

ASPA



Tom  
Lewist

VIEWSHED TO REMAIN

**RANCHO DE PLATA**  
**SITE ANALYSIS**  
**Rezoning from R1-144 to R1-7**  
**OV911-005**

*Prepared by:*  
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July 22, 2011  
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**APPENDICES**

**APPENDIX A: Vegetation, Saguaro Inventory**

**APPENDIX B: Arizona Fish and Game On-line Environmental Review Tool**

**APPENDIX C: Arizona State Museum Report**

**APPENDIX D: Traffic Analysis**

**APPENDIX E: Amphitheater School District Correspondence**

# Part I – Inventory and Analysis

## A. EXISTING LAND USES

### 1. Site Location

This 19.45 acre site is located on the west side of La Cholla Boulevard approximately 1/4 mile south of Tangerine Road. Specifically, the site is located in the N2 SE4 NE4 Sec. 4-12S-13E, APN's: 224-11-034A thru -034E ("Project Site"). See **Exhibit I.A.1 Regional Context Map**.

**2. On-site.** The Project Site is unimproved.

### 3. Adjacent Property (1/4 mile)

- a. **Zoning.** See **Exhibit I.A.3.a.**
- b. **Existing land use.** See **Exhibit I.A.3.b.**
- c. **Stories.** See **Exhibit 1.A.3.b.**
- d. **Pending rezonings.**  
None
- e. **Conditionally approved zonings.**  
None.
- f. **Approved subdivisions and development plans.**  
See Rancho del Cobre on **Exhibit I.A.3.b.**, Ironwood Ranch (OV12-95-09), Sunset Canyon Estates (OV12-05-31), and Naranja Ranch 1 (OV12-92-05).

**4. Wells within 100'.** See **Exhibit I.A.3.b.**

## B. TOPOGRAPHY

### 1. Topographic Characteristics

- a. **"Hillside Conservation" areas.**
- b. **Rock outcrops**

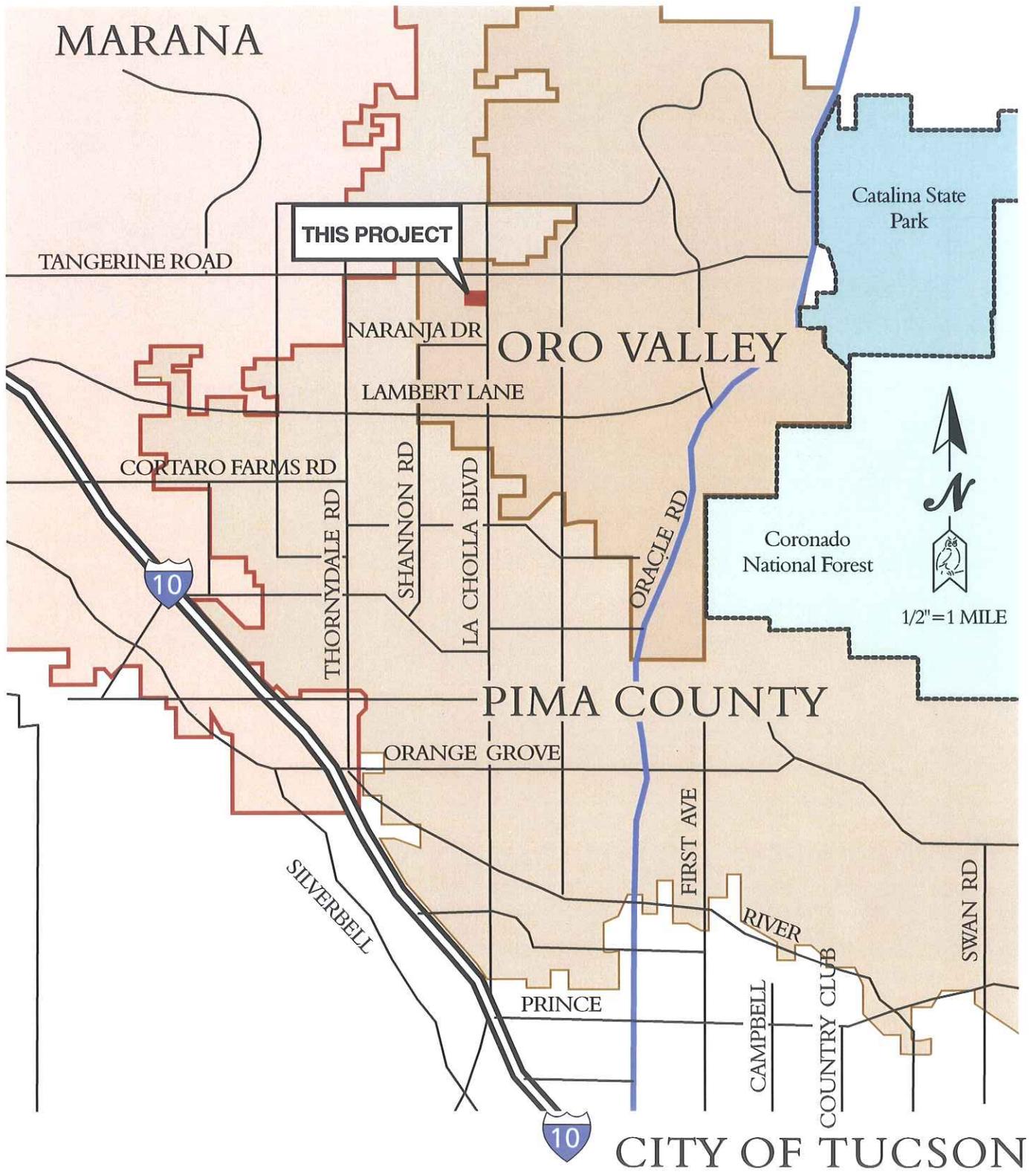
There are no hillside conservation areas required on the site and there are no rock outcrops based upon site investigation by Novak Environmental.

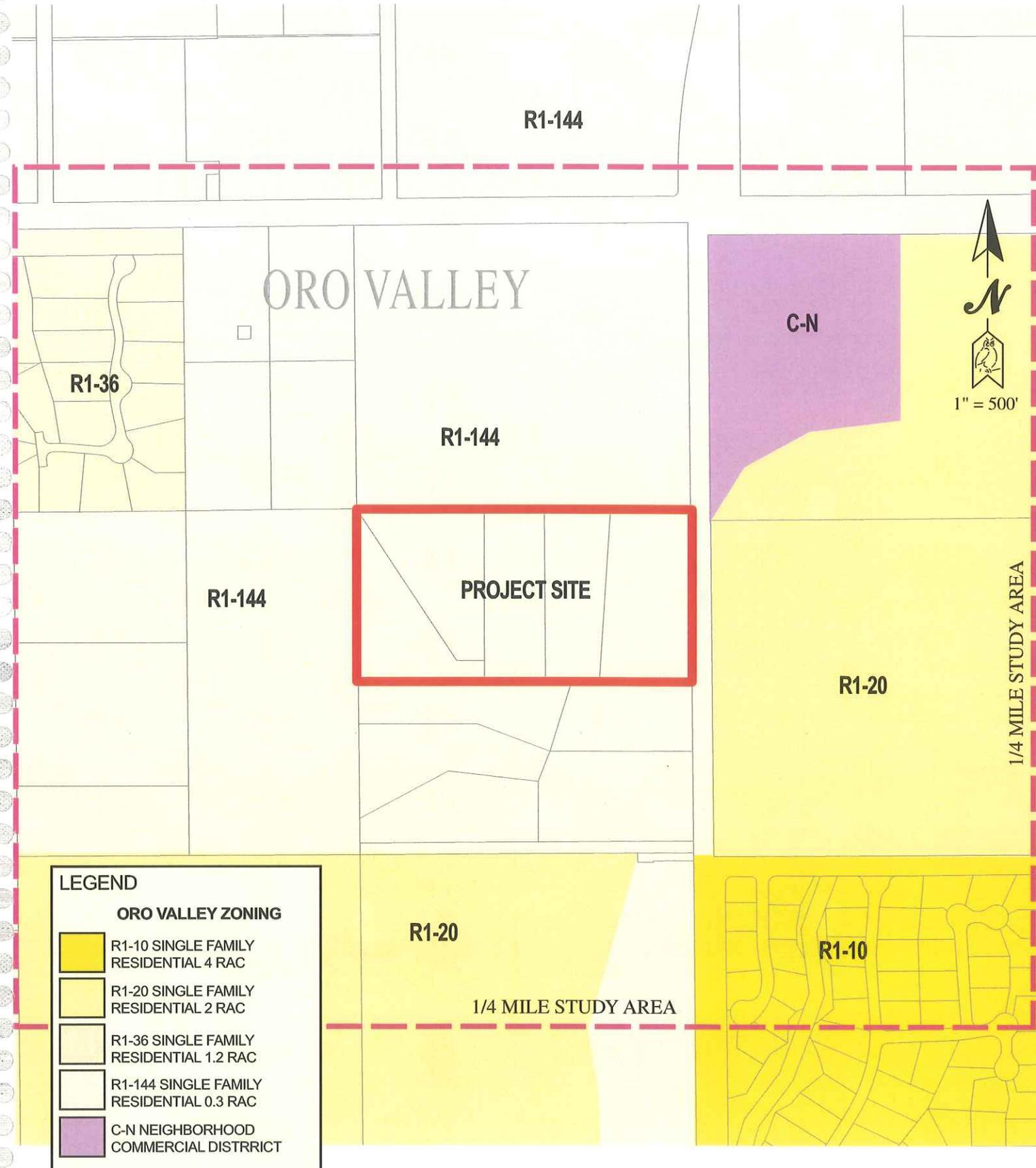
**c. Slopes of 15% or greater.** There are very limited slopes greater than 15% along the banks of the 2 drainage ways. See **Exhibit I.B.1.** The ESL

ordinance declares in Table 27.10-1B that an analysis of "Hillside Development Zones" per Addendum J.1 is not required for rezonings nor general plan amendments. However, the Hillside Area Category is subject to review. However, none of the 15% slopes are greater than 150' in length and 50' wide and greater than 7 1/2' vertically (section D.g.ii.a). In addition, there are no ridges with an elevation change of 25' or more and no rock outcrops or boulders. Therefore, ESL section D.g. does not apply to the Rancho de Plata rezoning.

**d. Other significant topographic features.** There are two well defined drainage channels entering the Property from the north and exiting to the south. The associated floodplains vary in width from 40' to over 150'.

**2. Pre-development average cross slope.** The average cross slope analysis presented in the site analysis first submittal is no longer accepted by the Town in the current ESL requirements. However, no other method for average cross slope analysis is presented. Therefore, during the subdivision platting process, Rancho de Plata will comply with ESL section D.g.iii, for a Sloped Area Analysis with 1' contour intervals that are currently not available.





**LEGEND**

**ORO VALLEY ZONING**

- R1-10 SINGLE FAMILY RESIDENTIAL 4 RAC
- R1-20 SINGLE FAMILY RESIDENTIAL 2 RAC
- R1-36 SINGLE FAMILY RESIDENTIAL 1.2 RAC
- R1-144 SINGLE FAMILY RESIDENTIAL 0.3 RAC
- C-N NEIGHBORHOOD COMMERCIAL DISTRICT

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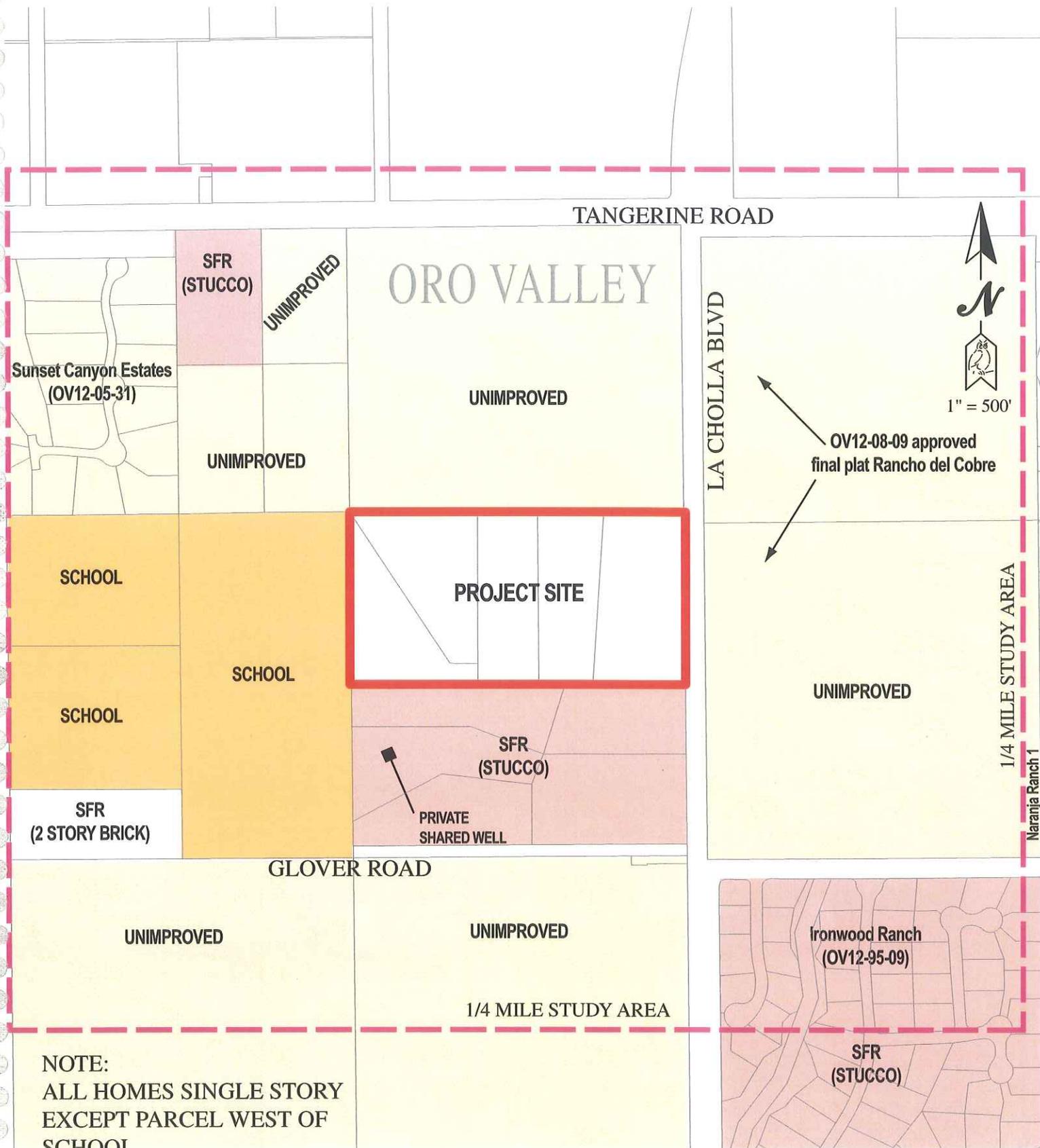
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**Adjacent Properties: Zoning**

**Rancho de Plata**

Exhibit I.A.3.a.	
7-2011	4

REV 7/4/11



NOTE:  
 ALL HOMES SINGLE STORY  
 EXCEPT PARCEL WEST OF  
 SCHOOL

REV 9/27/11

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Existing Land Use

Rancho de Plata

Exhibit I.A.3.b.

7-2011

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150 75 0 150 300

CONTOUR INTERVAL 2'

AERIAL IMAGE FROM 2010,  
USDA/FSA, MAPGUIDE.

STATE OF ARIZONA

1282'

15% OR GREATER SLOPES (TYP)

R/W

R/W

30' 30'

660'

L A C H O L L A R O A D

660'

1283

LOT 037H

LOT 037G

LOT 037D

AMPHITHEATER  
UNIFIED SCHOOL  
DISTRICT

660'

LEGEND



15% OR GREATER  
SLOPES

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Topographic Characteristics

Exhibit I.B.1.

Rancho de Plata

7-2011

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## C. HYDROLOGY

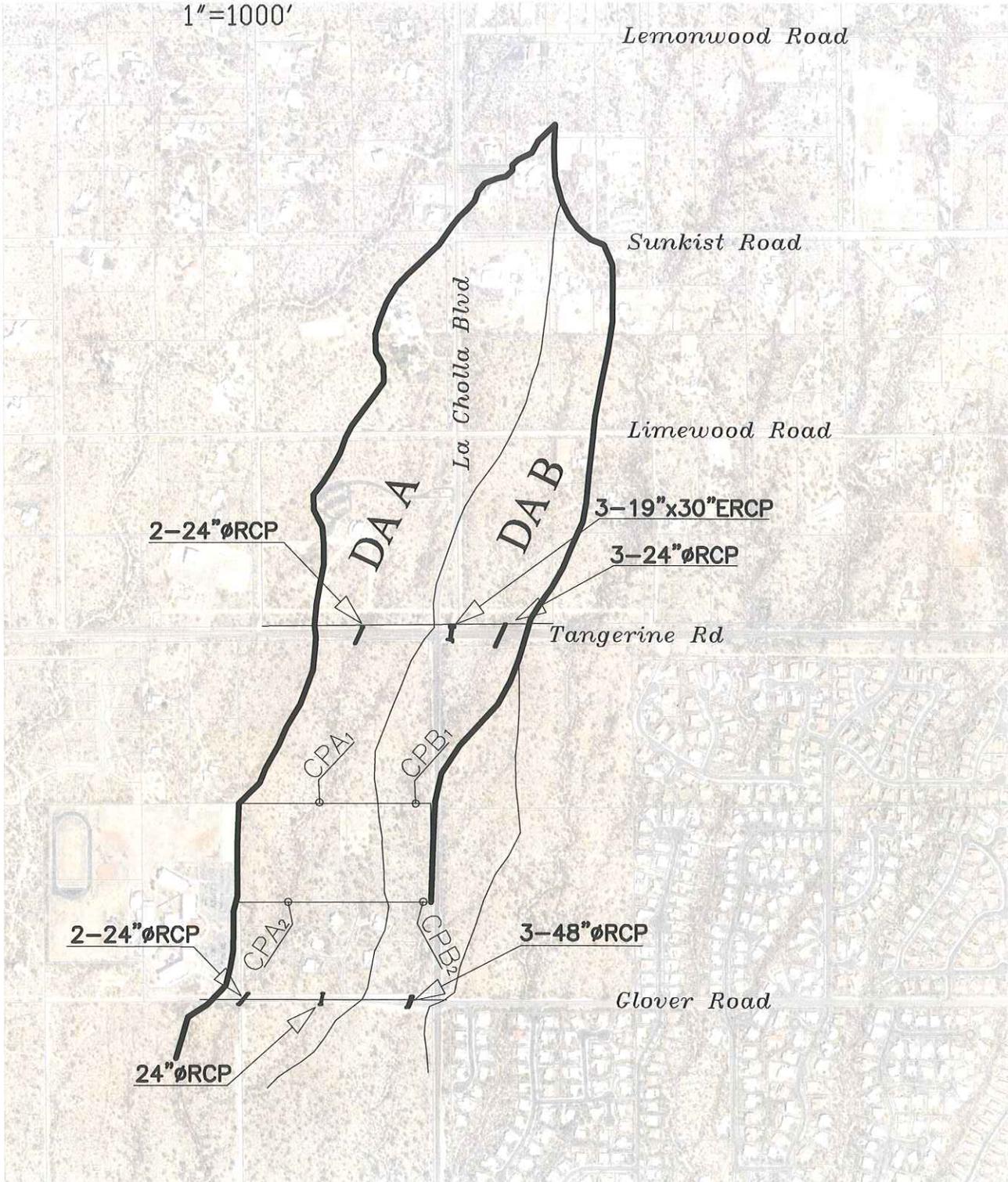
1. **Off-site hydrology.** The subject property lies in hilly terrain that drains in a southern direction, roughly to the west and along the alignment of La Cholla Boulevard. Two minor streams drain through the subject parcel, which are aggregate minor tributaries to Cañada del Oro Wash, approximately three miles south from the subject parcel. Land within this western sector of Oro Valley has been developed with a mix of medium- and low-density residential groupings, medium-density development being most common in the immediate vicinity of the subject parcel (see **Exhibit I.C.1, OffSite Watersheds**).
  - a. Per current Oro Valley guidance, all drainage areas within the city are considered Critical Basins.
2. **Significant Off-site Features.** The project vicinity is scheduled for improvements to its major arterials, La Cholla Boulevard and Tangerine Road, with plans for their widening being under current development. Although one of the stated goals for either project is the elimination of the many dips on the road, in favor of culvert drainage crossings, no specifics are immediately available as to drainage improvements that may directly affect the subject parcel and the project vicinity. However, the two drainageways that flow through the subject parcel will require drainage crossings under their respective arterials; in fact, the two drainageways already have been provided with provisional culverts under Tangerine Road, and under the recently constructed Glover Road, as identified in the exhibit. Rancho del Cobre, a mixed use residential and commercial subdivision, has recently been approved by Oro Valley, and will occupy the land parcel immediately east of La Cholla Boulevard; its subdivision master plan contemplates potential reduction of runoff crossing over La Cholla Boulevard.
3. **Off-site Watershed Acreage.** As identified earlier (see **Exhibit I.C.1, OffSite Watersheds**), two offsite basins impact the parcel from the north. For purposes of this investigation, they have been identified as drainage areas (DAs) A and B; to further evaluate development impact to these basins, each has been further subdivided into DAs up to the subject parcel north property line, identified with the subscript 1 (see **Exhibit I.C.1A, Existing OffSite Drainage**). DA A<sub>1</sub> comprises 88.47 acres and generates a 100-year peak runoff flow (Q<sub>100</sub>) of 259 cfs, which drains through the western confines of the subject parcel. DA B<sub>1</sub> comprises 52.22 acres and generates a 100 Q<sub>100</sub> of 155 cfs, which drains along the west parcel boundary and onto La Cholla boulevard right-of-way. These two basins are augmented by the subject parcel as shown in the exhibit, with the cumulative basins that include off site and onsite contributing areas being identified as DAs A<sub>2</sub> and B<sub>2</sub>, the additional surface area increases Q<sub>100</sub> for each, with DA A<sub>2</sub> comprising 103.02 acres and generating a Q<sub>100</sub> of 298 cfs, and DA B<sub>2</sub> comprising 57.17 acres and generating a Q<sub>100</sub> of 168 cfs, as illustrated in the exhibit.

4. **On-site Hydrology.** Terrain within the parcel and in the general vicinity slopes gently to the south, generally with gradients less than 2%, following the natural drainage patterns characterized by shallow valley flow with braided and dispersed natural streamlets. Vegetation cover throughout the area is Desert Brush, with more distinct vegetation groupings occurring along the natural streamlets that can be found in the area; for hydrologic purposes, average natural vegetation density has been estimated at 30%. Soils are a mixture of 50% B and 50% C hydrologic soils, per the most current NRCS reference.
- a. The flood prone areas for the two drainageways fed principally from off site flows are illustrated in the exhibit; none of the on site DAs generate 50 cfs or more. (See **Exhibit I.C.2. Existing On-site Drainage.**)
  - b. There is no sheet flooding on site, with local runoff joining the major flows along the banks of the two natural drainageways earlier described. Preliminary hydraulic modeling of the two drainageways indicates flow depths of 2' or less, in the reaches within the immediate parcel vicinity.
  - c. No portion of the subject parcel, nor any other properties in the immediate vicinity, lie within a regulatory floodplain, per the current FEMA FIRM Panel #04019C1070L, dated June 2011.
  - d. For purposes of comparing existing and developed conditions, four sub-basins have been identified within the subject parcel, as illustrated in the exhibit. As can be learned from the table included on the exhibit, none of these sub-basins generate  $Q_{100}$  of 50 cfs or more. (See **Exhibit I.C.2. Existing On-site Drainage.**)
5. **Downstream Drainage Conditions.** The parcel abutting to the south has similar terrain and vegetation characteristics as the subject parcel. It was allowed to split into five residential lots, without the creation of a formal subdivision; construction of the corresponding single-family residences has left the natural drainage patterns relatively undisturbed between residences, allowing runoff to drain into the existing two major drainageways identified earlier, which in turn drain directly into culverts constructed under Glover Road. The western drainageway is served by a low-flow crossing, while the eastern, smaller wash has been provided with full capacity culverts under the roadway.



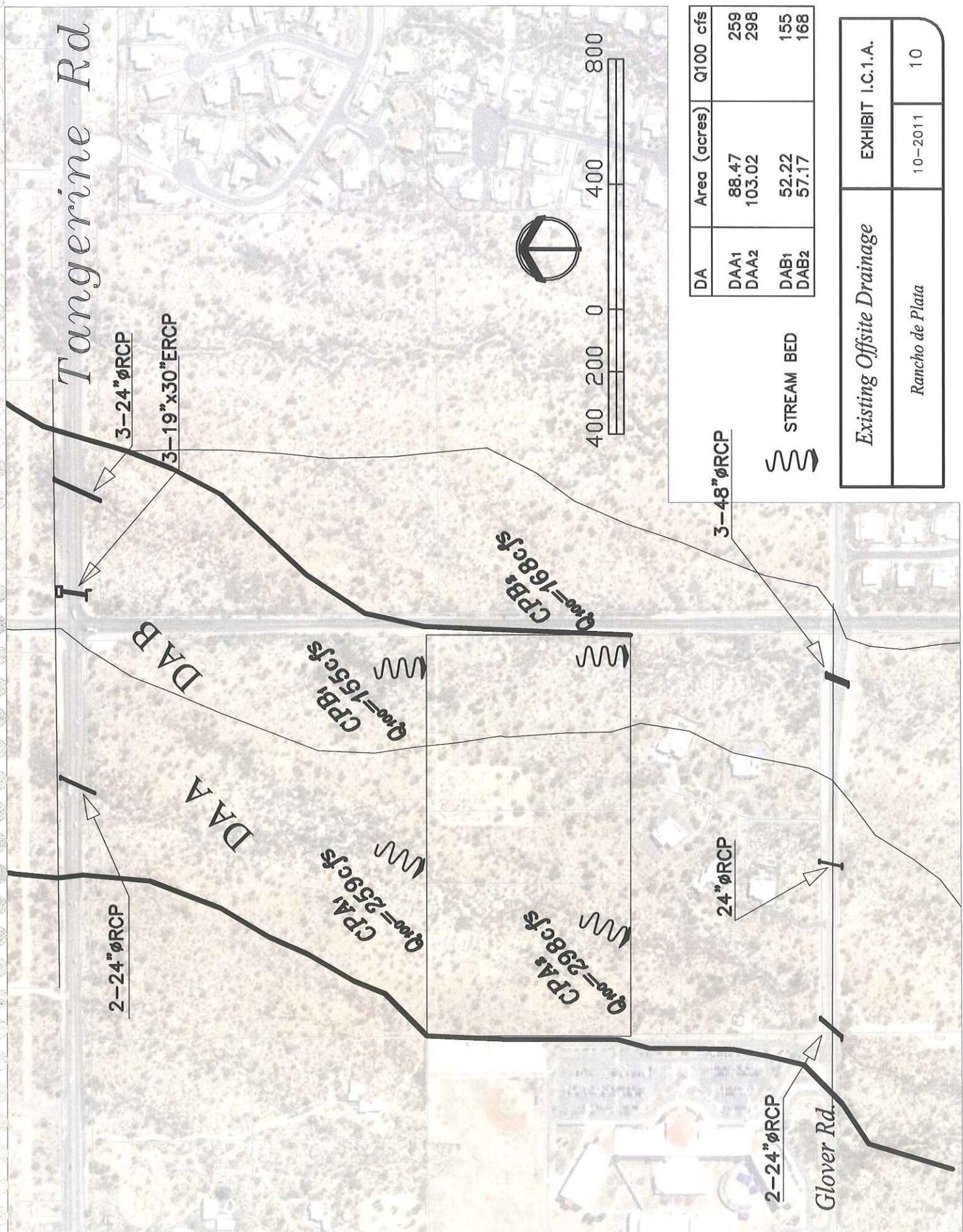
1000 500 0 1000 2000

1"=1000'



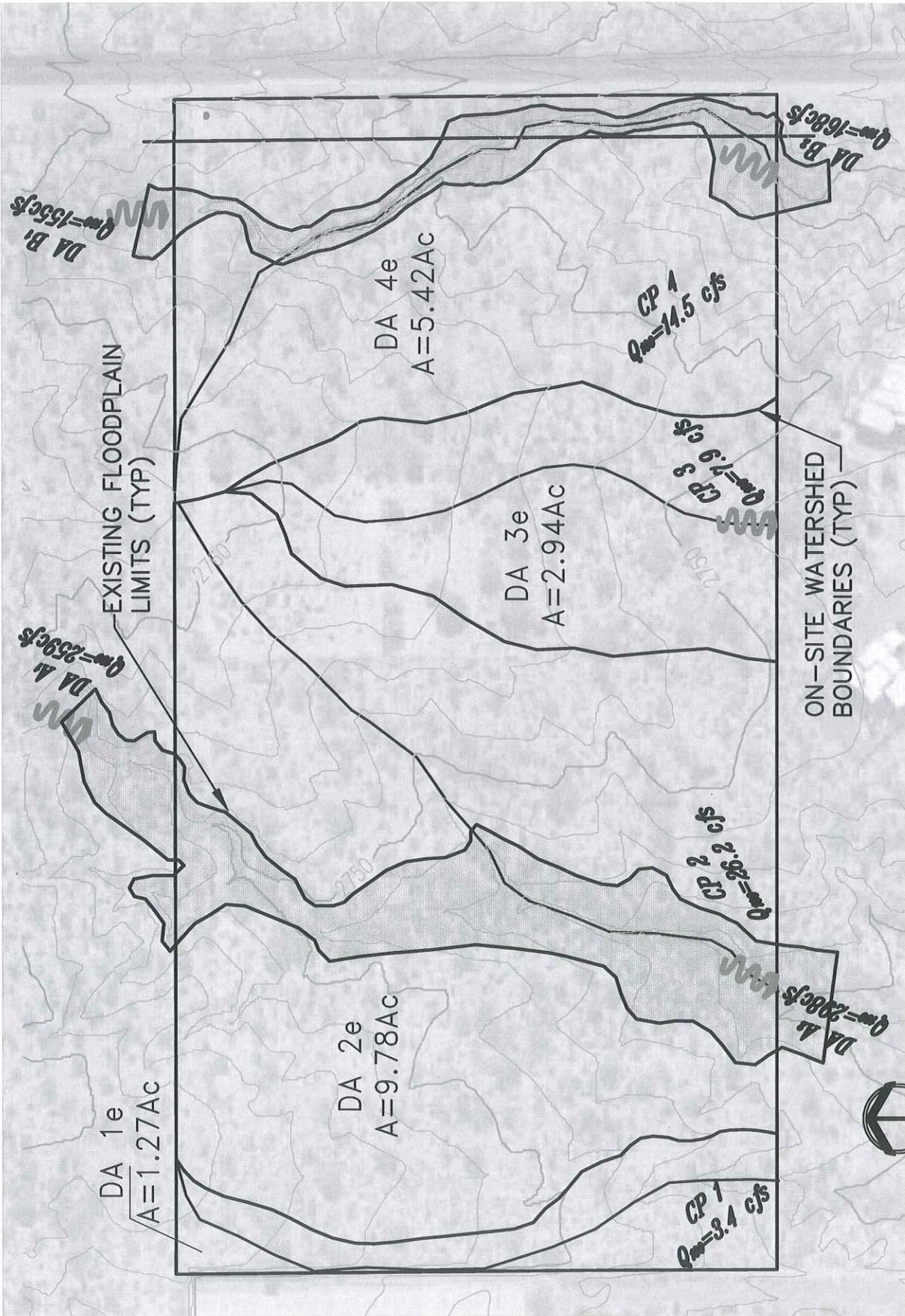
AERIAL IMAGE FROM GOOGLE EARTH, MARCH 3, 2011.

<i>Offsite Watersheds</i>		EXHIBIT I.C.1.	
<i>Rancho de Plata</i>		7-2011	9



DA	Area (acres)	Q100 cfs
DAA1	88.47	259
DAA2	103.02	298
DAB1	52.22	155
DAB2	57.17	168

Existing Offsite Drainage		EXHIBIT I.C.1.A.
Rancho de Plata		10-2011
		10



DA	ACRES	CFS
DA 1e	1.273	3.4
DA 2e	9.783	26.2
DA 3e	2.941	7.9
DA 4e	5.422	14.5

Existing Onsite Drainage	EXHIBIT I.C.2.
Rancho de Plata	10-2011
	11

## D. VEGETATION

### 1. Vegetative Communities

This site is undeveloped and the existing vegetation consists of native species.

There are two vegetative communities on this site, classified as Sonoran Desert Scrub - Arizona Upland with a strong association of Palo verde/Saguaro and Xeroriparian. There are two areas of Xeroriparian vegetation on site, associated with two small drainageways that run north and south across the property.

In general, native vegetation is diverse and in moderate to good health. The vegetation associated with the upland area is in better condition than the vegetation associated with the riparian habitat, which had many plants that appear dead or dying.

The upland vegetative community, which is approximately 14.5 acres of the site, includes the following representative plant species: Foothill Palo verde (*Parkinsonia microphyllum*), Ironwood (*Olneya tesota*), Velvet mesquite (*Prosopis velutina*). Cactus species include: Saguaro (*Carnegiea gigantea*), Prickly pear (*Opuntia phaeacantha*), Barrel cacti (*Ferocactus wislizenii*), Buckhorn cholla (*Opuntia acanthocarpa*), Chainfruit cholla (*Opuntia fulgida*). The dominant shrub species also consist of Creosote bush (*Larrea tridentata*).

The saguaro cacti on site range in size from small spears to fifteen (15) distinctive individuals over 15 feet tall with arms. There are a few very large specimens over 25 feet tall. (More information on these individuals is found in subsequent sections.)

The Xeroriparian vegetative community, which is approximately 5 acres of the site, includes the following representative plant species: Velvet mesquite (*Prosopis velutina*) and Ironwood (*Olneya tesota*). There is also some Whitethorn acacia (*Acacia constricta*) and Catclaw acacia (*Acacia greggii*). There are also Cholla species (*Opuntia sp.*) and some Saguaro cacti (*Carnegiea gigantea*) at the fringe areas of this community.

The Vegetative Communities exhibit illustrates the location of the two vegetative communities. See **Exhibit D.1**.

### 2. Vegetative Densities

Approximate vegetation densities were determined using on-site observations of the relationship of bare ground to vegetation coverage in conjunction with interpretation of vegetative patterns on aerial photos. Most of the site was categorized as "medium density" with approximate plant coverage of 20-60%. A smaller portion of the site, associated with the riparian habitat, was categorized as "high density" with over 60% vegetative coverage. One area of the site, near the northern-middle portion, appears

to have been cleared of vegetation at some point in the past, has “low density” with approximate plant coverage of under 20%.

The Vegetative Densities exhibit illustrates the location of the different vegetative densities. See **Exhibit D.2**.

### **3. Significant Cacti and Groups of Trees**

The site was inventoried for significant cacti and groups of trees. Specifically all saguaro cacti over 5 feet tall were inventoried. There are approximately 185 saguaro cacti found on the site, both within the upland vegetative community and within the Xeroriparian community.

Most of the saguaros were found to be in good condition, and the site has a diverse population of saguaro cacti sizes, from smaller individuals under 5 feet to large “distinctive” individuals up to 25-30 feet tall with multiple arms.

There are 15 Saguaros that meet the criteria for a “distinctive individual” as defined by the Town of Oro Valley. These are cacti over 15 feet tall with multiple arms.

In addition there are 8 “nurse plants” that meet the criteria of the Town of Oro Valley by having three or more saguaros growing underneath them.

The most significant groups of trees are found in association with the riparian habitat. These trees were not inventoried individually, but are shown collectively within the boundaries of the riparian habitat.

Additionally, analysis was done using aerial photos along with field observations to determine if there were “distinctive native plant stands” as defined by Section 27.6.3.b.i.a), b), c), d), and e). No areas were found that met the criteria.

No federally-listed threatened and endangered species were observed on site.

The Significant Cacti and Groups of Trees exhibit illustrates the location of the significant vegetation. See **Exhibit D.3**.

A spreadsheet with detailed information on the saguaros that were inventoried is contained in the **Appendix A**.



CONTOUR INTERVAL 2'  
 AERIAL IMAGE FROM 2011,  
 Google Earth  
 AVERAGE CROSS SLOPE=5.2%

STATE OF ARIZONA

1282'

2760

2750

1283

AMPHITHEATER  
 UNIFIED SCHOOL  
 DISTRICT

660'

30'

30'

660'

L A C H O L L A R O A D

LOT 037H

LOT 037G

LOT 037D

LEGEND

-  UPLAND VEGETATIVE COMMUNITY 14.5 AC, 74.4%
-  RIPARIAN VEGETATIVE COMMUNITY (including Apron Area) 5.0 AC, 25.6%
-  15' RIPARIAN APRON AREA
-  VEGETATIVE COMMUNITY BORDER

DATA COMPILED BY NOVAK  
 ENVIRONMENTAL, INC.  
 Tucson, AZ

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Vegetative Communities	Exhibit D.1.	
Rancho de Plata	7-2011	14



CONTOUR INTERVAL 2'  
 AERIAL IMAGE FROM 2011,  
 Google Earth  
 AVERAGE CROSS SLOPE=5.2%

STATE OF ARIZONA

1282'

R/W

R/W

30' 30'

660'

LA CHOLLA ROAD

1283

LOT 037H

LOT 037G

LOT 037D

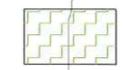
AMPHITHEATER  
 UNIFIED SCHOOL  
 DISTRICT

660'

LEGEND



< 20% COVERAGE



20%-60% COVERAGE



>60% COVERAGE

DATA COMPILED BY NOVAK  
 ENVIRONMENTAL, INC.  
 Tucson, AZ



Vegetative Densities	Exhibit D.2.	
Rancho de Plata	7-2011	15



150 75 0 150 300

CONTOUR INTERVAL 2'  
AERIAL IMAGE FROM 2011,  
Google Earth  
AVERAGE CROSS SLOPE=5.2%

STATE OF ARIZONA

1282'

1283

AMPHITHEATER  
UNIFIED SCHOOL  
DISTRICT

660'

30' 30'

LA CHOLLA ROAD

R/W

R/W

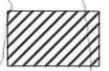
660'

LOT 037D

LOT 037H

LOT 037G

LEGEND

-  NURSE TREE
-  DISTINCTIVE CACTI >15'  
WITH 2 OR MORE ARMS
-  SIGNIFICANT CACTI 5-15'
-  SIGNIFICANT GROUPS OF  
TREES

DATA COMPILED BY NOVAK  
ENVIRONMENTAL, INC.  
Tucson, AZ

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Significant Cacti & Groups of Trees

Exhibit D.3.

Rancho de Plata

7-2011

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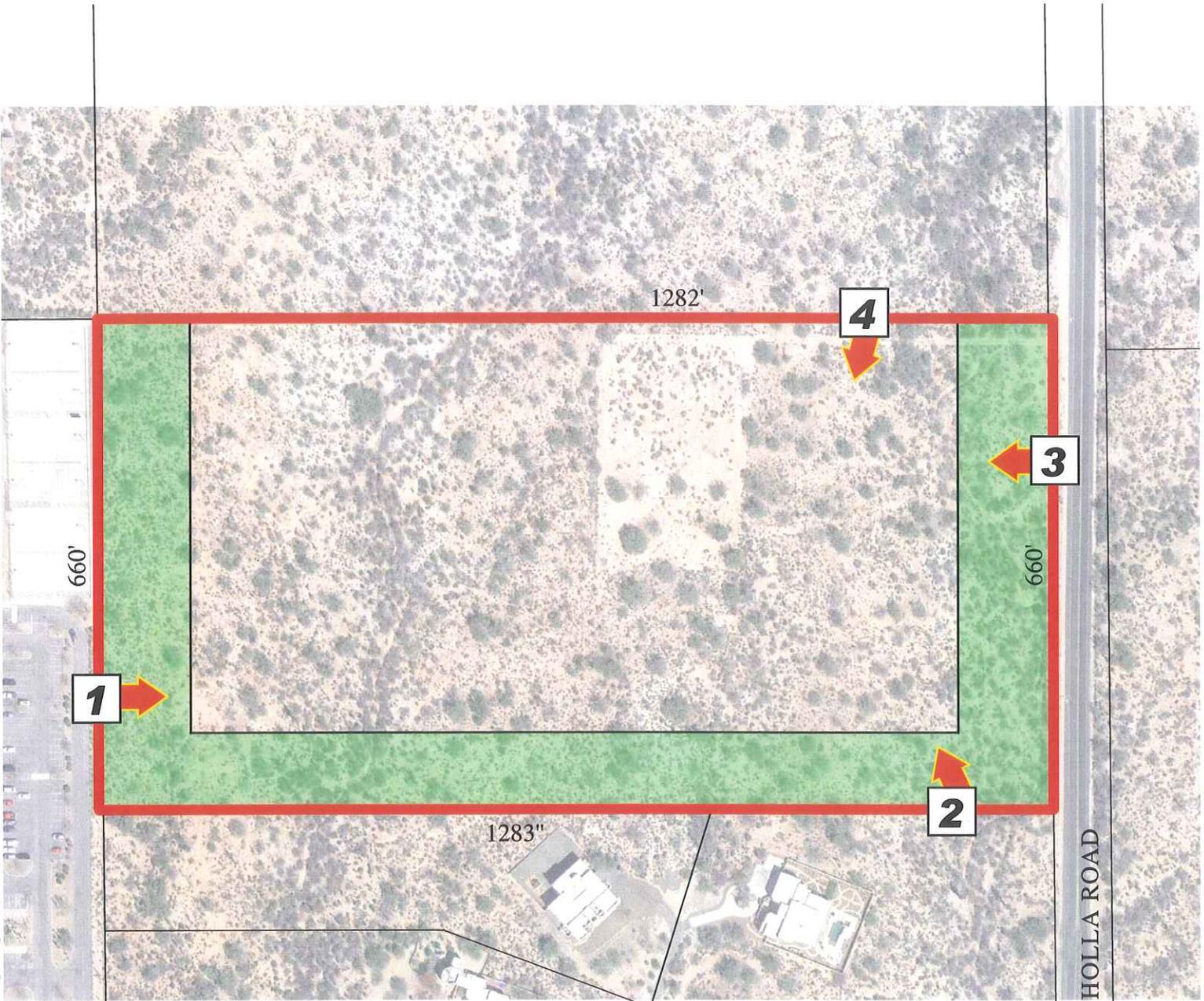
## **E. WILDLIFE**

- 1. See Appendix B.**

## **F. VIEWSHEDS**

- 1. Viewsheds.** See **Exhibit I.F.1 Viewsheds** for locations of the 4 views presented in **Exhibit I.F.1.a. Viewshed Photos.**
- 2. High Visibility.** The extent of high visibility is presented on **Exhibit I.F.1.** Although the views from La Cholla Boulevard are exposed to thousands of automobiles every day, the high density of vegetation and the relatively flat nature of the topography limits its views into the interior of the project site. The vegetative density is less dense along the northern boundary of the project site, but there is no development on the north and, therefore, no exposure.

Although the exposure from the southern boundary of the site is limited to 5 homesites, they exist at elevations higher than the project site and the density of vegetation along the site boundary is medium for the most part. Finally, the viewshed along the west boundary is high due to the exposure of hundreds of students and faculty and the rather “bland” topography.



**LEGEND**

 VIEW DIRECTION (SEE PHOTOS ON FOLLOWING PAGES)

 HIGH VISIBILITY AREA



AERIAL FROM GOOGLE EARTH, 3/9/2011

1" = 200'

LA CHOLLA ROAD

REV 7/4/11

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Viewshed Map

Rancho de Plata

Exhibit I.F.1.

7-2011

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[1] Looking east from Wilson School parking lot



[2] Looking north from resident on south.

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## Viewshed Photos 1

Rancho de Plata

Exhibit I.F.1.a.

7-2011

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[3] Looking west from La Cholla Blvd.



[4] Looking south from State land on north.

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## Viewshed Photos 2

Rancho de Plata

Exhibit I.F.1.a.

7-2011

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## G. TRANSPORTATION

### 1. Off-site streets.

### 2. Arterials within 1 mile.

The Property has direct access to La Cholla Boulevard, and is served as well by Tangerine Road, Naranja Drive, and by Glover Road, a minor collector located 1/8 mile south of the property, as shown on **Exhibit I.G.H.J. Traffic.Schools.Parks.Trails**. There are no proposed off-site streets.

- a. **thru h.** All of the answers are found within **Table A below**. All roads are owned by the Town of Oro Valley (item **c**).

### 3. Intersections.

The intersection of La Cholla Boulevard and Naranja Drive is signalized. The east and west legs of Naranja Drive and the south leg of La Cholla Boulevard feature 3 lanes including a left turn lane. The north leg of La Cholla Boulevard features 4 lanes including right and left turn legs.

The intersection of La Cholla Boulevard and Tangerine Road is signalized. All four legs of the intersection feature 3 lanes including left turn lanes. The east and west legs of Tangerine Road also have right turn lanes.

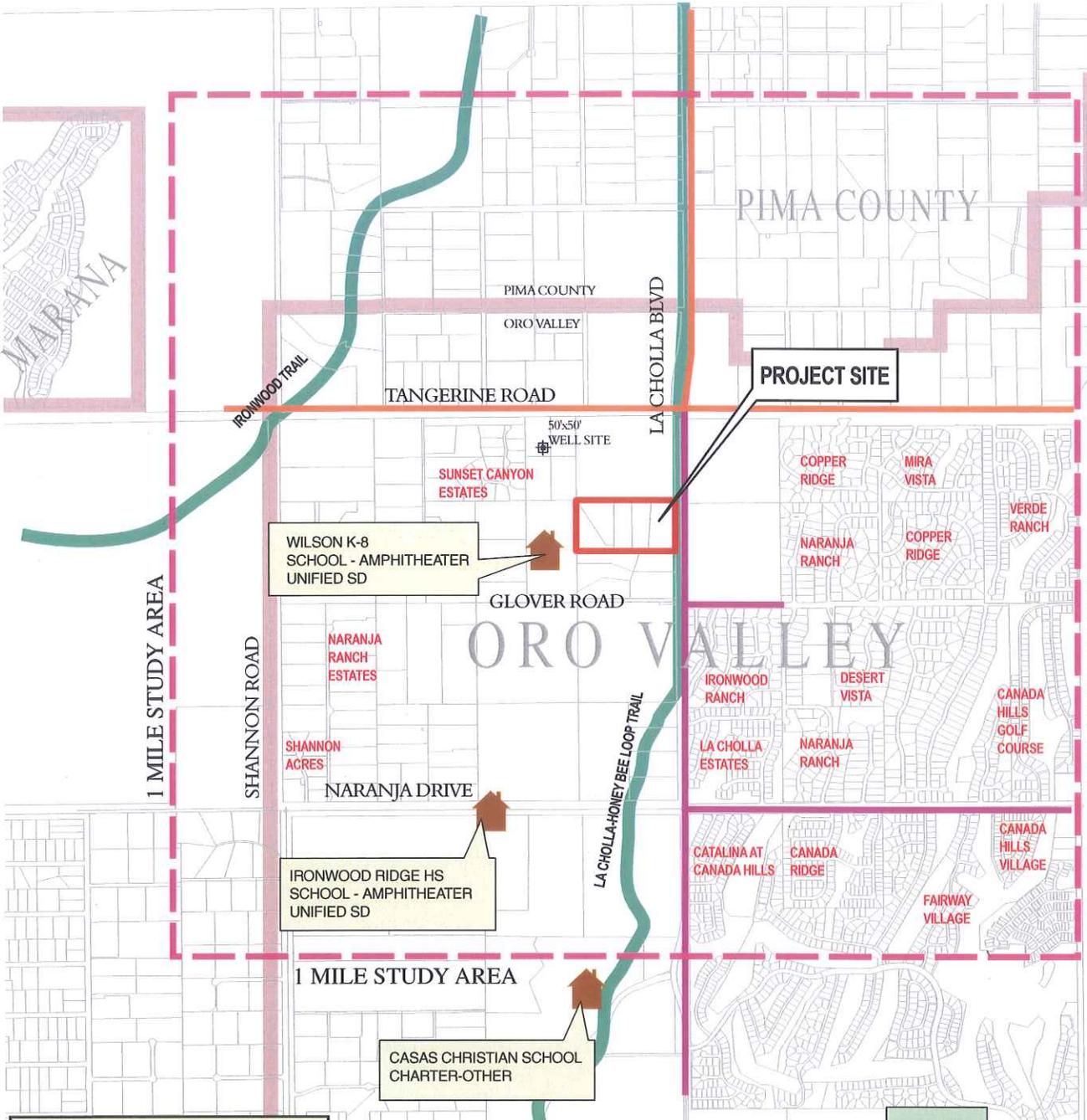
The intersection of La Cholla Boulevard and Glover Road is also signalized.

### 4. Pedestrian and bicycle ways.

There are striped bike paths adjacent to the site but no pedestrian ways at this time. The bike route along La Cholla Boulevard to the south ties into a shared use path and sidewalk at the Glover Road intersection which leads to Wilson School via a paved bike route and sidewalk.

**Table A – Off-site Streets**

<b>STREET</b>	<b>Exist. ROW</b>	<b>Req'd ROW</b>	<b>ROW Conforms?</b>	<b>Cont. ROW</b>	<b>Travel Lanes</b>	<b>Capacity</b>	<b>Speed Limit (mph)</b>	<b>ADT</b>	<b>Surface Conditions</b>	<b>Scheduled Improvements (TIP)</b>
La Cholla Blvd.- Tangerine South	60'- 105'	150'	no	no	2	14,900	45	10,000	paved w/ bike path Fair	2021
La Cholla Blvd.- Tangerine North	95'- 240'	150'	no	no	2	14,900	45	3,000	paved w/ graded shoulder Fair	no
Tangerine Road	100'- 200'	300'	no	no	2	14,900	45	13,000	paved w/ graded shoulder Fair	Currently in design
Naranja Drive	140'- 150'	150'	no	no	2	14,900	35 W of La Cholla; 45 E of La Cholla	8,000	paved w/ paved shoulders Good	Sidewalk, bike & drainage/ 2011
Shannon Road (unimproved south of Tangerine)	150'	150'	yes	yes	2	N/A	Not Posted	not available	Poor	no
Glover Road	75'	75'	yes	no	2	14,900	25 west of La Cholla; 35 east of La	not available	paved w/ rt & lt turn lanes Good	no



1" = 2000'

**LEGEND**

- BIKE ROUTE W/ STRIPED SHOULDER
- BUS/BIKE LANE
- SCHOOL

**GLOVER ROAD** (east of La Cholla) shared use path.  
**GLOVER ROAD** (west of La Cholla) bike route w/ striped shoulder and a portion of sidewalk  
**TANGERINE ROAD** (west of La Cholla) a shared use path

**WEST LAMBERT LANE PARK**  
 40 acres  
 (passive recreation)

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Traffic, Schools, Parks, Trails

---

Rancho de Plata

Exhibit I.G.H.J.	
7-2011	22

## H. RECREATION AND TRAILS

1. **Trails.parks.recreation areas.**
2. **Size and type of parks.**

**Exhibit I.G.H.J.** locates two trails but no parks or recreation areas within the one mile study area although Lambert Lane Park is located about 1 ½ miles from the intersection of La Cholla Boulevard and Naranja Drive

## I. CULTURAL/ARCHAEOLOGICAL/HISTORIC RESOURCES

1. **Arizona State Museum (ASM) report.** According to the Archaeological Site Records Search Results, dated 7/14/11, and located in **Appendix C**, the ASM concludes: “Because the project area was intensively inspected for historic properties in 1981 with no evidence of any historic properties in the project area, the ASM recommends that the proposed development proceed as planned without any additional archaeological investigation.”

Regarding the probability of buried resources, the ASM further concludes: “Although the property was inspected, the lapse of several years makes it possible, though highly unlikely, that buried cultural resources could now be visible on the ground surface or that they could be discovered during construction.”

## J. SCHOOLS

1. **Public schools within one mile.** **Exhibit I.G.H.J.** locates Wilson School (K-8) and Ironwood Ridge High School in close proximity to the project site.
2. **Public schools beyond one mile.** Not applicable since public schools are located within one mile of the site.

## K. WATER

1. **Water provider.** Oro Valley Water Utility, 11000 N. La Canada Dr., Oro Valley, Az. 85737. Our contact person has been Mr. Mark Moore.
2. **Water provider if service area not defined.** Not applicable.

**L. SEWERS**

1. **Public sewers.** Exhibit I.L. locates public sewers in relation to the site. The nearest sewer line is located on the Wilson School campus. It is an 8" line identified by Pima County Wastewater as G-2006-016.

**M. COMPOSITE MAP**

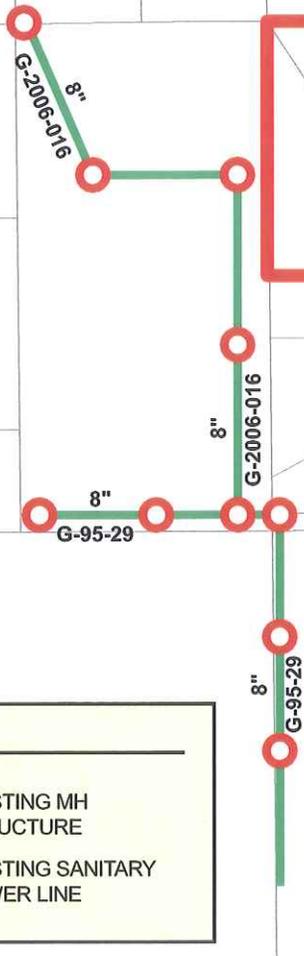
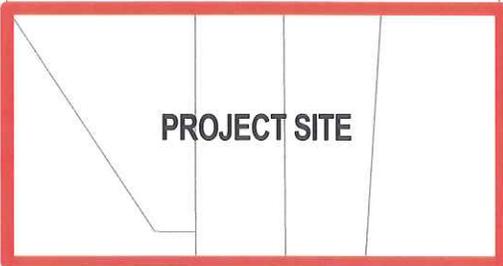
1. See Exhibit I.M.

TANGERINE ROAD

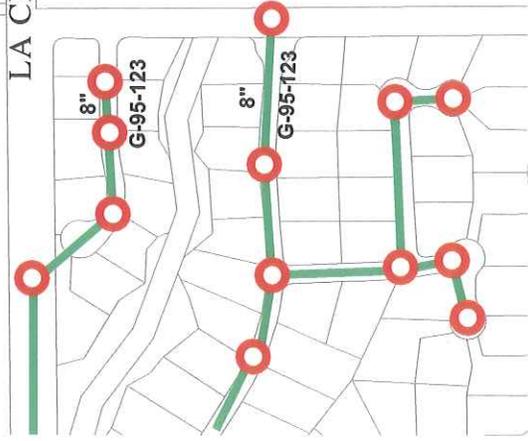
# ORO VALLEY



1" = 500'

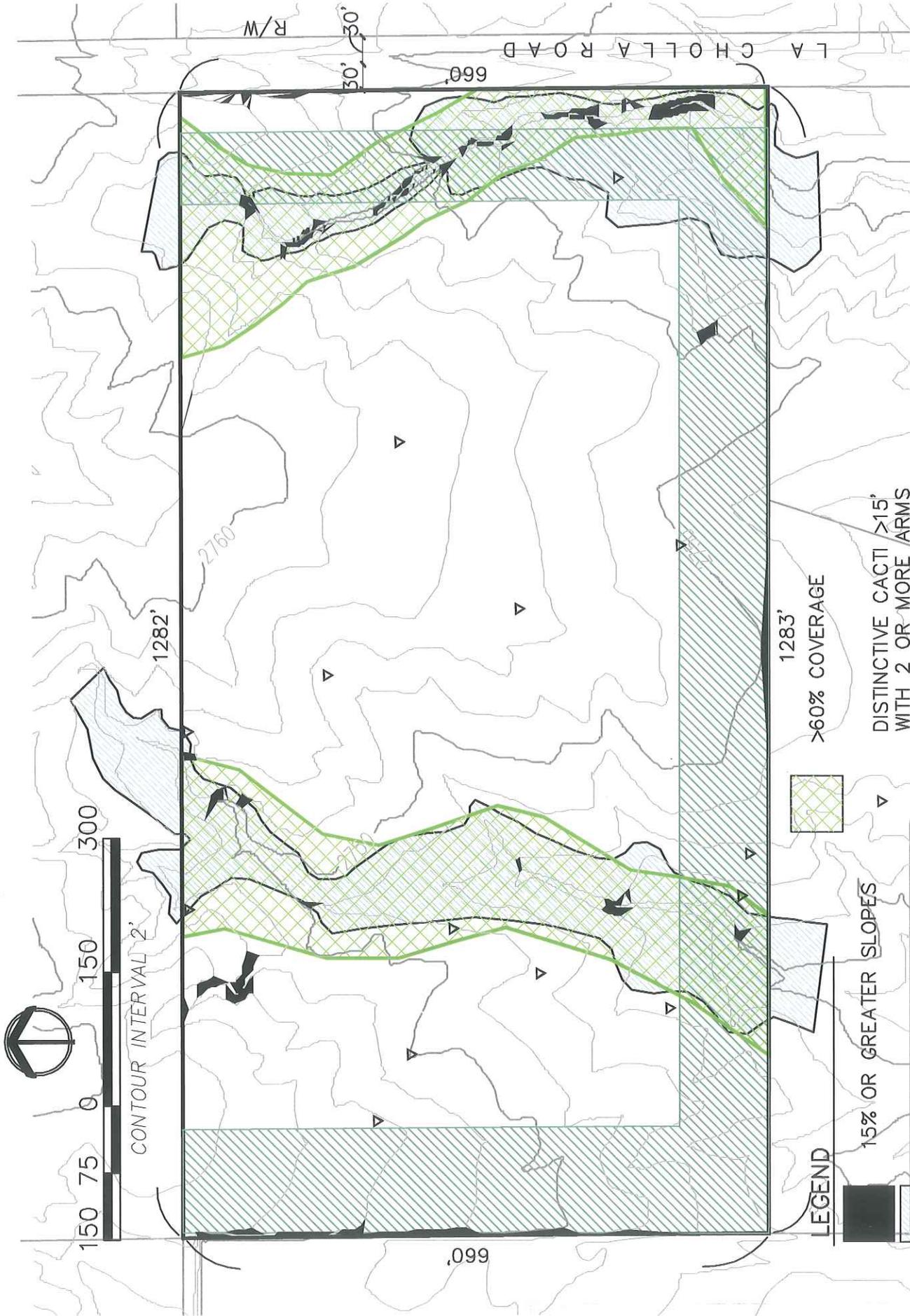


LA CHOLLA ROAD



**LEGEND**

-  EXISTING MH STRUCTURE
-  EXISTING SANITARY SEWER LINE



Composite Map	Exhibit I.M.
	Rancho de Plata
	July 2011
	26

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## Part II – Land Use Proposal

### A. PROJECT OVERVIEW

*“A GOOD NEIGHBOR THAT PROVIDES A MEDIUM DENSITY RESIDENTIAL TRANSITION BETWEEN LOW DENSITY RESIDENTIAL ON THE SOUTH TO COMMERCIAL ACTIVITY ON THE NORTH AT THE TANGERINE CORRIDOR.”*

This 2.6 DU/AC single family subdivision provides 36% open space according to the rules and regulations of the Town’s new Environmentally Sensitive Lands (ESL) Ordinance. This environmentally sensitive open space (ESOS) includes 3.17 acres of Critical Resource area and 3.90 acres of Tier 2 area. A 90’ bufferyard is provided to the neighbors on the south. In addition, a pathway will be provided to the kids for walking and biking directly to Wilson school avoiding the traffic on La Cholla Boulevard and Glover Road.

This 50 homesites, 19.45 acre subdivision will likely mix single story and two story homes with floor areas ranging from 1,800 sq. ft. to 2,800 sq. ft. on 6,600 sq. ft. lots. Specifically, the proposed lot sizes are 55’ x 115’ (6,325 sq. ft.) and 55’ x 120’ (6,600 sq. ft.). The closest zoning category would be R1-7, single family residential district (7,000 sq. ft. lots). The ESL Ordinance (Section 27.10.F.2.d.iii.b) provides for 5,500 sq. ft. lots with 25% ESOS. Rancho de Plata provides for 36% ESOS. Therefore, this rezoning is a request to the R1-7 District which requires the following development standards:

**Setbacks:** 20’ front and rear; 7.5’ sides.

**Height:** 25’ or two stories; two-story structure shall require CDRB approval.

**Detached accessory buildings:** Permitted coverage is 15% of total rear and side lot areas.

**Walls and fences:** Setback requirements shall not apply to walls and fences less than 4’-6” in front yards and 6’ in rear and side yards.

### B. TENTATIVE DEVELOPMENT PLAN (TPD)

Please refer to **Exhibit II.B. Tentative Development Plan**, sheets one and two.

#### 1. ESL ORDINANCE

Table 27.10-1B sets forth specific sections of the Ordinance that are applicable to rezoning cases. They are listed below with responses from this Site Analysis:

- a. **Major Wildlife Linkage:** There are no MWL's what have been mapped by the Town on this property.
- b. **Critical Resource Areas:** There are two Critical Resource Areas that have been mapped on this property. They have been included within the 95% ESOS on the Tentative Development Plan disturbed only by trails and essential services.
- c. **Core Resource Area:** There are no Core Resource Areas mapped on this property.
- d. **Resource Management Areas:** The entire site outside the Critical Resource Areas have been mapped as Tier 2 – Resource Management Areas. They have been included as 25% ESOS on the Tentative Development Plan disturbed only by trails, essential services, and a small detention area.
- e. **Cultural Resources:** There are no cultural resources on site. Please refer to Section I.1 of this Site Analysis for documentation.
- f. **Scenic Resources:** This property does not lie within the ¼ mile boundaries of the Tangerine Corridor Overlay District.
- g. **Hillside Area Category:** Table 27.10-1.2 directs the reader to Addendum J.1 but is not included in the copy of the ESL Ordinance provided by the Town this summer. However, HDZ issues are discussed Section I.B and II.D in this Site Analysis.
- h. **Open Space Requirements:** ESOS areas on the Tentative Development Plan do not include any Hillside Resource or Scenic Resource areas. ESOS areas will be permanently protected by a separate tract owned by a Homeowners' Association. The ESOS on the Tentative Development Plan meets the minimum percentages as specified in Table 27.10-2. The quantity of open space includes recreation areas and bufferyards all of which provide habitat connectivity. While the north and west bufferyards have a horizontal dimension of 10 feet, they will retain the distinct native vegetation. All resource areas set aside in the TDP meet the maximum disturbances permitted in Table 27.10-5.
- i. **ESOS Use and Development Standards:** Uses permitted in the ESOS areas of the TDP include natural open space, trails, essential services, and recreation facilities in the Tier 2 open space only. None of the ESOS uses include enclosed structures, parking, walls and fences, dumpsters, motorized vehicle access, recreation activities not contained within the confines of a designated area, establishment of

non-native species nor removal of native vegetation with an exception for flood control purposes.

- j. Development Balance and Incentives:** With the exception of minimum lot size in the R1-7 zoning district, none of the available incentives in Section 27.F.2. are requested.
- k. ESOS Design Standards:** Development envelopes will be delineated on the subdivision plat following rezoning. Requests will be made to the Planning and Zoning Administrator to reduce the ESOS setbacks to five feet for walls and fences for flood walls. The request will include specific techniques that insure no encroachment into ESOS. The road crossings in the ESOS areas use the shortest distance alignments and are necessary because no other viable alternatives exist. Further, the design of the circulation improvements will meet the code language outlined in Section 27.10.F.3.d. Structures will meet the requirements of Section 27.10.F.3.e and permanent walls and fences will meet the requirements of Section 27.10.F.3.f.
- l. Mitigation:** Mitigation will be required in the following ESOS areas (refer to **Exhibit II.B. sheet 1 of 2**):

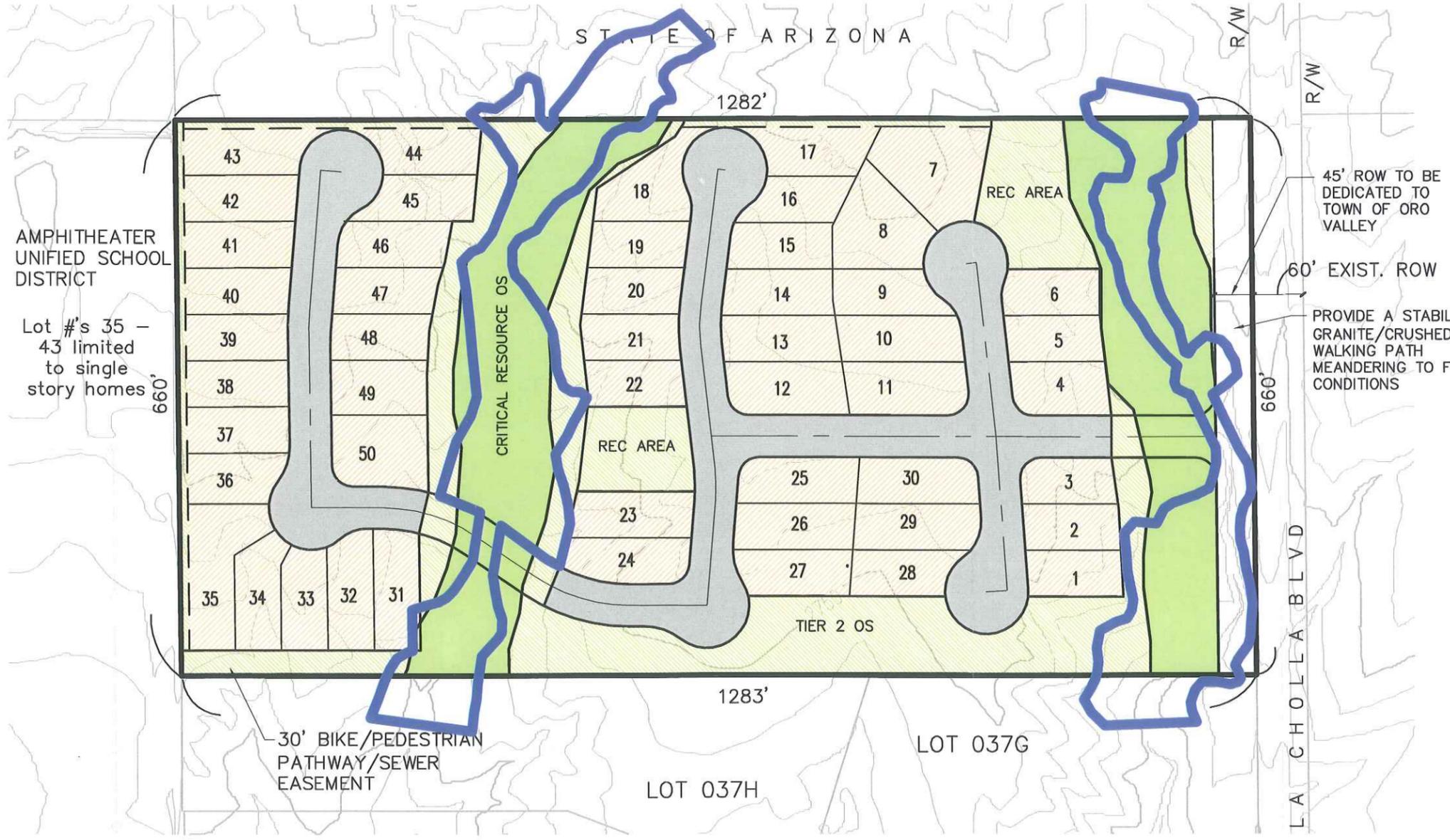
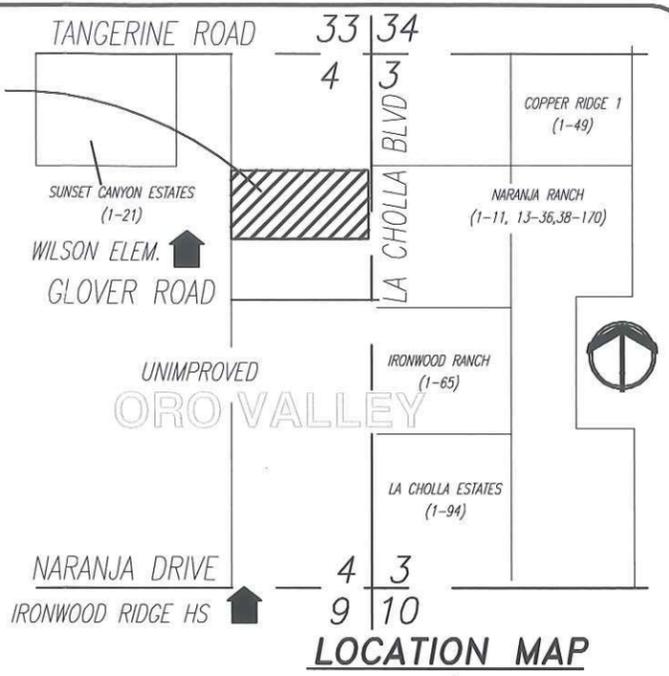
  1. Entrance driveway crossing of the east ESOS corridor;
  2. Road crossing west of lot 24 thru the west ESOS corridor; and,
  3. The bike / pedestrian trail / sewer easement that begins south of lot 35 and extends east through the ESOS corridor to the cul-de-sac south of lot 24.

During the subdivision platting process, mitigation will follow the sampling of riparian vegetation standards outlined in Section 27.10.G.4. Also, during the platting process, a mitigation plan will be prepared by a qualified habitat restoration specialist according to the procedures and standards from Section 27.10.G.5. Finally, Rancho de Plata is planning to conduct off-site mitigation thru relocation of saguaros to the neighbors on the south and Wilson School on the west. A meeting has been scheduled with a neighbor to the south to explore off-site salvage. Informal conversations have already taken place with an official from Amphitheater Public Schools about relocation to Wilson School and he has placed Ironwood Ridge High School on the table for consideration as well.

**ESOS OPEN SPACE PROVIDED**

TOTAL SITE:	19.45 ac
MINUS 45' LA CHOLLA R/W:	0.68 ac
NET AREA:	18.77 ac
<b>CRITICAL RESOURCES OS</b>	
3.34 acres @ 95%	3.17 ac (3.17 req'd)
<b>TIER 2 OS</b>	
15.43 acres @ 25%	3.86 ac (3.86 req'd)
TOTAL PROVIDED:	7.03 acres

**THIS PROJECT**



AMPHITHEATER UNIFIED SCHOOL DISTRICT

Lot #'s 35 - 43 limited to single story homes



**LEGEND**

	CRITICAL RESOURCE OS		LOTS		100-YR FLOODPLAIN
	TIER 2 OS		ROADS		

**CPE CONSULTANTS**  
 378 N. Main Avenue • Tucson, Arizona 85701  
 520-545-7001

- NOTES:**
- 19.45 GROSS ACRE PROJECT SITE TO BE REZONED. ZONING REQUEST FROM R1-144 TO R1-7.
  - RESIDENTIAL DENSITY 2.6 DU/AC.
  - 50 RESIDENTIAL LOTS
  - BUILDING HEIGHTS: MIX OF SINGLE STORY AND TWO STORY.
  - FLOODPLAINS NOT TO BE ALTERED NOR FILLED EXCEPT AT ROADWAY CROSSINGS.
  - WATER PROVIDED BY ORO VALLEY WATER UTILITY.
  - EXISTING ACCESS EASEMENT ALONG SOUTH BOUNDARY LOT SPLITS WILL BE VACATED.
  - THIS SITE IS SERVED BY OVERHEAD ELECTRIC LINES AND AN 8" GAS LINE IN LA CHOLLA BLVD.
  - INTERNAL STREETS ARE PUBLIC, 50' ROW.
  - CUL-DE-SACS AT LOTS 17 & 44 WILL PROVIDE WATER COMPANY EASEMENT FOR FUTURE SERVICE TO STATE LAND PARCEL.
  - REC AREAS TO INCLUDE SUCH FEATURES AS SWINGS, TEETER TOTTERS, SANDBOX, BARBEQUE GRILLS, PICNIC TABLES, AND RAMADAS.
  - INGRESS/EGRESS DRIVE TO LINE UP WITH THE APPORVED LOCATION OF THE RANCHO DEL COBRE INGRESS/EGRESS DRIVE ON THE EAST SIDE OF LA CHOLLA BLVD
  - NORTHBOUND LEFT-TURN LANE ALONG LA CHOLLA BLVD WILL BE DESIGNED AND CONSTRUCTED BY RANCHO DE PLATA.
  - RECREATIONAL IMPROVEMENTS WILL BE INSTALLED PURSUANT TO SEC. 26.5 OF THE OVZC.

Property Owner:  
 Estate of Thomas W. Levitt  
 P.O. Box 414740  
 Kansas City, MO 64141

Applicant:  
 CPE Consultants, LLC  
 378 N. Main Ave.  
 Tucson, AZ 85701

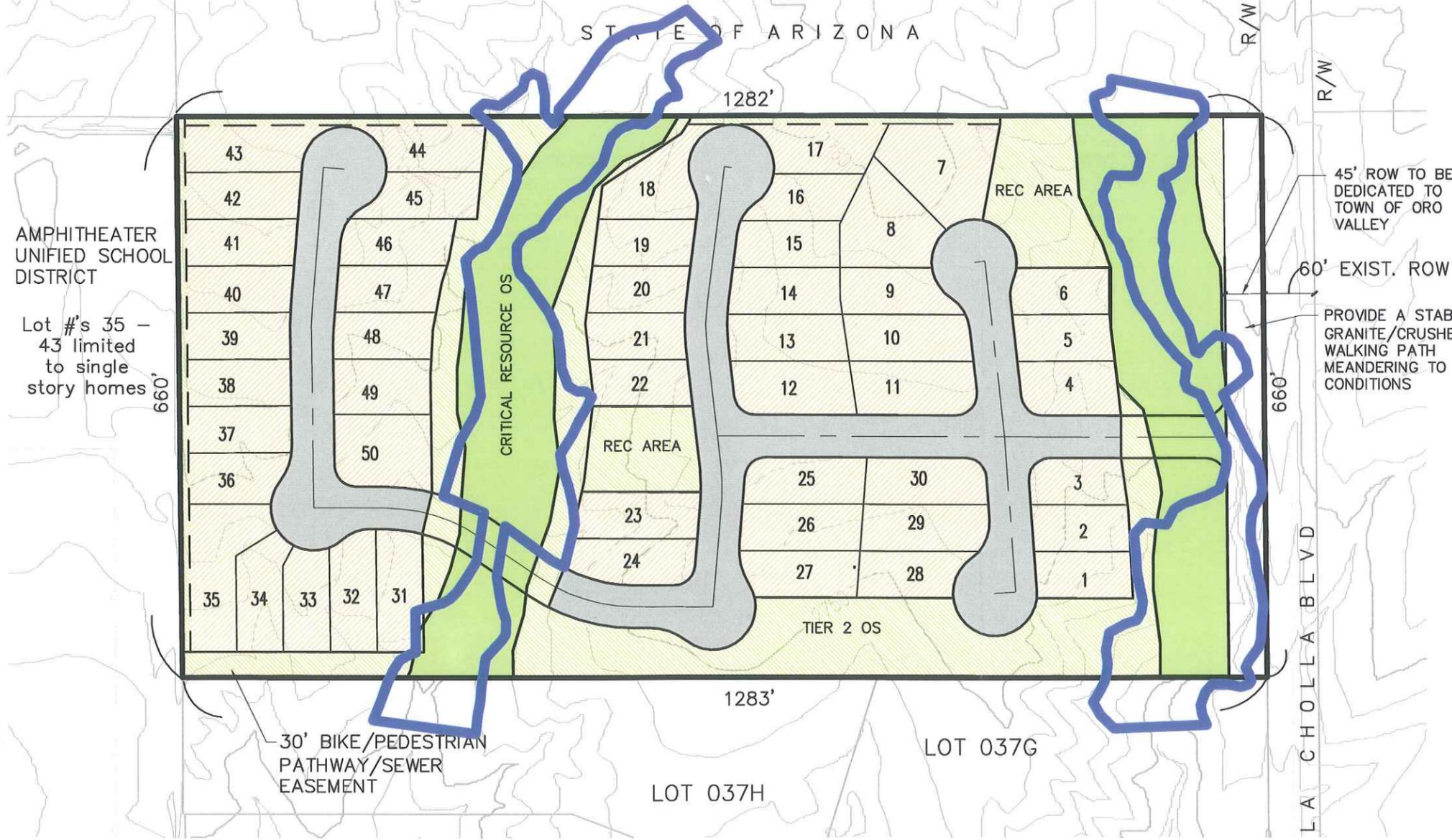
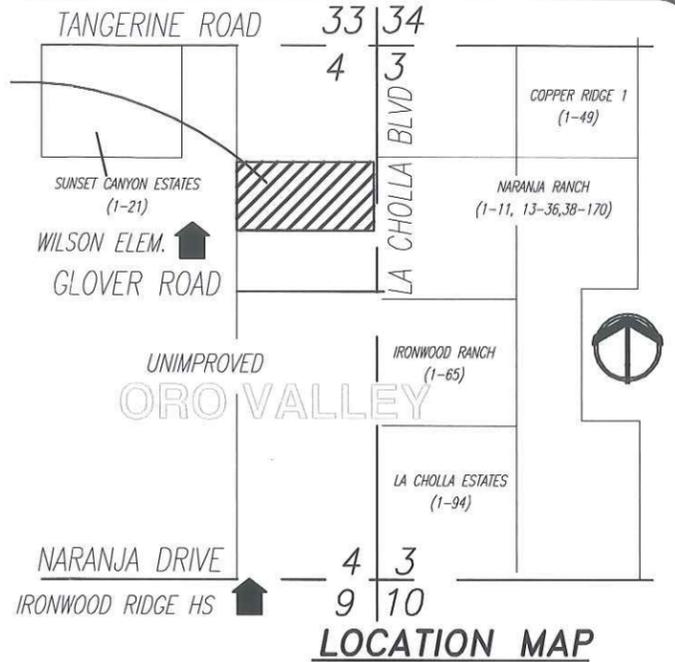
Tentative Development Plan	Exhibit II.B (sheet 1 of 2)	
Rancho de Plata Rezoning From R-1-144 to R1-7 Oro Valley No. OV911-005	10-2011	28

**ESOS OPEN SPACE PROVIDED**

TOTAL SITE: 19.45 ac  
 MINUS 45' LA CHOLLA R/W: 0.68 ac  
 NET AREA: 18.77 ac

CRITICAL RESOURCES OS 3.34 acres @ 95% 3.17 ac (3.17 req'd)  
 TIER 2 OS 15.43 acres @ 25% 3.86 ac (3.86 req'd)  
 TOTAL PROVIDED: 7.03 acres

**THIS PROJECT**



AMPHITHEATER UNIFIED SCHOOL DISTRICT  
 Lot #'s 35 - 43 limited to single story homes

45' ROW TO BE DEDICATED TO TOWN OF ORO VALLEY  
 60' EXIST. ROW  
 PROVIDE A STABILIZED GRANITE/CRUSHED STONE WALKING PATH MEANDERING TO FIT FIELD CONDITIONS

- NOTES:**
- 19.45 GROSS ACRE PROJECT SITE TO BE REZONED. ZONING REQUEST FROM R1-144 TO R1-7.
  - RESIDENTIAL DENSITY 2.6 DU/AC.
  - 50 RESIDENTIAL LOTS
  - BUILDING HEIGHTS: MIX OF SINGLE STORY AND TWO STORY.
  - FLOODPLAINS NOT TO BE ALTERED NOR FILLED EXCEPT AT ROADWAY CROSSINGS.
  - WATER PROVIDED BY ORO VALLEY WATER UTILITY.
  - EXISTING ACCESS EASEMENT ALONG SOUTH BOUNDARY LOT SPLITS WILL BE VACATED.
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  - RECREATIONAL IMPROVEMENTS WILL BE INSTALLED PURSUANT TO SEC. 26.5 OF THE OVZC.

Property Owner: Estate of Thomas W. Levitt  
 P.O. Box 414740  
 Kansas City, MO 64141  
 Applicant: CPE Consultants, LLC  
 378 N. Main Ave.  
 Tucson, AZ 85701



**LEGEND**

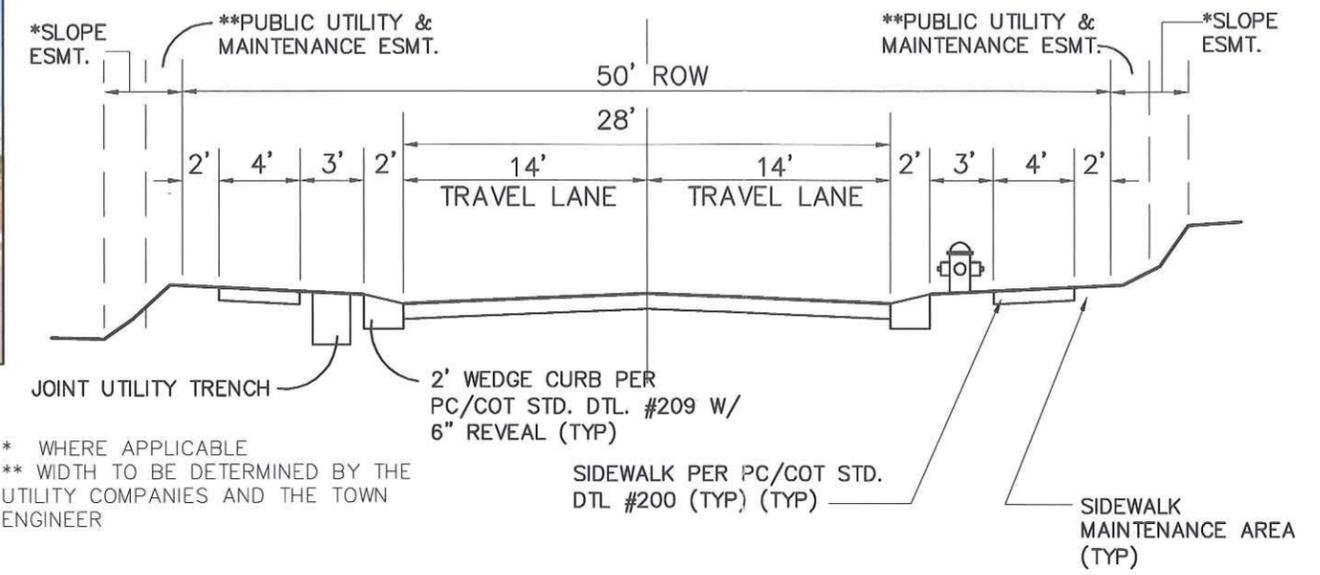
- CRITICAL RESOURCE OS (Green box)
- TIER 2 OS (Yellow box)
- LOTS (White box)
- ROADS (Grey box)
- 100-YR FLOODPLAIN (Blue outline)



Tentative Development Plan	Exhibit II.B (sheet 1 of 2)	
Rancho de Plata Rezoning From R-1-144 to R1-7 Oro Valley No. OV911-005	10-2011	28

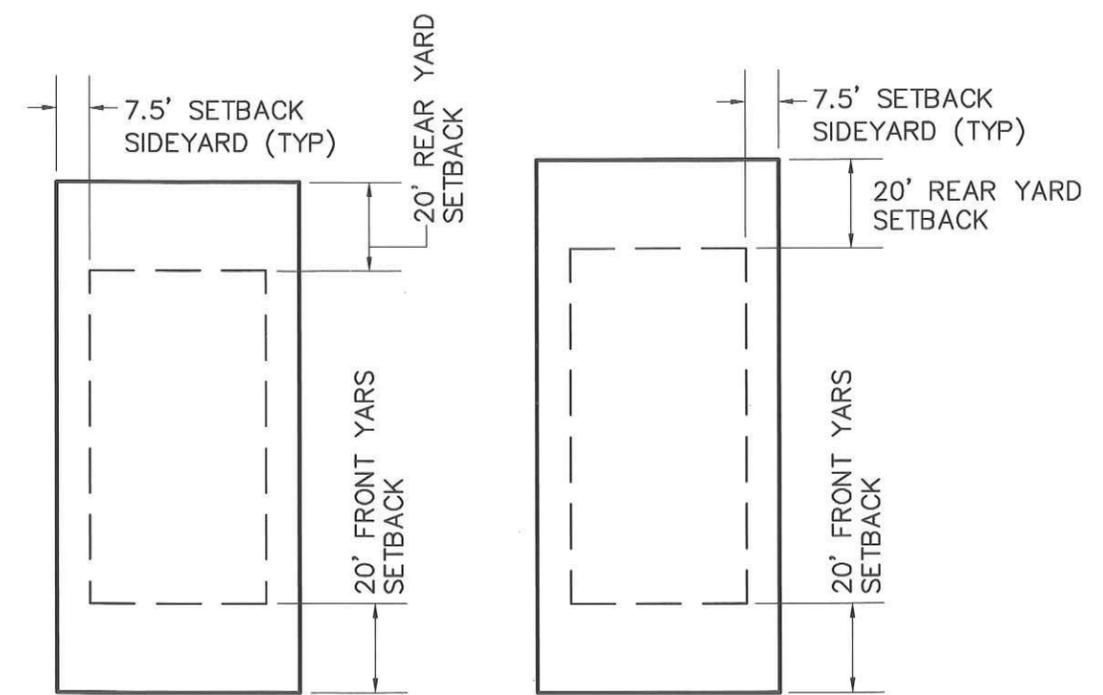


POSSIBLE BUILDING ELEVATIONS



\* WHERE APPLICABLE  
 \*\* WIDTH TO BE DETERMINED BY THE UTILITY COMPANIES AND THE TOWN ENGINEER

TYPICAL SUBDIVISION SECTION 50' ROW

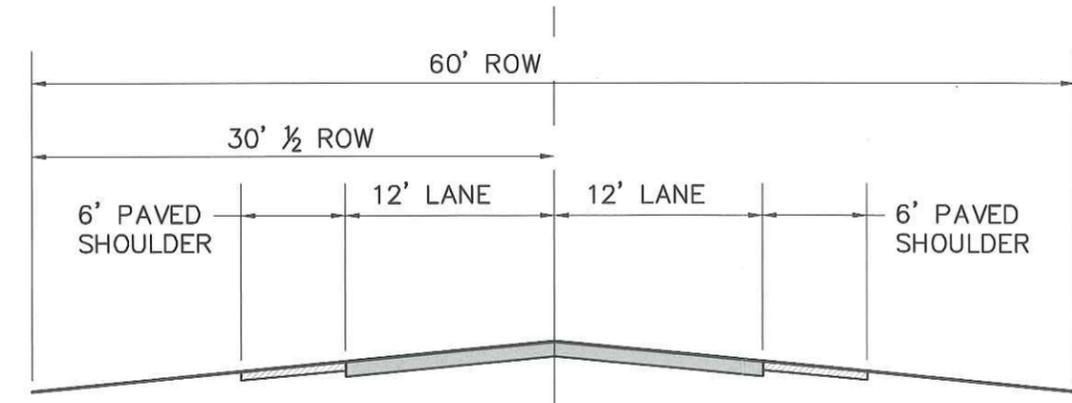


55'x115' LOT

55'x120' LOT

TYPICAL LOT LAYOUTS

1"=40'



LA CHOLLA TYP SECTION (EXISTING)

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Tentative Development Plan		Exhibit II.B (sheet 2 of 2)	
Rancho de Plata Rezoning From R-1-144 to R1-7 Oro Valley No. OV911-005		10-2011	29

## C. EXISTING LAND USES

1. **Zoning boundaries and adjacent land uses.** The entire 19.45 acre project site is proposed for R1-7 zoning. Existing land uses to the south and west are mapped on **Exhibit I.A.3.b.**
2. **Land Use Impacts.** There are no existing land uses on site and, therefore, no impacts. Rancho de Plata serves the large lot homesites on the south in two ways: (a) the project provides a 100' natural desert bufferyard from its south boundary; and (b) by substituting medium density residential uses for the General Plan commercial uses, this project provides an orderly transition to the Tangerine Corridor.

Wilson School on the west is a non-residential use and, therefore, there are no negative impacts. The developer is in negotiations with Amphi School District to contribute \$1,500 roof top donation.

## D. TOPOGRAPHY

1. **TPD response.**
2. **Encroachment.**

A substantial portion of the limited 15% slopes are contained within the ESOS areas and the dedicated ROW for La Cholla Boulevard. As discussed in Part I of this site analysis, none of the 15% slopes qualify for regulation within the ESL Ordinance in any event. The drainage channels and associated riparian vegetation are preserved in their natural state with the exception of roadway, pathways, and sewer crossings.

3. **New cross slopes.**
4. **HDZ natural areas.**

This project's existing cross slope is 5.2%. Therefore, no natural area designations are required for compliance with Table 27.10.-4 Slope Density and Disturbance Limits from the ESL Ordinance.

5. **Percent graded.**
6. **Map graded areas.**

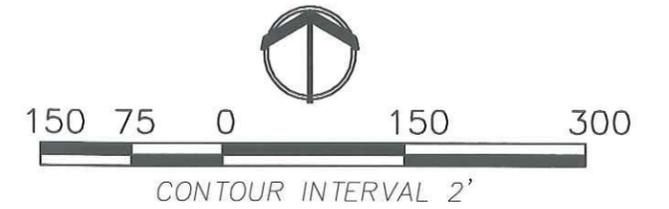
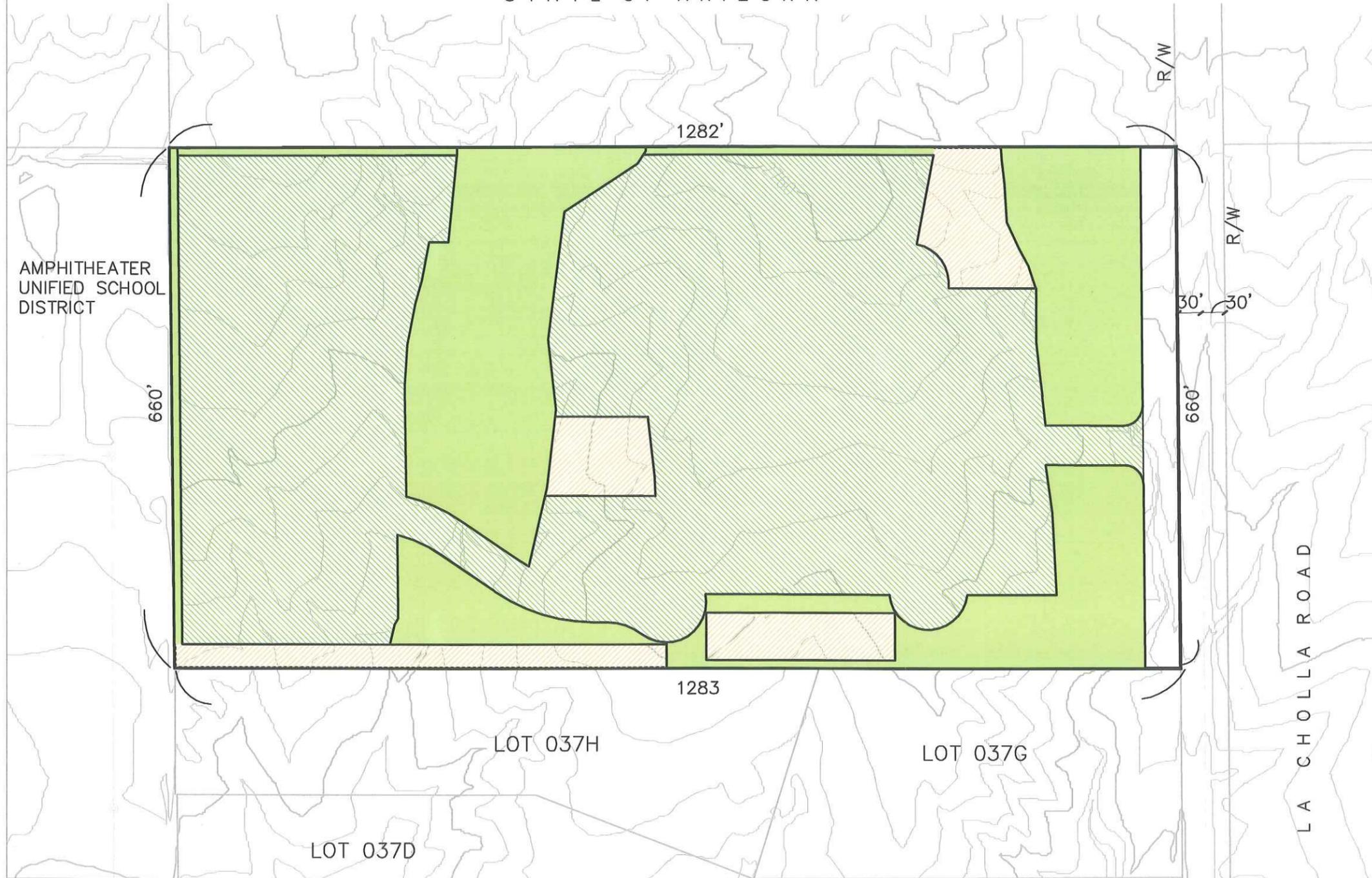
The following analysis concludes that 28% of the site will remain natural desert, 8.0% of the site will be revegetated, and 64% of the site will be graded.

Net site	18.77 acres
Less ESOS	(7.03) acres

Add road xings	<u>0.38 acres</u>
Graded	12.12 acres
% graded	64.6%
Revegetate rec areas/detention/pathway	1.94 acres
% revegetated	10.3%
Natural desert	4.71 acres
% undisturbed	25.1%

Please refer to **Exhibit II.D Grading.**

STATE OF ARIZONA



LEGEND

-  NATURAL DESERT (25.1%)
-  GRADED (64.6%)
-  REVEGETATED (10.3%)

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Grading

Exhibit II.D.

Rancho de Plata

10-2011

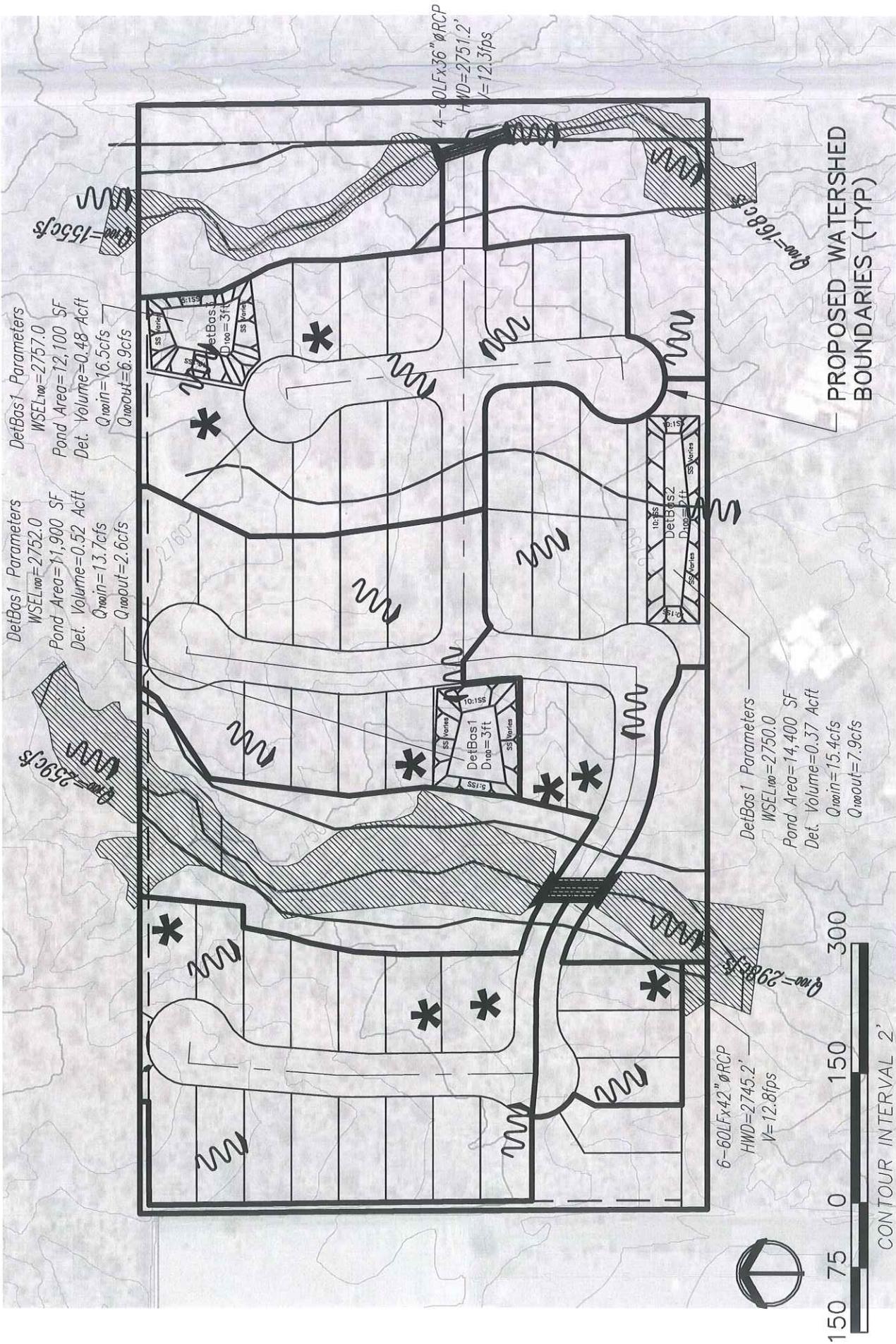
32

## E. HYDROLOGY

1. **TDP Response.** Development of the subject property will be accomplished such the two natural streams on site will be allowed to enter, flow through and leave the subject parcel, while remaining relatively undisturbed and following their natural alignment. This is because parcel development will create undisturbed open space, at locations where the streams presently flow naturally; these areas are designated ESOS in the development document. The ESOS substantially protects the natural stream floodprone areas and their associated erosion hazard setback, which have been estimated to be 18' for the western drainageway and 13' for the eastern drainageway. The only anticipated encroachments into the existing drainageways are at the proposed road crossings (see **Exhibit II.E.1, Proposed Drainage Scheme**), where culverts have been designed to allow peak flows to remain as per existing conditions. At the main entrance is proposed a 4-barrel 36" RCP culvert; at the western drainageway is proposed a 6-barrel 42" RCP culvert, to be constructed under the subdivision street crossing. These two culverts will be provided with energy dissipators, as needed and designed in conformance with current Oro Valley standards.
  
2. **Encroachment.** Implementation of the proposed drainage scheme ensures that the only disturbance to the eastern drainageway is at the street entrance that provides access into the subdivision, as illustrated in **Exhibit II.E.1**. Another culvert is provided for access into the subdivision rear lots. Both culverts will be provided with dumped rock riprap energy dissipators at their outlets designed per Oro Valley standards. As illustrated in the TDP, some lots are contiguous to flood prone areas; they been identified with an asterisk in the **Exhibit II.E.1**. These lots will require scour protection at their perimeter walls, which can be done in a practical and cost-effective manner through application of current design standards in Oro Valley. Without crossing the drainageways at least once, there can be no all weather access into the property from La Cholla Boulevard. The proposed bicycle/pedestrian path location at the southwest corner of the site was determined by Town staff. Options are to construct a narrow con-arch over the wash or turn the bicycle path north along the east boundary of lot 31 to the proposed street crossing. The method of crossing the floodplain will be determined during the tentative plat process. The options are the same for the sewer connection to the public sewer 90' west of the property in the Wilson School parking lot. Negotiations are underway with the School District to determine the best point of connection in its lot. Once the west end of the new sewer is determined, the crossing location in Rancho de Plata will be determined in the tentative plat process.
  
3. **Off-site Impacts.** Because existing flows will be permitted to enter and leave the subject parcel at the same locations and similar peak flows as in the undeveloped conditions, there are no anticipated impacts to drainage upstream or downstream from the parcel.
  
4. **Mitigation.** Within the parcel areas that are to be urbanized, development will increase runoff, because of the anticipated residential structures and subdivision streets. As shown in previous exhibits and for the purpose of evaluating development impact, drainage

within the parcel can be considered to create four discrete basins. In order to minimize construction of drainage mitigation facilities, development will also consider four discrete sub-basins on site, which will deliver their peak runoff flows to the same drainage exiting locations as under existing conditions (see **Exhibit II.E.2, Onsite Developed Drainage Conditions**). Sub-basin 1f has been conformed so that it generates similar peak flows as its corresponding pre-development sub-basin, DA1e. The other three sub-basins have been provided with detention basins, as identified in the exhibit; these basins will be designed per current Oro Valley standards, and the exhibit provides their preliminary operating parameters. In summary, the developed areas that feed into the proposed detention basins will make use of the streets to deliver runoff to the respective basins. As shown on the exhibit, developed peak flows will be mitigated through the corresponding detention basin in DAs 2f through 4f, such that peak flows leave the subject parcel at the same location and similar peak flows than under pre-development conditions; the exhibit table compares peak flows for each basin, under existing and developed conditions. Some lots are contiguous to flood prone areas; they have been identified with an asterisk in **Exhibit II.E.1**. These lots will require scour deep protection under their perimeter walls, which can be done in a practical and cost-effective manner, through application of current design standards in Oro Valley.

5. **Town Policies.** As shown in the exhibit, by designing developed areas to occur mostly on the outside of ESOS and flood prone areas, lot perimeter structures (screening walls and fences) can be placed beyond flooding or erosion sensitive areas within this parcel and, by corollary, also the corresponding residential structures in each lot.. This will allow for mitigation of developed peak flows, such that the open space upstream and downstream from the culverts remains in its natural state. Detention storage can be accomplished within the recreation areas and open space for this subdivision. By accepting and delivering off site flows at their current locations, the proposed drainage control facilities are compatible with the potential improvements scheduled for the two major arterials near the subject parcel, La Cholla Boulevard and Tangerine Road. This is also true for improvements contemplated for Rancho del Cobre, a residential subdivision planned for the land parcel immediately to the east of La Cholla Boulevard. As stated earlier, no specifics are yet available as to nature of the regional drainage improvements associated with the two roadway projects, leaving existing natural drainage patterns relatively undisturbed, will allow a sound complement to those regional drainage improvements. The proposed drainage scheme conforms to Oro Valley policies and guidance, in that its drainage design conforms to criteria for development in critical basins, the proposed detention basin returns mitigated peak flows to the natural stream exiting its subject parcel, and peak flows are maintained as in the pre-developed conditions. In addition, the finish floor elevations for all residences will be designed to be a minimum of 12" above any adjacent 100-year water surface elevation.

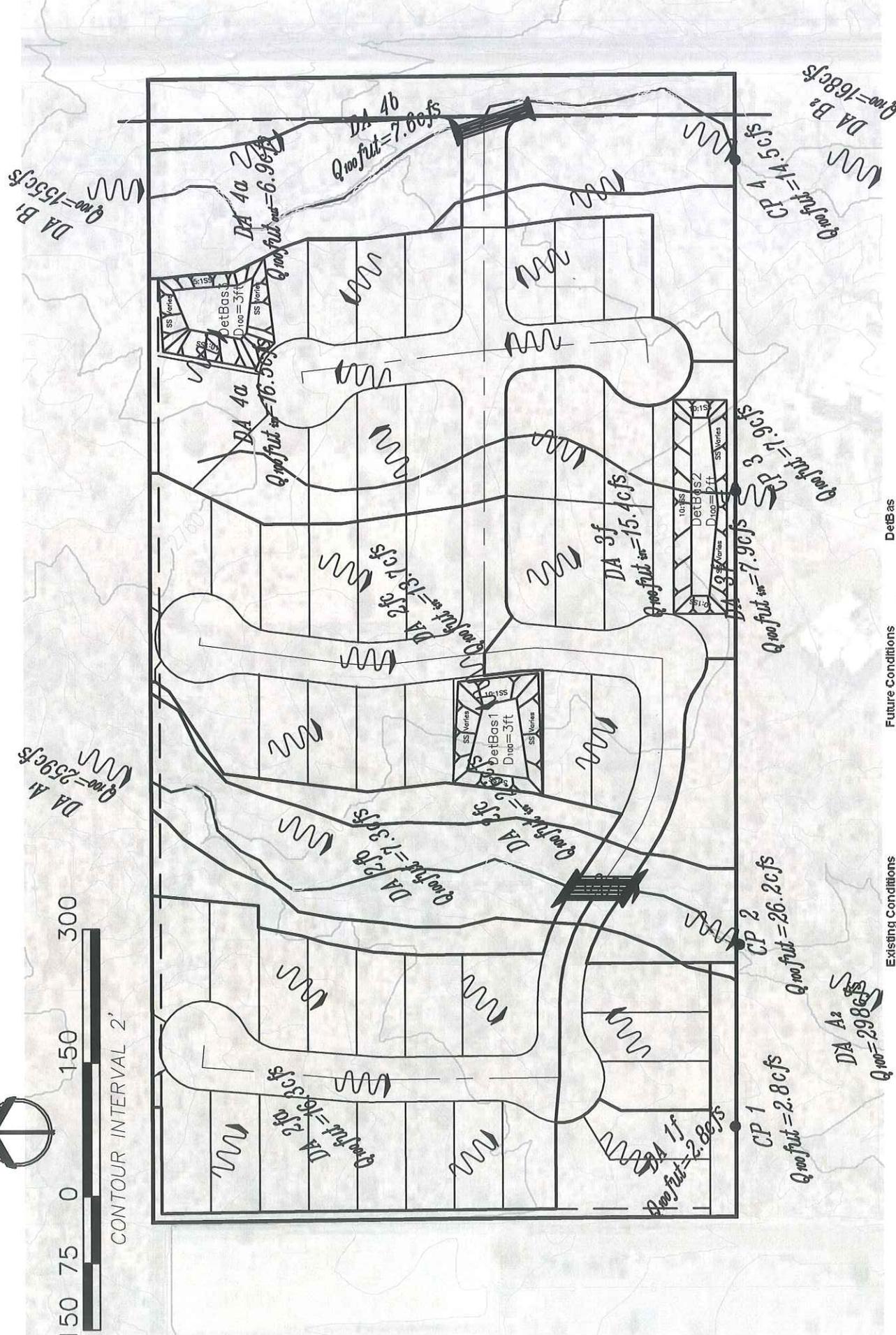


Post-Development Hydrology	Exhibit II.E.1.
Rancho de Plata	10-2011
	35

**\*** Lots requiring flood protective measures



CONTOUR INTERVAL 2'



Existing Conditions		Future Conditions		DetBas Mitigation	
DA	Acres	DA	Acres	Q100f	Q100f Mitigation
DA 1	1.273	DA 1	0.809	2.8	
DA 2	9.783	DA 2a	3.260	16.3	Cpk reduced from 0.100 to 0.137 cfs
		DA 2b	2.728	7.3	Cpk reduced from 0.100 to 0.137 cfs
		CP 2c	2.823	2.6	
CP 3	2.941	CP 3	3.352	7.9	Cpk reduced from 0.100 to 0.15 cfs
CP 4	5.422	CP 4a	3.612	6.9	Cpk reduced from 0.100 to 0.15 cfs
		CP 4b	2.835	7.5	

Developed Onsite Drainage Mitigation

Rancho de Plata

Exhibit II.E.2.

10-2011

35A

## F. VEGETATION

1. **TDP Response.** There are 5 vegetation issues that need to be addressed by the TPD are: high density > 60% plant coverage, significant groups of trees, significant cacti 5 – 15', distinctive cacti > 15' and nurse plants. The high density vegetation and significant groups of trees are associated with the riparian areas (Critical Resource Areas). The riparian areas are conserved in the TDP and located within the proposed ESOS areas. The ESOS corridors are wider than the riparian areas and, therefore the high density vegetation and significant groups of trees are substantially conserved.

About 40% of the saguaro cacti and nurse trees will be preserved in place within the ESOS acreage including the 100' natural desert buffer yard on the south. It looks like 6 of the 15 distinctive cacti are located outside the ESOS areas and will be subject to salvage on or off-site, if feasible.

Salvage would first occur within the tier 2 open space primarily within the south buffer yard and on the neighbors property if they would so desire. An early discussion with Amphitheater School District found a willingness to provide a new home for these cacti at Wilson School and even at Ironwood Ridge High School southeast of the project site.

The significant cacti will likewise be subject to salvage on or off-site with the same locations as described for distinctive cacti in the previous paragraph. Another candidate for off-site salvage would be on Town of Oro Valley property subject to its acceptance.

## G. WILDLIFE

1. **Mitigate wildlife habitat.** Arizona's On-line Environmental Review Tool located in **Appendix C** of this report "flags" the golden eagle as an occurrence or habitat within 3 miles of the project vicinity. Further discussions with AGFD revealed that the preferred habitat for the golden eagle is mountainous terrain or canyon walls which exists at Honey Bee Canyon and the Tortolitas north of the project site. CPEC has initiated contact with the US FWS as requested by the state and the town.

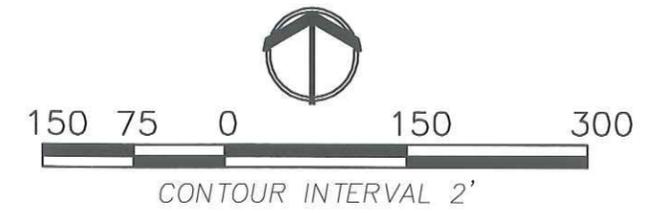
## H. BUFFER PLAN

1. **Map buffer yards. Exhibit II.H.1 Buffer yards** locates the plan view of the buffer yards on the La Cholla Boulevard frontage and along the south property line adjacent to existing residences. The south and east buffer yards can be augmented to high density standards within the tier 2 areas on the south and the tier 2 areas on the east outside the riparian (critical resource os) area. The critical resource area is already at high density in its natural state. The tier 2 areas generally exist at medium density standards. Rancho de Plata proposes, therefore, to transplant into these areas such

native species as, Foothill Palo Verde, Ironwood, Velvet Mesquite, Saguaro, Prickly Pear, Barrel, Buckhorn Cholla, Chainfruit Cholla and Creosote.

- 2. Illustrate buffer yards. Exhibit II.H.2 Buffer yard Treatment** shows the natural desert buffer yard that will be provided and conserved along the La Cholla Boulevard frontage. This exhibit also shows the natural desert buffer yard from the south property line. Please notice the difference in density from the La Cholla vegetation. It is in this area where transplantation can take place as described in the previous paragraph.

STATE OF ARIZONA



LEGEND



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Bufferyards	Exhibit II.H.1.	
Rancho de Plata	10-201	38



High Density Vegetation fronting on La Cholla Blvd



Medium Density Vegetation along south border

rev 7/14/11

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Bufferyard Treatment

Rancho de Plata

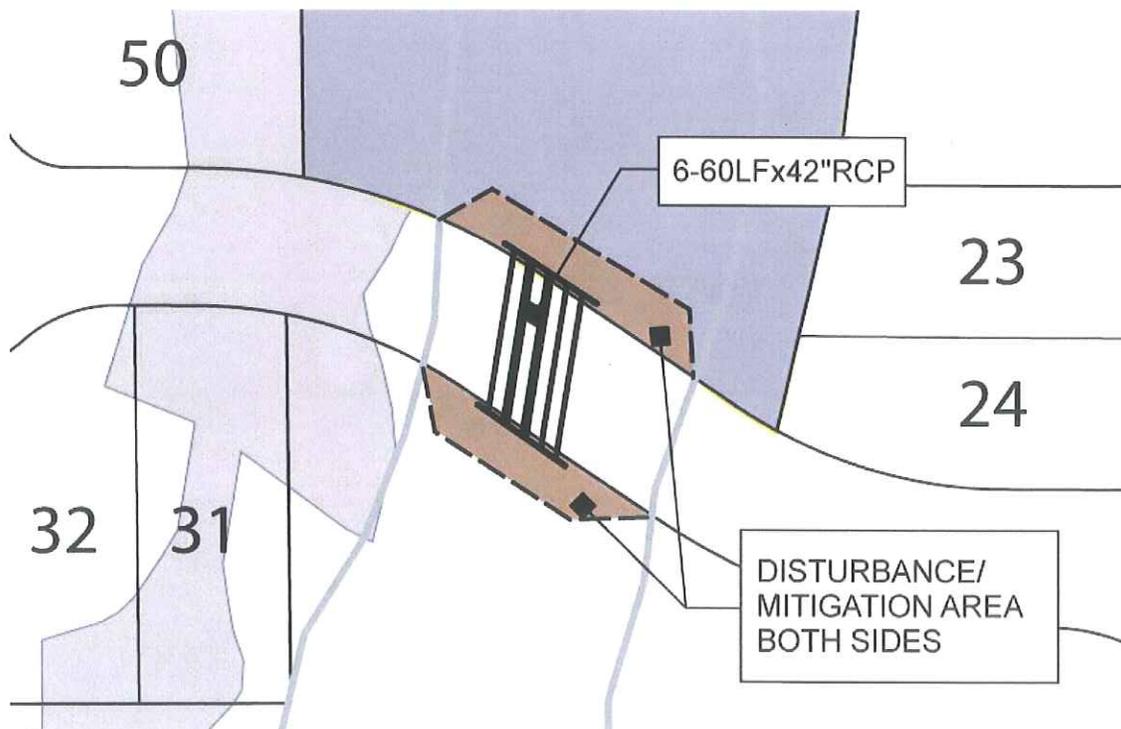
Exhibit II.H.2.

7-2011

39

## I. VIEWSHEDS

- 1. TPD mitigation.** As shown on **Exhibit I.F.1 Viewshed Map**, the areas of high visibility occur along the east, south and west property lines. The mitigation provided along east and south property lines has been detailed in **Exhibit II.H.2**, the previous section of this site analysis. A combination of deep natural desert bufferyards including augmentation of the vegetative densities clearly mitigates these viewsheds. Rancho de Plata proposes single story construction along the western tier of lots – lots 35 thru 43 – to mitigate Wilson School’s views of the distant mountains at Catalina State Park and Coronado National Forest.
- 2. Roadway construction.** As described in **Section II.E** of this site analysis, the site will be gently graded to convey drainage from all lots through the streets to the west drainage area which a large, natural basin. Cut and fill will be minimal. The only abnormal disturbance will occur at an elevated road crossing over the western drainage way to accommodate the installation of a 4 barrel, 36” RCP. Disturbance could occur 10’ to 20’ north and south of the road ROW and will be mitigated according to the rules set out in the Landscape Conservation Code, ESL Related revisions to Section 27.6.

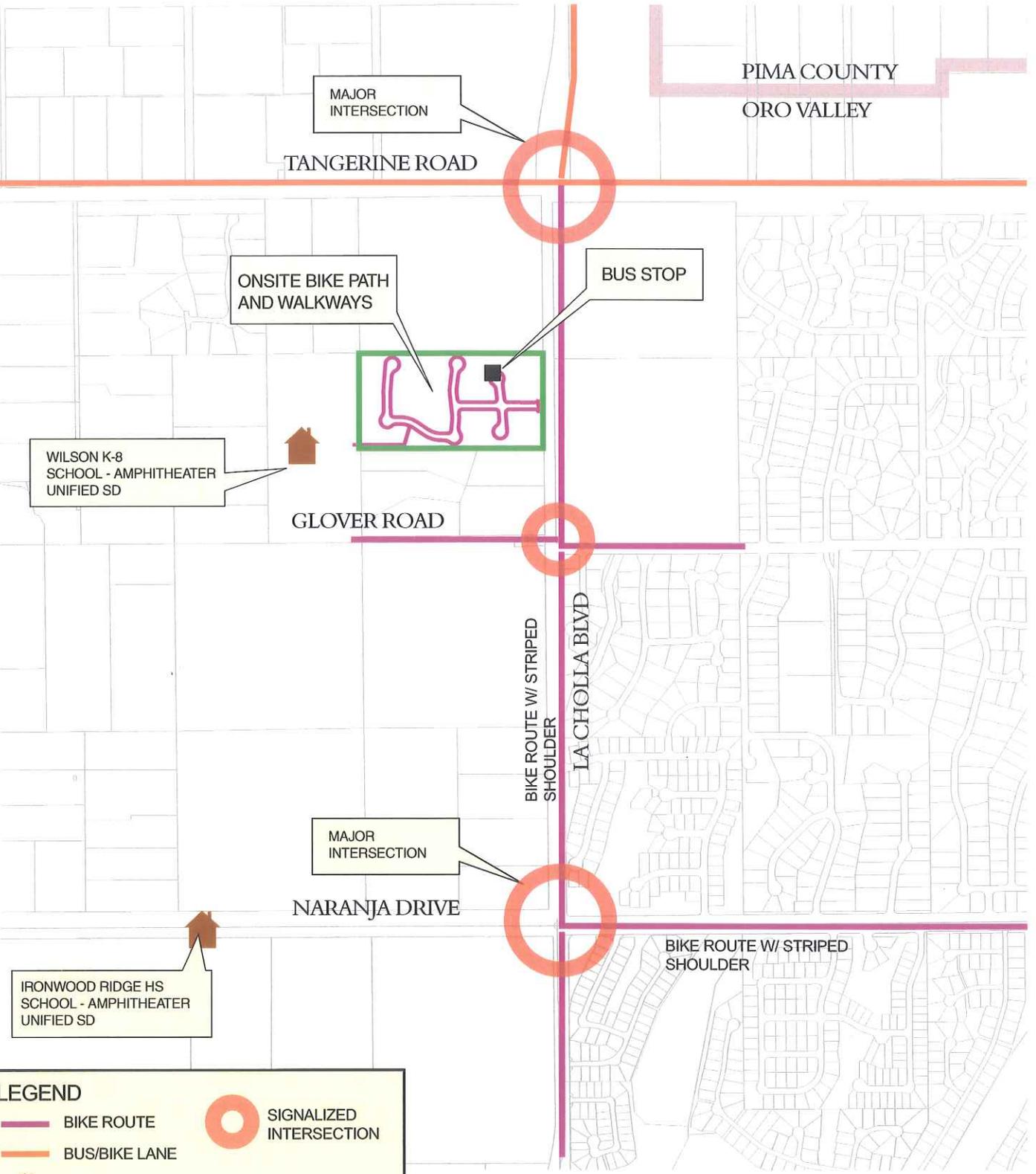


## J. TRAFFIC

1. **Intersections.bikes.walkways.** Please refer to **Exhibit II.J.** for the location of existing intersections with Tangerine Road and Naranja Drive that will be used by traffic generated from Rancho de Plata. There are no proposed new intersections although the widening of the Tangerine Road intersection with La Cholla Boulevard is currently under a design contract. This exhibit also maps the location of an existing bikeway connection to Wilson School from the site on La Cholla to Glover Road. It should be noted that the La Cholla Boulevard intersection with Glover Road is a signalized intersection that will be used by traffic generated from Rancho de Plata.
2. **Traffic impact statement.** Please refer to **Appendix D.**
3. **On-site street ROW.** The proposed subdivision street system will be developed at a 50' ROW by the developer and dedicated to the Town of Oro Valley by final plat. The proposed cross section is presented on sheet 2 of Exhibit II.B. and provides two 14' travel lanes, wedge curbs, fire hydrant, sidewalks, a bike path and a sidewalk maintenance area within the PUE.
4. **On-site bikes and walkways.** There will be a bike/pedestrian pathway developed from the southern part of the project site directly to Wilson School as shown on **Exhibit II.B. sheet 1.** In addition, proposed bikeways and sidewalks are included within the subdivision street cross section shown on **Exhibit II.B. sheet 2** for connection to the bikeway in La Cholla Boulevard as well as Wilson School.
5. **Bus Stops.** The elementary school is located adjacent to the project site. However, the high school is 1 ¼ miles to the southwest. CPE Consultants LLC had a discussion with the Executive Manager, Operational Support, Amphitheatre School District the third week of July and agreed to look at a bus stop on site at the eastern recreation area adjacent to a cul-de-sac turnaround as shown on **Exhibit II.B. sheet 1.** Both parties agreed that CPEC would formally propose this location to the District for their written approval of both the bike/pedestrian pathway connection and the bus stop location.

## K. SEWERS

1. **Sewer service method.** Please refer to **Exhibit I.L. Sewers** and notice there is an 8" public sewer #G-2006-016 located on the Wilson School campus 90' west of the Rancho de Plata west boundary. CPE Consultants met with Legal Counsel to the Amphitheatre School District the week of July 20, 2011 to explore the possibility of securing a sewer easement from them to connect. The first round of negotiations went well, and CPEC made a formal request to the District. (Please see letters in Appendix E.)
2. **Response letter.** Please see capacity response letter from Pima County on page 43.



**LEGEND**

-  BIKE ROUTE
-  BUS/BIKE LANE
-  SCHOOL
-  SIGNALIZED INTERSECTION

**CPE** CONSULTANTS



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**Intersections/Bike Paths/Walkways**

**Rancho de Plata**

<b>Exhibit II.J.</b>	
7-2011	42



**Pima County  
Regional Wastewater Reclamation Department**

Jackson Jenkins  
Director

201 N. Stone Ave., 8<sup>th</sup> Floor  
Tucson, Arizona 85701  
(520) 740-6500

Visit our website:  
<http://www.pima.gov/wwm>

July 19, 2011

Ron Asta  
CPE Consultants  
378 N. Main Avenue  
Tucson, AZ 85701

**Capacity Response No. 11-134 Type I**

**RE: Rancho de Plata, 60 Residential Lots on Parcels 224-11-034A, -034B, -034C, -034D & -034E.  
Estimated Flow 13,800 gpd (ADWF).**

Greetings:

The above referenced project is tributary to the Ina Road Wastewater Reclamation Facility via the Cañada del Oro Interceptor.

Capacity is currently available for this project in the 8-inch public sewer G-2006-016, downstream from manhole 3497-03.

This letter is not a reservation or commitment of treatment or conveyance capacity for this project. 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.

**Note: Conditions within the public sewer system constantly change. A Type II letter must be obtained to verify that capacity exists in the downstream public sewer system just prior to submitting the development plan or subdivision plat for review and approval.**

If further information is needed, please feel free to contact us at (520) 740-6534.

Respectfully,

A handwritten signature in blue ink that reads "Mary Hamilton".

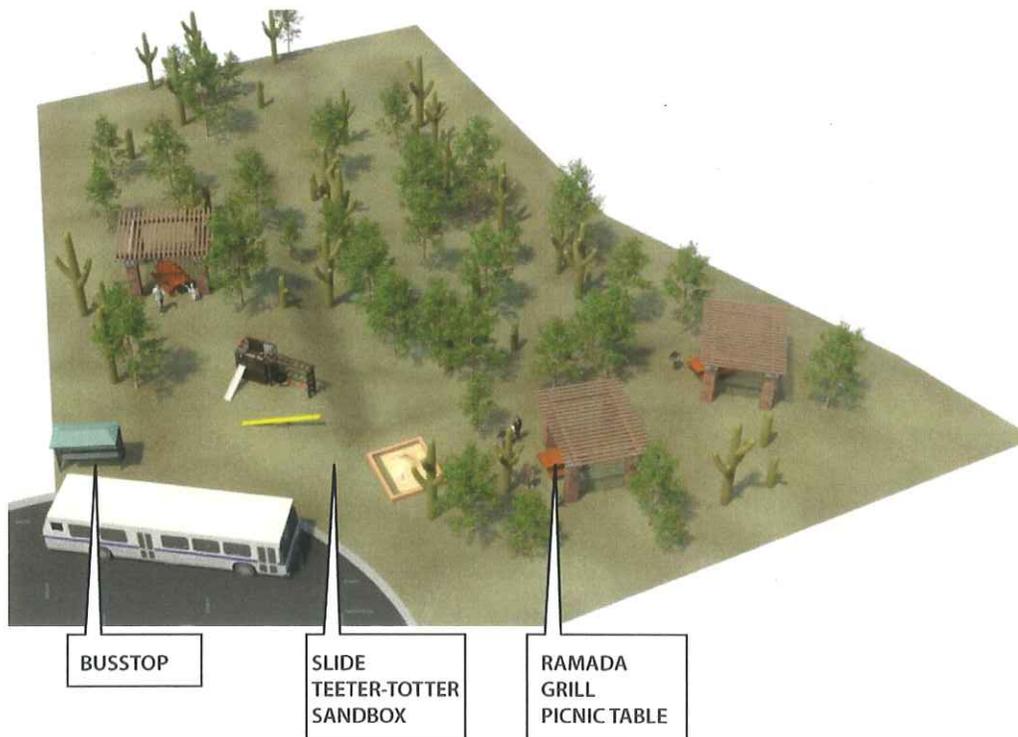
Mary Hamilton, P.E.  
PCRWRD Planning Section Manager

MH:ks

c: T12, R13, Sec. 04

## L. RECREATION AND TRAILS

1. **Off-site Trails.** Please refer to **Exhibit I.G.H.J.** for the location of parks and trails within a one-mile study area.
2. **Parks identified.** Although outside the study area, the 40-acre West Lambert Lane Park is located on Lambert Lane and offers passive recreation. This park is owned by Oro Valley.
3. **Off-site trail access.** Rancho de Plata is providing a stabilized granite/crushed stone walking path along the project's frontage located within the 45' dedicated ROW as shown on **Exhibit II.B. Tentative Development Plan.** In that context, this project is actually building a part of the Honey Bee Loop Trail itself.
4. **Ownership.** The natural and modified open spaces within the development (ESOS) will be platted as common area and owned by a Rancho de Plata homeowners association.
5. **Private Recreation Areas On Site:** The Town of Oro Valley subdivision regulations require 0.61 acres of private recreation areas for a 50 lot subdivision. Rancho de Plata has provided 0.75 acres including such features as swings, teeter totters, sandbox, barbecue grills, picnic tables, and armadas.



EXAMPLE OF TYPICAL RECREATION AREA LAYOUT

## M. CULTURAL, ARCHAEOLOGICAL AND HISTORIC RESOURCES

**1. 2.3. Resource protection and surveys.** Please refer to Section I.1. and the ASM letter located in Appendix C. The report concludes that there are no resources on site and no additional archaeological investigation is necessary.

## N. SCHOOLS

- 1. Students generated.**
- 2. Remaining capacity.** Amphitheater Public Schools projects 35 students K - 8 will be generated by Rancho de Plata for attendance at Wilson School. The District also projects a 2011-12 enrollment of 1,064 with a capacity of 1,550.

Amphitheater Public Schools also projects 8 high school students will be generated by Rancho de Plata for attendance at Ironwood Ridge High School. The District also projects a 2011-12 enrollment of 1,862 with a capacity of 2,370.

Please refer to correspondence with Amphi regarding enrollment and sewers in Appendix E..

## O. WATER

- 1. Domestic Water Demand.** A good estimate for water usage is 230 gallons/day/lot dry weather flow. At 50 lots for Rancho de Plata, the total domestic water use is projected at 11,500 gallons/day.
- 2. Water service capacity.** The following three conditions of rezoning will apply to Rancho de Plata: (1) The developer shall extend the 12" water main in the Glover Road right-of-way west across La Cholla Boulevard and north to supply domestic water to this subdivision. The water main shall be placed outside of pavement in the western La Cholla Boulevard right-of-way; (2) The water main extension shall be designed so that connections at Glover Road and the entry road have modified drain valve assemblies west and north respectively; and, (3) Easements shall be granted to the Oro Valley Water Utility at the northern end of the east and west cul-de-sacs to the northern property line. The water mains in these two streets shall be constructed with modified drain valve assemblies and be sized for future extensions to the north.

**APPENDIX A: VEGETATION, SAGUARO INVENTORY**

Levitt Property Significant Saguaro Inventory					
I.D.#	Botanical Name	Common Name	Arms	Height Feet	In-situ Viability
1	Carnegiea gigantea	Saguaro	4 arms	14	L
2	Carnegiea gigantea	Saguaro		5	H
3	Carnegiea gigantea	Saguaro		7	H
4	Carnegiea gigantea	Saguaro		5	H
5	Carnegiea gigantea	Saguaro		5	H
6	Carnegiea gigantea	Saguaro		6	H
7	Carnegiea gigantea	Saguaro		16	M
8	Carnegiea gigantea	Saguaro	4 arms	18	H
9	Carnegiea gigantea	Saguaro	3 arms	15	H
10	Carnegiea gigantea	Saguaro		7	H
11	Carnegiea gigantea	Saguaro		5	H
12	Carnegiea gigantea	Saguaro	2 arms	14	H
13	Carnegiea gigantea	Saguaro		18	H
14	Carnegiea gigantea	Saguaro		7	H
15	Carnegiea gigantea	Saguaro	9 arms	30	H
16	Carnegiea gigantea	Saguaro		5	H
17	Carnegiea gigantea	Saguaro		12	H
18	Carnegiea gigantea	Saguaro		12	H
19	Carnegiea gigantea	Saguaro		7	H
20	Carnegiea gigantea	Saguaro		14	H
21	Carnegiea gigantea	Saguaro		7	H
22	Carnegiea gigantea	Saguaro		15	H
23	Carnegiea gigantea	Saguaro		10	H
24	Carnegiea gigantea	Saguaro		9	H
25	Carnegiea gigantea	Saguaro		7	H
26	Carnegiea gigantea	Saguaro		5	H
27	Carnegiea gigantea	Saguaro		8	H
28	Carnegiea gigantea	Saguaro		5	H
29	Carnegiea gigantea	Saguaro	3 arms	15	H
30	Carnegiea gigantea	Saguaro		7	H
31	Carnegiea gigantea	Saguaro		5	H
32	Carnegiea gigantea	Saguaro		15	H
33	Carnegiea gigantea	Saguaro		11	H
34	Carnegiea gigantea	Saguaro		10	H
35	Carnegiea gigantea	Saguaro		11	H
36	Carnegiea gigantea	Saguaro		5	H
37	Carnegiea gigantea	Saguaro		12	H
38	Carnegiea gigantea	Saguaro		10	H
39	Carnegiea gigantea	Saguaro		9	H
40	Carnegiea gigantea	Saguaro	2 arms	16	H
41	Carnegiea gigantea	Saguaro		11	H
42	Carnegiea gigantea	Saguaro		9	H
43	Carnegiea gigantea	Saguaro		10	H
44	Carnegiea gigantea	Saguaro		12	H
45	Carnegiea gigantea	Saguaro		18	H
46	Carnegiea gigantea	Saguaro		6	H
47	Carnegiea gigantea	Saguaro		5	H

48	Carnegieia gigantea	Saguaro		11	H
49	Carnegieia gigantea	Saguaro		7	H
50	Carnegieia gigantea	Saguaro		8	H
51	Carnegieia gigantea	Saguaro		5	H
52	Carnegieia gigantea	Saguaro		15	H
53	Carnegieia gigantea	Saguaro		12	H
54	Carnegieia gigantea	Saguaro		6	H
55	Carnegieia gigantea	Saguaro		7	H
56	Carnegieia gigantea	Saguaro		5	H
57	Carnegieia gigantea	Saguaro		12	H
58	Carnegieia gigantea	Saguaro		6	H
59	Carnegieia gigantea	Saguaro		6	H
60	Carnegieia gigantea	Saguaro		8	H
61	Carnegieia gigantea	Saguaro		5	H
62	Carnegieia gigantea	Saguaro		8	H
63	Carnegieia gigantea	Saguaro		8	H
64	Carnegieia gigantea	Saguaro		7	H
65	Carnegieia gigantea	Saguaro		15	H
66	Carnegieia gigantea	Saguaro	10 arms	30	H
67	Carnegieia gigantea	Saguaro		30	H
68	Carnegieia gigantea	Saguaro		9	H
69	Carnegieia gigantea	Saguaro	10 arms	18	H
70	Carnegieia gigantea	Saguaro		5	H
71	Carnegieia gigantea	Saguaro		10	H
72	Carnegieia gigantea	Saguaro		12	H
73	Carnegieia gigantea	Saguaro		10	H
74	Carnegieia gigantea	Saguaro		15	H
75	Carnegieia gigantea	Saguaro		6	H
76	Carnegieia gigantea	Saguaro		7	H
77	Carnegieia gigantea	Saguaro		12	H
78	Carnegieia gigantea	Saguaro		5	H
79	Carnegieia gigantea	Saguaro		5	H
80	Carnegieia gigantea	Saguaro		6	H
81	Carnegieia gigantea	Saguaro		7	H
82	Carnegieia gigantea	Saguaro	13 arms	30	H
83	Carnegieia gigantea	Saguaro		7	H
84	Carnegieia gigantea	Saguaro		9	H
85	Carnegieia gigantea	Saguaro		7	H
86	Carnegieia gigantea	Saguaro	4 arms	18	H
87	Carnegieia gigantea	Saguaro	9 arms	30	H
88	Carnegieia gigantea	Saguaro		11	H
89	Carnegieia gigantea	Saguaro	crestlike arms @ top	14	H
90	Carnegieia gigantea	Saguaro		6	H
91	Carnegieia gigantea	Saguaro		5	H
92	Carnegieia gigantea	Saguaro		12	H
93	Carnegieia gigantea	Saguaro		5	H
94	Carnegieia gigantea	Saguaro		5	H
95	Carnegieia gigantea	Saguaro		12	H
96	Carnegieia gigantea	Saguaro		7	H
97	Carnegieia gigantea	Saguaro		5	H
98	Carnegieia gigantea	Saguaro		6	H

99	Carnegieia gigantea	Saguaro		9	H
100	Carnegieia gigantea	Saguaro		6	H
101	Carnegieia gigantea	Saguaro		12	H
102	Carnegieia gigantea	Saguaro		5	H
103	Carnegieia gigantea	Saguaro		9	H
104	Carnegieia gigantea	Saguaro		7	H
105	Carnegieia gigantea	Saguaro		5	H
106	Carnegieia gigantea	Saguaro		8	H
107	Carnegieia gigantea	Saguaro		7	H
108	Carnegieia gigantea	Saguaro		8	H
109	Carnegieia gigantea	Saguaro		7	H
110	Carnegieia gigantea	Saguaro		8	H
111	Carnegieia gigantea	Saguaro		5	H
112	Carnegieia gigantea	Saguaro		5	H
113	Carnegieia gigantea	Saguaro		5	H
114	Carnegieia gigantea	Saguaro		9	H
115	Carnegieia gigantea	Saguaro		12	H
116	Carnegieia gigantea	Saguaro		7	H
119	Carnegieia gigantea	Saguaro		12	H
120	Carnegieia gigantea	Saguaro		6	H
121	Carnegieia gigantea	Saguaro		5	H
122	Carnegieia gigantea	Saguaro		5	H
123	Carnegieia gigantea	Saguaro		5	H
124	Carnegieia gigantea	Saguaro		7	H
125	Carnegieia gigantea	Saguaro		12	H
126	Carnegieia gigantea	Saguaro		5	H
127	Carnegieia gigantea	Saguaro		8	H
128	Carnegieia gigantea	Saguaro		7	H
129	Carnegieia gigantea	Saguaro		5	H
130	Carnegieia gigantea	Saguaro		12	H
131	Carnegieia gigantea	Saguaro	1 arm	18	H
135	Carnegieia gigantea	Saguaro		5	H
136	Carnegieia gigantea	Saguaro		5	H
137	Carnegieia gigantea	Saguaro		12	H
138	Carnegieia gigantea	Saguaro		5	H
139	Carnegieia gigantea	Saguaro		11	H
140	Carnegieia gigantea	Saguaro		15	H
141	Carnegieia gigantea	Saguaro		8	H
142	Carnegieia gigantea	Saguaro		5	H
143	Carnegieia gigantea	Saguaro		5	H
144	Carnegieia gigantea	Saguaro		5	H
145	Carnegieia gigantea	Saguaro		5	H
146	Carnegieia gigantea	Saguaro		6	H
147	Carnegieia gigantea	Saguaro		8	H
148	Carnegieia gigantea	Saguaro		9	H
149	Carnegieia gigantea	Saguaro		12	H
150	Carnegieia gigantea	Saguaro		7	H
151	Carnegieia gigantea	Saguaro	2 arms	18	M
152	Carnegieia gigantea	Saguaro		5	H
153	Carnegieia gigantea	Saguaro	5 arms small	11	H
154	Carnegieia gigantea	Saguaro		6	H

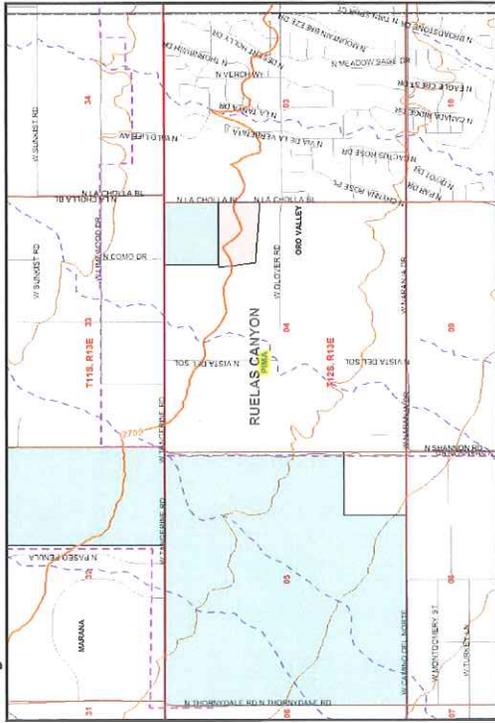
155	Carnegieia gigantea	Saguaro		11	H
156	Carnegieia gigantea	Saguaro		6	H
157	Carnegieia gigantea	Saguaro		6	H
158	Carnegieia gigantea	Saguaro		6	H
159	Carnegieia gigantea	Saguaro		6	H
160	Carnegieia gigantea	Saguaro		9	H
161	Carnegieia gigantea	Saguaro		12	H
162	Carnegieia gigantea	Saguaro		6	H
163	Carnegieia gigantea	Saguaro		10	H
164	Carnegieia gigantea	Saguaro		12	H
165	Carnegieia gigantea	Saguaro		6	H
166	Carnegieia gigantea	Saguaro	3 arms	15	L
167	Carnegieia gigantea	Saguaro		6	H
168	Carnegieia gigantea	Saguaro		6	H
169	Carnegieia gigantea	Saguaro	3 arms small	5	M
170	Carnegieia gigantea	Saguaro		5	H
171	Carnegieia gigantea	Saguaro		7	H
172	Carnegieia gigantea	Saguaro		7	H
173	Carnegieia gigantea	Saguaro		6	H
174	Carnegieia gigantea	Saguaro		12	H
175	Carnegieia gigantea	Saguaro		6	H
176	Carnegieia gigantea	Saguaro		10	H
177	Carnegieia gigantea	Saguaro	17 arms	25	H
178	Carnegieia gigantea	Saguaro		9	H
179	Carnegieia gigantea	Saguaro		9	H
180	Carnegieia gigantea	Saguaro		9	H
181	Carnegieia gigantea	Saguaro		8	H
182	Carnegieia gigantea	Saguaro		8	
183	Carnegieia gigantea	Saguaro		5	H
184	Carnegieia gigantea	Saguaro		8	H
185	Carnegieia gigantea	Saguaro		8	H
186	Carnegieia gigantea	Saguaro		15	H
187	Carnegieia gigantea	Saguaro		8	H
188	Carnegieia gigantea	Saguaro		12	H
189	Carnegieia gigantea	Saguaro		15	H
190	Carnegieia gigantea	Saguaro		6	H
191	Carnegieia gigantea	Saguaro	3 arms	15	H
Note: If a number shown is not shown on the Exhibit it is because the individual was found to be outside the property boundary.					

**APPENDIX B:**  
Arizona Fish and Game On-line Environmental Review Tool

Arizona's On-line Environmental Review Tool

Search ID: 20110718015600  
 Project Name: Rancho Del Platte  
 Date: 7/18/2011 12:04:34 PM

**Project Location**



The Department appreciates the opportunity to provide in-depth comments and project review when additional information or environmental documentation becomes available.

**Special Status Species Occurrences/Critical Habitat/Tribal Lands within 3 miles of Project Vicinity:**

Name	Common Name	FWS	USFS	BLM	State
Aquila chrysaetos	Golden Eagle	BGA			
Glaucidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl	SC	S		WSC
Tucson - Tortolita - Santa Catalina Mountains Link	Wildlife Corridor				

**Project Name:** Rancho Del Platte  
**Submitted By:** PEP Project Evaluation Program  
**On behalf of:** CONSULTING  
**Project Search ID:** 20110718015600  
**Date:** 7/18/2011 12:04:29 PM  
**Project Category:** Development Within Municipalities (Urban Growth), Residential subdivision and associated infrastructure, New construction  
**Project Coordinates (UTM Zone 12-NAD 83):** 498595.572, 3586944.528 meter

**Project Area:** 24.407 acres  
**Project Perimeter:** 1297.821 meter  
 County: PIMA  
 USGS 7.5 Minute Quadrangle ID: 1683  
 Quadrangle Name: RUELAS CANYON  
 Project locality is not anticipated to change

**Location 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 Receipt is solely responsible for the project location and thus the correctness of the Project Review Receipt content.

Arizona's On-line Environmental Review Tool

Search ID: 20110718015600

Project Name: Rancho Del Platte

Date: 7/18/2011 12:04:34 PM

**Please review the entire receipt for project type recommendations and/or species or location information and retain a copy for future reference.** If any of the information you provided did not accurately reflect this project, or if project plans change, another review should be conducted, as this determination may not be valid.

**Arizona's On-line Environmental Review Tool:**

1. This On-line Environmental Review Tool inquiry has generated recommendations regarding the potential impacts of your project on Special Status Species (SSS) and other wildlife of Arizona. SSS include all U.S. Fish and Wildlife Service federally listed, U.S. Bureau of Land Management sensitive, U.S. Forest Service sensitive, and Arizona Game and Fish Department (Department) recognized species of concern.
2. These 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). These recommendations are preliminary in scope, designed to provide early considerations for all species of wildlife, pertinent to the project type you entered.
3. This receipt, generated by the automated On-line Environmental Review Tool does not constitute an official project review by Department biologists and planners. Further coordination may be necessary as appropriate under the National Environmental Policy Act (NEPA) and/or the Endangered Species Act (ESA).

The U.S. Fish and Wildlife Service (USFWS) has regulatory authority over all federally listed species under the ESA. Contact USFWS Ecological Services Offices: <http://arizonaes.fws.gov/>.

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

Tucson Sub-Office  
201 North Bonita, Suite 141  
Tucson, AZ 85745  
Phone 520-670-6144  
Fax 520-670-6154

Flagstaff Sub-Office  
323 N. Leroux Street, Suite 101  
Flagstaff, AZ 86001  
Phone 928-226-0614  
Fax 928-226-1099

**Disclaimer:**

1. 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.
2. 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.
3. 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. HDMS data contains information about species occurrences that have actually been reported to the Department.

**Arizona Game and Fish Department Mission**

**To conserve, enhance, and restore Arizona's diverse wildlife resources and habitats through aggressive protection and**

*management programs, and to provide wildlife resources and safe watercraft and off-highway vehicle recreation for the enjoyment, appreciation, and use by present and future generations.*

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

### **Project Type Recommendations:**

All degraded and disturbed lands should be restored to their natural state. 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.

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.water.az.gov/adwrr/>)

Based on the project type entered; coordination with County Flood

Control districts may be required.

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

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

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 at <http://www.azgfd.gov/hgis/guidelines.aspx>.

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.

During planning and construction, minimize potential introduction or spread of exotic invasive species. Invasive species can be plants,

## Arizona's On-line Environmental Review Tool

Search ID: 20110718015600

Project Name: Rancho Del Platte

Date: 7/18/2011 12:04:34 PM

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 and after project activities to reduce the spread of invasive species. 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 <http://www.azda.gov/PSD/quarantine5.htm>. 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\\_f/hunting\\_rules.shtml](http://www.azgfd.gov/h_f/hunting_rules.shtml).

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.

Hydrological considerations: 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. Aquatic wildlife considerations: reduce/minimize barriers to migration of amphibians or fish (e.g. eliminate falls). 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 at <http://www.azgfd.gov/hgis/guidelines.aspx>.

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 (including 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.

Planning: consider impacts of lighting intensity on mammals and birds 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.

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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.

The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly.

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.

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.

### **Project Location and/or Species recommendations:**

Heritage Data Management System 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 (refer to page 1 of the receipt). Please contact:

Ecological Services Office

US Fish and Wildlife Service

2321 W. Royal Palm Rd.

Phoenix, AZ 85021-4951

Phone: 602-242-0210

Fax: 602-242-2513

HDMS records indicate your project is in or near an identified wildlife habitat linkage corridor. Project planning and implementation efforts should focus on maintaining adequate opportunities for wildlife permeability. For information on the linkage assessment and wildlife species that may be affected refer to:

<http://www.corridordesign.org/arizona>. Contact your Arizona Game and Fish Department Regional Office for specific project recommendations: [http://www.azgfd.gov/inside\\_azgfd/agency\\_directory\\_shtml](http://www.azgfd.gov/inside_azgfd/agency_directory_shtml)

### **Recommendations Disclaimer:**

1. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project.
2. These recommendations are proposed actions or guidelines to be considered during **preliminary project development**.
3. Additional site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies.
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. The Department is interested in the conservation of all fish and wildlife resources, including those Special Status Species listed on this receipt, and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
6. **Further coordination requires the submittal of this initialed and signed Environmental Review Receipt 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).**

## Arizona's On-line Environmental Review Tool

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7. Upon receiving information by AZGFD, please allow 30 days for completion of project reviews. Mail 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**

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2. Unauthorized attempts to upload information or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act .
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4. This Environmental Review is based on the project study area that was entered. The review must be redone if the project study area, location, or the type of project changes. If additional information becomes available, this review may need to be reconsidered.
5. A signed and initialed copy of the Environmental Review Receipt

indicates that the entire receipt has been read by the signer of the Environmental Review Receipt.

### **Security:**

The Environmental Review and project planning web application operates on a complex State computer system. This system is monitored to ensure proper operation, to verify the functioning of applicable security features, and for other like purposes. Anyone using this system expressly consents to such monitoring and is advised that if such monitoring reveals possible evidence of criminal activity, system personnel may provide the evidence of such monitoring to law enforcement officials. Unauthorized attempts to upload or change information; to defeat or circumvent security measures; or to utilize this system for other than its intended purposes are prohibited.

This website maintains a record of each environmental review search result as well as all contact information. This information is maintained for internal tracking purposes. Information collected in this application will not be shared outside of the purposes of the Department.

If the Environmental Review Receipt and supporting material are not mailed to the Department or other appropriate agencies within six (6) months of the Project Review Receipt date, the receipt is considered to be null and void, and a new review must be initiated.

Print this Environmental Review Receipt using your Internet browser's print function and keep it for your records. Signature of this receipt indicates the signer has read and understands the information provided.

Signature: \_\_\_\_\_

Arizona's On-line Environmental Review Tool

Search ID: 20110718015600

Project Name: Rancho Del Platte

Date: 7/18/2011 12:04:34 PM

Date: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Proposed Date of Implementation: \_\_\_\_\_

Address: \_\_\_\_\_

Please provide point of contact information regarding this Environmental Review.

City, State, Zip: \_\_\_\_\_

*Application or organization responsible for project implementation*

Phone: \_\_\_\_\_

Agency/organization: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

*Person Conducting Search (if not applicant)*

Agency/organization: \_\_\_\_\_

**APPENDIX C: ARIZONA STATE MUSEUM REPORT**



CPE: ORO VALLEY, 11791 N La Cholla Blvd



SCALE 1 : 3,302



## APPENDIX D: TRAFFIC ANALYSIS

**TRAFFIC IMPACT ANALYSIS**  
**OV911-005 Rancho de Plata**  
**Prepared by CPE Consultants, LLC**  
**July 20, 2011**

**1. PRELIMINARY TRAFFIC ANALYSIS**

- a. Access from arterial streets.** Rancho de Plata fronts on La Cholla Blvd. and, therefore, makes a direct connection with this arterial. The entry road was chosen, at the request of the Town of Oro Valley, to line up with the proposed entrance for Rancho del Cobre on the east side of La Cholla. Rancho del Cobre has an approved final plat. Refer to the TDP for the internal circulation network.
- b. Future off-site road improvements.** The tentative development plan does not depend upon future off-site road improvements. However, road widening to accommodate a northbound left-turn lane into the subdivision will be constructed as a part of this project at the developer's expense. Furthermore, a right-turn lane warrant analysis will be completed with the full Traffic Impact Analysis to determine if a dedicated southbound right-turn lane along La Cholla Boulevard will be required for this project.
- c. Traffic Projections and Analysis.** The proposed 50 lot subdivision will generate an ADT of 500 trips at build out. The level of service "D" capacity for La Cholla Blvd., Tangerine Rd. and Naranja Dr. is 14,900 ADT. The current traffic volume on La Cholla is 10,000 ADT and, therefore, the projected volume would be 10,500 on La Cholla well below its current capacity.

Assuming a 50% - 50% split of de Plata's traffic heading north to Tangerine and south to Naranja, and then a 33.3% - 33.3% - 33.3% split to the three legs of Naranja, 250 trips per day would be added to the current intersection volume of 16,500 for an increase of 1.5% which is statistically insignificant. The same would be true with the intersection at Tangerine Rd. with a current intersection volume of 18,500 that would be increased by 1.4%.

The total peak hour traffic at the La Cholla Boulevard / Glover Road signalized intersection will be 25 trips assuming again a 50% - 50% split north and south from the total trip generation of 500 ADT. The peak hour volume of 25 trips will add one car every other signal cycle. The impact at the La Cholla / Glover signal will be little or negligible. This impact will be similar for the signalized intersections at La Cholla / Tangerine and La Cholla / Narana. A full blown TIA will be prepared and submitted with the tentative plat, and all turning movements will be examined in further detail.

The unsignalized intersection at La Cholla / Site Access Drive for this project will be a 4-way intersection with STOP control on the site access driveways for Rancho Del Cobre as well as Rancho de Plata. The level of service will be "C" or

better given that Rancho de Cobre is obligated to develop a southbound left turn lane and Rancho de Plata will, at least, be required to build a northbound left turn lane.

- d. **Impact to Neighbors.** There are only 2 developments in the immediate area of Rancho de Plata. The 5 single family houses to the south and Wilson School to the west both access to Glover Rd. with a traffic signal at La Cholla. This project should add about one car every two signal cycles at Glover road.
- e. **Proposed on-site and off-site roads.** The local residential streets section selected by Rancho de Plata is recommended by the Town of Oro Valley for ADT's of 0 – 1,000. This project will generate at build-out 500 trips/day. The proposed ROW and pavement widths for the on-site streets are 50' and 28' respectively. The preliminary street geometrics are found on **Exhibit II.B. Tentative Development Plan.** The design speed is 25 mph and STOP control is recommended at the intersection with La Cholla Blvd.
- f. **Improvements needed.** Tangerine Road from I-10 to La Canada is currently in design from a 2-lane road to a 4-lane divided roadway. Construction is scheduled to begin in 2016. A northbound left-turn lane into the subdivision will be constructed as a part of the project at the developer's cost. In addition, a right-turn lane warrant analysis will be completed with the full Traffic Impact Analysis to determine if a dedicated southbound right-turn lane along La Cholla Boulevard will be required for this project.
- g. **Responsible parties.** The on-site roadways and overall infrastructure will be the responsibility of the owner/ developer of the property. These roadways will become the property of the Town following construction.
- h. **Turning movements.** La Cholla Blvd. currently operates at a volume 33% below its current capacity. The addition of Rancho de Plata trips will only reduce that margin to 30%, insufficient to merit any concerns with turning movements.

It has been estimated that one vehicle will enter the signalized intersections at Glover, Naranja and Tangerine every 2 signal cycles at peak hour. In addition, the two left turn lanes that will be built by Rancho de Plata on the west side of La Cholla Boulevard and Rancho Del Cobre on the east side with STOP controls on the site access driveways will all provide for a level of service "C" or better at this unsignalized intersection.

**APPENDIX E: AMPHITHEATER SCHOOL DISTRICT  
CORRESPONDENCE**

## Ron Asta

---

**From:** Ron Asta [ron.asta@cpeconsultants.com]  
**Sent:** Wednesday, July 27, 2011 12:01 PM  
**To:** 'McFarland, Connie'  
**Subject:** RE: response to request for Amphi information

Thank you very much Connie. I do need a letter from Amphi that says there is space available to accomodate the students that will be generated from our proposed 50-lot subdivision. It's obvious from the numbers you have given me but Oro Valley still requires a letter. Whom should I address this request to?

I will be sending Todd an official letter requesting connection to the sewer.

-----Original Message-----

**From:** McFarland, Connie [mailto:cmcfarla@amphi.com]  
**Sent:** Tuesday, July 26, 2011 4:54 PM  
**To:** ron.asta@cpeconsultants.com  
**Subject:** response to request for Amphi information

Mr Asta:

I am responding to your request for information regarding Amphitheater enrollment and your project's capacity impact. We use the following enrollment demographic multipliers developed by the U.S. Department of Census, Bureau of Census, and adjusted for Amphitheater District's school organizational patterns per household:

- 0.456 elementary students
- 0.261 middle school students
- 0.144 high school students

Also, enrollment projections for the 2011-2012 school year are:

- Wilson K-5           486 students
- Wilson 6-8           578 students
- IRHS                   1862 students

Please feel free to contact me if I can be of further assistance.

Best wishes,  
Connie

*Connie R. McFarland  
Legal Assistant  
Office of Legal Counsel  
Amphitheater Public Schools  
701 W Wetmore Rd  
Tucson AZ 85705  
(520) 696-5155 direct*

**CPE** CONSULTANTS



August 1, 2011

Mr. Todd Jaeger, Legal Counsel  
Amphitheatre Public Schools  
701 W. Wetmore Rd.  
Tucson, Az. 85705

**RE: RANCHO DE PLATA/ TOWN OF ORO VALLEY CASE NO.  
OV911-005/ WEST SIDE OF LA CHOLLA BLVD. ¼ MILE SOUTH OF  
TANGERINE**

Dear Mr. Jaeger:

My clients are proposing a 50 lot subdivision on 19.45 acres on the east side of Wilson School. The tax code parcel's for this site are 224-11-034A thru 034E. We are currently in the rezoning and major plan amendment processes at the Town.

One of the Town's requirements for rezoning is that we "provide a letter from the affected school district indicating that a proposed site can accommodate the educational space requirements for the project number of residents."

This letter then is to request such a letter from you. Let me know what I can do to make this task simple or let me know if you have any questions. Thank you for your consideration.

Sincerely,

CPE Consultants, LLC

A handwritten signature in black ink, appearing to read "Ron Asta", is written over a horizontal line.

Ron Asta, Vice President



August 2, 2011

Mr. Todd Jaeger, Legal Counsel  
Amphitheatre Public Schools  
701 W. Wetmore Rd.  
Tucson, Az. 85705

**RE: RANCHO DE PLATA/ WEST SIDE OF LA CHOLLA BLVD. ¼ MILE  
SOUTH OF TANGERINE**

Dear Mr. Jaeger:

Thank you for meeting with me on July 18, 2011. I certainly appreciated your positive attitude regarding our project. As presented, my clients are proposing a 50 lot subdivision on 19.45 acres of land on the east side of Wilson School. The five tax code parcel's for this site are 224-11-034A thru 034E. We are currently in the rezoning and general plan amendment processes at the Town of Oro Valley (rezoning case #OV911-005).

I have attached a map (Sewers) locating the public sewer on the Wilson campus in relation to our project site. The sewer is 90' west of our project boundary. A July 19, 2011 letter from Pima County Regional Wastewater Reclamation Department (attached) documents that sewer capacity exists for our development.

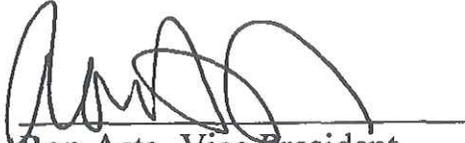
**This letter then is an official request of Amphitheatre Public Schools to grant Rancho De Plata a sewer easement to connect to sewer #G-2006-016. As discussed at our meeting, my clients are willing to make roof-top donations to Amphi. Please let us know what steps are necessary to make this easement happen.**

Attached also is our project's tentative development plan. Please notice at the SW corner of the property, we have proposed a bike/ pedestrian pathway/ sewer easement on our project site.

Thank you for your consideration, Todd, and we look forward to hearing from you.

Sincerely,

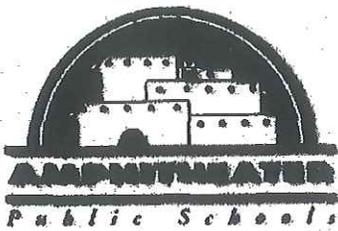
CPE CONSULTANTS, LLC



Ron Asta, Vice President

Attach: 3

Cc: Doug Ajo w/ attach



**OFFICE OF LEGAL COUNSEL**

Todd A. Jaeger, J.D.  
Associate Superintendent  
(520) 696-5156  
FAX (520) 696-5074

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

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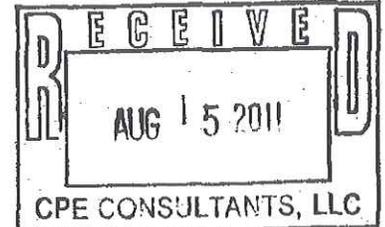
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Linda Loomis, Ph.D.

Susan Zibrat

SUPERINTENDENT  
Vicki Balentine, Ph.D.

August 10, 2011



Ron Asta  
Vice President  
CPE Consultants  
378 N Main Ave  
Tucson, AZ 85701

**RE: Rancho De Plata  
Town of Oro Valley OV911-005**

Dear Mr. Asta:

I am in receipt of your letters of August 1 and August 2, 2011. Following our recent discussions, I am happy to accommodate your requests.

As we discussed, your proposed subdivision would impact, but not overburden, student enrollment capacity at Amphitheater Schools' Walker K-8 and Ironwood Ridge High.

Our District is also willing to work with you regarding your development plan. Please forward more information regarding the Easement at your convenience.

Please contact me if I can be of further assistance.

Sincerely,

Todd A. Jaeger, J.D.  
Associate to the Superintendent  
General Counsel

TAJ/crm

**Ron Asta**

---

**Subject:** FW: Rancho de Plata next door to Wilson School

-----Original Message-----

From: McFarland, Connie [mailto:cmcfarla@amphi.com]  
Sent: Wednesday, October 12, 2011 4:25 PM  
To: ron.asta@cpeconsultants.com  
Subject: RE: Rancho de Plata next door to Wilson School

Doug and Scott just left my office. We agreed that the correct numbers to use for IRHS is a capacity of 2370 and the Wilson K-5 capacity is 750 and its 6-8 capacity is 800.

---

From: Ron Asta [ron.asta@cpeconsultants.com]  
Sent: Wednesday, October 12, 2011 4:13 PM  
To: McFarland, Connie  
Subject: RE: Rancho de Plata next door to Wilson School

What are your numbers Connie?

-----Original Message-----

From: McFarland, Connie [mailto:cmcfarla@amphi.com]  
Sent: Wednesday, October 12, 2011 2:35 PM  
To: ron.asta@cpeconsultants.com  
Subject: RE: Rancho de Plata next door to Wilson School

Ron, my numbers are different. I will confirm the correct numbers with Doug Aho as soon as he gets out of a meeting. Will advise soonest!

---

From: Ron Asta [ron.asta@cpeconsultants.com]  
Sent: Wednesday, October 12, 2011 2:26 PM  
To: McFarland, Connie  
Subject: Rancho de Plata next door to Wilson School

Hi Connie. When I talked to one of the principles at Wilson School this summer, he told me that the enrollment capacity was about 1,500 students. And when I talked to one of the staff memebers at Ironwood, she said about 2,100 students. If these are o.k., please let me know. If not, revised figures are requested. Thanks.

Ron Asta, Vice President  
CPE Consultants LLC  
378 N. Main Ave.  
Tucson, Az. 85701  
520-545-7001