Person*): David Stephen, Ph.D.
Address: 5036 E. Golder Ranch Drive., Tucson, AZ 85739
Phone: 520.825.3536 **Email:** dvms@pastarizona.com

IV. AGENCY/PROJECT INFORMATION

Lead Agency: Pima County **Project Number:** Not provided
Agency Name: _____ **Project Number:** _____
Route, Mileposts Limits (ADOT projects): N.A.
Nearest City/Town & County: Oro Valley, Pima County
Address (if appropriate, e.g., cell tower projects): N.A.
Project Sponsor: Oasis Tucson, Inc. **Funding Source(s):** Private
Other Permitting/Land Agencies & Permit Numbers: N.A. **ASLD Lease Application No.:** N.A.

V. PROJECT DESCRIPTION

The purpose of the study was to determine if any important cultural resources that might be negatively impacted by the proposed undertaking were present within the study area. Archival research and on-foot archaeological survey of private property (58.58 acres) was conducted in anticipation of ground disturbance related to residential construction. No important or register eligible cultural resources including historical period or prehistoric sites, features or isolated objects greater than 50 years of age were found.

VI. AREA OF POTENTIAL EFFECTS (APE)/PROJECT AREA DESCRIPTION

The study area is a 58.58 acre parcel of land for which the general configuration is a 8 sided polygon comprised nominally of a 20 acre and a 40 acre parcel. The APE corresponds with study area boundary. Based on survey results and site locations on nearby lands activities outside the APE will not impact any sites or IOs.

VII. PROJECT AREA INFORMATION

Total Ha/ac: 23.71/58.58 **Map Datum:** NAD 83 **UTM Zone:** 12 **PLSS Meridian:** G&SRB&M
Justification for areas not surveyed: N.A.

Project Location

Land Jurisdiction	Legal Description	Ha/ac Surveyed	Ha/ac Not Surveyed
Private	T12S R13E S27 E2 SE4 NW4 & NW4 NE4	23.71/58.58	Zero

VIII. INVENTORY CLASS COMPLETED

Note: Previous survey within APE must be <10 years old and meet current standards or new survey is required. See comments section as appropriate.

Class I Inventory only **Class III Intensive Field Survey** **Other: N.A**

**STATE HISTORIC PRESERVATION OFFICE
SURVEY REPORT SUMMARY FORM**

IX. CLASS III SURVEY PERSONNEL AND METHODS

Field Personnel: A. Lenhart & D. Stephen

Project Principal Investigator: David Stephen, Ph.D. (44 years of experience in Arizona)

Project Director/Field Supervisor: Same As Above **Crew:** A. Lenhart & D. Stephen

Date(s) of Fieldwork: January 12, 2016 & October 6-13, 2004

Methods & Area Surveyed:

NA	NA	Linear Meters/Miles	transect intervals ≤20 m/65' apart	Coverage: 100%
23.71	58.58	Ha/ac Block Survey	transect intervals ≤20 m/65' apart	Coverage: 100%

Site recording criteria used: A.S.M.

Ground Surface Visibility:

General conditions were excellent for conducting the field work with the ground surface minimally obscured by the presence of annual grasses, succulents semi-shrubs, and trees.

Integrity of Survey Area: The aboriginal landform has been moderately disturbed by modern alterations to the ground surface. The most observable impacts include informal trails, dirt tracks, fencing, rill cutting and subsequent soil erosion.

X. CULTURAL RESOURCES

No cultural resources identified

Isolated occurrences only

Number of IOs recorded: 1

Archaeological sites present

Number of Previously Recorded Sites: 0

Number of Newly Recorded Sites: 0

Number of Sites Not Re-located: 0

Historic period structures documented/evaluated; historic property inventory forms attached

Name: (historian/architectural historian) N.A.

Years of experience: N.A.

XI. RECOMMENDATIONS

The quantity, nature and integrity of archaeological materials within the APE and data about known sites in the vicinity indicate that the undertaking will not have an adverse effect on important cultural resources or a historic property. Consequently, further cultural resource studies do not appear warranted for the study area.

Recommended Finding of Project Effect

No Historic Properties Affected

No Adverse Effect

Adverse Effect

***Final Draft Report Reviewed By (Consulting Archaeologist):**

Reviewer's Name	Title	Years Experience
David Stephen, Ph.D.	Senior Archaeologist/Principal	Forty Six

CONSULTANT CERTIFICATION (Signature of Responsible Party)

I certify the information provided herein has been reviewed for content and accuracy and all work meets applicable agency standards.



Senior Archaeologist/Principal

1/27/2016

Date

Comments:

Previous survey within was in 2004 (Stephen) but complies with current standards based on 2016 field work and archival research.

NOTE: because no sites were recorded the Site Management Summary Table has not been included

**UPDATE TO THE ARCHAEOLOGICAL SURVEY
OF THE JACKSON 58 PROJECT
NEAR ORO VALLEY, PIMA COUNTY, ARIZONA**

Submitted to:

**Oasis Tucson, Inc.
P.O. Box 14890
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Submitted by

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**VERSIONS OF THE REPORT ARE REDACTED FOR THIRD PARTY DISTRIBUTION
(see page 12)**

**Prepared by
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State Antiquities Permit No. 2016-059bl**

P.A.S.T. Cultural Resources Report No. 162052

PROJECT TITLE:

Update to the Archaeological Survey Of The **Jackson 58** Project Near **Oro Valley**, Pima County, Arizona.

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P.A.S.T. PROJECT NUMBER:

162052.1

REPORT DATE

1/27/2016

P.A.S.T. PROJECT SUMMARY FORM

P.A.S.T. JOB NO. 162052

OVERVIEW. An on-foot archaeological survey of private property (58.58 acres) in anticipation of ground disturbing activities near Oro Valley in Pima County identified no cultural resources and 1 isolated artifact. The current fieldwork was an update of a prior project with additional fieldwork conducted and archival research brought current.

INTRODUCTION					
(D1)	Update for the Archaeological Survey Of The Jackson 58 Project				
Near Oro Valley, Pima County, AZ.					(D2) 1/27/2016
(D3) Agency Name:	Pima County				
(D4) ASM Permit No.	2016-059bl	Accession No.			
(D5) Project Description:	The land is slated for residential construction				
(D6) Agency Reference:				Other Permits:	NA
Project Sponsor:	Oasis Tucson, Inc.				
(D7) PROJECT LOCATION INFORMATION (see also attached copy of USGS map)					
County:	Pima	Vicinity of	Oro Valley	AZ	Parcel No. 225-21-0010
Reference UTM Zone	12	Reference UTM Easting	499997	Reference UTM Northing	3581036
Legal:	Primarily within E2 SE4 NW4 & NW4 NE4 Section 27 T12S R13E G&SRB&M				
AZ QUAD		USGS MAP NAME		MAP SCALE	
1. AA:12 SE		Jaynes		7.5'	
(D8) SURVEY INFORMATION					
Type:	Non-collection on-foot survey with systematic 20m transects or equal			Person-days	4
58.58 acres AND/OR 0 miles long BY 0 foot wide right-of-way			Percent surveyed	100%	
Land Ownership	Private				
Field Crew	A. Lenhart, D. Stephen		Project Director:	David Stephen	
Field Work Dates	Jan. 12, 2016 & Oct. 6-13, 2004		Ground visibility was effected	minimally	
Additional Survey Records Submitted:	None		Artifact Collections Submitted to ASM:	None	
(D9-10) CULTURAL RESOURCES WITHIN PROJECT AREA (see report narrative for additional information)					
Archives Researched:	ASM/AZSITE <input checked="" type="checkbox"/>	GLO <input checked="" type="checkbox"/>	SHPO <input type="checkbox"/>	MNA <input type="checkbox"/>	Other:
Number of eligible sites	NA		Numbers of ineligible site	NA	
Previously recorded site	NA		New sites found this project	NA	
Artifact scatters	NONE		Total sites	NONE	
Known sites within 100m	NONE		Isolate density/total artifacts	<1 per acre	1
Sites in 1.6 km radius	In addition to the above 8 sites have been recorded (see Table A-2a)				
Prior Surveys	No full survey coverage or intersecting surveys. See also table A-2b				
(D11) RECOMMENDATIONS FOR FURTHER WORK (see also comments below)					
FURTHER WORK RECOMMENDED		NONE <input checked="" type="checkbox"/> OR			
SITE RECORDING <input type="checkbox"/>	MONITORING <input type="checkbox"/>	SUB-SURFACE TESTING <input type="checkbox"/>	DATA RECOVERY <input type="checkbox"/>		
COMMENTS (see report narrative additional information)					
The quantity of artifacts within the study area and data about known sites in the area suggests the undertaking will impact no cultural resources. Based on the fieldwork and archival documentation, the project sponsor should be allowed to develop the subject property without further cultural resource studies.					
Form Completed By	David Stephen		Form Rev. 1/12	Date	1/27/2016

Update To The Archaeological Survey Of The Jackson 58 Project Near Oro Valley, Pima County, Arizona

PAST No. 162052

Introduction.

In anticipation of residential development personnel from P.A.S.T. conducted a 4 person-day, survey of the Jackson 58 property on January 12, 2016 & October 6-13, 2004 located in Pima County near Oro Valley as well as updated field and archival information for the study area. A complete, intensive archaeological survey to 2006 professional standards had been previously conducted (Stephen 2004). Because of the time that had transpired since the original archaeological survey, the purpose of the new field work was to reassess the condition and integrity of cultural resources located during the prior archaeological survey. The project sponsor (Oasis Tucson, Inc.) initiated this study in accordance with municipal requirements. P.A.S.T. holds permit 2016-059bl issued under the Arizona Antiquities Act through the Arizona State Museum.

Project Location and Ownership.

The approximately 58.58-acre project area is located in the northwestern portion of the Tucson Basin (Figure 1). The project area is located on the Jaynes United States Geological Survey 7.5' map. The location with respect to the Public Land Survey System is primarily within the E2 SE4 NW4 & NW4 NE4 of Section 27 T12S R13E G&SRB&M. The UTM values for selected boundary points are shown on the map to indicate the approximate extent of the parcel. The boundary shown on the map is reasonably accurate given the limitations of a 1:24,000 scale map. It is based on data and maps provided by the client as well as field observations but it is not intended to represent the precise legal extent of the parcel. Unless otherwise noted, land ownership coincides with the parcel and survey boundary shown in Figure 1. The fieldwork was conducted on private lands.

Base Maps Included In Report

Figure 1 is a copy of a portion of the U.S.G.S. Jaynes 7.5-minute topographic map that shows the project boundaries, archaeological sites within the project area, and all isolated artifacts and features found during the survey. Table A-1, located at the end of the report, provides coordinate and other information for these isolates. Projects with boundaries extending across multiple U.S.G.S. maps are so noted on page ii and in the lower left of Figure 1. Figures 2a, 2b, 3a and 3b depict the study area on other base maps.

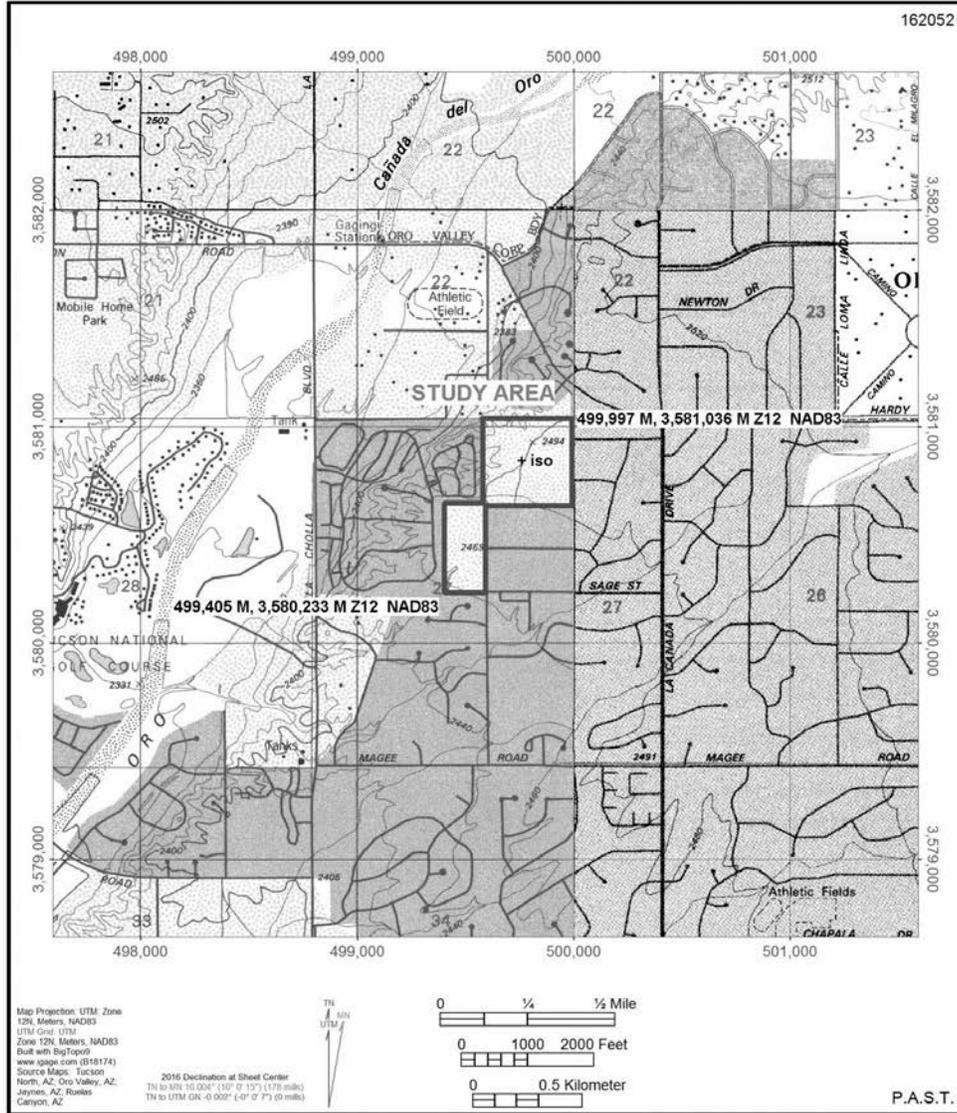
BACKGROUND TO STUDY AREA:

Effective Environment.

The study area is within the Basin and Range physiographic province at an elevation of about 2,480 feet situated on the upper eastern terrace of the Canada del Oro. The deep alluvial soils primarily of the hydrologic soil group "D" (USDA 2007) are dissected by northwest trending washes in the northern part of the study area with no observable surface geology. Project area vegetation is typical of the Arizona Upland subdivision of the Sonoran Desertscrub biotic province (Turner and Brown 1982) predominately comprised of cholla, annual grasses, palo verde, semi-shrubs and prickly pear.

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Figure 1. Jaynes U.S.G.S. 7.5' MAP (T12S R13E)



NOTE: Due to the sensitivity of site locations, only sites within the project area are depicted on the map. Site, IO, and study area locations as well as their geometric representation and extent are approximate. + = isolate

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Figure 2a. Project Area (in red) Street Map

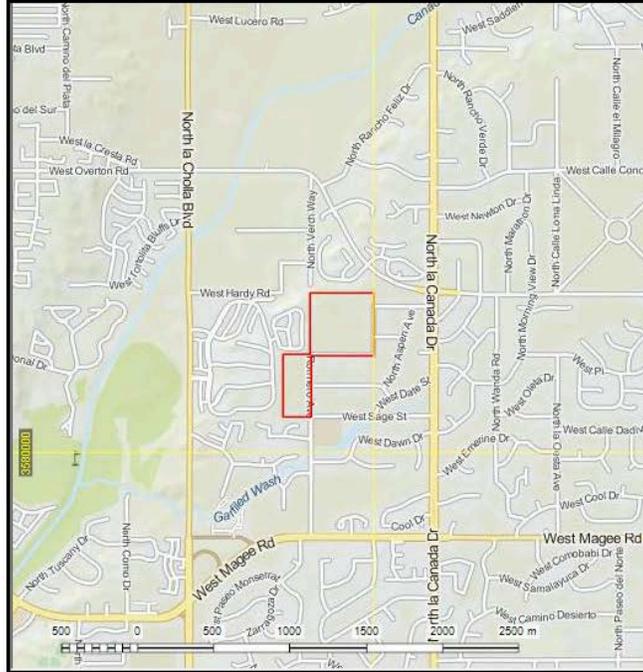


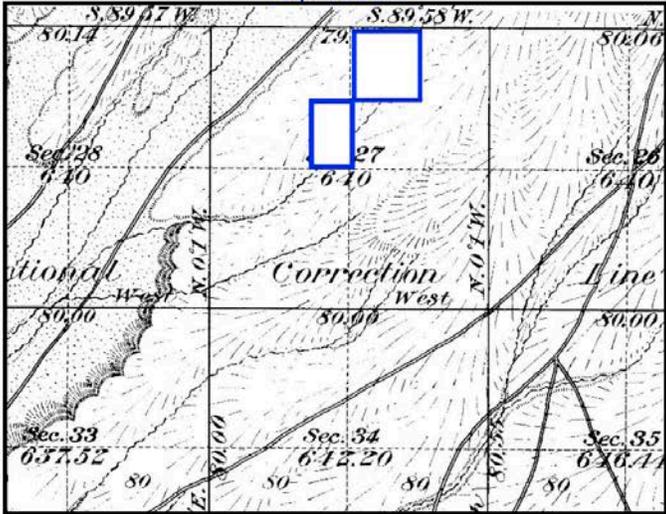
Figure 2b. Project Area ALRIS Land Ownership Map
(all private land with blue highlight for study area)



Figure 3a. Project Area 15' 1947 USGS Map Cortaro Quadrangle



Figure 3b. Project Area 1913 GLO Map
Study Area in Blue



Culture History.

The chronological parameters for most historical periods are based on absolute dates such as the American Civil War Period (1861 - 1865). In contrast, the temporal threshold for an archaeological site established by ASM in their site definition standard is "at least 50 years old." However, due to the ASM criteria of 50 years or greater, the boundary between the modern and the earlier period is never a fixed date. Consequently, what qualifies as an archaeological site technically changes on an annual basis. Scholars of contemporary history (Catterall 1997) face a similar challenge in defining the temporal parameters of their discipline.

The Historical Period. This period commenced in roughly 1700 and is comprised of the Spanish, Mexican and Anglo occupations of the southern Arizona region. The Spanish Period was initiated in 1691 with Kino's intrusion into the Santa Cruz Valley. Spanish exploration and expansion continued with the Tubac presidio being established in 1752 and Tucson being established 1776. Spanish military campaigns, followed by a lessening of tensions between the local population and the Apaches, brought relative stability to the region through to the end of the Mexican War of Independence in 1821. The Mexican Period began with the end of the war and ended with the Treaty of Guadalupe Hidalgo in 1848. An American presence began during the Mexican Period but intensified with the discovery of gold in California heralding the start of the American Period in 1848. With the Gadsen Purchase and the acquisition of Baja Arizona by the United States the following century brought the region through the formation of the territories of New Mexico (1850) and Arizona (1863) followed by statehood for each in 1912. In southern Arizona, the post WWII era was a period of economic prosperity with the mid-1960s being a time associated with increased population growth, accelerating sub-urban expansion and a proliferation of material culture remains compared to earlier periods. Cultural resources from these periods can include sites associated with homesteads, ranching, transportation, mining, missions and refuse disposal, among others. In accordance with the ASM standard, sites, objects and artifacts dating from the mid 1960s and earlier must be evaluated for possible significance.

Protohistoric. Some researchers recognize the protohistoric as a transitional culture from the earlier prehistoric occupations. The prehistoric peoples who lived in this region include the Hohokam, Archaic and Paleoindian cultures.

The Hohokam (A.D. 450 - 1450). The Hohokam were a sedentary, agriculture-based people who produced both plain and decorated pottery, along with numerous other crafts of shell, stone and clay. They were skillful agriculturists who lived in houses built in shallow pits (pithouses) and constructed extensive irrigation canal systems. In some of the larger villages, they built ballcourts that probably served as focal points for ceremonial or recreational activities. Whether the Hohokam migrated into the region from Mexico or developed from indigenous Archaic populations is still hotly debated. The Hohokam cultural sequence was established in the 1930s based on the decorated pottery types unearthed at the Snaketown Site in the Phoenix Basin. Shortly thereafter, Isabel Kelly modified this chronology to fit the Tucson Basin sequence after her

excavations at the Hodges Ruin in northwest Tucson. Since that time, the continual acquisition of new archaeological data has brought about many refinements in the chronology.

Archaic Era (7500 B.C. - A.D. 450). The Archaic era has traditionally been characterized by assemblages of chipped stone artifacts along with ground stone tools for processing plant materials, and a lack of ceramics. Recent research in the Tucson Basin and elsewhere has demonstrated the presence of pit house villages, agriculture and some ceramics in the Late Archaic. The shift from a hunting-based economy to a reliance on plant foraging and small-game hunting that characterized the Archaic sites was caused by the extinction of Pleistocene mammals favored by the Paleoindians.

Paleo-Indian Era (ca. 10,000 - 7500 B.C.). Approximately eleven thousand years ago, the climate in the Southwestern United States was considerably wetter and cooler than it is today, and much of the terrain consisted of lush grasslands that supported herds of mammoth, bison and other large grazing animals. Many of the earliest occupants of the area, known as Paleoindians, were hunters who subsisted on these large, late Pleistocene mammals. The belief that many of the Paleoindians were primarily big-game hunters is supported by the fact that most of the Paleo-Indian sites that have been excavated have been kill and butchering sites. The artifact assemblages from these sites are made up of projectile points and other stone tools suitable for skinning animals and cutting meat and bone. The earliest Paleo-Indian artifacts found in southern Arizona belong to the Clovis complex (9500-9000 B.C.), which is characterized by long, lanceolate, fluted Clovis points, along with other stone implements and bone artifacts.

Arizona State Museum Site Definition Standard (ASM 1993).

The determination of what constitutes an archaeological site is, to a certain extent, a matter of professional judgment. However, if certain minimal archaeological discoveries (listed below) are encountered, then an ASM site card must be completed and submitted. In other words, if the archaeological discoveries exceed the minimum criteria listed below, a site card must be filled out. Sites that do not meet the minimum standards, but which the archaeologist deems worthy of site status, may also be assigned ASM numbers.

Most archaeologists define sites based on consideration of age of remains as well as density and diversity of artifacts and features and the spatial arrangements of these remains within the area under consideration. The following guidelines should be used to define archaeological sites:

All sites should contain:

1. physical remains of past human activity that are at least 50 years old.

Additionally, sites should consist of at least one of the following:

2. 30+ artifacts of a single class (i.e., 30 sherds, 30 lithics, 30 tin cans) within an area 15 meters (50 feet) in diameter, except when all pieces appear to originate from a single source (i.e., one ceramic pot, one core, one glass bottle).
3. 20+ artifacts which include at least 2 classes of artifact types (i.e., sherds, groundstone, nails, glass) within an area 15 meters (50 feet) in diameter,

4. one or more archaeological features in temporal association with any number of artifacts.
5. two or more temporally associated archaeological features without artifacts.

Non-linear, isolated features without associated artifacts may be recorded. An "isolated feature" is defined as a feature that does not have any other features within a 100-meter (325 feet) diameter. This might include isolated rock piles, mine shafts, prospecting pits or unidentified depressions without artifact associations.

Criteria for the Evaluation of Cultural Resources.

Although archaeological and historical sites may qualify for formal recording under state standards, they generally are not considered significant unless they are eligible for listing in the Arizona or National Register of Historic Places. According to the current standards a property must possess sufficient integrity, significance and antiquity to be listed in the Register. In addition to being at least 50 years of age a resource must meet the criteria set forth below:

The quality of significance in American or Arizona history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. that have yielded, or may be likely to yield, information important in prehistory or history (National Park Service 1986).

ARCHAEOLOGICAL SURVEY:

Survey Expectations.

This project's study area was located in a portion of southern Arizona that is conducive to prehistoric and/or historical settlement. Therefore, it was considered a reasonable likelihood that prehistoric or historical sites would be found during the survey.

Records Review.

A review of the records of the Arizona State Museum (ASM), in anticipation of the survey, revealed that the subject parcel had either not undergone a complete, intensive archaeological survey or sufficient time had passed since an earlier study suggesting heretofore undiscovered cultural resources may have been subsequently exposed that would not have been documented by any earlier field work. The ASM records, as well as the other archives indicated on the associated project form, revealed no recorded cultural resources on the inspected parcel.

There are not previous surveys recorded or on file at ASM/AZSITE or from other sources that encompassed the study area. Other recorded surveys that intersected it are listed in the relevant tables of this report. GLO surveyor's maps (Ingalls 1912) showed no

cultural features for T12S R13E G&SRB&M in the vicinity of the study area except for an unnamed road in the northwest portion of the section.

Recorded cultural resources within a 1.6-kilometer radius of the center of the project area are listed in Table A-2a and on the project summary form. As noted in the table, ASM/AZSITE data indicates 8 site numbers have been issued within a one mile perimeter of the study area. **NOTE:** Maps and tables with resource specific location information are redacted in some version of report in accordance with the ASM Archaeological Records Use Agreement. Please see the "information disclosure notice" paragraph following the literature cited section of this report for more information.

Methods.

The 2004 fieldwork consisted of intensive on-foot coverage of the property by our staff in order to identify and locate any cultural resources, historic or prehistoric, within the property boundaries. Field personnel (A. Lenhart, D. Stephen) were spaced approximately 20 meters apart and crossed the study area in a series of contiguous corridors with any areas of extreme slope covered less intensively. Survey transects paralleled the longest dimension of the property except when prevented by the landform, vegetation density or hydrological features. Unless noted otherwise, the transect count is the quotient of the transect extent and parcel width. General conditions were excellent for conducting the fieldwork. The 2016 field work employed judgmental transects to locate or confirm study area boundaries and relocate isolates. Ground visibility was minimally affected by the presence of trees, shrubs, semi-shrubs, succulents and grasses. The original landform was moderately disturbed by modern alterations to the ground surface.

Survey Results.

Archaeological Sites. The information derived from the fieldwork is generally in keeping with the expectations generated from archival and literature sources. There were no surface indications of archaeological resources within the study area which meet the Arizona State Museum minimum standard for recording as an archaeological site or that would be eligible for inclusion in the National Register of Historic Places.

Vicinity Sites, Isolates and Modern Features.

Vicinity Sites. Cultural resources that are located close to the study area (within roughly 100 meters or a 328 foot perimeter) are considered vicinity sites. These sites are noted in the relevant tables and discussed when appropriate in this section. Such resources could be impacted by the project and may account for the presence of isolated non-site cultural entities found on the parcel. According to ASM/AZSITE records and other sources there no sites located within the 100 meter perimeter and eight sites located in the 1.6km buffer area.

Recorded sites further away but in the general area (within a one-mile perimeter) are summarized in the relevant tables. Archaeological site numbers can be found in PAST Summary Form and relevant tables in the appendix.

Isolates. The occurrence of isolated artifacts and non-site features in lower density than that required for formal recording as a cultural resource are documented below, in Figure 1 or in Table A-1 as appropriate. For this project a total of 1 isolated artifacts or non-site features were noted and none deemed significant. The isolate report in 2004 was not relocated in 2016 nor were others discovered.

Modern Features. More recent cultural manifestations identified during the survey include dirt tracks, informal trails and a light scatter of trash. All appear to be modern in origin.

Eligibility Evaluation.

No cultural resources were located during the course of the fieldwork in the project area appear to be more than 50 years old. Consequently it is not germane to assess significance under any of the criteria listed above.

Evaluation Of Effects Of The Proposed Project.

Considering the nature of the cultural resources found on the property, information collected about known sites in the area and the work already completed, indicates the development of the inspected parcel will not have a negative impact on important cultural resources within or in close proximity to the study area.

Recommendations.

Based on the archival information, field methods, the observable surface indications and because none of the materials observed on the study area have potential to provide important archaeological or historical information beyond what was obtained for this project, P.A.S.T. supports approving the sponsor's application. Although P.A.S.T. does not endorse additional archaeological studies for this project, ground-disturbing activities on the property should not commence without authorization by the agency archaeologist(s).

There remains the possibility that ground-disturbing activities could reveal the presence of heretofore-undiscovered cultural resources. If such materials are discovered construction activities should stop. Consultation should be initiated with the appropriate agency archaeologist, and if applicable under ARS §41-841 *et seq.* the Arizona State Museum, to assess the potential significance of any materials unearthed. Under State law (ARS 41-§865 & §41-844) if human skeletal remains or funerary objects are discovered on either public or private lands the Arizona State Museum should be contacted immediately.

LITERATURE CITED

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2007 National Engineering Handbook, Part 630 Hydrology. Chapter 7. Hydrologic Soil Groups. Natural Resources Conservation Service (210-NEH, May 2007). Washington D.C.

NOTICES, DISCLOSURES AND CONFIDENTIALITY

NOTE FOR A.D.O.T. INVOLVED PROJECTS: If previously unidentified cultural resources are encountered during activity related to the use of this source, the contractor shall stop work immediately at that location and shall take all reasonable steps to secure the preservation of those resources. The Engineer will contact the A.D.O.T. Environmental Planning Group, Historic Preservation Team at 602.712.7767 and make arrangements for the proper treatment of those resources.

INFORMATION DISCLOSURE NOTICE: P.A.S.T. is a holder of an Arizona Antiquity Permit and a signatory to the "ASM Archaeological Records Use Agreement" as well as the AZSITE database user rules. As such, in compliance with the associated conditions and regulations of these documents, P.A.S.T. is bound "not to distribute or disclose specific site location information in a public document or make this information available to unauthorized individuals". P.A.S.T. reports are often initiated through third parties, who are not authorized to access this information. Consequently such information is presented herein in a manner deemed appropriate not to compromise site location or divulge potentially identifying site attribute information. P.A.S.T. reports are further structured to restrict the dissemination of such information through the removal of Appendix "A" as well as any maps of archaeological sites included in the document prior to wider distribution of the report.

P.A.S.T. will readily provide further or more specific site location, eligibility or site attribute information to a qualified individual when that person makes a request in writing or via email directly to P.A.S.T. That request must be supported with written concurrence from the agency lead archaeologist and either the SHPO, Director of the Arizona State Museum or their authorized designee(s) if the requestor does not hold a valid Arizona Antiquity Permit, has not executed the aforementioned ASM records use agreement or is an not approved AZSITE user.

**NOTE: Additional maps & tables follow
except in redacted versions of the document
distributed to third parties.**

**Copies of the redacted information are available to
qualified individuals upon request.**

BIBLIOGRAPHY

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