

**PLANNING & ZONING
COMMISSION DRAFT**

WHITEHOUSE CANYON -REZONE-

**PIMA COUNTY
NOVEMBER 2015**

Whitehouse Canyon Rezone

Pima County, Arizona
Whitehouse Canyon Road
and Camino De La Canoa

Submitted to:

**Pima County
Development Services Department**
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August, 2015
Rezone Case #xxx-xx-xx

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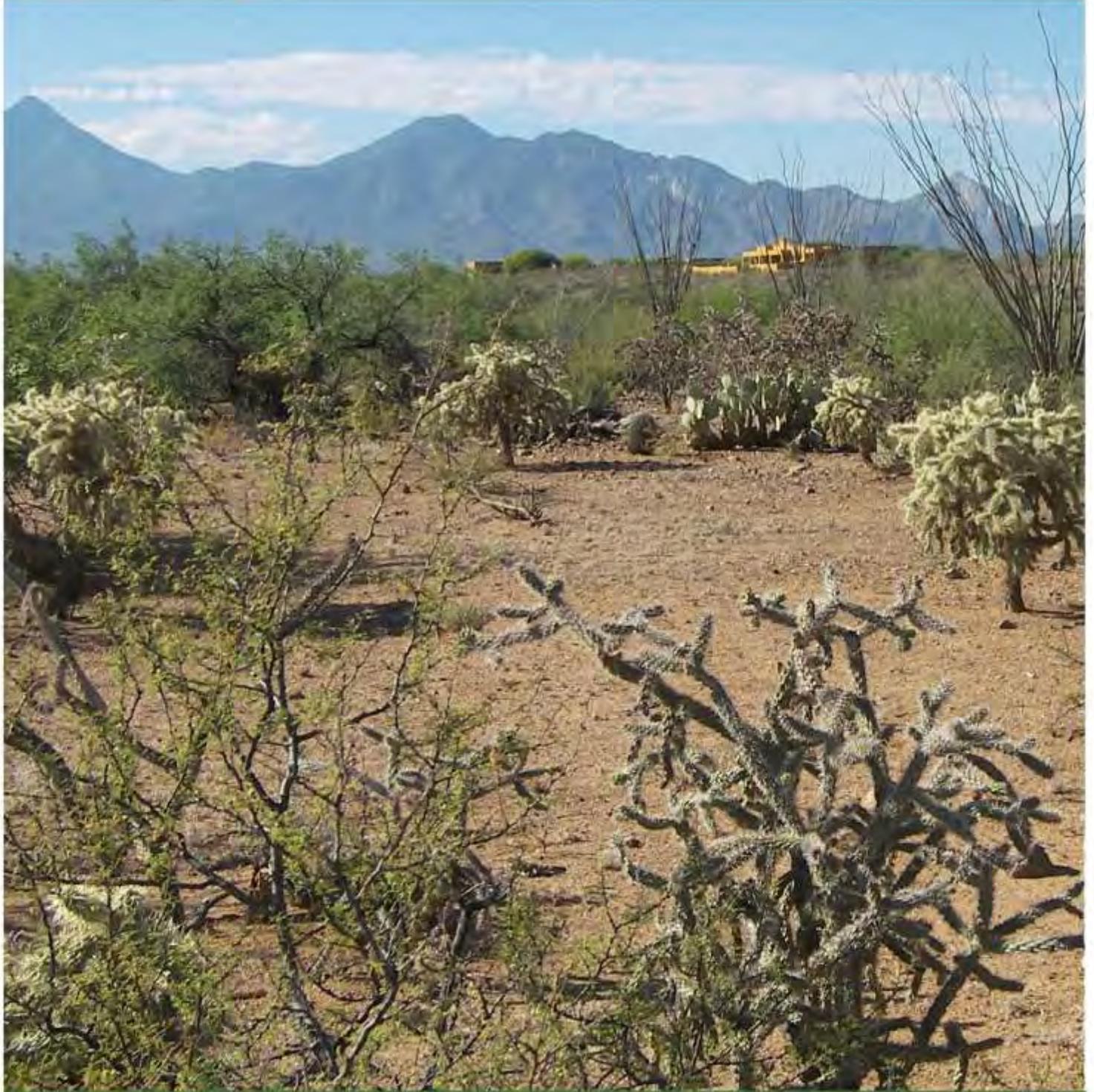
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I: INTRODUCTION

The following document summarizes a site inventory and analysis for the subject property located in Green Valley, in southeastern Pima County, Arizona. The purpose of the study is to identify factors directly or indirectly influencing a rezoning of the property from RH (Rural Homestead) to CR-1 (Cluster Development Option). The cluster development option was utilized in order to provide flexibility in siting of structures and roadways while preserving the most sensitive natural elements of site, including the washes, natural vegetation and topographic features.

The site is currently vacant. Information gathered from a site visit on June 13, 2014 indicated that the property was formerly used for grazing cattle. There are former elements of grazing infrastructure in the form of a deconstructed cattle guard and fencing on the property, but they are no longer in use.

The opportunities and constraints identified in the Site Analysis were taken into consideration in the creation of the Preliminary Development Plan, including the Land Use, Circulation and Post-Development Hydrology Concepts. The land use proposal enables the developer to set forth design concepts derived from the analysis of the site's characteristics, and to present sensitive design and mitigation techniques that respond to unique site characteristics and the character of the surrounding areas.

The document was designed to address the Pima County Site Analysis Requirements dated March 16, 2010 and Section 18.09.040 Cluster Development Option of the Pima County Zoning Code.





II: SITE INVENTORY

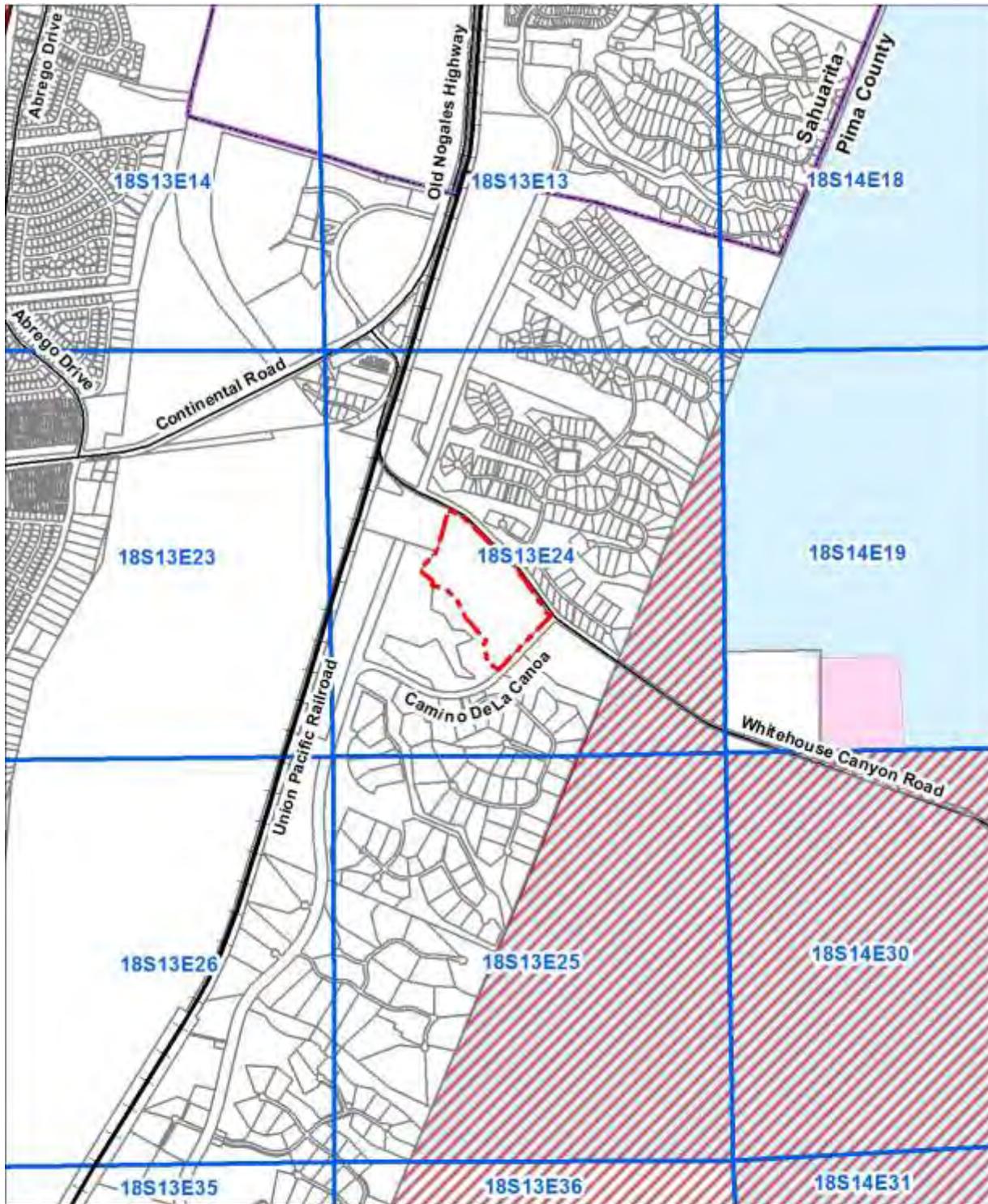
A. Existing Land Uses

1. Location and Regional Context

This application includes a portion of parcel #304-18-9760. The area of the entire parcel is approximately 54.8 acres, and the subject property of this application is for 36.62 acres of that parcel. The site is located in Green Valley, in southeastern Pima County, at the southwest corner of Whitehouse Canyon Road and Camino De La Canoa, approximately one-half mile east of the Union Pacific Railroad tracks and one mile south of the Town of Sahuarita. The site is located within Township 18 South, Range 13 East, Section 24 of Pima County, Arizona (See *Exhibit II.A.1: Location and Vicinity.*)



Exhibit II.A.1: Location and Vicinity



LEGEND

- | | | | | | |
|---|----------------------------|---|-------------------------------|---|--|
|  | Site Boundary |  | Arizona State Trust | Project Site Location:
Township 18S, Range 13E, Section 24
Acreage: Approx. 36.6 AC
Parcel ID: 304189760 |  <p>FILE NAME: TP105_location_6a8.mxd
SOURCE: Pima County GIS, 2014</p> |
|  | Jurisdictions |  | BLM | | |
|  | Township, Range, & Section |  | Santa Rita Experimental Range | | |
|  | Parcels | | | | |



2. Existing Land Uses

a. Existing On-Site Uses

The site is currently vacant. There is a fence that dissects the property from the southeast to the northwest, and there is infrastructure in disrepair on the property indicating that it was formerly used for grazing cattle. (See *Exhibit II.A.2.a: Existing On-Site Uses*)

b. Existing On-Site Easements

There is an electrical transmission line above the property that runs from the southeast to the northwest borders of the property. The easement for electrical line is unknown at this time.

c. On-Site Pima Prospers Comprehensive Plan Designations and Designations within a One-Quarter Mile Radius

The existing Pima Prospers comprehensive plan designations and approximate acreages of each designation on the site are as follows:

- 16.4 acres of Low Intensity Urban, 1.2 (LIU-1.2)
- 2.0 acres of Community Activity Center (CAC)
- 18.1 acres of Low Intensity Rural, (LIR)

(See *Exhibit II.A.2.c: Comprehensive Plan Designations*)

The land use designations surrounding the site within a one-quarter mile radius are as follows:

- North: Low Intensity Urban 1.2 (LIU 1.2)
- South: Low Intensity Rural (LIR)
- East: Low intensity Rural (LIR), Resource Sensitive (RS)
- West: Neighborhood Activity Center (NAC), Community Activity Center (CAC), Resource Sensitive (RS)



Exhibit II.A.2.a: Existing On-Site Uses

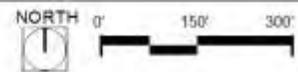
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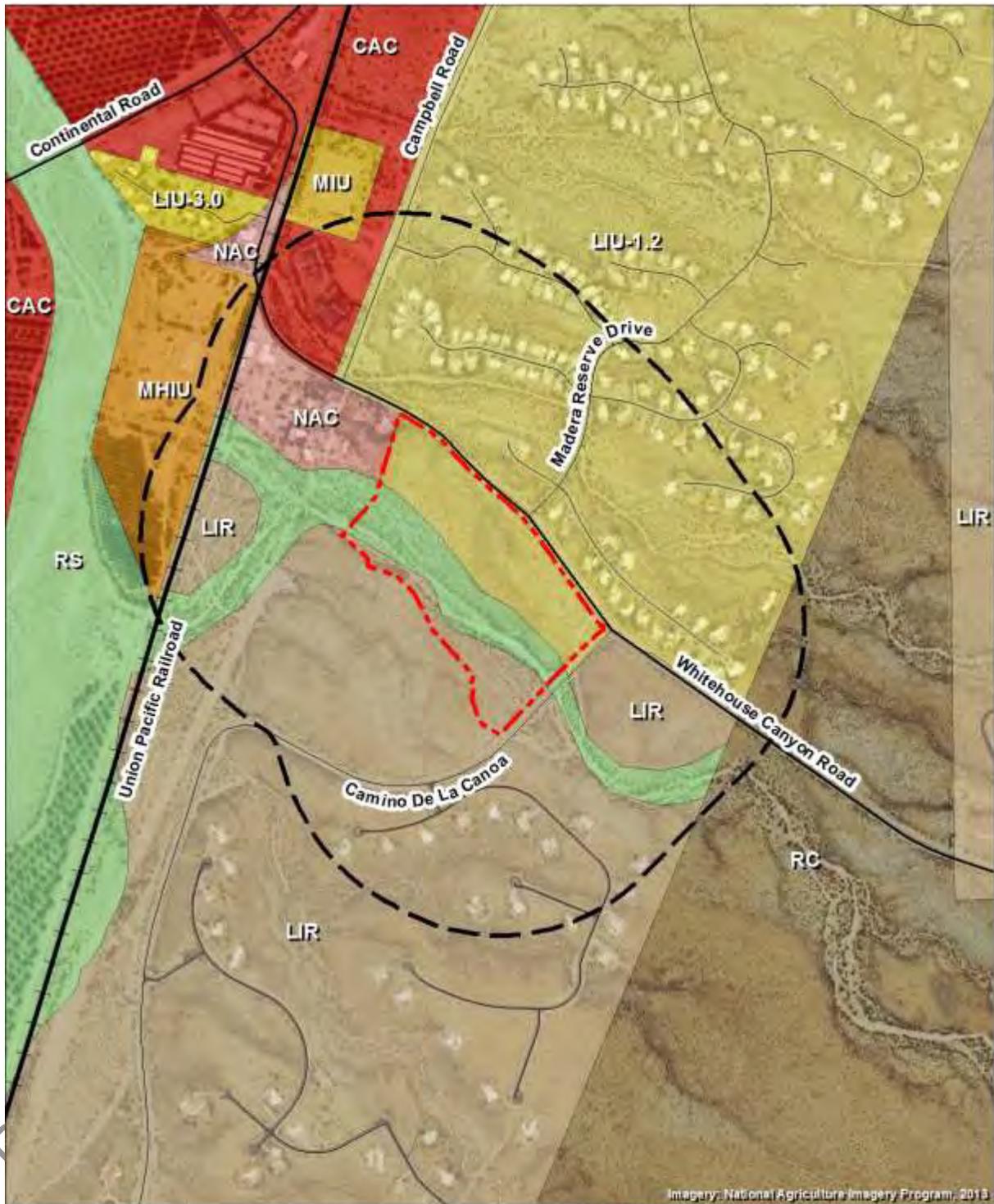
-  Site Boundary
-  Approximate Location of Overhead Power Lines
-  Approximate Location of Fencing



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 SOURCE: Pima County GIS, 2015



Exhibit II.A.2.c: Pima Prosperes Comprehensive Plan Designations

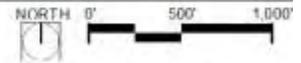


LEGEND

- Site Boundary
- 1/4-Mile Radius

Pima County Comprehensive Plan Designation

- | | | |
|---|---|--|
| LIU-1.2 | LIR | RC |
| LIU-3.0 | RS | |
| MIU | NAC | |
| MHIU | CAC | |



FILE NAME: TP105_com_plan_6x8.mxd
SOURCE: Pima County GIS, 2015



3. Aerial Photo

Exhibit II.A.3 displays a 2014 Pictometry aerial Image of Subject Property with a 600-Foot Radius surrounding the site.

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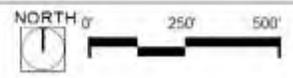


Exhibit II.A.3: Aerial Photo



LEGEND

-  Site Boundary
-  600-Foot Radius



FILE NAME: TP05_aerial_6x8.mxd
SOURCE: Pima County GIS, 2015



4. Surrounding Properties

a. Existing On-site and Off-site Zoning within One-Quarter Mile Radius

The site is within one mile of the Santa Rita Experimental Range, a public preserve, and therefore, subject to the Section 18.67: Buffer Overlay Zone of the Pima County Zoning Code. In addition, Whitehouse Canyon Road to the north of the site is classified as a scenic route.

Table II.A.4.a: Existing Zoning

Project Site	Pima County RH (Rural Homestead)
North	Pima County CR-1(Cluster Option)
South	Pima County RH (Rural Homestead)
East	Pima County RH (Rural Homestead)
West	Pima County RH (Rural Homestead)

(See Exhibit II.A.4.a: Existing Zoning.)

b. Existing Off-site Land Uses within One-Quarter Mile Radius

Table II.A.4.b: Existing Off-Site Land Uses

North	Madera Reserve Phase I Single Family Residential (SFR) 0.7 RAC
South	Madera Foothills Estates SFR 0.4 RAC
East	Vacant
West	Unsubdivided Residential, Community Center, Medical Center, Union Pacific Railroad, Mature Nut Crop Trees and Associated Structures, Continental Airport

(See Exhibit II.A.4.b: Existing Land Uses.)

c. Number of Stories of Off-site Existing Structures

Table II.A.4.c: Number of Stories of Off-site Existing Structures

North	One-Story Single Family Residential
South	One-Story Single Family Residential
East	N/A
West	One and Two-Story Single and Multi-Family Residential



(See Exhibit II.A.4.b: Existing Land Uses.)

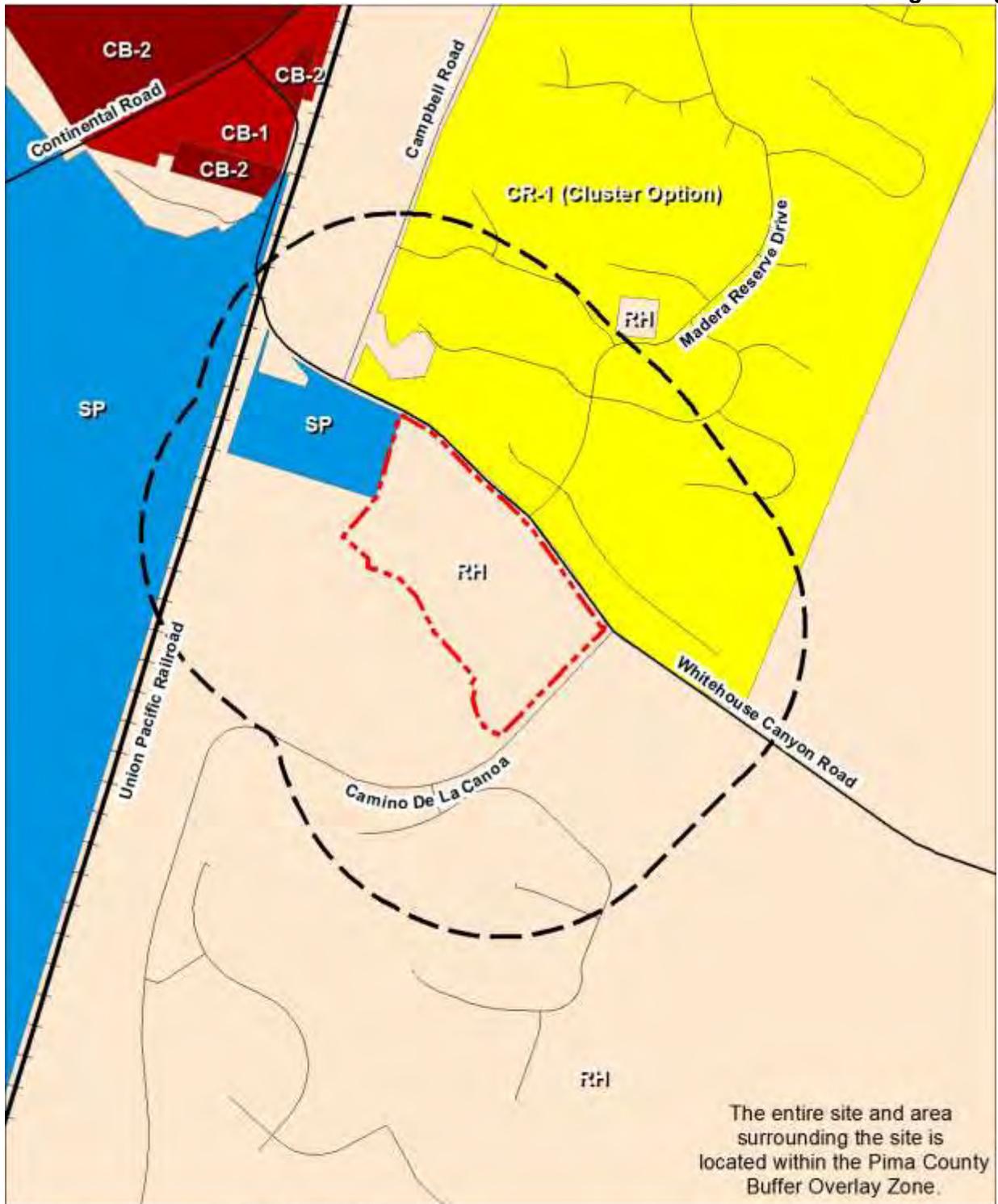
d. Pending or Conditionally Approved Rezonings:

There are no pending or conditionally-approved rezonings and subdivisions and/or development plans currently under review.

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Exhibit II.A.4.a: Existing Zoning



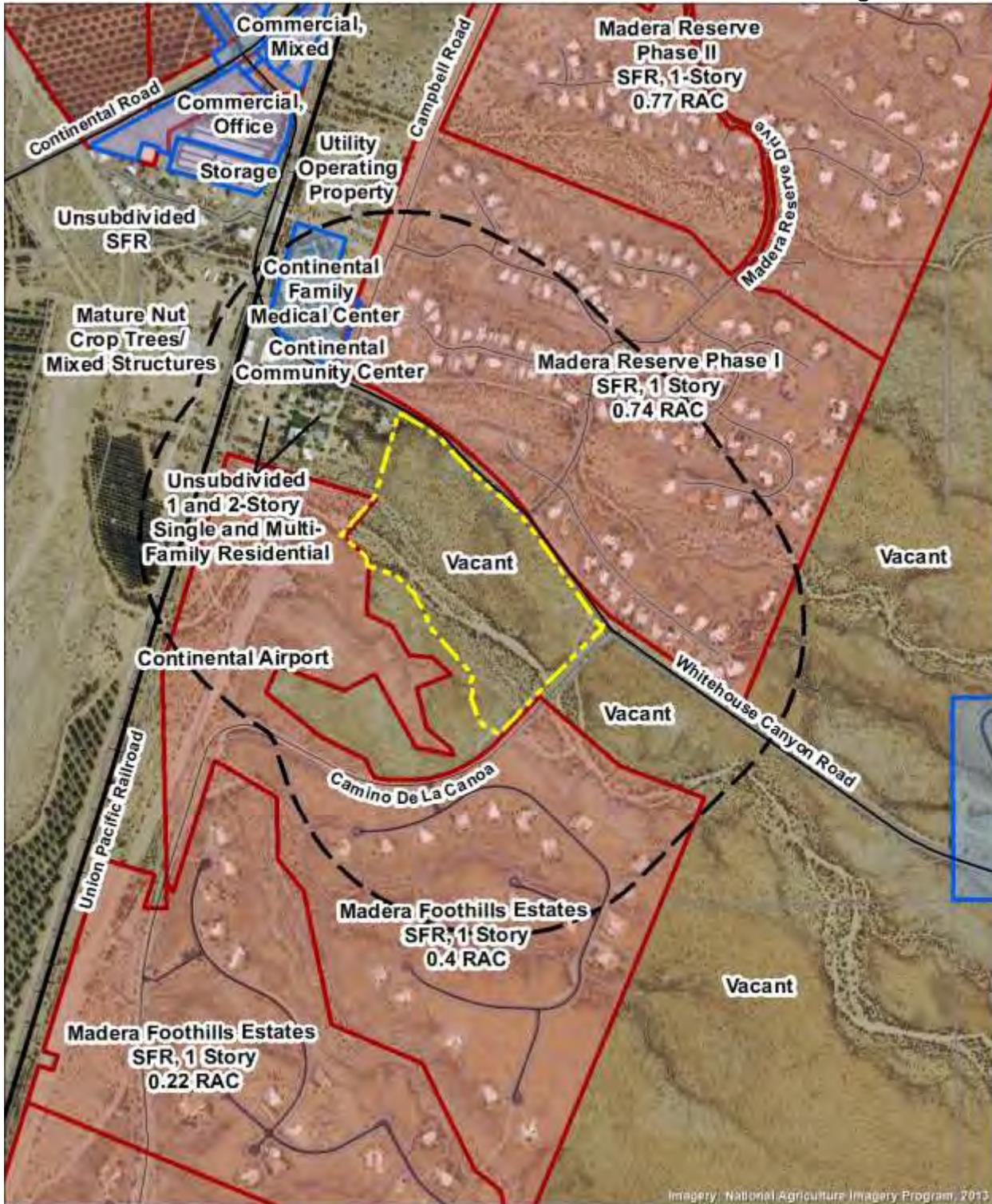
LEGEND		Pima County Zones	
	Site Boundary		CR-1
	1/4-Mile Radius		RH
			CB-1
			CB-2

NORTH

FILE NAME: TP105_zoning_6x8.mxd
SOURCE: Pima County GIS, 2015



Exhibit II.A.4.b: Existing Land Uses



LEGEND

- Site Boundary
- Approved Subdivisions
- 1/4-Mile Radius
- Approved Development Plans

NORTH 0' 500' 1,000'

FILE NAME: TPI05_ex_uses_6x8.mxd
SOURCE: Pima County GIS, 2015



B. Topography

1. Topographic Characteristics

Elevation ranges from 2,880 feet at the northwestern edge of the property to 2,946 feet in the eastern corner of the property nearest to the intersection of Whitehouse Canyon Road and Camino De La Canoa.

Preliminary development plans have established a developable area of approximately 8.7 acres in the eastern portion of the property. The elevations on the developable portion of the property range from approximately 2,908 feet at the northwestern corner to approximately 2,946 feet at the southeastern corner (See *Exhibit II.B.1: Topography.*)

a. **Restricted Peaks and Ridges**

There are no restricted peaks or ridges located on-site.

b. **Rock Outcrops**

There are no rock outcrops or talus slopes located on-site.

c. **Slopes of 15% or greater**

There are slopes greater than 15% throughout the site. The buildable portion of the site is generally flatter and has a lower proportion of steep slopes than the areas of the site that will remain undisturbed.

d. **Significant Topographic Features**

There is a vertical cut bank of roughly 12 feet located along the southwestern edge of the wash that runs through the parcel.

e. **Existing grading**

The site is vacant, and therefore no ground disturbance has occurred on the subject property.

2. Pre-Development Average Cross Slope

The average cross-slope of the entire parcel is 12.9% as calculated in accordance with the Pima County Zoning Code by performing the following calculation:

$$ACS = \frac{I \times L \times 0.0023}{A}$$

Interval (I) = 2'

Total length of contours in feet (L) = 102,312'

Area in acres (A) = 36.6

ACS = 12.9



The average cross-slope of the developable area of the parcel is 9.6% as calculated using the following factors:

Interval (I) = 2'

Total length of contours in feet (L) = 18,234

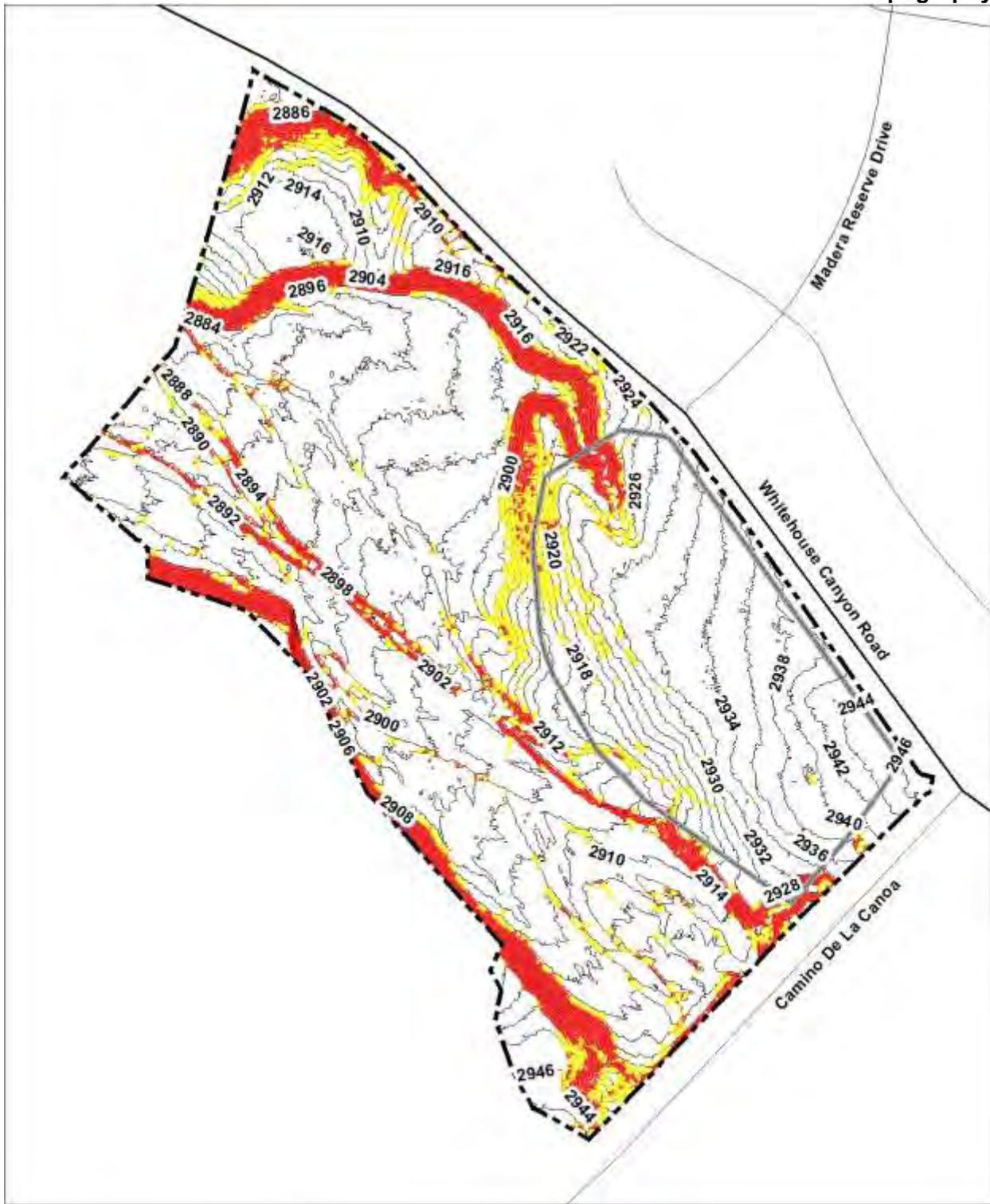
Area in acres (A) = 8.7

ACS = 9.6

PLANNING AND ZONING COMMISSION DRAFT



Exhibit II.B.1: Topography

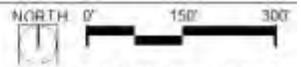


LEGEND

-  Site Boundary
-  Plan Area Boundary

SLOPES

-  15% - 25%
-  >25%
-  2' Elevation Contour Lines



FILE NAME: TPI05_topo_6x8.mxd
 SOURCE: Fima County GIS, 2014



C. Hydrology

1. Off-Site Watersheds

The perimeter of all offsite watersheds that affect or are affected by the project site area depicted on *Exhibit II.C.1*.

2. Off-Site Features

There is one offsite watershed affecting this property. This offsite watershed extends to the southeast of the project and into the foothills of the Santa Rita Mountains. This wash exits the site along the west property boundary.

3. Acreage of Off-Site Watersheds

The area of the offsite watershed affecting the property is 2545 acres.

4. On-Site Hydrology

The watershed area and 100-year peak discharge rate for the wash entering and exiting the project site is shown on *Exhibit II.C.4*.

a. 100-Year Floodplains

Minor surface drainage enters the site along the north boundary as runoff from the south half of the Whitehouse Canyon Road right of way. This unconfined flow can be characterized as sheet flow with depths of about 0.1 feet.

b. Sheet Flooding Areas

Drainage conditions associated with the major offsite storm water can best be characterized as channel and overbank flow with depths of 3- to 5-feet.

c. Federally-Mapped Floodplains

There are no federally mapped floodplains on the project site. The property is mapped as Zone X on FEMA FIRM Panels #04019C3955L, effective June 16, 2011.

d. Peak Discharges

100-year storm event peak discharge rates for all points of concentration along the project boundaries were computed using PC-Hydro. The location of the concentration point, drainage areas and 100-year peak discharge rates are provided on *Exhibit II.C.4*.

e. Riparian Habitat



The project site contains some areas that are mapped Xeroriparian Type C. The locations and areas of these riparian areas are shown on *Exhibit II.C.4*

f. **Drainage Infrastructure**

The only drainage infrastructure in the vicinity of the property are the culverts beneath Camino De La Canoa. The location of these culverts are shown on *Exhibit II.C.4*.

g. **Surface Water**

There are no lakes, ponds, wetlands, springs or perennial surface waters in the vicinity of the project site.

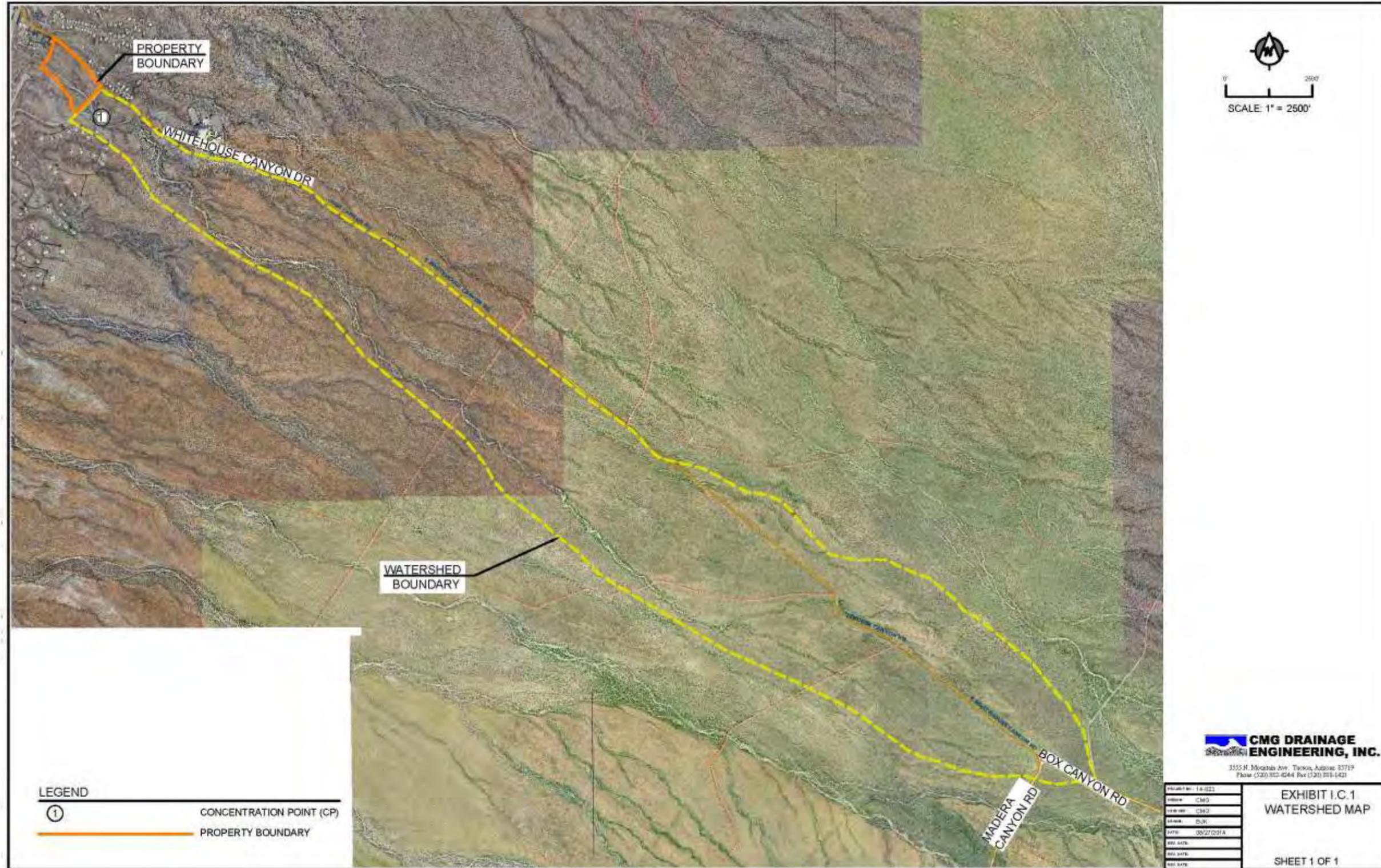
h. **Erosion Hazard Setbacks**

The largest 100-year peak flow exiting the project is at concentration point #1 (3,243 cubic feet per second). The erosion setback distance from the natural bank of this wash is 75-feet. Engineering analyses may determine that this setback can be reduced.

5. Downstream Drainage Conditions

The on-site wash exits along the west boundary in a natural condition, then drains to culverts beneath the Union Pacific Railroad. The wash ultimately discharges to the Santa Cruz River.







D. Biological Resources

1. Conservation Lands System

According to the Pima County Conservation Lands System (CLS) Map, ±7 acres of the site located along the northern boundary is located outside of CLS. Approximately 29 acres comprises the remainder of the site classified as a Multiple Use Management Area. Multiple Use Management Areas are defined by the CLS as areas of significant biological value, but do not attain the level associated with Biological Core Management Areas (See *Exhibit II.D.1: Conservation Lands System.*)

2. Critical Landscape Connections

According to the Pima County CLS, critical landscape connections are broadly defined as areas that provide connectivity for movement of biological species, but also contain potential or existing barriers to the movement of wildlife between major conservation areas. The subject property is located in an area identified by the CLS as landscape connection area 4: Across the I-19 and the Santa Cruz River corridors in southern Pima County.

3. Pima Pineapple Cactus Priority Conservation Area

The site is not within the Pima Pineapple Cactus Priority Conservation Area (PCA).

4. Needle-Spined Pineapple Cactus Priority Conservation Area

The site is not located within the Needle-Spined Pineapple Cactus PCA.

5. Priority Conservation Areas

a. Cactus Ferruginous Pygmy Owl

The site is not located within a Priority Conservation Area for the cactus ferruginous pygmy-owl.

b. Western Burrowing Owl

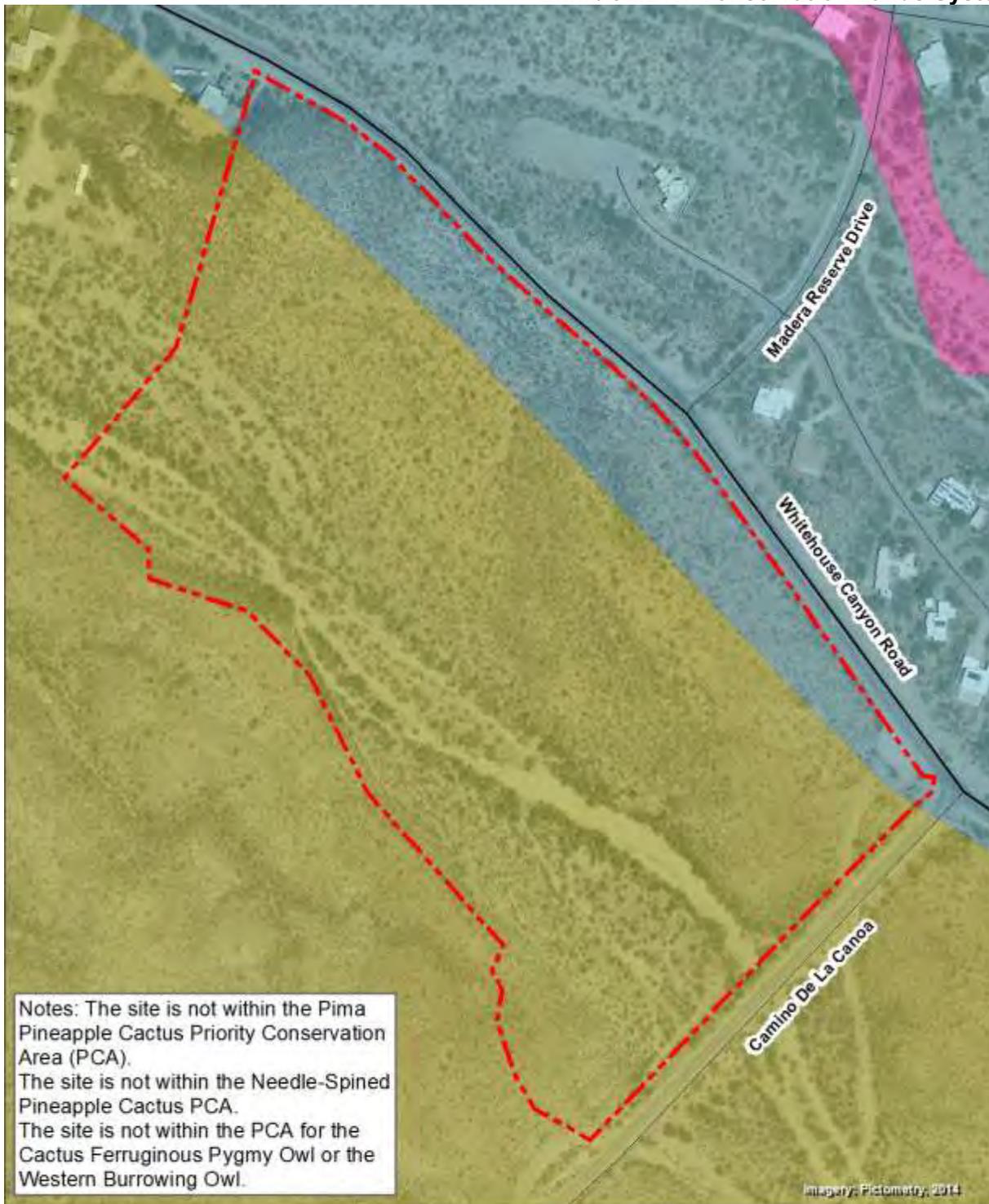
The site is not located within a Priority Conservation Area for the western burrowing owl.

6. Arizona Game & Fish Department Heritage Data Management System

The Arizona Game and Fish Department's (AGFD) Heritage Data Management System (HDMS) was accessed via their On-line Environmental Review Tool. The Pima Pineapple Cactus is Listed Endangered (LE) by the United States Fish and Wildlife Service (FWS) and Highly Safeguarded (HS) by the Arizona Department of Agriculture (ADA), and is known to occur within three miles of the property. The HDMS also includes records for other species that do not have Endangered Species Act (ESA) protection (special-status species), and of lands of environmental concern, such as critical habitat for species with ESA protection and wildlife linkage corridors. The summary page from the HDMS review has been included as *Exhibit: II.D.6: AGFD Online Environmental Review*. The HDMS identifies the Stag-horn Cholla as Salvage Restricted (SR) by the ADA, and the Yellow-billed Cuckoo as a Special-Status species (S) by the U.S. Forestry Service and as a top-tier (1A) vulnerable species by the AGFD, and those species are known to occur within 3 miles of the property. The HDMS also identifies the site being within three miles of both the Santa Rita-Sierrita and the Santa Rita-Tumacacori Linkage Design Wildlife Corridors. In addition, the online tool identifies the site as an experimental area for the nonessential population of the Mexican Gray Wolf and the Pronghorn Sheep by the FWS.



Exhibit II.D.1: Conservation Lands System



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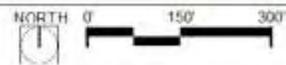
Site Boundary

Conservation Lands System Designation

Multi-Use Management Area

Outside CLS

Important Riparian Area



FILE NAME: TP105_CLS_6x8.mxd
 SOURCE: Pima County GIS, 2014



Exhibit II.D.6: AFGD On-Line Environmental Review

Arizona Game and Fish Department
Project ID: HGIS-01910

project_report_whitehouse_canyon_15246_15485.pdf
Review Date: 7/30/2015 04:51:35 PM

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

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Antilocapra americana sonoriensis</i>	100 area for Sonoran Pronghorn	LE,XN				
<i>Canis lupus baileyi</i>	100 area Zone 2 for Mexican gray wolf	LE,XN				
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo (Western DPS)	LT	S			1A
<i>Coryphantha scheeri</i> var. <i>robustispina</i>	Pima Pineapple Cactus	LE			HS	
<i>Opuntia versicolor</i>	Stag-horn Cholla					SR
Santa Rita - Sierrita Linkage Design	Wildlife Corridor					
Santa Rita - Tumacacori Linkage Design	Wildlife Corridor					

Note: Status code definitions can be found at http://www.afgd.gov/wr_credits/fdms_status_definitions.shtml.

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

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Aix sponsa</i>	Wood Duck					1B
<i>Amazilia violiceps</i>	Violet-crowned Hummingbird		S			1B
<i>Ammodramus savannarum ammolegus</i>	Arizona grasshopper sparrow		S	S		1B
<i>Ammospermophilus harrisi</i>	Harris' Antelope Squirrel					1B
<i>Amphispiza quinquestriata</i>	Five-striped Sparrow					1B
<i>Anthus spragueii</i>	Sprague's Pipit	C*				1A
<i>Antrostomus ridgwayi</i>	Buff-collared Nighthawk		S			1B
<i>Aquila chrysaetos</i>	Golden Eagle	BGA		S		1B
<i>Aspidoscelis stictogramma</i>	Giant Spotted Whiptail	SC	S			1B
<i>Athene cucularia hypugaea</i>	Western Burrowing Owl	SC	S	S		1B
<i>Botaurus lentiginosus</i>	American Bittern					1B
<i>Buteo regalis</i>	Ferruginous Hawk	SC		S		1B
<i>Chilomeniscus stramineus</i>	Variable Sandsnake					1B
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo (Western DPS)	LT	S			1A
<i>Colaptes chrysoides</i>	Gilded Flicker			S		1B
<i>Coluber bilineatus</i>	Sonoran Whipsnake					1B
<i>Corynorhinus townsendii pallescens</i>	Pale Townsend's Big-eared Bat	SC	S	S		1B
<i>Crotalus tigris</i>	Tiger Rattlesnake					1B
<i>Cynanthus latirostris</i>	Broad-billed Hummingbird		S			1B
<i>Dynomys ludovicianus</i>	Black-tailed Prairie Dog	SC		S		1A
<i>Dipodomys spectabilis</i>	Banner-tailed Kangaroo Rat			S		1B
<i>Euderma maculatum</i>	Spotted Bat	SC	S	S		1B
<i>Eumops perotis californicus</i>	Greater Western Bonneted Bat	SC		S		1B
<i>Falco peregrinus anatum</i>	American Peregrine Falcon	SC	S	S		1A



7. Saguaros and Ironwoods

A site visit was conducted on June 13, 2014 and a preliminary plant inventory identified no saguaro cacti or ironwood trees located within the site boundaries.

8. Habitat Protection or Community Open Space

In accordance with the Sonoran Desert Conservation Plan Mapguide, the site is not identified for any areas identified for habitat protection or community open space.

9. Especially Important Vegetation

Sonoran Riparian Scrub vegetation is located alongside the borders of the site's various graded wash system; however plant density and diversity are relatively similar across the site. This community is dominated by mesquite trees (*Prosopis velutina*), foothills palo verde (*Parkinsonia microphyla*), whitethorn acacia (*Acacia constricta*), desert hackberry (*Celtis pallida*), and canyon ragweed (*Ambrosia abrosioides*).

Existing riparian vegetation is moderately denser and more diverse at points along the wash system than the vegetation of the upland areas. The riparian vegetation is largely the same species makeup as the upland vegetation, with the addition of desert hackberry and canyon ragweed. There is a slightly greater density of plant coverage due to the concentrated runoff from rainfall.

Table II.D.9 presents a list of plants observed during the site visit. Also observed, but not listed, were various bunch grasses and forbs.



Table II.D.9: Species list of plant species observed on site.

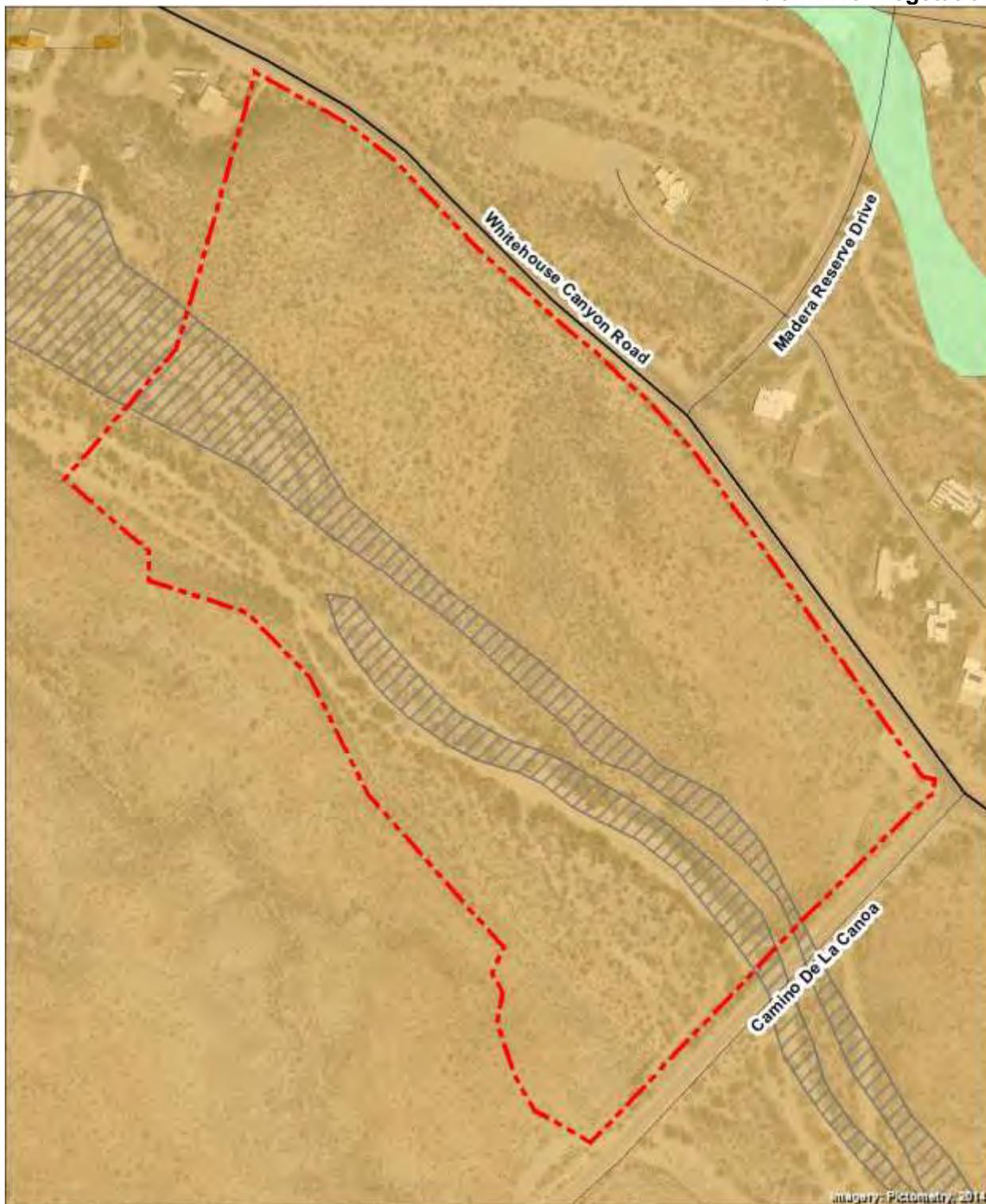
SCIENTIFIC NAME	COMMON NAME
<i>Acacia greggii</i>	Catclaw acacia
<i>Acacia constricta</i>	White thorn acacia
<i>Ambrosia deltoidea</i>	Triangle-leaf bursage
<i>Ambrosia abrosioides</i>	Canyon Ragweed
<i>Celtis pallida</i>	Desert Hackberry
<i>Echinocereus</i> sp.	Hedgehog cactus
<i>Ferocactus wislizenii</i>	Barrel cactus
<i>Fouquieria splendens</i>	Ocotillo
<i>Larrea tridentata</i>	Creosotebush
<i>Mammillaria microcarpa</i>	Pincushion cactus
<i>Opuntia engelmannii</i>	Prickly pear cactus
<i>Opuntia</i> spp.	Cholla Species
<i>Parkinsonia microphylla</i>	Foothills palo verde
<i>Prosopis velutina</i>	Velvet mesquite

10. Vegetative Communities

The project site contains native vegetation that is typical of that found in the Arizona Sonoran Desert (See *Exhibit II.D.10: Vegetation.*) There is a wash on the property that drains from the southeast to the northwest. According to Pima County Mapguide, the xeroriparian vegetation that occurs within the on-site wash is listed as Class C, and the existing vegetation on the remainder of the site is categorized as Scrub-Grassland (Semi-desert Grassland.)



Exhibit II.D.10: Vegetation



LEGEND

-  Site Boundary
-  Scrub-Grassland (Semidesert Grassland)
-  Agriculture / Developed / Water / Bare Ground

Pima County Xeroriparian Class

-  C
-  IRA - B - Important Riparian Area



FILE NAME: TP105_Veg_6x8.mxd
 SOURCE: Pima County GIS, 2015



E. Viewsheds

1. Site Visibility

Areas of high, medium, and low visibility as seen from nearby off-site locations have been mapped (See *Exhibit II.E.1: Site Visibility*.) The property consists of variable topography which results in a range of visibility onto and through the site. Visibility ranges from low to high depending on the viewer's specific location. The entire site cannot be seen from any given viewpoint because of the topographic differences. The areas of high, medium and low visibility were determined by visiting the site and viewing the property from Whitehouse Canyon Road, which has been listed in the Pima County Major Streets and Scenic Routes Plan as a scenic route.

Generally, areas of higher elevations are more visible from off-site vantage points. Views from the northwestern edge of the site on Whitehouse Canyon Road are blocked by the topography, and only a small portion of the site in the immediate vicinity of the northwestern edge are visible. The proposed project site is visible along Whitehouse Canyon Road, with visibility decreasing as the viewer looks towards the interior of the site due to the downward slope of the terrain.

Low Visibility Areas: The areas of lowest visibility occur in the floodplain areas where the site sits at the lowest elevation and consists of the higher density vegetation.

Medium Visibility Areas: The areas of medium visibility occur on the slopes from the edges of the property down to the main wash areas.

High Visibility: There are areas of high visibility at the northwest and northeast corner boundary adjacent to Whitehouse Canyon and southeast boundary adjacent to Camino De La Canoa. These areas are highly visible along the roadways due to topography.

2. Site Photos

Exhibit II.E.2.a: Site Photos displays photographs taken from different angles throughout and around the site. The approximate locations and directions from which these photographs were taken are displayed on *Exhibit II.E.2: Photo Key Map*.



Exhibit II.E.1: Site Visibility



LEGEND

Site Boundary	Low
Parcels	Medium
2' Elevation Contour Lines	High

NORTH

FILE NAME: TP105_viewshed_6x8.mxd
SOURCE: Pima County GIS, 2014

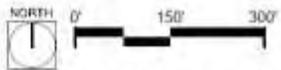


Exhibit II.E.2: Photo Key Map



LEGEND

-  Site Boundary
-  Photo Location and Direction



FILE NAME: TC105_photokey_6x8
SOURCE: Pima County GIS, 2015



Exhibit II.E.2.a: Site Photos



Photo 1: View looking southwest from the eastern corner of the property.



Photo 2: View looking west from the eastern corner of the property.



Photo 3: View looking north across Whitehouse Canyon Road from near the eastern property corner.



Photo 4: View looking east from the eastern property corner.



Photo 5: View from Camino De La Canoa looking southwest.



Photo 6: View from the eastern property corner at Camino De La Canoa looking southeast at neighboring development.



Exhibit II.E.2.a: Site Photos (cont.)



Photo 7: View looking south at the wash and culvert from near the eastern property boundary.



Photo 8: View looking west from near the eastern property boundary.



Photo 9: View looking southeast from the interior of the property with fencing and overhead electrical transmission lines.



Photo 10: View looking northwest from the interior of the property with fencing and overhead electrical transmission lines.



Photo 11: View from the property boundary on Whitehouse Canyon Road looking northeast at Madera Reserve Drive.



Photo 12: View from Madera Reserve Drive looking south across Whitehouse Canyon Road.



Exhibit II.E.2.a: Site Photos (cont.)



Photo 13: View looking west from the western property boundary with neighboring buildings.



Photo 14: View looking south from near the western property boundary.



Photo 15: View looking northwest from the southwest corner of the property.



Photo 16: View looking northwest from the southern boundary of the property.



Photo 17: View from the southeast corner of the property looking northwest.



Photo 18: View from the southeast corner of the property looking north along Camino De La Canoa.



F. Transportation

1. Existing and Proposed Off-Site Streets

a. Rights-of-Way

The site is located in Green Valley, directly adjacent to the south side of Whitehouse Canyon Road and west of Camino De La Canoa, and approximately one-half mile east of the Union Pacific Railroad tracks. Characteristics of these streets are located in *Table II.F.1: Roadway Inventory*. The closest major intersection is a four-way stop at the intersection of Whitehouse Canyon Road and Continental Road, approximately $\frac{3}{4}$ -mile northwest of the site. The closest traffic signal is located approximately 1.5 road miles from the site at the intersection of Abrego Drive and Continental Road.

Table II.F.1: Roadway Inventory

Roadway Segment	Existing Right-of-Way*	No. Lanes***	Conforms To Width Standards*	Continuous ROW*	Curb/Gutter***	Capacity**	Paving***	Posted Speed Limit***
Whitehouse Canyon Road	60-105 feet	2	No	No	No	16,000	Yes	35
Camino De La Canoa	90 feet	2	Yes	Yes	No	16,000	Yes	45
Continental Road	150 feet	2	Yes	Yes	No	16,800	Yes	45
Madera Reserve Drive	50 feet	2	Yes	Yes	No	16,000	Yes	25
Abrego Drive	90 feet	3	Yes	Yes	Yes	16,700	Yes	35
Campbell Road	100-150 feet	2	Yes	No	No	N/A	No	25
Old Nogales Highway	70-150 feet	2	Yes	No	No	16,000	Yes	50

Source:* Pima County Mapguide (2015), **Pima County Major Streets and Scenic Routes Plan (2011), ***Florida Department of Transportation (2007), ****Google Earth (2014)



Whitehouse Canyon Road

Whitehouse Canyon Road is listed on Pima County Mapguide as a rural minor collector road with an existing right-of-way width that varies between 60-feet and 105-feet, and has a posted speed limit of 35 mph. The Pima County Major Streets and Scenic Routes Plan (MSSRP) indicates that the planned right-of way for Whitehouse Canyon Road is 80 feet west of Camino De La Canoa, and is not listed on the MSSRP east of Camino De La Canoa. The existing right-of way directly adjacent to the project site is a continuous 105 feet. The MSSRP identifies Whitehouse Canyon Road as a scenic, not major route, and the road is identified as a bike route by the Pima County Bicycle and Pedestrian Program.

Camino De La Canoa

Camino De La Canoa is a minor collector road, with an existing right-of-way width of 90-feet and a posted speed limit of 45 mph. The road is also listed as a bike route by the Pima County Bicycle and Pedestrian Program.

Continental Road

Continental Road is listed as an urban collector road on Pima County Mapguide with an existing right-of way width of 150 feet, and a posted speed limit of 45 mph. It is also listed by the Bicycle and Pedestrian Program as a bike route, and by the Pima County MSSRP as a major scenic route, and as a medium volume arterial with a planned future right-of-way of 150 feet.

The traffic map addresses the right-of-way requirements as outlined for the Transportation section in the Pima County Site Analysis Requirements, March 2010 for major roads within a one-mile radius of the project (See *Exhibit II.F.1.*). It also addresses those roads which are adjacent to the site. Existing right-of-way information was obtained from Pima County Mapguide. Future right-of-way information was obtained from the Pima County MSSRP.

b. Present Average Daily Trips (ADT) for Existing Streets

Table II.F.1.b Average Daily Trips identifies traffic counts generated by Traffic Engineering of the Pima County Department of Transportation and Pima Association of Governments (PAG) Roadway Segment Traffic Counts for roadways within one mile of the project site.

Table II.F.1.b: Average Daily Trips

Road	Average Daily Trips (Year Taken)
Whitehouse Canyon Road (Camino De La Canoa to Continental Road)	2,761 (2014)
Continental Road (I-19 Frontage Road to Abrego Road)	13,223 (2014)
Continental Road (Abrego Road to Old Nogales Highway)	9,792 (2012)
Abrego Drive (Continental Road to Esperanza Drive)	5,790 (2015)
Old Nogales Highway (Continental Road to Nogales Highway)	*6,269 (2013)

Source: Pima Department of Transportation, Traffic Engineering, 2015, *Pima Association of Governments (PAG) Traffic Count Records (2015)

c. Existing Bicycle and Pedestrian Ways

According to Pima County GIS, there are existing bicycle routes on Whitehouse Canyon Road, Camino De La Canoa, Continental Road and Abrego drive. The Pima County Bicycle and Pedestrian Program indicates that there is a shared use path as well as a single track trail along the north side of Whitehouse Canyon Road, adjacent to the site location.

d. Scheduled Roadway Improvements

Continental Road and Old Nogales Highway are intended to undergo road improvements according to the PAG 2040 Regional Transportation Plan (RTP) Roadway Projects map, although these are planned improvements, and not currently funded. The PAG 2040 RTP Bicycle and Pedestrian Projects map indicates that bike lane improvements are planned for Whitehouse Road adjacent to the project site.

2. Distances from the Site to Existing Roadways

Exhibit II.F.2: Distance to Existing Driveways has been provided to give more detailed information on existing right-of-ways adjacent to the site and the distance from the site to the nearest existing curb cut.

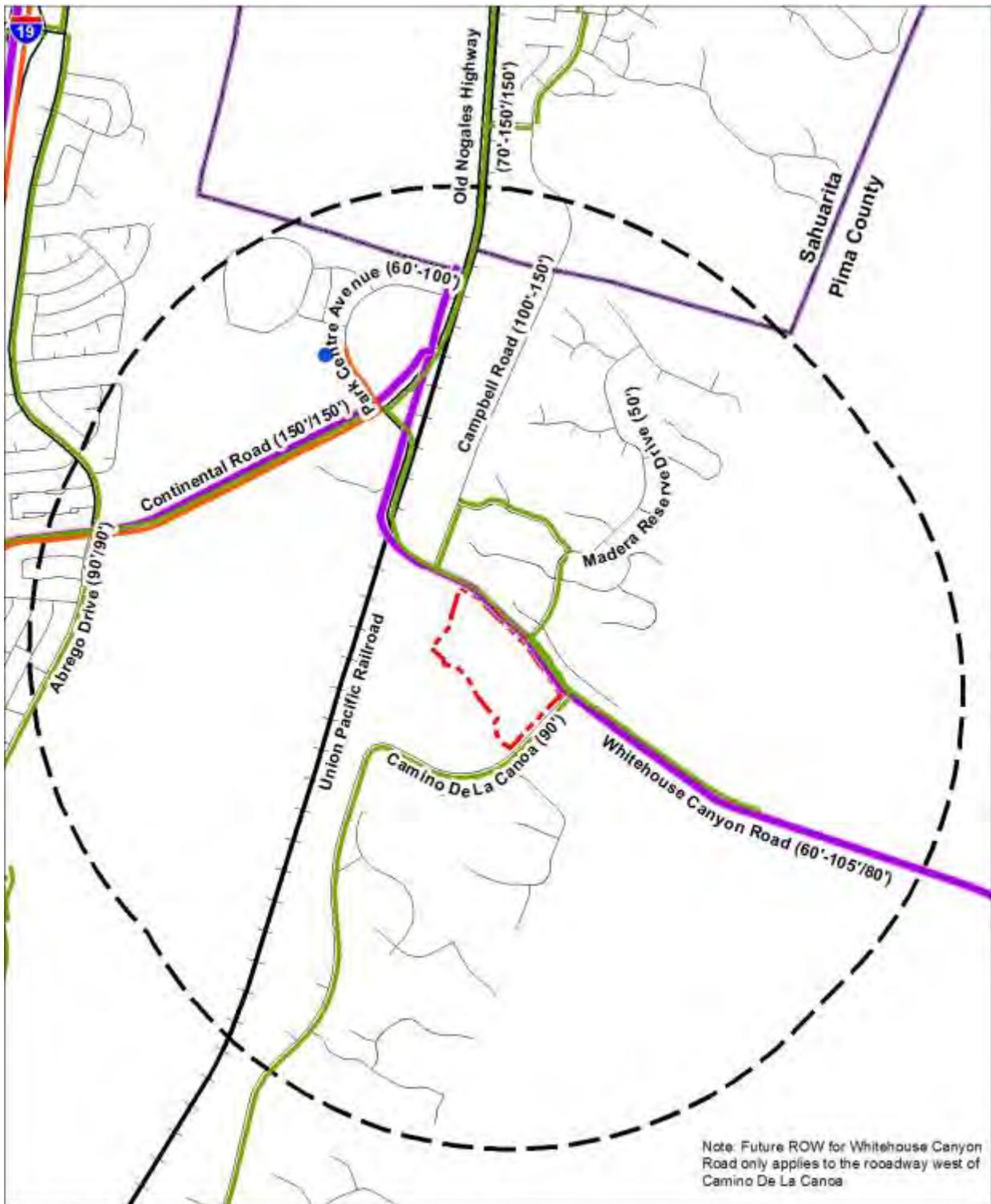
3. Bus Routes

According to the Regional Transportation Authority, stop #1 on Sun Shuttle route #421 is within one mile of the project site location. (See *Exhibit II.F.1: Traffic*)



PLANNING AND ZONING COMMISSION DRAFT





LEGEND

- | | |
|---|---|
|  Site Boundary |  Scenic Routes |
|  One-Mile Radius |  Bicycle Routes |
|  Jurisdictional Boundaries |  Sun Shuttle Route |
|  Sun Shuttle Stop | (Existing ROW/Future ROW) |

NORTH  0' 1,000' 2,000'

FILE NAME: TP105_trafficl_6x8.mxd
SOURCE: Pima County GIS, 2015

Exhibit II.F.2: Distance to Existing Driveways

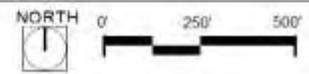




Imagery: Pictometry, 2014

LEGEND

 Site Boundary



FILE NAME: TP105_Driveways_6afl.mxd
SOURCE: Pima County GIS, 2015



G. Sewers

1. Capacity Response Letter from Pima County Regional Wastewater Reclamation Department

The site is within the Pima County Regional Wastewater Reclamation Department (RWRD) service area and tributary to the Green Valley Water Reclamation Facility.

Request for a capacity response letter was submitted by The Planning Center, and a response from the Pima County RWRD was received on June 25, 2014 (See *Exhibit II.G.1: Wastewater Letter.*) The RWRD has indicated that the sewerage capacity for this project currently exists in the public sewer G-97-144 at manhole 6572-01.

2. Site Constraints for Extension of the Existing Sewer Network:

According to Pima County MapGuide, an 8-inch public sewer (G-97-144) exists along Whitehouse Canyon Road north and east of the property (See *Exhibit II.G.2: Existing Sewer Network.*) The development site will connect to an existing sewer network served by Pima County Regional Wastewater Reclamation Department at manhole 6572-01. A right-of-way will be established that will enable sewer service for the development to connect with the existing network on Whitehouse Canyon Road.



Exhibit II.G.1: Wastewater Letter



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

JACKSON JENKINS
DIRECTOR

PH: (520) 724-6500
FAX: (520) 794-9635

June 25, 2014

Tim Craven
The Planning Center
110 S Church Street, Suite 6320
Tucson, Arizona 85701

Sewerage Capacity Investigation No. 2014-145 Type I

RE: **Whitehouse Canyon Rezoning, Parcel 304189760**
Estimated Flow 6,264 gpd (ADWF).

Greetings:

The above referenced project is tributary to the Green Valley Water Reclamation Facility.

Capacity is currently available for this project in the public sewer G-97-144, downstream from manhole 6572-01.

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.

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

Reviewed by: Kurt Stemm, CEA



PLANNING AND ZONING COMMISSION DRAFT

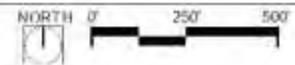


Exhibit II.G.2: Existing Sewer Network



LEGEND

-  Site Boundary
-  Existing Sewer Network
-  Parcels
-  Existing Sewer Manhole



FILE NAME: TP105_sewer_8x8.mxd
SOURCE: Pima County GIS, 2015



H. Recreation and Trails

1. Parks, Recreation Areas, Public Trails within One Mile of the Site

According to the Pima County Parks and Recreation Map, the Continental Community Center and the Santa Cruz River Park are located within one mile of the project location (See *Exhibit II.H.1: Parks, Recreation and Trails*.) River Parks are described in the Pima Regional Trail Master Plan as green corridors with paths and trails located along the metropolitan area's major watercourses, and are designed to accommodate the widest spectrum of users, including runners, walkers, equestrians, cyclists, and more. River Parks provide many benefits, including opportunities for alternative modes of transportation and connectivity with trails, workplaces, shopping, residential areas, and more. They also provide urban wildlife habitat, shade, and help to mitigate the urban heat island effect.

2. Trails

According to the Pima Regional Trail Master Plan (PRTMP), the Madera Canyon Road trail is located within a one-mile vicinity of the site. The trail is classified in the PRTMP as a Singletrack Trail, and provides hiking access from Green Valley to Madera Canyon and the Coronado National Forest. (See *Exhibit II.H.1: Parks, Recreation and Trails*.) Singletrack Trails are described in the PRTMP as having a recommended width of 2-3 feet, and built with greater sensitivity to the natural environment. There is a trailhead for the Madera Canyon Road trail located just south of Continental Road and east of Abrego Drive at the Santa Cruz River Park. According to the Pima County Bicycle and Pedestrian Program (PCBPP), there is a shared-use path on Whitehouse Canyon Road between the Continental School and Madera Reserve Drive. Shared-use paths are described by the PCBPP as a paved 8' to 16' wide path, suitable for bicycles, pedestrians, equestrians and more.

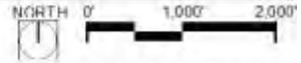


Exhibit II.H.1: Parks, Recreation and Trails



LEGEND

- Site Boundary
- One Mile Radius
- Santa Cruz River Park
- Jurisdictions
- Shared Use Path
- Madera Canyon Road Trail
- Santa Rita Experimental Range
- 058 SCR Abrego Drive Trailhead



FILE NAME: TPI05_rec_6x8.mxd
SOURCE: Pima County GIS, 2015



I. Cultural Resources: Archaeological and Historic Sites

1. Arizona State Museum Letter

a. Cultural Resources Field Survey

A search of the archaeological site records from the Arizona State Museum (ASM) found that the proposed project area has not been previously inspected for cultural resources (see *Exhibit II.1.1: Arizona State Museum Letter.*)

b. Previously Recorded Archaeological or Historic Resources

Since a cultural resources survey has not been performed; there are no known archaeological or historic resources found on the site.

c. Probability of Buried Archaeological Resources

The probability of buried archaeological resources located under the surface of the property is unknown.

d. Archaeological Survey Recommendations

Prior to ground modifying activities, an on-the-ground archaeological and historic sites survey shall be conducted on the subject property. A cultural resources mitigation plan for any identified archaeological and historic sites on the subject property shall be submitted at the time of, or prior to, the submittal of any tentative plan or development plan. All work shall be conducted by an archaeologist permitted by the Arizona State Museum, or a registered architect, as appropriate. Following rezoning approval, any subsequent development requiring a Type II grading permit will be reviewed for compliance with Pima County's cultural resources requirements under Chapter 18.81 of the Pima County Zoning Code.

2. Map and Description of Archaeological or Historic Sites

The Arizona State Museum records check indicated that no cultural resource surveys have been performed on the property. A potential future cultural resources survey will determine whether there are any cultural or historic sites on the subject property.

3. Field Survey Requirements or Results

The ASM defer to Pima County regarding recommendations concerning the need for meeting cultural resources requirements prior to any ground modification activities. Based on the results of the ASM site record check, the Pima County Cultural Resources and Historic Preservation Office may recommend that an on-the-ground survey be conducted by a qualified archaeologist prior to any ground modification activities.



Exhibit II.I: Arizona State Museum Letter



Arizona State Museum
The University of Arizona

1013 E. UNIVERSITY BLVD.
TUCSON, AZ 85721

ARCHAEOLOGICAL SITE RECORDS SEARCH

**This report documents the results of an archaeological site-records check.
It does not constitute a cultural resources clearance.*

Request Received: 8/17/2014

Search Completed: 8/1/2014

Requester Name: Tim Craven
Company: The Planning Center
Address: 110 S. Church, Suite 6320
City, State, Zip Code: Tucson, AZ 85701
Phone/FAX/or E-mail: (520) 623-6146

Project Name and/or Number: Whitehouse Canyon/TPI-05
Project Description: Rezoning

Project Area Location: Whitehouse Canyon Road and Camino de la Canoa

Legal Description: T18S R13E S24

Search Results: According to a search of the archaeological records housed at the Arizona State Museum (ASM), 17 previous survey projects have been conducted within a one-mile radius of the area of potential effect (APE) between 1987 and 2013; however, no portion of the APE has been subject to previous archaeological survey. Nineteen archaeological sites have been identified within a 1-mile radius of the project area, but none are present within the APE.

Sites in Project Area: No archaeological sites have been identified within the project area, however, but no portion of the APE has been previously surveyed.

Recommendations: No portion of the proposed project area has been subjected to an archaeological survey and there is a possibility for unidentified historic properties in the area. Therefore, the ASM recommends a qualified archaeological contractor be consulted before any ground disturbance begins. However, Pima County has jurisdiction in this project area, the county will make recommendations for the project using its own search results and it may use the ASM's search results and / or others. Should the county require additional archaeological work in this parcel, you will need to contact a qualified archaeological contractor whose name is maintained on a list posted on the ASM website at the following link: <http://www.statemuseum.arizona.edu/crservices/permits/index.shtml>

Pursuant to *Arizona Revised Statutes* §41-865 *et seq.*, if any human remains or funerary objects are discovered during your project work, all work will stop within the area of the remains and Dr. Todd Pitezzi, ASM assistant curator of archaeology, will be contacted immediately at (520) 621-4795.

If you have any questions about the results of this records search, please contact me

Sincerely,

Shannon Twilling, M.A.

Shannon D. Twilling, M.A.
Research Specialist
Archaeological Records Office
Arizona State Museum
(520) 621-1271
twilling@email.arizona.edu



J. Air Quality

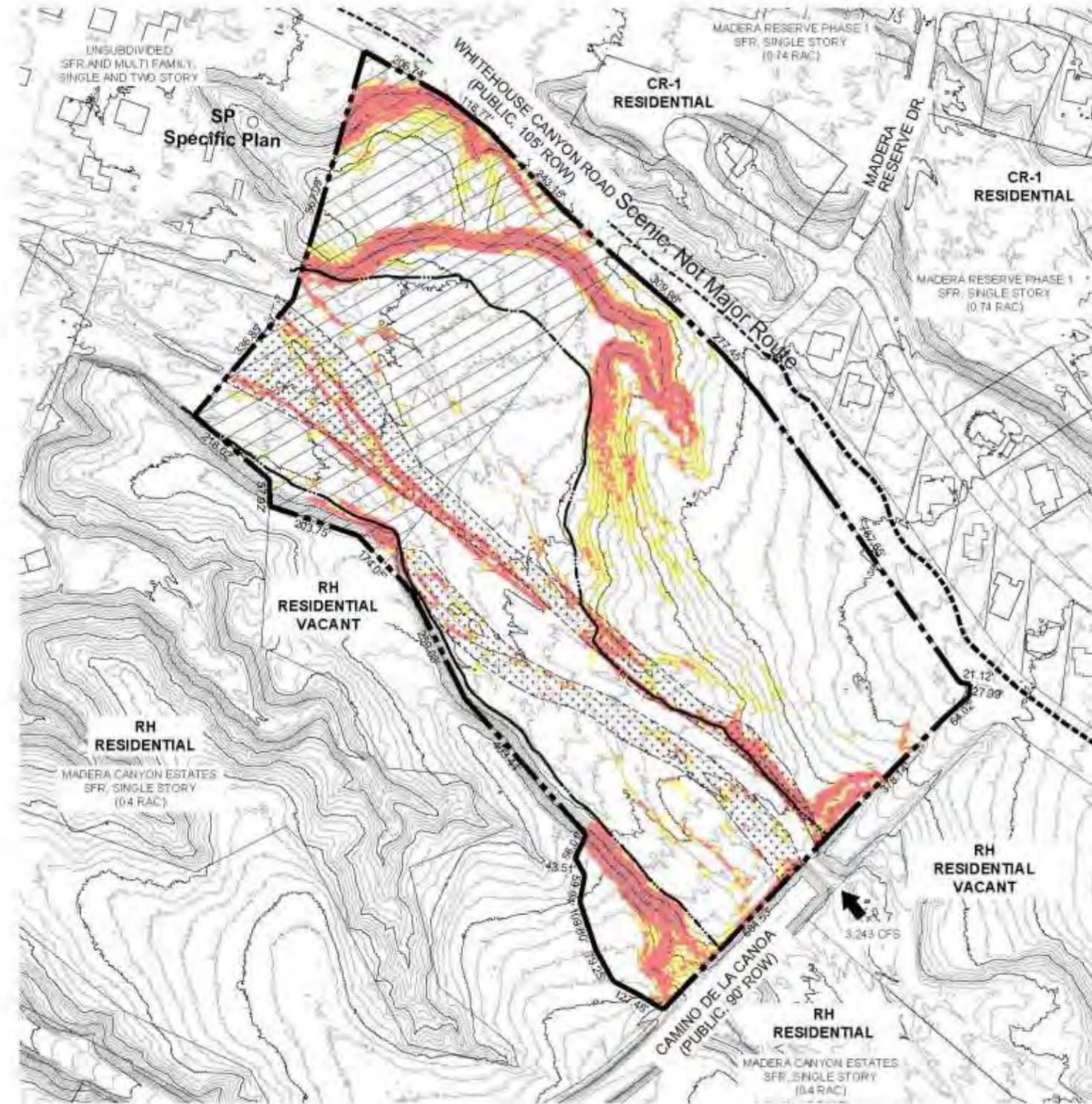
The proposed development does not include industrial type uses and therefore, this section does not apply.

K. Composite Map

The composite map graphically illustrates the summation of opportunities and constraints identified during the inventory and analysis process. (See *Exhibit II.K: Composite Map*).

PLANNING AND ZONING COMMISSION DRAFT





LEGEND

- SITE BOUNDARY
- PARCEL BOUNDARY
- EXISTING 2' CONTOUR
- - - 100 YEAR FLOODPLAIN
- EXISTING TRAIL - SHARED USE
- - - - EXISTING TRAIL - MADERA CANYON ROAD
- [Dotted Box] XERORIPARIAN C
- [Yellow Box] SLOPES: 15% TO 25%
- [Red Box] SLOPES: OVER 25%



FILE NAME: TNS SITE PLAN - C DWG / B & B COMPOSITE



III: LAND USE PROPOSAL

A. Project Overview

1. Requested Zoning Boundaries

This is a request to rezone a property into comprised of approximately 36.6 acres from RH (Rural Homestead) to CR-1 (Single Family Residential), Cluster Development Option (See *Exhibit III.A.1: Rezoning Boundaries.*)

2. Characteristics of the Proposed Development

The project will feature a cluster design in order to buffer the existing neighborhoods as well as protect the most sensitive natural features of the site, including the existing wash corridor, Xeroriparian areas, 15% or greater slopes and location within the buffer overlay zone. The subdivision is proposed for 23 single-family detached residential homes. Lot sizes will generally be 65' x 140' and shall consist of one-story home sites as shown on Exhibit III.B.1: Preliminary Development Plan. The overall project density is approximately 0.6 dwelling units per acre. Approximately 76% (27 acres) of the project property will remain permanently preserved as natural open space. Approximately 24% of the site located outside of the sensitive areas is proposed for development. The proposed architectural style will be compatible with the surrounding architecture and desert-toned colors of the area.

The following is a list of development characteristics that will benefit the community. The preliminary development plan will:

- Provide additional housing opportunities compatible with the existing subdivisions in the area.
- Preserve and feature the natural beauty of the site, including the washes, and native vegetation.
- Maximize the spectacular views of the Santa Rita Mountains, Tucson Mountains, and Santa Catalina Mountains, as well as city views to the west.
- Provide buffering for existing residents adjacent to the property through the provision of natural open space adjacent to these areas.
- Provide meaningful open space that allows for wildlife movement across the site while preserving a large portion of the remaining native vegetation.

a. Project Response to Site Constraints

The cluster development option is being proposed in order to preserve the natural drainage ways, vegetation and wildlife connectivity that occurs on the site in perpetuity. Project responses to site constraints are as follows:

- A 20-foot bufferyard and 4-foot screening wall is proposed along the developed portion of the site adjacent to Whitehouse Canyon



Road to mitigate any negative impacts on visibility, privacy and noise.

- A 60-foot bufferyard and 4-foot screening wall is proposed along the developed portion of the site adjacent to Camino De La Canoa.
- Proposed grading limits shall be minimized to preserve as much connective high resource value habitat as possible.
- The large wash that crosses through the site will remain as natural undisturbed open space.
- No two-story construction shall occur. The maximum building height will be limited to 14 feet in order to mitigate views from adjacent properties of the Santa Rita Mountains to the southeast.

b. **Pima Prospers- Comprehensive Plan**

The overall project density is approximately 0.6 dwelling units per acre. The Pima Prospers Pima County Comprehensive Plan designation on the property is Low Intensity Urban, which allows for a maximum of 1.2 units per acre.

c. **Impact to Existing Land Uses and Surrounding Land Uses**

The proposed project site is located on a major local road, Whitehouse Canyon Road, approximately one-half mile east of the Union Pacific Railroad tracks and one mile south of the Town of Sahuarita boundary. The project site is located in the vicinity of land uses similar to the intensity and land use proposed. The existing Madera Reserve located north of the project site is developed at approximately 0.74 RAC. The properties adjacent to the project area to the south and east are vacant. Other land uses adjacent to the site include unsubdivided single-family and multi-family residences to the west. The proposed development will have minimal impact on existing land uses on- and off-site given the following:

- Ample setbacks, screening, open space, undisturbed natural open space and vegetative buffering is proposed where appropriate between the project site and adjacent properties to mitigate any negative impacts on visibility, privacy and noise.
- Building height limitation is proposed to restrict the development to single-story development, with a maximum of 14 feet in height. This will help mitigate views from adjacent properties of the Santa Rita Mountains to the southeast. The topography, screening and vegetation will also help mitigate any adjacent off-site views.



d. **Smart Growth Principles**

The project site is located in a biologically diverse area. The proposed density of the subject property promotes compact residential development encouraging the majority of the property to remain as open space, and providing wildlife habitat and connectivity. It also promotes pedestrian connectivity via the shared-use and singletrack trails adjacent to the site. The proximity of these trails will ultimately reduce car trips and encourage pedestrian activity within the community.

e. **Sustainability Features**

The proposed development will incorporate passive solar access and sustainable green building measures.

The following is a list of some standards that will be implemented to ensure energy efficiency in the proposed homes:

- Low-e insulated windows that increase efficiency
- Low-flow toilets and showerheads
- Landscape designed with drought tolerant plants with low water demand and trees located to maximize shade
- Passive water harvesting
- Tucson Electric Power's energy guarantee

3. Ordinances

a. **Buffer Overlay Zone**

The project site is within an area designated as a Pima County Buffer Overlay Zone. The site is located within one mile of the western edge of the Santa Rita Experimental Range and Wildlife Area, and therefore subject to the compliance of Pima County Code of Ordinances Title 18, Chapter 18.67.

The following is a list of some performance standards that will be met by the Whitehouse Canyon rezoning:

- Natural earthtone colors
- Compliant fences and walls
- Limited external lighting
- Relocated utility lines
- Minimum 50% natural open space
- Native vegetation
- Undisturbed washes
- Minimal visual impact

d. **Cluster Development Option**

This document is an application for rezoning from Rural Homestead (RH) to Residential CR-1, Cluster Development option. A cluster development is a grouping of residential properties on a development site in order to



preserve the most sensitive areas of the site as open space. The total area of the subject property of this application is over 36 acres, and the actual planned development area is approximately 8.8 acres. Approximately three-quarters of the project property will remain permanently preserved as natural open space. The site will be subject to, and in compliance with the Pima County Code of Ordinances, Title 18, Chapter 18.09.040 relating to the cluster development option of the CR-1 rezoning.

e. **Native Plant Preservation Ordinance (NPPO)**

The site is required to comply with the NPPO. The set-aside method, as specified in the Pima County Code of Ordinances Chapter 18.72.090, will be utilized for this property. The set-aside method requires that no less than 30% of a site with the highest resource value must remain undisturbed natural open space, wherein no development shall occur.



Exhibit III.A.1: Rezoning Boundaries

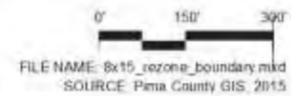
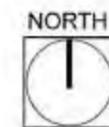


LEGEND

 Site Boundary

 Parcels

Notes:
The rezone district comprises approximately
36.6 acres of parcel #304-18-9760



B. Preliminary Development Plan

1. PDP Overlay

A removable acetate overlay and a 24-inch by 36-inch exhibit of the Preliminary Development Plan (*Exhibit III.B.1*) are included in the map pocket located at the end of this Site Inventory and Land Use Proposal.

2. Support Data

a. Building Heights

According to Pima County Zoning Code 18.21.030, the maximum building height is allowable in a CR-1 zone is 34 feet, and the maximum number of stories is two.

b. Number of Homes

The total number of dwelling units for the proposed development is 23.

c. Maximum Residential Density

Maximum density for a CR-1 zone is 1.2 residences per acre. The proposed residential density is approximately 0.6 residences per acre.

d. Parking Spaces

This development will include 2 parking spaces inside the garage and 2 visitor parking spaces in the driveway for each unit, or approximately 100 parking spaces. No additional parking is necessary. Visitor parking will be permitted along both sides of the paved street.

e. Landscaping

The proposed development will feature native and near-native low water use plant species, as well as permeable ground covers that reflect the natural environment of the surrounding desert. The landscape will feature passive rainwater harvesting systems to mitigate rainwater runoff and supplement landscape irrigation. In addition, a minimum of one large canopy tree will be planted in the yards of each unit.

f. Open Space

Cluster open space shall comprise at least thirty percent of the gross site area and be equal to or greater than the difference between the total area of the residential lots to be subdivided and the required average site area per dwelling unit total in the applicable zone. The Preliminary Development exceed this requirement by proposing a total of 76% open space on the site. This vision includes maintaining large buffers and preserving the natural vegetation to the extent feasible. The main wash running through the middle of the site will provide for a wildlife corridor



between the vacant adjacent property to the east and the large culvert running under Camino De La Canoa. The lots adjoining this natural feature will take advantage of the natural viewsheds, native vegetation and wildlife habitat. Open space is shown on *Exhibit III.B.1: Preliminary Development Plan*. All open space and common areas will be owned and maintained by the homeowners associations

PLANNING AND ZONING COMMISSION DRAFT



PRELIMINARY DEVELOPMENT PLAN (PDP)



GENERAL NOTES

- PROJECT AREA: 36.6 ACRES
- DEVELOPED AREA: 8.8 AC / 24%
- OPEN SPACE AREA: 27.8 AC / 76%
- EXISTING ZONING: RH (RURAL HOMESTEAD)
- PROPOSED ZONING: CR-1 (CLUSTER SUBDIVISION)
- NUMBER OF LOTS: 23
- RESIDENCES PER ACRE: 0.6 RAC
- BUILDING HEIGHT: MAX. 14' (SINGLE STORY)
- SETBACKS: FRONT 30', REAR 40', SIDE YARDS 10'
- RECREATION REQUIREMENT: IN LIEU FEE

LEGEND

-  SITE BOUNDARY
-  XERORIPARIAN C
-  TRAIL - SHARED USE
-  TRAIL - ROAD TRAIL
-  PUBLIC RIGHT-OF-WAY
-  LOTS
-  100 YEAR FLOODPLAIN
-  EROSION HAZARD SETBACK
-  SURFACE FLOW DIRECTION
-  OPEN SPACE

WHITEHOUSE CANYON

NO WARRANTIES OR GUARANTEES ARE MADE BY THE ENGINEER FOR THE ACCURACY OF THE INFORMATION PROVIDED BY THE CLIENT. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT AS SHOWN ON THE DRAWINGS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY OTHER WORK NOT SHOWN ON THE DRAWINGS. PROJECT NUMBER: 2016-11-01-0114. DATE: 11/01/14. FILE NAME: 16-00-02-PLAN-02-0000-020115.DWG. THE PLANNING CENTER logo.

C. Topography and Grading

1. Development on Slopes of 15% or Greater

As seen on *Exhibit II.A.2: Preliminary Development Plan*, development is limited to the relatively flat area of the site located along Whitehouse Canyon Road, on the eastern portion of the property. The majority of the lots on the area to be developed are located on slopes of less than 15%, but lots 11 through 13 on the western portion of the development area are located in areas with greater than 15% slopes present, and will require grading in order to allow for development to occur.

2. Hillside Development Zone

The proposed development area of the project in existing condition was found to possess an Average Cross Slope (ACS) of 9.6% therefore, the site is not subject to the Hillside Development Zone.

3. Site Description

a. Retained as Natural Open Space

Approximately 76% of the overall site area will be designated as open space and natural undisturbed open space for the benefit of residents, natural vegetation, and for the maintenance of wildlife corridors. Designated open space will be owned and maintained by the homeowners association.

b. Revegetated

Areas of the site disturbed by development will be revegetated with native and low water plant species. Revegetation will reflect the character habitat value and visual interest of the local Sonoran Desert. Revegetated areas may include trees, cacti, shrubs, accents, and seed mixes.

c. Graded or Disturbed

The proposed developed portion of the property, comprising approximately 8.8 acres of the site will be graded as shown on Exhibit III.C.5: Cross Section Plan.

4. Maximum Change in Elevation

Within the 8.8 acres of proposed disturbed area, the change in elevation will range from a minimum of 2910 feet above mean sea level in the northwestern portion of the site, to a maximum of 2946 feet above mean sea level in the southeastern part of the site nearest to the intersection of Whitehouse Canyon Road and Camino De La Canoa. This results in a maximum change in elevation



of 36 feet. The goal would be to cut at the Whitehouse Canyon line and excavate a 3:1 slope to the pad elevation, then run across the site and have a fill 3:1 slope at the rear of lots 1-15. On those lots we would have a flat pad minimum of 120' deep then a 3:1 slope to natural grade.

5. Cross-Sections

The site grading concept, as shown in Exhibits III.C.5.a and III.C.5.b, calls for a 3:1 slope from existing grade at Whitehouse Canyon Road, down to the proposed elevation of the residential lots. A 3:1 slope will tie the proposed elevation of the lots into the existing elevation along the south side of the development area. These 3:1 slopes will be stabilized with riprap, crushed rock, or hydroseed. Small areas of steeper slopes may include grouted riprap or retaining walls.

The development area and proposed slopes are orientated in a way to make them less visible from Whitehouse Canyon Road. The proposed slopes are lower than Whitehouse Canyon Road and slope away from this existing road, making them much less visible from Whitehouse Canyon Road.

Bufferyards and revegetation will be placed on the proposed slopes, reducing their visual impact on adjacent residents and roadway users. Revegetation of the slopes may include trees, shrubs, accents, and seed mixes. The proposed residential homes and perimeter walls will screen the proposed slopes from Whitehouse Canyon Road. (See *Exhibit III.C.5: Cross Section Plan, Exhibit III.C.5.a: Cross Section A, Exhibit III.C.5.b: Cross Section B*)

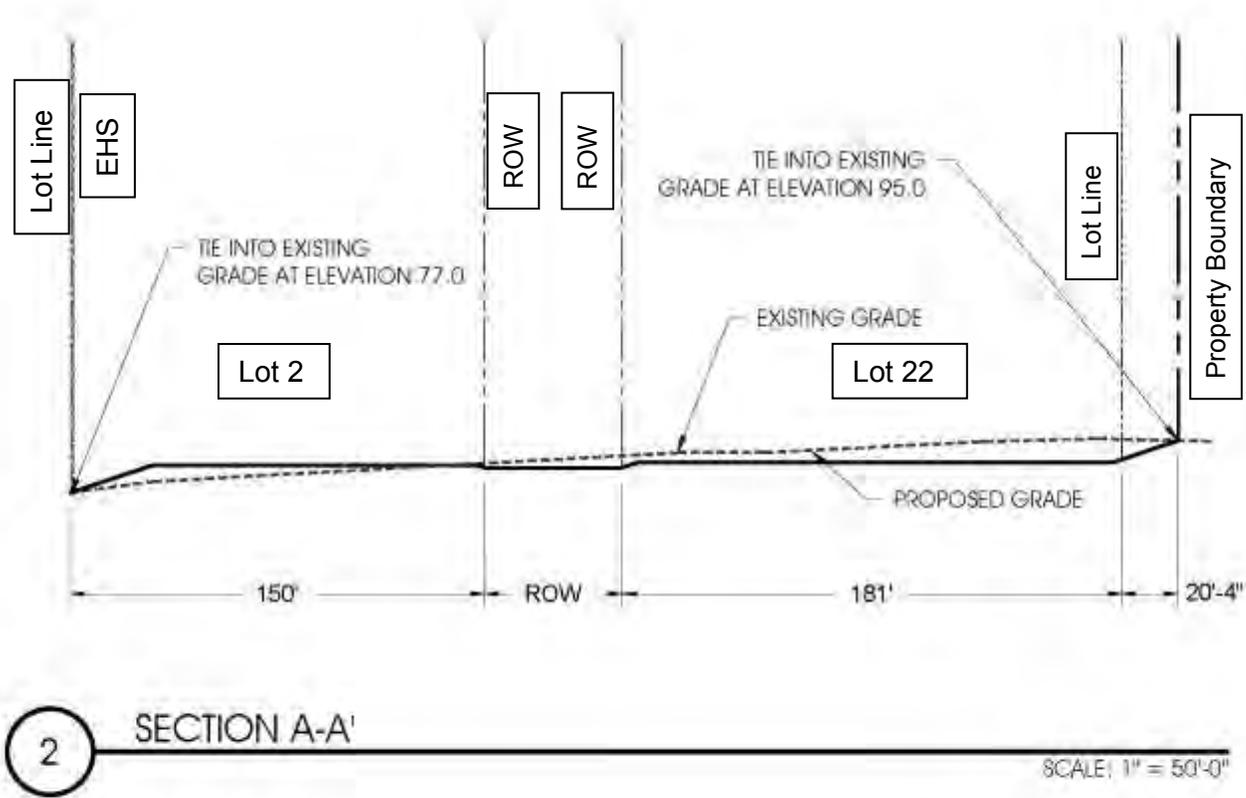


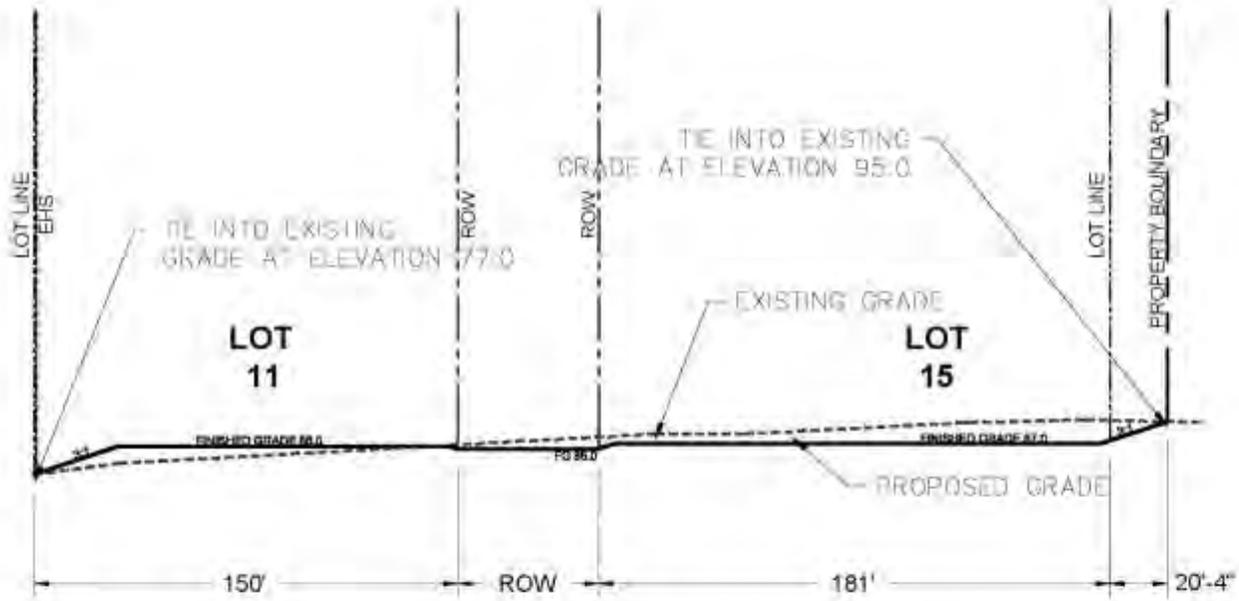
Exhibit III.C.5: Cross Section Plan



PLAN







2 SECTION B-B'

SCALE: 1" = 50'-0"



D. Hydrology

1. Hydrologic Characteristics of PDP

The proposed development will consist of 23 lots on a ±36 acre site resulting in approximately 0.6 residents per acre (RAC). The detention/retention requirements were estimated as outlined in the Pima County Stormwater Detention/Retention Manual. The methodology outlined in the Pima County Hydrology Manual was used in determining both the pre and post-development runoff.

The primary means by which the PDP will respond to the surface drainage conditions will be to leave major the wash as a natural open space corridor. This open space corridor has existing widths ranging from 100 to 200 feet. (See *Exhibit III.D.1: Post Development Hydrology*)

2. Encroachment Mitigation

The natural channel crossing the site does not have adequate capacity to contain flows associated with larger storms so some overbank flooding will occur toward the west end of the property. This overbank flooding area will be incorporated into the open space. No encroachments into the 100-year floodplains are necessary for this development. Erosion hazards, if present will be avoided.

3. Potential Drainage Impacts to Off-site Locations

The post development discharge rates exiting along the east property boundary will be approximately equal to the existing conditions discharge rates. Onsite detention will be provided to mitigate potential increases in peak flows associated with site development.

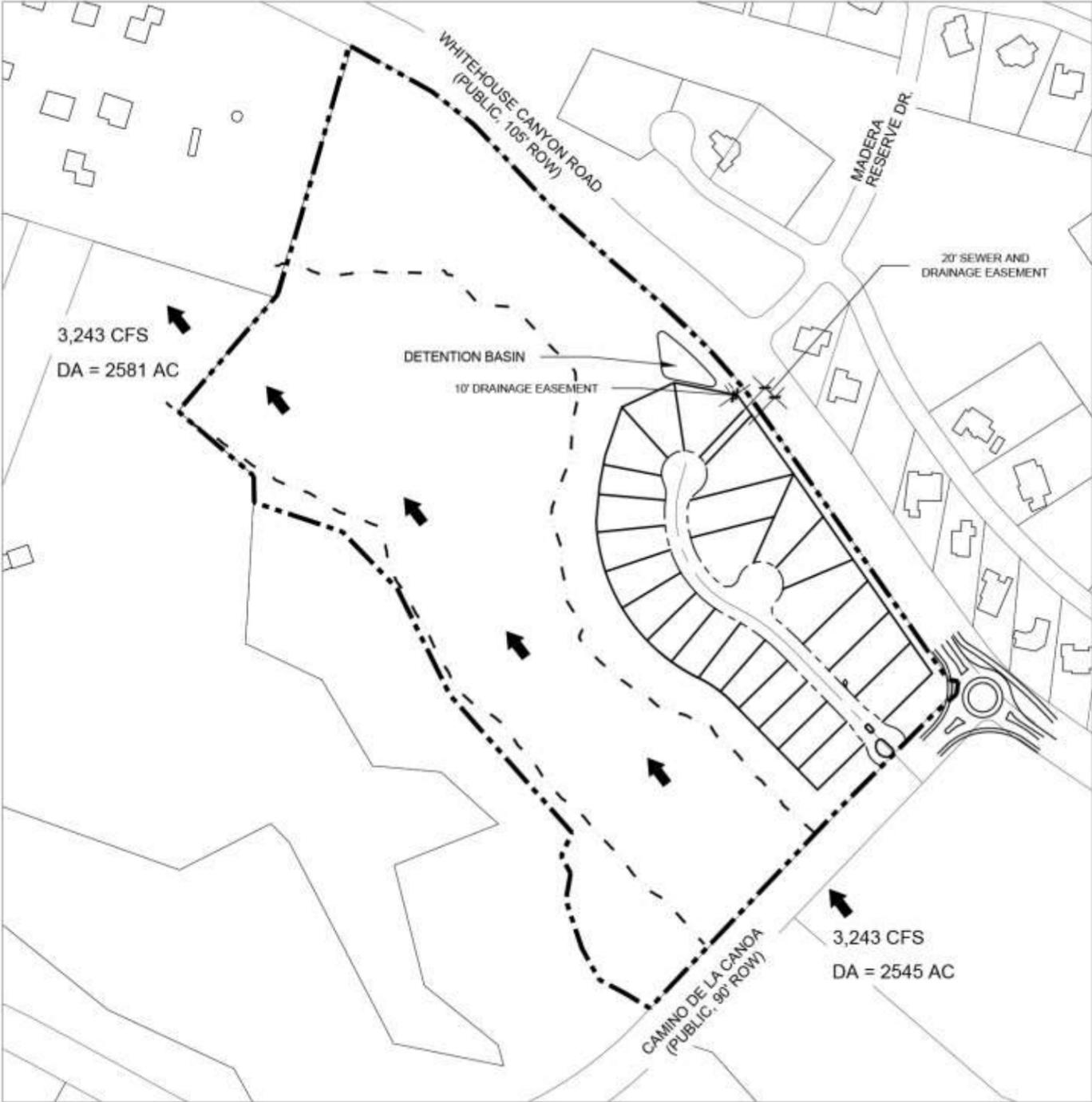
4. Engineering and Design Features

The engineering features that will be used to mitigate potential impacts to the site development will include erosion setbacks if necessary, and onsite detention. Natural ground elevations where the development will occur are several feet above flood stage. The engineering feature that will be used to mitigate potential impacts to downstream property will include onsite detention basins to prevent significant increases in peak flow rates. Preservation of the primary wash within natural open space corridor will prevent an increase in flow velocity.

5. PDP Conformance

The PDP conforms to all known basin management policies and with Pima County floodplain management policies and regulations. Primary amongst them are regulations related to erosion hazard mitigation and onsite detention requirements.





LEGEND

- SITE BOUNDARY
- PARCEL BOUNDARY
- - - 100 YEAR FLOODPLAIN
- ← FLOW ARROW



E. Biological Resources

1. Expected Impacts

a. Conservation Lands System

Nearly 28 acres of the 36.6 acre site is classified as a Multiple Use Management Area by the Conservation Lands System (CLS.) The remainder of the site is not within the CLS.

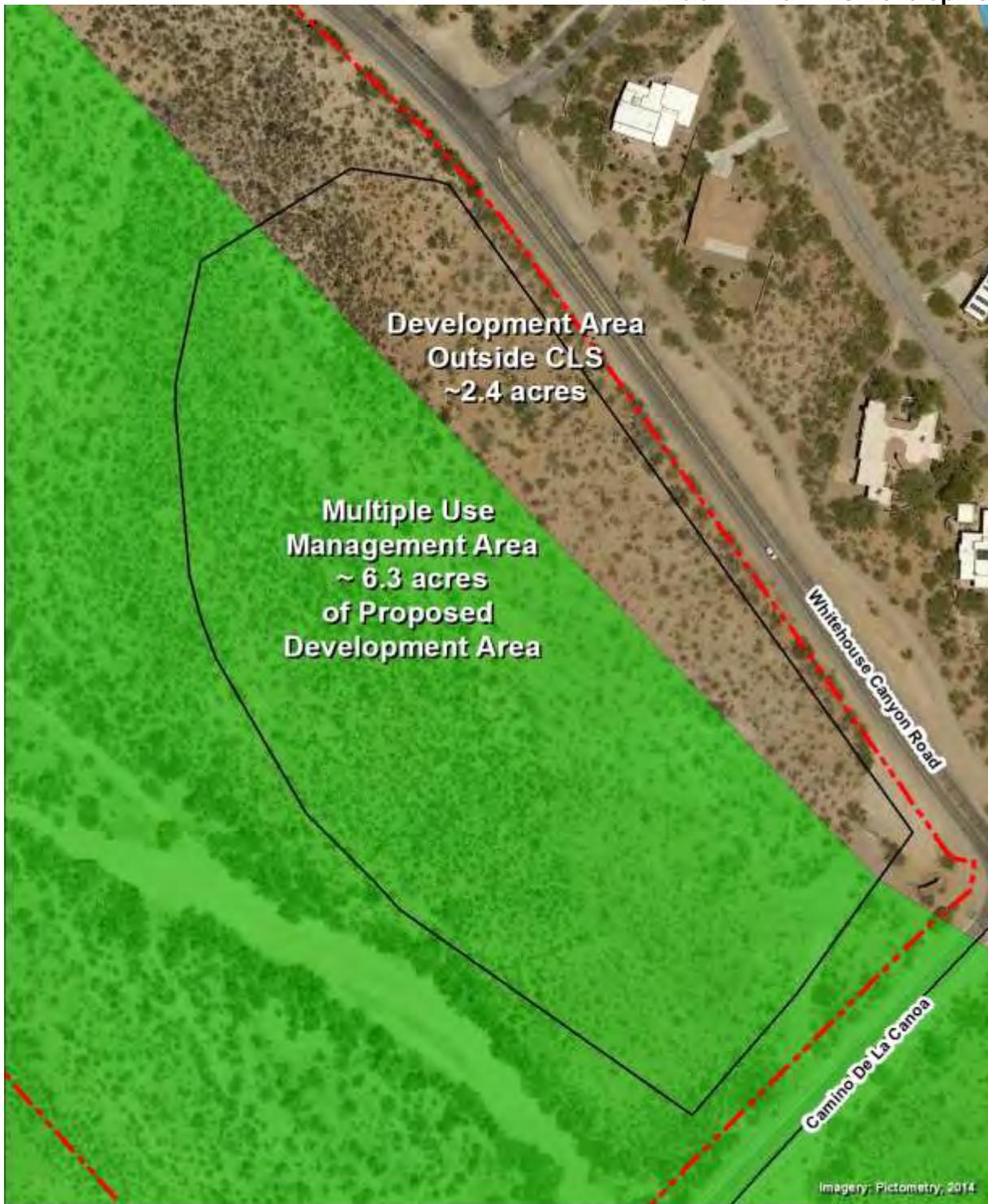
Multiple Use Management Areas are defined by the CLS as lands that are not as biologically rich as lands designated as Biological Core Management Areas, but maintain the potential to support high value habitat for vulnerable species.

The conservation guidelines within the CLS specify that two-thirds of the total acreage within this designation must remain undisturbed open space. The total acreage covered by this rezoning document is approximately 36.6 acres, and development within the site will be limited to an area of ± 8.8 acres.

Within the ± 8.8 developed portion of the project site, approximately 6.3 acres is within the Multiple Use Management Area of the CLS, while the remainder of the developed portion is outside of the CLS (See *Exhibit III.E.1.a: CLS Development*).



Exhibit III.E.1.a: CLS Development



LEGEND

-  Site Boundary
-  Proposed Developed Area



FILE NAME: CLS_lots_6x8.mxd
SOURCE: Pima County GIS, 2015



- b. **Saguaros**
A preliminary site survey conducted in June, 2014 indicated that no saguaros were present on the site.
- c. **Ironwood Trees**
A preliminary site survey conducted in June, 2014 indicated that no ironwood trees were present on the site.
- d. **Pima Pineapple Cactus**
A preliminary site survey conducted in June, 2014 indicated that no Pima pineapple cacti were present on the site.
- e. **Needle-Spined Pineapple Cactus**
A preliminary site survey conducted in June, 2014 indicated that no needle-spined pineapple cacti were present on the site.

2. Landscape Connectivity

The primary goals of the Cluster Development option of this rezoning document is to focus development away from environmentally sensitive areas, to prevent encroachment into the wash and 100-year floodplain areas within the site boundary, and to preserve the remainder of the site from any future development impacts.

F. Landscape and Buffer Plan

1. Landscape Bufferyard Plan

Table III.F.1 displays the proposed bufferyard requirements identified in the Pima County Code of Ordinances Chapter 18.73.040 as it pertains to this project (See Exhibit III.F.1: Buffer Plan.)

Table III.F.1: Buffer and Screening Plan

Parcel Boundaries (adjacent land use)	Required Bufferyard	Provided Bufferyard	Provided Screening
North (Scenic Route)	Bufferyard D	20-foot bufferyard	48"
South (RH Zone)	Bufferyard D	40+-foot bufferyard	48"
East (Public Street)	Bufferyard C	60-foot bufferyard	48"
West (RH Zone)	Bufferyard D	20-foot bufferyard	48"



2. Landscape Bufferyard Conflicts

The property is within one mile of the Santa Rita Experimental Range, an area identified as a public preserve and subject to Chapter 18.67 of the Pima County Code of Ordinances as a Buffer Overlay Zone. The ordinance states that the maximum height for a fence or wall within the zone is 48”.

3. Vegetation Transplanted On-Site

The most sensitive vegetative areas of the site will remain undisturbed. All other areas will remain in compliance with the NPPO.

PLANNING AND ZONING COMMISSION DRAFT



G. Viewsheds

1. Visual Impacts from Development

a. Views and Vistas from Off-Site Locations

The majority of views in the area are in the distant background to the east, south and west, with the closest views of the Santa Rita Mountains to the east. The proposed development will not impact views or vistas from off-site locations due to the large setbacks to adjacent land uses, amount of dedicated open space and the proposed landscape buffers and proposed screening along Whitehouse Canyon Road and Camino de la Canoa.

b. Areas of High and Medium Visibility

There will be a 20' buffer yard as required by the Pima County MSSRP for developments that are adjacent to scenic routes.

2. Measures to Minimize Visual Impacts from Development

The developed portion of the site will be graded and the homes will be situated at a lower elevation than Whitehouse Canyon Road. The proposed single-story units will be limited to a maximum of 14' in height. In addition, a 20' bufferyard featuring natural vegetation, along with a 4' screening wall will reduce the visual impact of the development from Whitehouse Canyon Road and from neighboring residences. The distance from the nearest residential home across Whitehouse Canyon Road to the screening walls of the proposed development is greater than 160 feet.

The homes will be finished using natural, non-reflective colors that blend with the natural environment of the surrounding desert. The site will consist of downward-facing external lighting in compliance with the Outdoor Lighting Code, Chapter 15.12 of the Pima County Code of Ordinances. Approximately 76% of the subject property will remain undisturbed natural open space in perpetuity, including the wash that is present on the site.

H. Transportation

1. Access Points

There will be one access point to the property from Camino De La Canoa, approximately 240 feet from the intersection of Whitehouse Canyon Road and Camino De La Canoa.

3. Future Road Improvements

The primary access to the site will be designed in accordance with Pima County street standards for a residential collector in a rural residential subdivision. The



Pima County Department of Transportation was consulted in a meeting in February, 2015 regarding traffic concerns. Officials from the County indicated that the Department was considering a roundabout for the intersection of Whitehouse Canyon Road and Camino De La Canoa to alleviate traffic congestion during peak hours.

4. Changes to Average Daily Trips

The proposed development will generate approximately 230 trips per day in accordance with the Trip Generation Manual, 7th Edition, Institute of Transportation Engineers. The average rate for single family detached homes is 10 trips per day multiplied by the number of units (23).

5. Traffic Impacts Minimized by PDP

The project will have one access point located on Camino De La Canoa. The traffic impacts to Whitehouse Canyon Road will be reduced by using Camino De La Canoa as the only access point.

6. Bicycle and Pedestrian Pathways

Sidewalks are proposed on both sides of the internal roadways to accommodate pedestrian traffic through the site. There is an existing shared use path located adjacent to Whitehouse Canyon Road between Continental School and Madera Reserve Drive that would potentially accommodate pedestrian traffic from the site to the school.

7. Typical Roadway Sections

The interior roadway will be public. This road consists of a 24-foot paved driving surface with curbing, landscape, and sidewalk within a 50 foot right of way.

8. Transportation Concurrency

The site meets transportation concurrency for all major roads in the area.

I. On-Site Wastewater Treatment and Disposal

1. On-Site Wastewater Treatment/Disposal Facilities

The site will be served by Pima County Regional Wastewater Reclamation Department.

J. Sewer

1. Method of Sewer Service

The rezoning area is within the PCRWRD service area and is tributary to the Green Valley Water Reclamation Facility. Capacity for this development is currently available in the 8-inch public sewer G-97-144, downstream from manhole 6572-01, in the Whitehouse Canyon Road right-of-way (Type I, 2014-145, June 25, 2014). II-(See *Exhibit II.G.1: Wastewater Letter*)



2. Collection Sewers

Sewers within this development will follow the right-of-way through the development, and will require a 20' easement for a right-of-way to enable connection to the existing sewer service at Whitehouse Canyon Road.

3. Sewers within public right-of-way

Sewer service is located along Whitehouse Canyon Road adjacent to the subject property.

4. Site Constraints to Gravity Sewer

There are no site constraints to gravity sewer.

PLANNING AND ZONING COMMISSION DRAFT



K. Water

Refer to Appendix A: Preliminary Integrated Water Management Plan.

L. Schools

1. Routes to Adjacent Schools

Continental Elementary School is located approximately 2/3 mile east of the project site on Whitehouse Canyon Road.

2. School Capacity

As shown in *Exhibit III.L.2: Existing Schools and Libraries*, the site is located within the Continental School District. There is one public school located within one mile of the project site. See Table III.L.2 for all public schools serving the site. Continental School District does not have a high school. According to the Continental School District website, the District pays tuition to local public high schools for Continental students to attend. The majority of the Continental School District students attend Sahuarita Unified School District High Schools. The Continental School District provides transportation for these students. Students choosing other area public high schools must provide their own transportation.

Table III.L.2: Public School Districts Serving the Site

School Name	Location
Continental School District (Pre-K – 8)	1991 E. Whitehouse Canyon Road
Sahuarita Unified School District (9 – 12)	350 W. Sahuarita Road

Source: Continental School District Website, 2014

f. Present and Projected Enrollments

Dr. Virginia Juettner, Superintendent of Continental Elementary School District, was consulted for the current enrollment and capacity numbers for the public schools that will serve the site. Continental School currently has 579 students enrolled, and have the current capacity to serve 800 students in grades Pre-K - 8.

According to the Sahuarita Unified School District, the high schools within the District have a current enrollment of 1,649 students, and the capacity to serve 2,469 students.

a. Projected Increase to Enrollment

The Continental School District does not use a multiplier to estimate increases in enrollment due to residential development. Correspondence with the Continental School Superintendent indicated that Continental School has the capacity for the students generated by the subject property.



The Sahuarita Unified School District has the capacity for projected increases in high school enrollment as a result of the addition of 23 single family homes.

g. **School Facilities Improvements**

There have been recent improvements completed at the newly rebuilt campus of Continental Elementary School. The improvement resulted in an increased capacity of 800 students, with future plans to build out to a capacity of 1,200.

PLANNING AND ZONING COMMISSION DRAFT



Exhibit III.L.2: Existing Schools and Libraries



LEGEND

	Site Boundary		State Trust Land		Public School
	3-mile Radius		BLM		Private School
	Jurisdictions		Coronado National Forest		Library

NORTH  0 1 mi 2 mi
 FILE NAME: TPI05_rec_6x6.mxd
 SOURCE: Pima County GIS, 2014



M. Recreation and Trails

1. Recreation Areas to be Provided

The property owner has elected to pay the in-lieu fee to be paid per the Pima County Zoning Code 18.69.090 for subdivisions of sixty-five lots or fewer.

2. Proposed Ownership of Open Space

The total amount of open space (wash area and landscape bufferyards) within this project is expected to measure approximately 27 acres. A homeowners association will own and maintain the open space, as well as other common areas, proposed for this project.

3. Proposed Trails in Compliance with Eastern Pima County Trails System Master Plan

According to the Pima County Bicycle and Pedestrian Program, the property is located adjacent to an existing Shared-use path, and according to the Pima Regional Trail System Master Plan, the site is located adjacent to single track trail # 86, Madera Canyon Road trail.



N. Cultural Resources: Archaeological and Historic Sites

1. Mitigation Measures for Protection of Resources

Based on an Arizona State Museum check of the records, no archaeological or historic resources are known to exist on the property. However, no cultural resources surveys have been conducted on the property.

2. Archaeological Survey Measures

Prior to ground modifying activities, an on-the-ground archaeological and historic site survey shall be conducted on the subject property, and submitted to Pima County for review. A cultural resources mitigation plan for any identified archaeological or historic sites on the subject property shall be submitted to Pima County at the time of, or prior to, the submittal of any tentative plan or development plan. All work shall be conducted by an archaeologist permitted by the Arizona State Museum or a registered architect, as appropriate. Following rezoning approval, any subsequent development requiring a Type II grading permit will be reviewed for compliance with Pima County's cultural resources requirements under Chapter 18.81 of the Pima County Zoning code.

3. Cultural Resources Mitigation Plan

In the event that cultural resources are revealed during ground-disturbing activities, all construction shall cease, and consultation shall be initiated with ASM to assess potential significance of any unearthed materials (ARS 41-841.) If human skeletal remains or funerary objects are discovered, ASM will be contacted immediately (ARS 41-865 & 41-844.)

O. Environmental Quality

1. Control of Dust Pollution

Watering trucks will be on hand during construction to control dust pollution. In addition, all Parking Area Access Lanes will be paved.

2. Control of Emissions Greater than 100 tons per Year

a. Air Quality Code

The site is planned for residential development. The standards do not apply.

P. Agreements

1. Agreements with Neighboring Properties

A preliminary neighborhood meeting was held in November 2014 for the purpose of introducing the project and garner feedback from neighbors. All neighbors



within 1000 feet and all neighborhood associations within one-mile were invited to this meeting. Initially the project plans included 29 residential lots. Feedback from neighbors, especially those neighbors directly adjacent to Whitehouse Canyon Road to the north of the subject property, led to the reduction in the number of lots to 23.

Residents of the properties to the south of the proposed development voiced concern with the increased traffic congestion at the intersection of Camino De La Canoa and Whitehouse Canyon Road brought on by the development. A meeting with the Pima County Department of Transportation in February 2015 was held in order to discuss the traffic concerns. A potential solution to the traffic congestion in the form of a roundabout being installed at the intersection in order to keep traffic flowing during peak travel times. This solution is being considered by County DOT officials.

At a meeting on April 30, 2015, the Green Valley Council's Planning and Architecture Committee voted to approve the proposed project and recommends Pima County approve the application for rezoning. (See *Exhibit III.P.1: Green Valley Council Letter*)



Exhibit III.P.1: Green Valley Council Letter

TPI-05



Green Valley Council

555 N. La Cañada Drive, Suite 117 • Green Valley, AZ 85614
(520) 648-1936 • Fax (520) 648-5079 • e-mail: info@gvcouncil.phxcoxmail.com • web site: www.gvccc.org

June 25, 2015

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

Re: Whitehouse Canyon Road Rezoning

Dear Elva:

At its meeting on April 30, the Green Valley Council's Planning and Architecture Committee heard a presentation by The Planning Center on the Whitehouse Canyon Road Rezoning. The request is to rezone 8.8 acres from R11 to CR-1, as shown on the attached Preliminary Development Plan, dated 3/30/15, to allow the development of 23 lots for single family homes.

Based on the presentation, the Planning & Architecture Committee approved the project rezoning and recommends Pima County approve the application for rezoning.

Please let me know if you have any questions.

Sincerely,

William D. O'Malley
Chair
GVC Planning & Architecture

Cc: Linda Morales, The Planning Center
Eddie Peabody, GVC
Don Weaver, GVC

WDO:lmc



Bibliography:

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Critical and Sensitive Biological Communities of the Tucson, Arizona Area. Pima County Department of Transportation and Flood Control District, Tucson, Arizona. August, 1986.

Desert Plants. David E. Brown (ed.). University of Arizona, Tucson, Arizona. 1982.

Flood Insurance Rate Maps. Federal Emergency Management Agency, Baltimore, Maryland.

Floodplain Management Ordinance No. 1988-FCI for Pima County Arizona, adopted by the Board of Directors, Pima County Flood Control District, April 26, 1988. Pima County Department of Transportation and Flood Control District, Pima County, Arizona.

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Mapguide. Sonoran Desert Conservation Plan. 2013.

Regional Transportation Plan, 2040. Pima Association of Governments, Pima County, Arizona. 2013.

Regional Trail System Master Plan, Pima County, Arizona, 2010

Stormwater Detention/Retention Manual. Pima County Department of Transportation and Flood Control District, City of Tucson, Arizona. 1987.

Zoning Code Pima County, Arizona. Pima County Development Services. Pima County, Arizona. October, 1986





APPENDICES

Appendix A: Preliminary Integrated Water Management Plan

1. Water Context

The subject property is comprised of a portion of parcel #304-18-9760. The area of the entire parcel is approximately 54.8 acres, and the subject property of this application is for 36.62 acres of that parcel. The site is located in Green Valley, in southeastern Pima County, at the southwest corner of Whitehouse Canyon Road and Camino De La Canoa, approximately one-half mile east of the Union Pacific Railroad tracks and one mile south of the Town of Sahuarita. The site is located within Township 18 South, Range 13 East, Section 24, Gila and Salt River Meridian, Pima County, Arizona. The property will be served by the Farmers Water Company, and has been designated by the State of Arizona Department of Water Resources (ADWR) as having a 100-year assured water supply. (See *Exhibit A.1: Water Context Map*, *Exhibit A.4: Water Supply Letter*)



Exhibit A.1: Water Context Map



LEGEND

Site Boundary	Township, Range, and Section
Parcels	Wells
Farmer's Water Company Service Area	
Community Water Company of Green Valley	

FILE NAME: TP05_watercontext_box8.mxd

 SOURCE: Pima County GIS, 2015



2. Onsite Existing and Historic Water Use

The site is vacant and undeveloped. There are no wells located on-site.

PLANNING AND ZONING COMMISSION DRAFT



3. Onsite Proposed Water Use

The subject property is planned approximately 23 single family residential homes. The development will feature native, drought tolerant landscaping, and water harvesting.

4. Water Supply and Delivery

Farmers Water Company has indicated that capacity exists to serve the development. (See *Exhibit A.4: Water Supply Letter*)

PLANNING AND ZONING COMMISSION DRAFT



Exhibit A.4: Water Supply Letter:



1525 E. Sahuarita Road, PO Box 7, Sahuarita, AZ 85629
Phone: 520.879.7474 * Fax: 520.791.2853 * www.farmerswaterco.com

June 26, 2014

Tim Craven
The Planning Center
110 S. Church, Ste. 6320
Tucson, AZ 85701

Re: Rezoning for 20 Acres at Whitehouse Canyon Road and Camino de la Canoa; Water Service to Parcel No. 304-18-9760

Dear Mr. Craven:

Farmers Water Co. (FWC) is providing the following information in response to your inquiry dated June 17, 2014, regarding the above-referenced parcel:

- Parcel No. 304-18-9760 is located within FWC's Certificate of Convenience and Necessity; therefore, FWC has the exclusive franchise to serve water to this parcel.
- Parcel No. 304-18-9760 currently has no water service distribution lines feeding into the parcel from FWC's existing service area.
- FWC has 8" transmission mains fronting Parcel No. 304-18-9760, first on the north side of Whitehouse Canyon Road from Madera Reserve Drive to Camino de la Canoa, and second on the east side of Camino de la Canoa.
- Any request for water service to Parcel No. 304-18-9760 will require satisfaction of FWC's New Development Procedures.

Feel free to contact me about FWC's New Development Procedures, and, specifically FWC's design standards, when this project approaches the design phase.

Sincerely,



Matthew Bailey
Executive Vice President



5. Water Demand Projections

- a. Table 'A' of the PIWMP guidelines indicates that a development such as the one proposed (CR-1 zoning) is likely to require approximately 0.46 acre-feet annually per household. The project is proposed to have 23 individual dwelling units, which equates to a demand of approximately 10.6 acre-feet annually.
- b. Water conservation measures listed in Table B – Water Conservation Measures in the Pima County Site Analysis requirements to be included as part of the proposed project are as follows:
 - O-2, Rainwater harvesting capturing 10% of runoff – 2 points
 - O-12, Drought-tolerant, native plant landscaping – 4 points
 - I-6, Low-flow faucets – 3 points
 - I-7, Low-flow shower heads – 3 points
 - I-8, Low-flow toilets – 3 points

6. Proximity to Renewable and Potable Water Supplies

As required staff has conducted the Water Resources Impact Assessment (WRIA) as follows:

- a. The site is to be served by the Farmer's Water Company and does not have access to renewable supplies as they pump and deliver groundwater.
- b. Per the ADWR Well Inventory the wells shown on the map contained in the PIWMP at the Continental School approximately 1 mile uphill from the site had depths to groundwater of 242 feet' when tested in 1982. The wells downhill from the site near the railroad had depth to groundwater over 150' in the 1980s. Per the Tucson Active Management Area Safe Yield Task Force: Between the years 2010 and 2025 groundwater depth is predicted to decline between 30 to 50 feet by 2025. The local water table depth in 2025 is projected to be between 251 and 350 feet. It should be noted that these maps are rasterized and visually interpolated to the project site.
- c. Neither the site nor closest Farmer's Water Company wells are located within a mapped subsidence zone.



d. Neither the site nor closest Farmer's Water Company wells is within 5 miles of a Groundwater-Dependent Ecosystem.

e. The site is within the Tucson Hydrogeologic Basin, and the depth to bedrock is 1600-4800 feet. The range is broad due to the site straddling two isopleths.

Pima County's Water Resources Impact Assessment finds that, under existing conditions, the proposed project will not have access to renewable water. However based upon projections provided in the PIWMP, the location of the site and supply wells in relation to subsidence and shallow groundwater areas adverse impacts are not expected. Furthermore appropriate conservation measures will be required as noted above.

PLANNING AND ZONING COMMISSION DRAFT

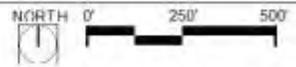


Exhibit A.5: Water Service Provider



LEGEND

-  Site Boundary
-  Existing Sewer Network
-  Existing Sewer Manhole
-  Farmers Water Company Service Area
-  Existing 8" Water Main
-  Parcels



FILE NAME: TPI05_water_6x8.mxd
SOURCE: Pima County GIS, 2015
Farmers Water Company, 2014