

SITE ANALYSIS REPORT  
FOR A 9.33 ACRE PARCEL LOCATED  
ON THE EAST SIDE OF BONANZA AVE, SOUTH OF  
SNYDER ROAD BY ABOUT 600 FEET

SandyCreek

MJM

**CONSULTING, INC.**

*Land Planning and Development Services*  
7002 E. 4th Street Tucson, Arizona 85710 Phone & Fax: 520-885-5021

**SITE ANALYSIS REPORT**  
**FOR 9.33 ACRES ON THE EAST SIDE OF BONANZA AVE &**  
**ABOUT 600 FEET SOUTH OF SNYDER ROAD**

Prepared for:  
The J. DeGrazia Company LLC  
Attention: Jerry DeGrazia  
4030 N. Painted Quail Place  
Tucson, Arizona 85750

Prepared by:  
Michael Marks, AICP  
MJM Consulting, Inc.  
7002 E. 4<sup>th</sup> Street  
Tucson, Arizona 85710

April 9, 2014

## PREFACE

This report is submitted in connection with a rezoning application proposing a change from SR to CR-1 on the property at the east side of Bonanza Ave and about 600 feet south of Snyder Road. The report was prepared in accordance with the official Pima County Site Analysis Report Checklist, as it was amended in March, 2010.

This Site Analysis Report was prepared by Michael Marks, AICP of MJM Consulting, Inc. Assistance in the preparation of specific sections of the report was provided by other consultants. Baker & Associates Engineering performed the hydrologic/drainage analysis, the site planning, the preliminary grading and drainage, and the potable water supply analysis. Novak Environmental, Inc. performed the vegetative inventory and riparian habitat related work. PAST performed the archaeological work.

## TABLE OF CONTENTS

### PART I - SITE INVENTORY

I-A Existing Land Uses	Page 1
I-B Topography and Grading	Page 1
I-C Hydrology	Page 7
I-D Biological Resources	Page 10
I-E Viewsheds	Page 16
I-F Transportation	Page 16
I-G Sewers	Page 21
I-H Recreation and Trails	Page 21
I-I Cultural Resources	Page 21
I-J Air Quality	Page 21
I-K Composite Map	Page 21

### PART II - LAND USE PROPOSAL

II-A Project Overview	Page 27
II-B Preliminary Development Plan	Page 28
II-C Topography and Grading	Page 32
II-D Hydrology	Page 32
II-E Biological Resources	Page 35
II-F Landscape and Buffer Plan	Page 35
II-G Viewsheds	Page 37
II-H Transportation	Page 37
II-I On-Site Wastewater Treatment & Disposal	Page 38
II-J Sewers	Page 38
II-K Water	Page 38
II-L Schools	Page 38
II-M Recreation and Trails	Page 38
II-N Cultural Resources	Page 38
II-O Environmental Quality	Page 41
II-P Agreements	Page 41

### APPENDIX

1. The Preliminary Integrated Water Management Plan (i.e. the PIWMP)	Page 42
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## T ABLE OF EXHIBITS

Ex. I-A.1	Regional Location Map	Page 2
Ex. I-A.2	Subject Property Map	Page 3
Ex. I-A.3	Surrounding Properties Map	Page 4
Ex. I-A.4	Vicinity Map	Page 5
Ex. I-B	Topography Map	Page 6
Ex. I-C.1	Woodland Wash Study Map	Page 8
Ex. I-C.4	Hydrology Map	Page 9
Ex. I-D.1	Conservation Lands System Map	Page 11
Ex. I-D.6a	Game & Fish Info	Page 12
Ex. I-D.6b	Novak Environmental Memo	Page 13
Ex. I-D.7	Special Species Map	Page 14
Ex. I-D.9/10	Vegetative Communities Map	Page 15
Ex. I-E.2	Onsite Photos	Page 17
Ex. I-F.1	Major Routes Map	Page 19
Ex. I-F.2	Driveway Separation Map	Page 20
Ex. I-G.1	Sewer Map	Page 22
Ex. I-H	Parks and Trails Map	Page 23
Ex. I-I	Cultural Resources Letter	Page 24
Ex. I-K.1	Composite Map	Page 25
Ex. I-K.2	Composite Map Overlay	Page 26
Ex. II-B.1a	Preliminary Development Plan	Page 29
Ex. II-B.1b	Preliminary Development Plan Overlay	Page 30
Ex. II-B.1k	PDP with 300' Coverage	Page 31
Ex. II-C.3	Preliminary Grading Plan	Page 33
Ex. II-D.3	Preliminary Drainage Plan	Page 34
Ex. II-E	Biological Impacts Map	Page 36
Ex. II-J.1	Sewer Capacity Letter	Page 39
Ex. II.L.2	School Capacity Letter	Page 40

## BIBLIOGRAPHY

Existing Land Use Information Sources: Boundary Survey by Amerson Surveying Inc.; Pima County Mapguide, Pima County Assessor's Office, Land Use Survey of Subject Property and Surrounding Properties, Aerial Photography, Pima County Planning Division records

Topography Sources: Topographic Survey by Amerson Surveying Inc and Site Visit

Hydrology Sources: Hydrology Report by Baker & Associates Engineering, Inc.

Vegetation Sources: Survey and assessment by Novak Environmental, Inc

Wildlife Sources: Letter by Arizona Game and Fish Department, Memo by Novak Environmental, Inc.

Viewshed Sources: Site visit

Traffic Sources: Use of Pima County Street Standards information.

Recreation and Trails Sources: Eastern Pima County Trails Master Plan, Pima County Mapguide

Cultural/Archaeological/Historic Resources Sources: Archaeology Report by PAST

Public Utilities Sources: Records of Pima County Wastewater Management Department, City of Tucson Water, Tucson Electric Company, Southwest Gas, Quest, and site observation.

Water: Tucson Unified School District

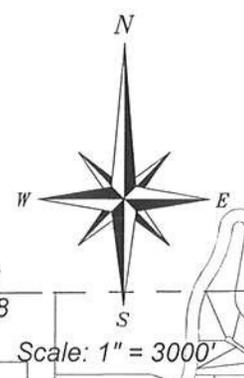
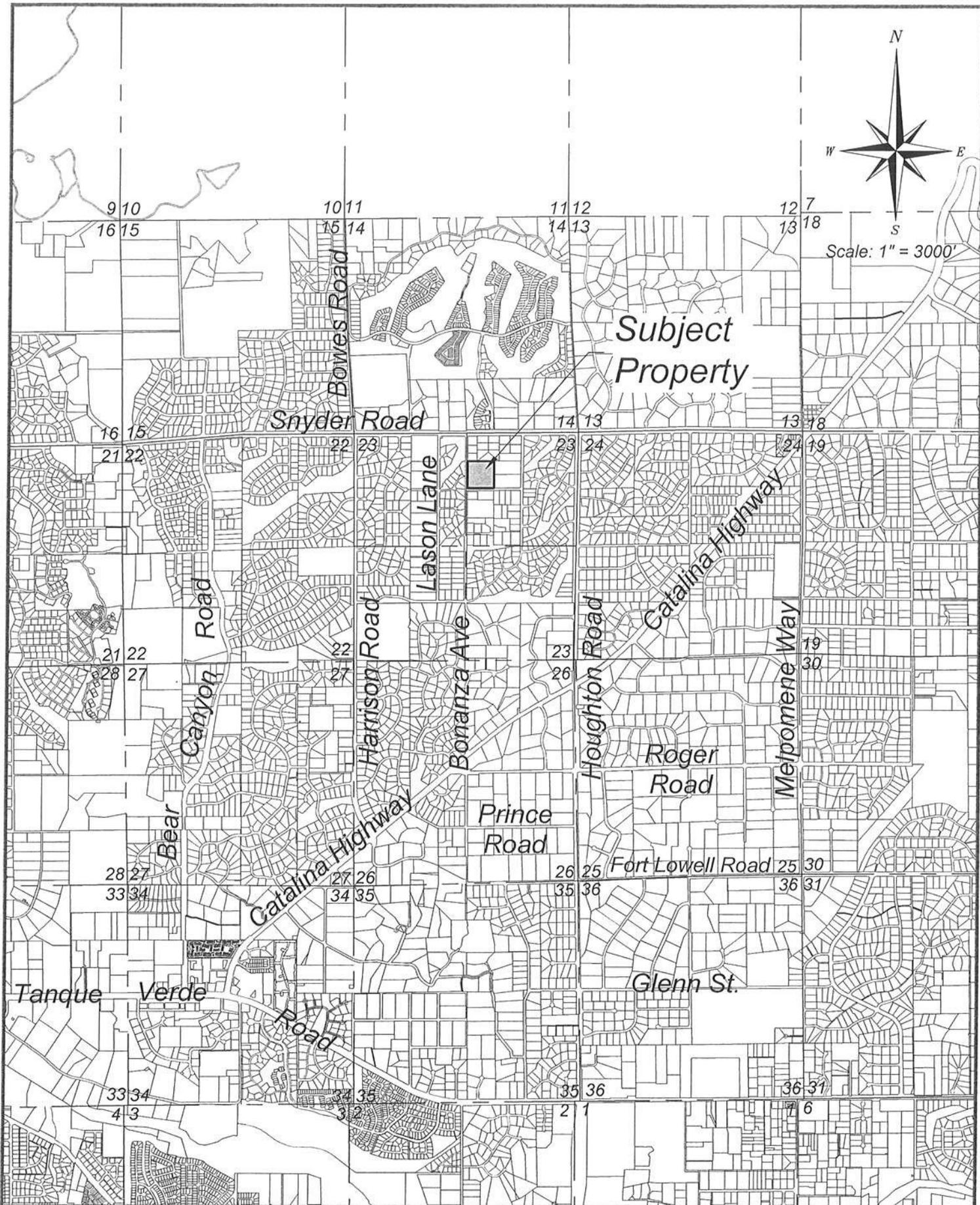
## PART I SITE INVENTORY

### **I-A. EXISTING LAND USES**

1. Exhibit I-A.1, i.e. the Regional Location Map, depicts the site in a regional context. The property is Assessor Parcel 114-21-322A, which is located within Section 23 of Township 13 South, Range 15 East.
2. Exhibit 1-A.2.(i.e. the Subject Property Map) shows the conditions of the property
  - a. The property is vacant. This is shown on the Subject Property Map.
  - b. Exhibit 1-A.2 shows an aerial photo of the subject property. As there are no easements on the property, none are shown.
  - c. The Comprehensive Plan designates the property as LIU 1.2. The property is not subject to any rezoning or special area policy. Additionally the property is within the boundaries of the Aqua Caliente – Sabino Creek Zoning Plan, which designates the property for CR-1 zoning.
3. Exhibit I-A.3, the Surrounding Properties Map, is an aerial photo of the subject property and surrounding area within 600 feet in all directions.
4. Exhibit I-A.4 shows properties within ¼ mile and addresses the following information:
  - a. The map shows all of the properties north of Snyder Road to be zoned SR. South of Snyder Road there are a few SR zoned parcels but all the rest are zoned CR-1. The Buffer Overlay Zone applies to all the properties north of Snyder Road but none south of Snyder Road. No other overlay zone affects any property on the map.
  - b. Most of the properties within ¼ mile are developed, either residential at roughly 1 RAC or on large lots, but there are also a number of vacant properties.
  - c. All of the homes are one story in height, with the exception of a couple of two-story homes which were observed.
  - d. None of the properties are subject to any conditionally approved rezoning. Much of the properties shown are platted, with the names of those subdivisions shown on the map. None of these properties are the subject of a development plan.
  - e. The Comprehensive Plan designation for all properties within ¼ mile is LIU 1.2.

### **I-B. TOPOGRAPHY AND GRADING**

1. The topographic characteristics of the property, still essentially in its natural state, are described below and are depicted on Exhibit I-B:
  - a. There are no restricted peaks or ridges.
  - b. There are no rock outcrops or talus slopes.
  - c. There are no natural slopes of 15 percent or greater.
  - d. There are no significant topographic features.
  - e. The entire property is in its natural state.
2. The pre-development average cross slope on the gross site is 4.0 percent. This percentage is derived from the following formula:  $(16,226' \times 1 \times .0023) \div 9.33 = 4.0\%$ .



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SandyCreek on Bonanza Ave.  
 Parcel No. 114-21-322A  
 Section 23, Township 13 S, Range 15 E  
 Pima County, Arizona

Exhibit I-A.1  
 Regional Location Map



Scale: 1" = 100'

S 89° 51' 33" E 628.79'

Bonanza Avenue

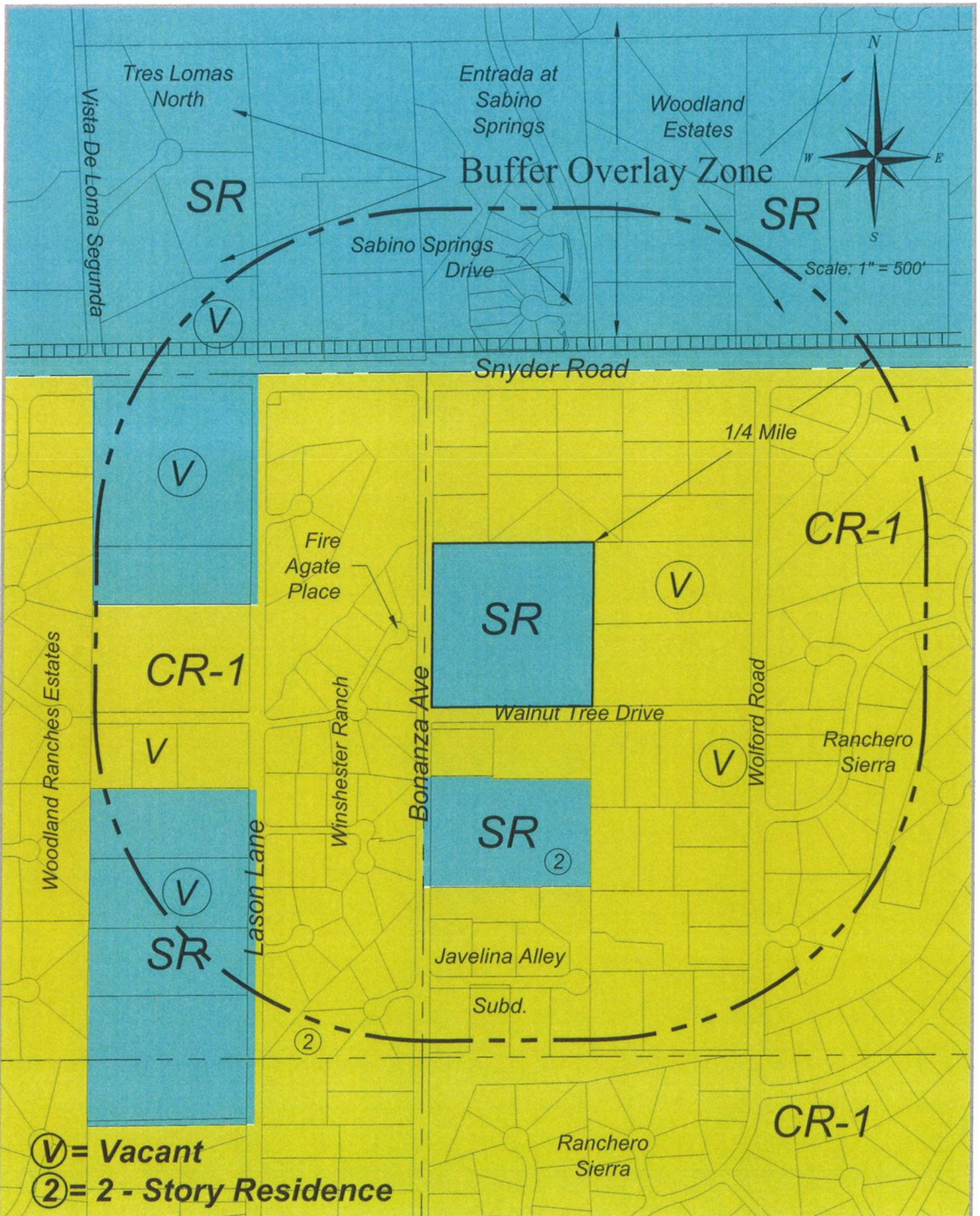
N 00° 46' 38" E 647.39'

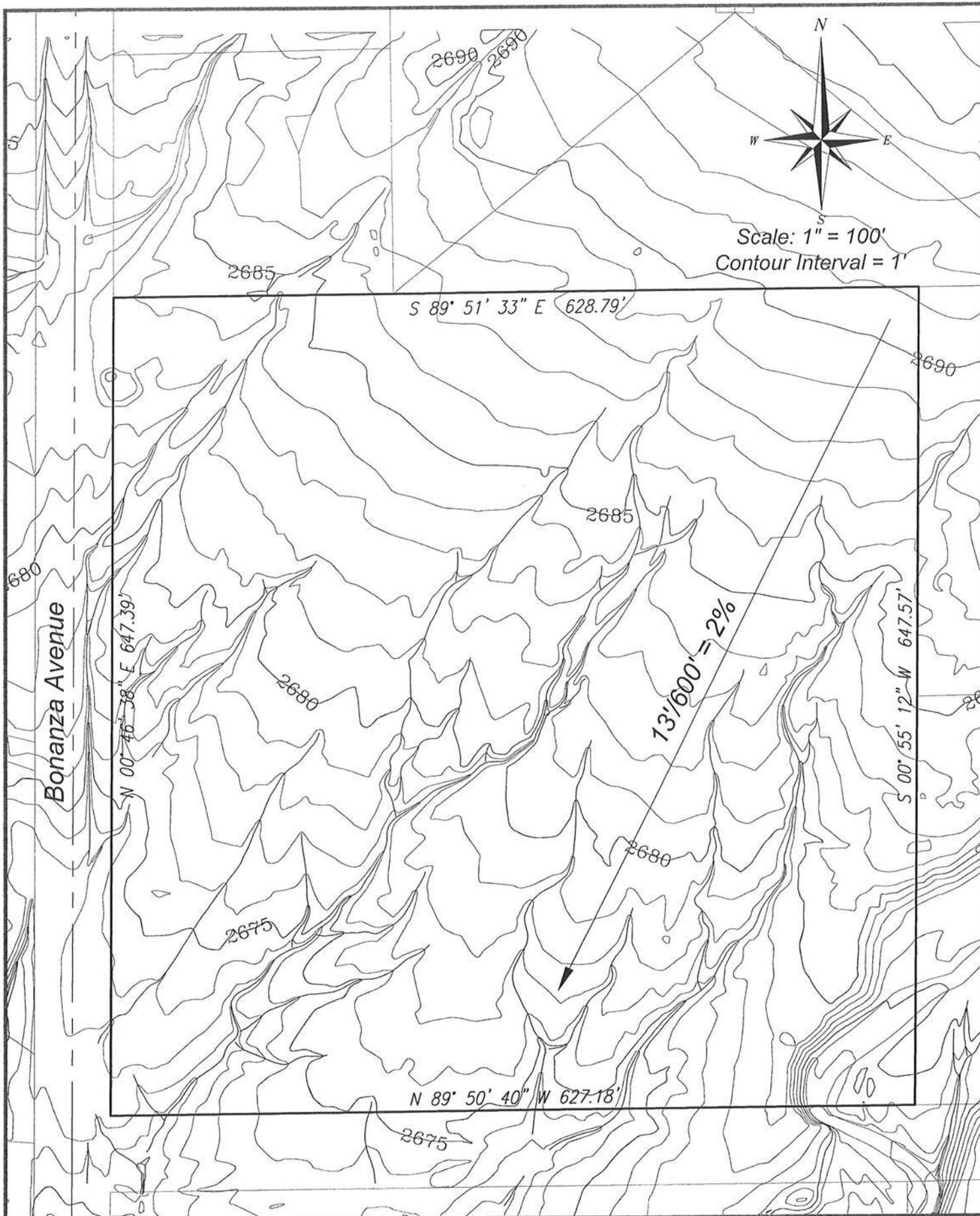
Subject Property  
9.33 Acres

S 00° 55' 12" W 647.57'

N 89° 50' 40" W 627.18'

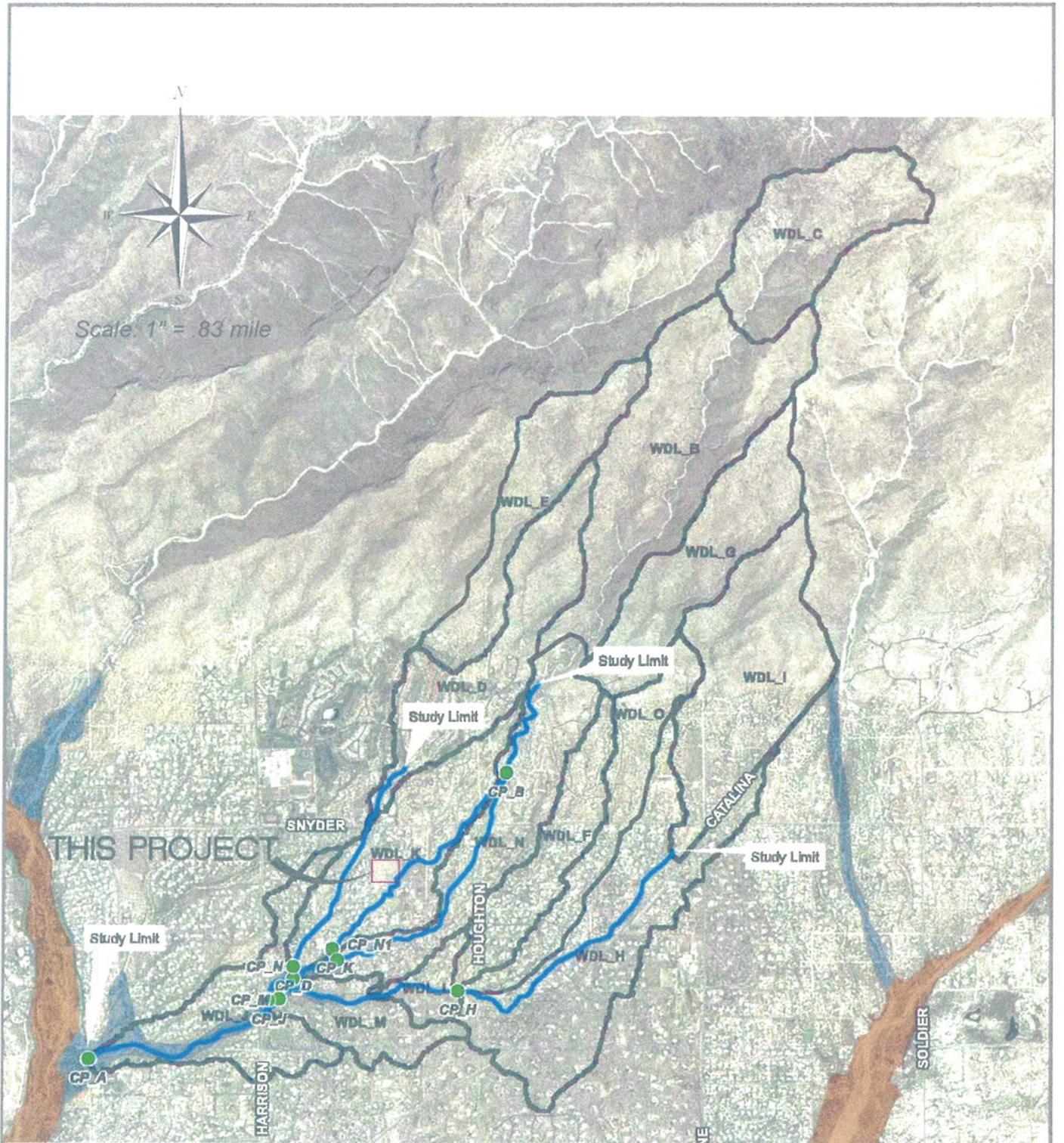


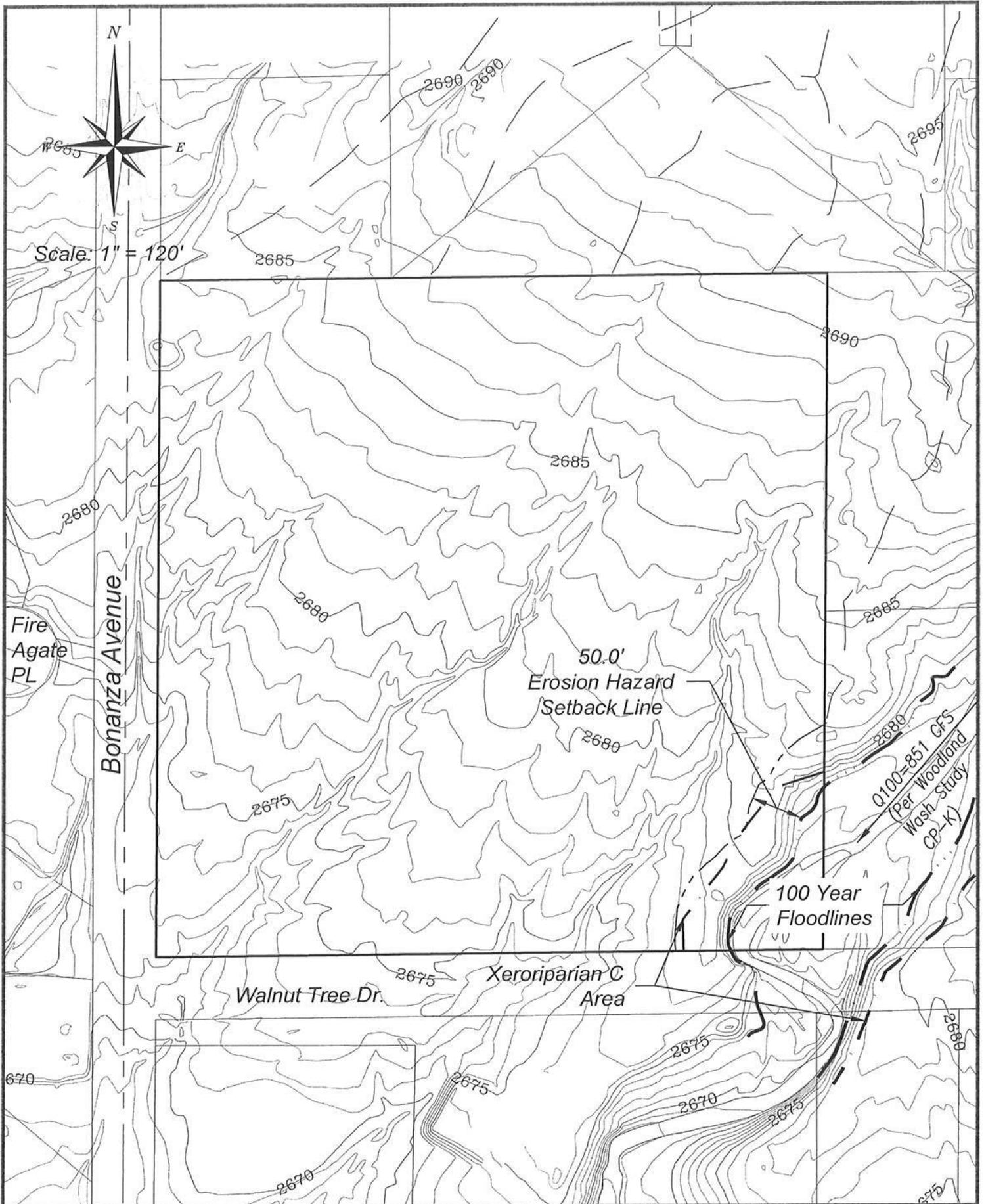




## I-C. HYDROLOGY

1. The main and only significant runoff entering the site is within a watershed that enters and crosses the property at the very southeast corner of the property. That watershed is within the study area reflected in the "Catalina Foothills Watercourse Studies: Technical Data Notebook for Hydrologic and Hydraulic Mapping of the Woodland Wash and its Tributaries: dated Feb. 19, 2010. The proposed development is identified as being within Watershed WDL\_K on the Woodland Wash Study Map, i.e. Exhibit I-C.1.
2. The main watershed identified above is 'natural'. The roadway crossings on Snyder Road and Wolford Road and Lason Lane are all dip sections, and only the crossing on Bonanza Avenue is a culvert. The proposed development will take place outside of 100-year floodplain and that there is no proposed encroachment into the erosion setback (See Note #2 on Exhibit II-B.1a). The minor watersheds upstream are also natural and generate a nuisance level of discharge on to the property. The conditions of all of these watersheds upstream will not have a significant impact on the property due to the fact that the discharge is so minor. Downstream the conditions will remain essentially the same as they are today.
3. The watershed depicted in Exhibit I-C.1, that enters the property at its southeast corner has a peak flow greater than 100 cfs in the 100 year storm event. The peak flow for watershed WDL\_K has a discharge of 851 cfs in the 100 year storm, and that flow was used as a peak flow at this development.
4. The Onsite Hydrologic conditions are depicted on Exhibit I-C.4.
  - a. The 100 year floodplain lines and erosion setback lines for the one wash with a flow in excess of 100 cfs are shown.
  - b. No sheet flow from the minor nuisance flows through the site occurs.
  - c. The property does not contain any federally-mapped floodways or floodplains. It is covered by FEMA Map No. 04019C1720M which designated the entire property in a Zone X, meaning it is "outside the 0.2% annual chance floodplain".
  - d. The peak discharge for the one wash with a Q100 greater than 100 cfs is the one at the southeast corner is shown. One discharge value is shown for the flow entering and exiting the site since both are so close to one another.
  - e. The Riparian Habitat Ordinance designates property at the southeast corner of the site as Xeroriparian C. The area of this designation is shown on Exhibit I-C.4. This line is technically modified from what appears on Mapguide, and more accurately represents the riparian area per an agreement between Karen Novak of Novak Environmental and Eric Shepp & Patricia Gilbert of the Pima County Flood Control District reached on January 14, 2014. The area of Xeroriparian C was calculated to be 15,608 square feet.
  - f. There is no existing or planned drainage infrastructure on the site.
  - g. There are no onsite sources of perennial surface water.
  - h. Exhibit I-C.4 shows the erosion hazard setback (EHS) adjacent to the main wash at the southeast corner. That EHS is measured at 50 feet from the top of bank of this wash, since the wash contains a flow between 500 & 2000 cfs in accordance with the Pima County Floodplain Ordinance (2010-FC5).
5. The downstream conditions of the affected watersheds should not be impacted by the development of the subject property. The main wash at the southeast corner will not be encroached upon with no significant additional onsite flow entering into it, making the downstream conditions unaffected. The other watersheds impacting downstream properties on the south and west borders are all minor with a quantity of flow ranging





**MJMM CONSULTING, INC.**  
 Land Planning and Development Services  
 7002 E. 4th Street Tucson, Arizona 85710 Phone: 520-885-5021

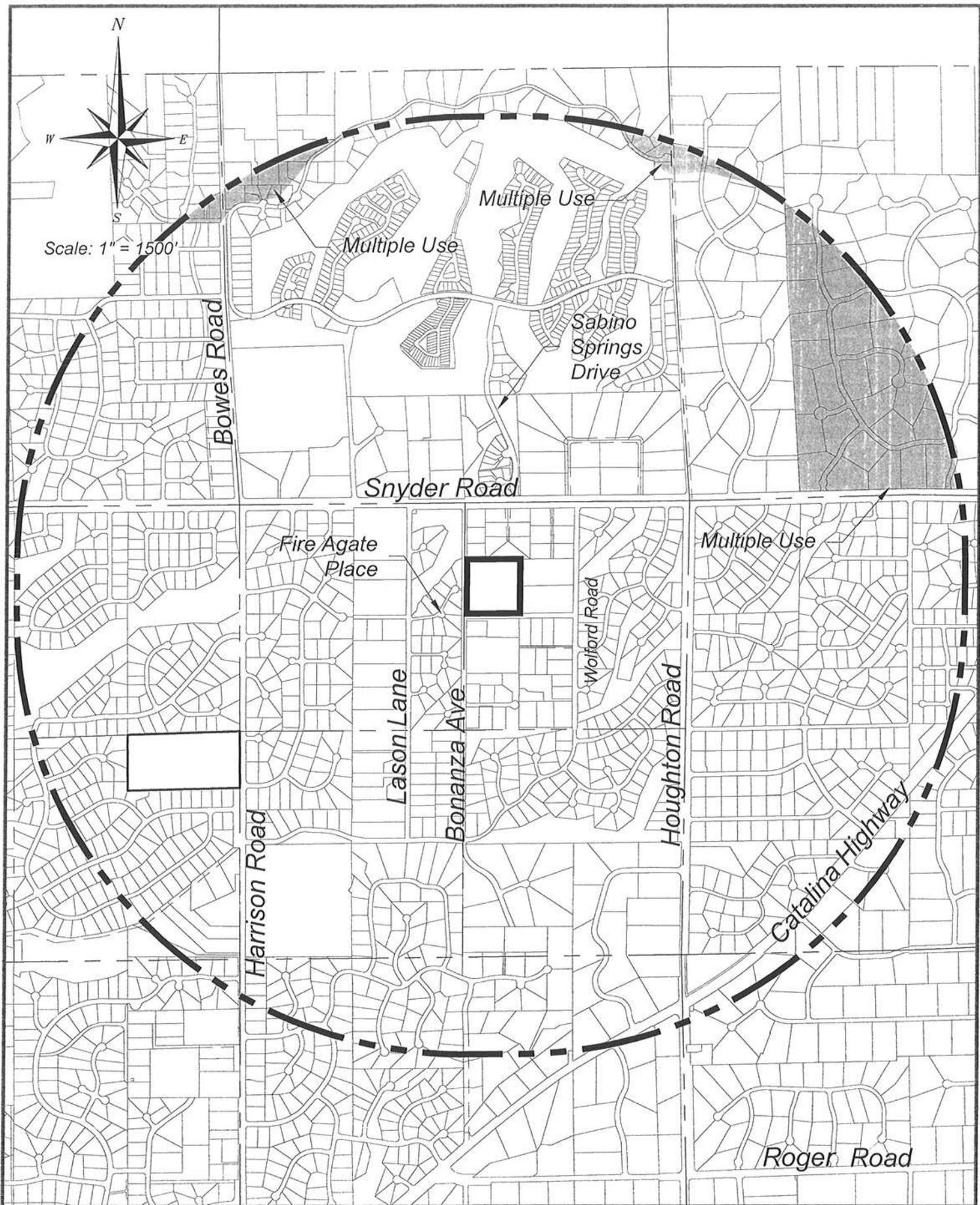
SandyCreek on Bonanza Ave.  
 Parcel No. 114-21-322A  
 Section 23, Township 13 S, Range 15 E  
 Pima County, Arizona

**Exhibit I-C.4**  
**Hydrology Map**

from 7.1 to 28 cfs. The flows within these watersheds all continue either to the south within natural washes or across Bonanza Ave to the west on the surface.

#### **I-D. BIOLOGICAL RESOURCES**

1. The property is outside of the Conservation Land System (CLS). That is made clear by Exhibit I-D.1, the Conservation Lands System Map, which shows the conditions in a regional context. Within the map coverage the only properties affected by the CLS are those to the north about a mile away.
2. The property is not within or adjacent to one of the Critical Landscape Connections.
3. The property is not within the Priority Conservation Area for the Pima Pineapple Cactus
4. The property is not within the Priority Conservation Area for the Needle-spined Pineapple Cactus.
5. The property is entirely within the Priority Conservation Area for the Cactus Ferruginous Pygmy-Owl (Priority 1) but not at all for the Western Burrowing Owl.
6. A copy of the Arizona Game & Fish Department Heritage Data Management System is enclosed as Exhibit I-D.6a. It shows a number of Special Status Species known to exist within a 3 mile radius of the subject property. Given that within a 3 mile radius of the property there is a wide array of habitats, including that of the Sabino Canyon and of the lower elevations of Mt. Lemmon, the number of species on the list is not an indication of the presence of these species on the subject property. Those species are the Pima Indian Mallow, the Sabino Canyon Dancer, the Giant Spotted Whiptail, Designated Critical Habitat for Gila chub, Designated Critical Habitat for Mexican spotted owl, Mexican Long-tongued Bat, Greater Western Bonneted Bat, the Gila Chub, the Cactus Ferruginous Pygmy-owl, the Sonoran Desert Tortoise, the Western Red Bat, the Western Yellow Bat, the Lowland Leopard Frog, the Arizona Manihot, the Palmer's Muhly, the Lemmon Cloak Fern, the Pocketed Free-tailed Bat, the Big Free-tailed Bat, the Stag-horn Cholla, the Mexican Spotted Owl, and the Tumamoc Globeberry. See Exhibit I-D.6a for the specific classification each of 22 special species is given. The likelihood of each species was then evaluated by Karen Cesare, RLA and the results are presented in Exhibit I-D.6b which indicates speaks to that likelihood.
7. Novak Environmental, Inc. staff, under the direction of Karen Cesare, RLA, performed field work on the site to identify vegetative communities and to inventory Saguaros and Ironwoods. No Ironwoods were found. Regarding Saguaros, 34 were found. Of the 34, 20 were found to be over 6' tall and 14 were found to be 6' tall or less. Exhibit I-D.7/9 depicts the location of these saguaros.
8. The SDCP MapGuide does not classify the property as either Habitat Protection or Community Open Space priority acquisition property under either the 2004 or the Proposed 2010 Conservation Bond Program.
9. There are no areas onsite where the vegetation is especially important for scenic value, or for screening and/or buffering. The riparian vegetation in the southeast corner provides some soil stabilization for the drainageway. See Exhibit I-D.7/9.
10. Exhibit I-D.10 shows four separate onsite Vegetative Communities, entitled 1) Sonoran Desert Upland - Cholla dominate (22% of the site), 2) Sonoran Desert Upland - Mixed Palo Verde/Saguaro (59% of the site), 3) Sonoran Desert Upland - Creosote Dominate (16% of the site), and 4) Xeroriparian Habitat 'C' (3% of the site). The Sonoran Desert Uplands are characterized by Foothills Palo Verde, Mesquite, Saguaro Cactus, Prickly Pear, Pencil Cholla, Jumping Cholla, Barrel Cactus, Creosote Bush, and Triangle Leaf Bursage. Areas further classified as dominated by one species contain a significant



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 Parcel No. 114-21-322A  
 Section 23, Township 13 S, Range 15 E  
 Pima County, Arizona

Exhibit I-D.1  
 Conservation Land  
 System Map

Arizona's On-line Environmental Review Tool  
 Search ID: 20131117021852  
 Project Name: DeGrazia - Bonanza  
 Date: 11/17/2013 1:40:57 PM

**Project Location**



**Project Name:** DeGrazia - Bonanza  
**Submitted By:** Michael Marks  
**On behalf of:** PRIVATE  
**Project Search ID:** 20131117021852  
**Date:** 11/17/2013 1:40:47 PM  
**Project Category:** Development Outside Municipalities (Rural Development), Residential subdivision and associated infrastructure, New construction  
**Project Coordinates (UTM Zone 12-NAD 83):** 520719.733, 3572904.982 meter  
**Project Length:** 549.534 meter  
**County:** PIMA  
**USGS 7.5 Minute Quadrangle ID:** 1726  
**Quadrangle Name:** SABINO CANYON  
**Project locality is not anticipated to change**

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
Abutilon parishii	Pima Indian Mallow	SC	S	S	SR
Argia sabino	Sabino Canyon Dancer	SC	S		
Aspidoscelis burti stictogrammus	Giant Spotted Whiptail	SC	S		
CH for Gila intermedia	Designated Critical Habitat for Gila chub				
CH for Strix occidentalis lucida	Designated Critical Habitat for Mexican spotted owl				
Choeronycteris mexicana	Mexican Long-tongued Bat	SC	S	S	WSC
Eumops perotis californicus	Greater Western Bonneted Bat	SC	S	S	
Gila intermedia	Gila Chub	LE			WSC
Glaucidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl	SC	S	S	WSC
Gopherus morafkai	Sonoran Desert Tortoise	C*	S		WSC
Lasiurus blossevillii	Western Red Bat		S		WSC
Lasiurus xanthinus	Western Yellow Bat		S		WSC
Lithobates yavapaiensis	Lowland Leopard Frog	SC	S	S	WSC
Manihot davisiae	Arizona Manihot		S		
Muhlenbergia palmeri	Palmer's Muhly		S		
Notholaena lemmonii	Lemmon Cloak Fern	SC			
Nyctinomops femorosaccus	Pocketed Free-tailed Bat		S		
Nyctinomops macrotis	Big Free-tailed Bat	SC			
Opuntia versicolor	Stag-horn Cholla				SR
Stevia lemmonii	Lemmon's Stevia		S		
Strix occidentalis lucida	Mexican Spotted Owl	LT			WSC
Tumamoca maccougallii	Tumamoc Globeberry		S	S	SR

**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.

Ex. I-D. 6a



January 23, 2014

Novak Environmental, Inc.  
4574 North First Avenue  
Suite 100  
Tucson, AZ 85718  
Tel 520.206.0591  
Fax 520.882.3006

Mr. Michael Marks, MJM Consulting  
7002 E. 4<sup>th</sup> Street  
Tucson, AZ 85710

Ex. I-D.6b

Subject: Arizona Game and Fish Special Status Species Occurrence Statement – Bonanza Property

Dear Mike:

I have reviewed the information contained in the results of the Arizona Game and Fish's "On-line" review for the approximately 10 acre parcel of land on N. Bonanza Avenue in Pima County.

The results returned show a total of 22 species of plants and/or animals that have some sort of special status as possibly existing within three miles of the subject property.

I have reviewed the list of species and compared the habitat requirements of each against the conditions found on the subject property.

It is important to note that within a three mile radius of the subject property there is Sabino Canyon and Bear Canyon, protected riparian areas and lower elevations of Mt. Lemmon in the Coronado National Forest. This is mentioned as an explanation for the presence of many of the species listed in the results of the review.

With two exceptions there is no habitat on the subject property that could support the species listed. The two species that may be found, but are not highly likely to be found on site include:

1. *Opuntia versicolor*, Stag-horn Cholla, which only listed as a state regulated species, and not observed on site even though there is a significant population of other Cholla species. No special treatment of this species is required should it be found.
2. *Gopherus morfkai*, Sonoran Desert Tortoise, which can be found in a variety of habitats including rocky slope areas and bajadas. No evidence of the Sonoran Desert Tortoise was observed; however, no specific surveys were conducted, nor are required. Should a Sonoran Desert Tortoise be found on site then appropriate steps for its protection and relocation will be done.

Please let me know if you have any questions or need more information.

Sincerely,

  
Karen Cesare, RLA

Page 13

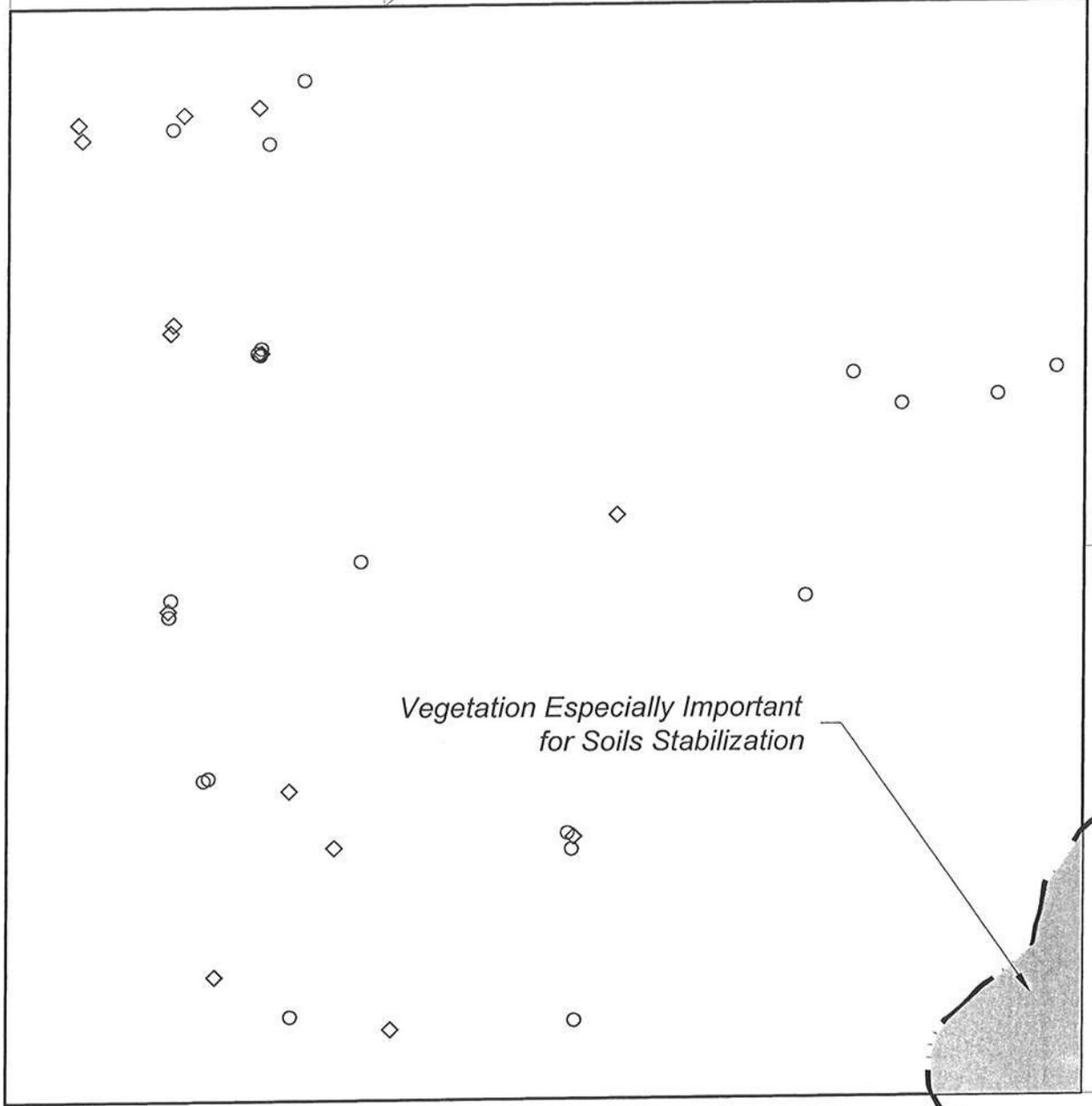


Scale: 1" = 100'

LEGEND

- ◇ Saguaro < or = 6'
- Saguaro > 6'

Bonanza Avenue

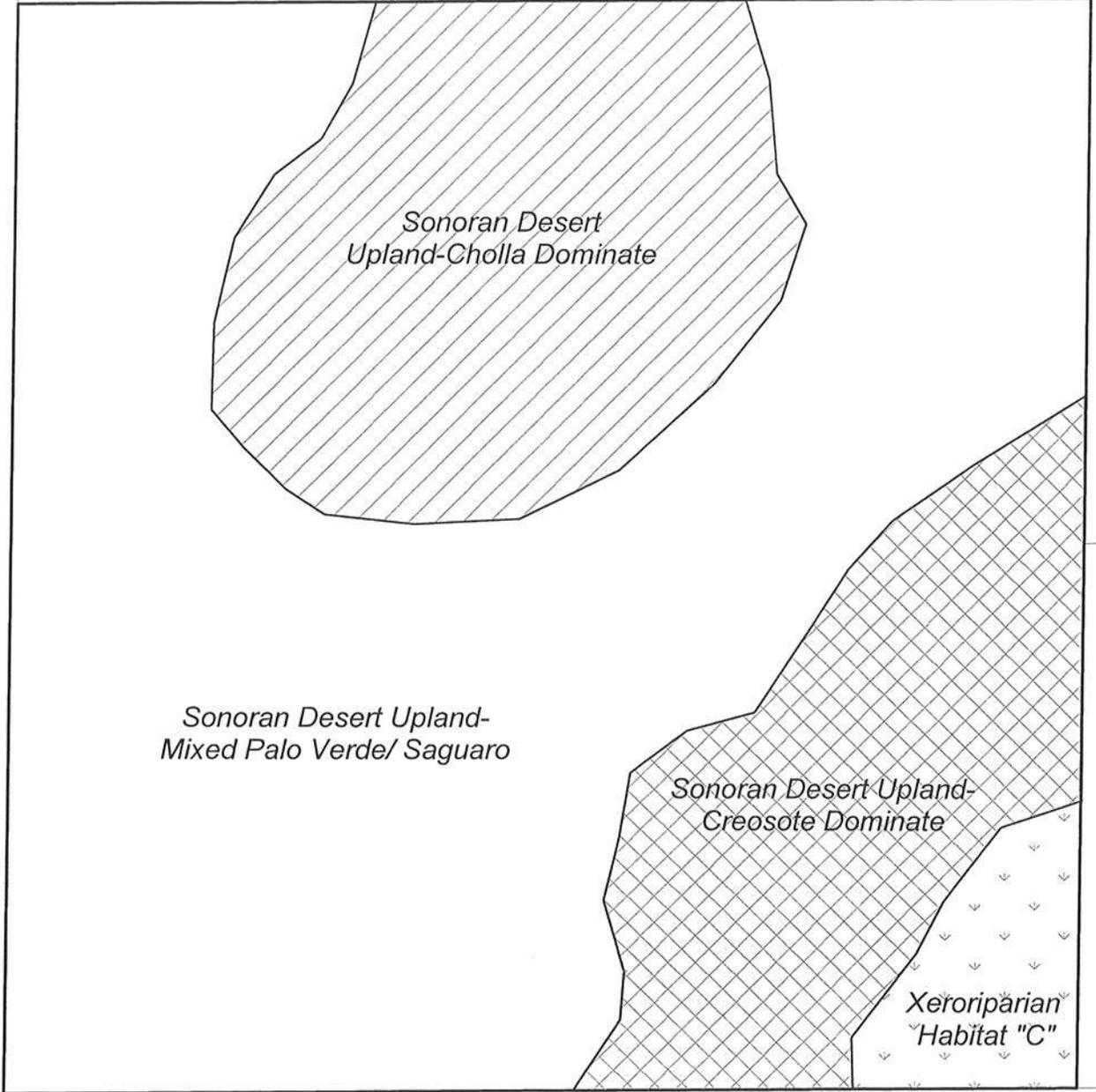


*Vegetation Especially Important  
for Soils Stabilization*

100 Year Floodline



Scale: 1" = 100'



number of that species, and are mapped separately to provide more detailed information about the site. The Xeroriparian 'C' area includes Mesquite, Whitethorn Acacia, Greythorn, Christmas Cholla, Barrel Cactus, and Creosote Bush. The Xeroriparian area is classified as Xero-riparian 'C' by Pima County.

#### **I-E. VIEWSHEDS**

1. The Cluster Option will not be utilized and therefore this section will not apply.
2. See Exhibit I-E.2 for photos of the site, taken from offsite.

#### **I-F. TRANSPORTATION**

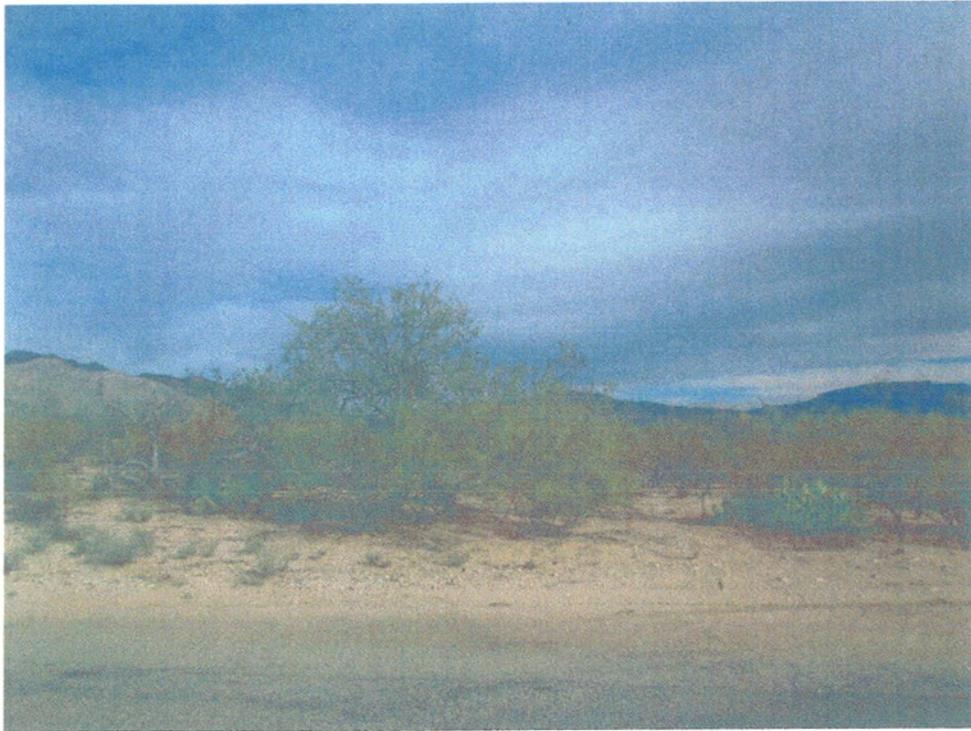
1. The property has direct access off of Bonanza Avenue, which is not a 'major route' according to the Pima County Major Streets & Routes Plan. The closest 'major route' is Snyder Road, to which Bonanza Ave intersects about 600 feet to the north. Snyder Road is also a 'scenic route'. Exhibit I-F shows the location of the subject property, Bonanza Ave, Snyder Road, and Houghton Road and the Catalina Highway which are the only two other 'major routes' and 'scenic routes' within one mile of the subject property. Below information is presented for each one of these 'major routes'.

##### Snyder Road

- a. The 1956 establishment for Snyder Road for the entire segment within the 1 mile radius, per Proceedings No. 907, recorded in Book 7 Page 74 of Road Maps, provided for a 100 foot right-of-way, 50 feet on either side of the centerline. Since that time, when plats were recorded adjacent to Snyder Road, the additional right-of-way of 25 feet was dedicated leading to a complete half right-of-way of 75 feet on a segment by segment basis.
- b. The ultimate right-of-way per the Major Streets & Routes Plan is 150 feet. As stated above there are segments above with half right-of-way that do comply and then where adjacent to acreage there are segments with half right-of-way that do not and are only 50 feet wide.
- c. Snyder Road is continuous from the Sabino Creek, to the west by a little less than 1 mile, to the Aqua Caliente Wash, about 3 ½ miles to the east.
- d. See the sub-section below entitled 'Proposed Off-site roads'.
- e. The roadway consists of two travel lanes and dirt shoulders, without any curbs or bike lanes or sidewalks. There is a center left turn lane from Lason Lane to the west to about Wolford Road to the east. The posted speed limit is 45 MPH. The capacity of this roadway is 15,930 average daily trips (ADT).
- f. According to the PAG traffic volume online report, based on a 2010 count, Snyder Road between Harrison and Houghton Roads has an average daily two-way traffic of 3,000 trips.
- g. There are no bike or pedestrians paths along the roadway.
- h. There are no roadway improvements planned per the Pima County 5 Year Transportation Plan.

##### Houghton Road

- a. The existing full right-of-way is 150 feet, with 75 feet on both sides, from Snyder Road south to about 1900 feet north of Catalina Hwy, where the r/w reduces in width. North of Snyder Road the r/w is 30 feet wide.
- b. The ultimate MS&R Plan right-of-way from Snyder Road to the south is 200 feet. All of the existing r/w south of Snyder Road is deficient. The MS&R Plan does not show any ultimate r/w north of Snyder Road.



*On the West Boundary Looking Easterly*



*On the South Boundary Looking Northerly*

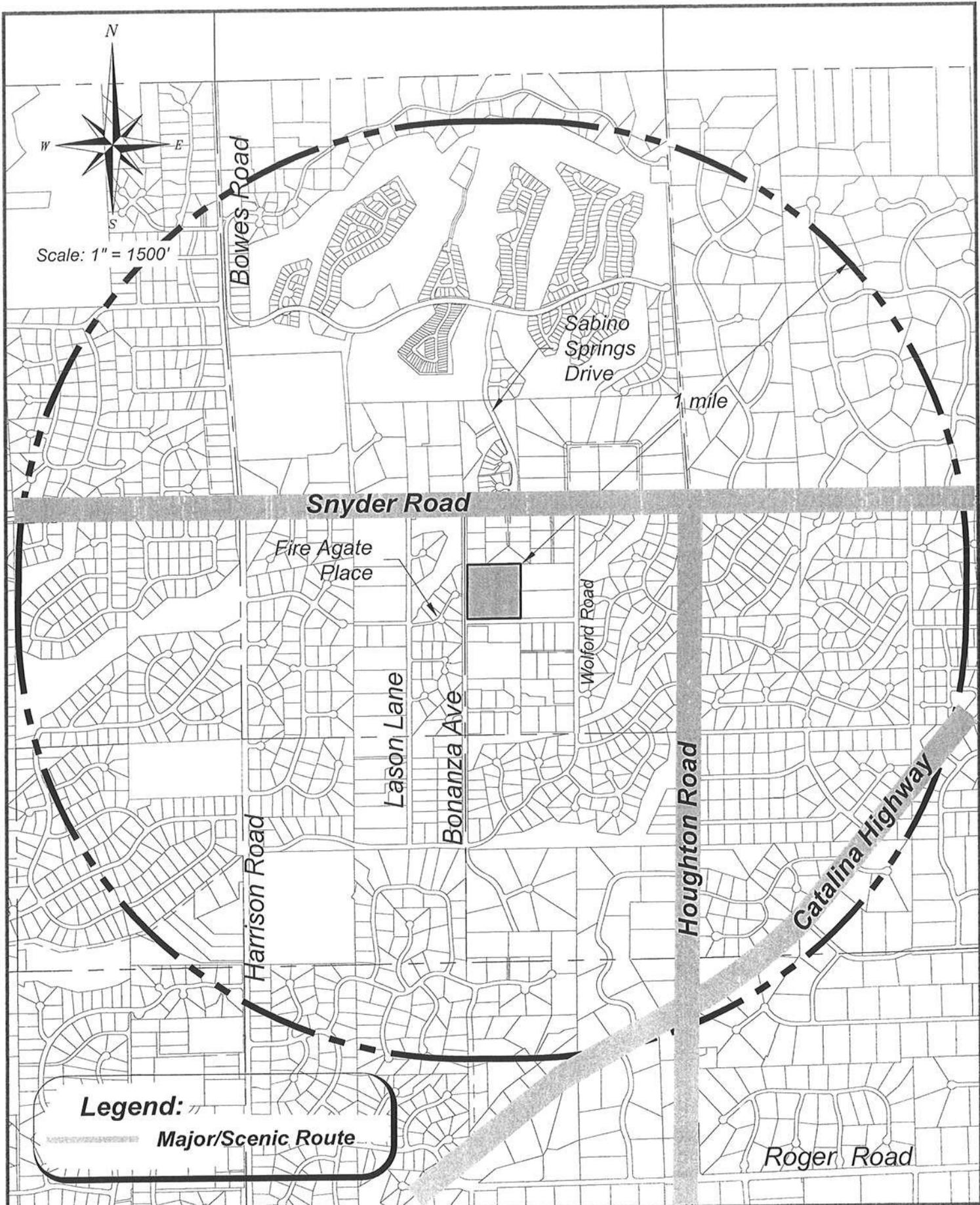
- c. Houghton Road has a continuous right-of-way from north of Snyder Road southerly, to and through the City, to Corona de Tucson.
- d. See the sub-section below entitled 'Proposed Off-site roads'.
- e. South of Snyder Road, the roadway consists of two travel lanes with paved shoulders, without any curbs or bike lanes or sidewalks. The posted speed limit is 45 MPH. The capacity of this roadway is 15,930 average daily trips (ADT). North of Snyder Road the roadway is strip pavement without any speed limit posting.
- f. According to the PAG traffic volume online report, based on a 2010 count, Houghton Road between Snyder Road and Catalina Hwy has an average daily two-way traffic of 4,000 trips.
- g. There are no bike or pedestrian paths.
- h. There are no roadway improvements planned per the Pima County 5 Year Transportation Plan. The RTA planned improvements to Houghton Road do not affect any segment within one mile of the subject property. The PAG Regional Transportation Plan calls for the widening to 3 lanes of Houghton Road from Tanque Verde Road to Catalina Highway.

#### Catalina Highway

- a. The existing right-of-way for the segment within 1 mile of the subject property ranges from 110 to 150 feet wide.
- b. The ultimate MS&R Plan right-of-way is 150 feet, so there are segments that are sub-standard.
- c. The r/w is continuous from Tanque Verde Road to the Mt. Lemon Highway.
- d. See the sub-section below entitled 'Proposed Off-site roads'.
- e. The roadway consists of two travel lanes plus a continuous center left turn lane, with paved shoulders, and without any curbs or sidewalks. The paved shoulder is painted indicating it to be a bike lane. The posted speed limit is 50 MPH. The capacity of this roadway is 16,700 average daily trips (ADT).
- f. According to the PAG traffic volume online report, based on a 2011 count, from east of Houghton Road to Tanque Verde Road the average daily two-way traffic is 15,000 trips. Also, on Catalina Highway, the count from Houghton Rd to Snyder Rd is 3,817 (April 2012) and from Prince Rd to Houghton Rd it is 6,391 (April 2010).
- g. There are painted bike lanes on both sides. There are no pedestrian paths.
- h. The Pima County 5 Year Transportation Plan does not call for any roadway improvements.

#### Proposed Offsite Roads

- a. There are no new 'proposed offsite roads'. However, there are two existing offsite roads that I will address.
  - b. Bonanza Ave is not a 'major route' nor a 'scenic route'. This local, residential street contains strip pavement with minimal dirt shoulders, without any curbs or sidewalks or bike lanes. It is posted at 25 MPH. The right-of-way is 60 feet wide.
  - c. Walnut Tree Street is a minor street along the south boundary of the site, running between Bonanza Ave and Wolford Road, however not continuously. This is a dirt road that serves just a few homes.
2. Exhibit I-F.2 shows the distances between the subject property and the nearby street intersections. The Walnut Tree Drive runs along the south boundary of the property. It serves just five lots which also have access to Wolford Road. To the north on Bonanza



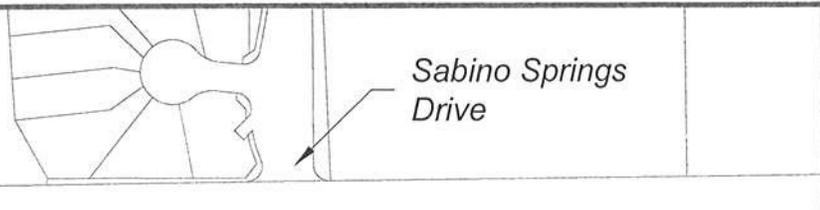
**Legend:**

*Major/Scenic Route*

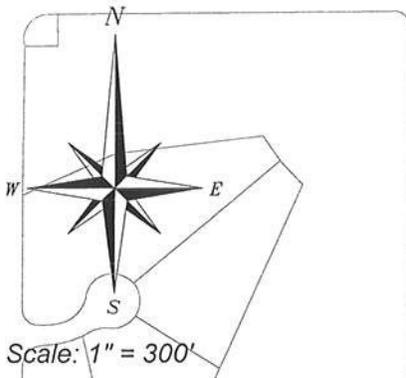
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 Parcel No. 114-21-322A  
 Section 23, Township 13 S, Range 15 E  
 Pima County, Arizona

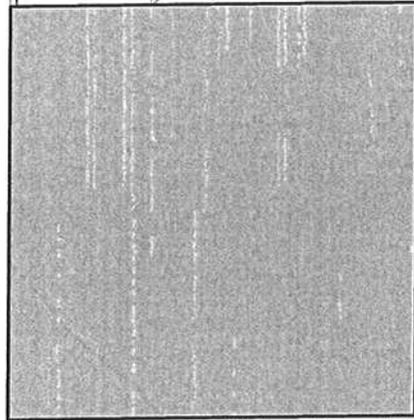
**Exhibit I-F.1**  
**Major Routes Map**



Snyder Road



600'



Walnut Tree Drive

Lason Lane

Fire Agate Place

Bonanza Ave

Wolford Road

1065'

Wild Javalina Pl

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Exhibit I-F.2  
Driveway Separation Map

the nearest street intersection is the one with Snyder Road which is about 600 feet away. To the south the nearest intersection is about 1050 feet at Wild Javalina Place.

3. There is no mapping of transit routes, since none either exist or are planned within one-half mile of the site.

#### **I-G. SEWERS**

1. Exhibit I-G shows an existing 8" public sewer line (i.e. G-93-034) running from the Fire Agate Place cul-de-sac bulb to a manhole in Bonanza Ave.
2. There are no constraints to connecting to the manhole noted above by gravity sewer.

#### **I-H. RECREATION AND TRAILS**

1. Within one mile of the property there is just one public park and that is the Pima County McDonald District Park. It is located on the east side of Harrison Road, about 3000 feet to the southwest. That location is shown on Exhibit I-H. There are no recreation areas or public trails within that one mile distance, and so none are shown on the exhibit.
2. The Pima Regional Trails System Master Plan indicates within one mile of the subject property there are several planned trails. That includes the proposed Sabino Creek Trail (#45), the proposed Pine Tree Wash Trail (#44), the proposed Pine Tree Wash to Prince Road Trail (#241), the Tomahawk Trail (#199), the proposed Bear Canyon Road alignment Trail (#214), the proposed Snyder Road alignment Trail (#234), and the proposed Harrison-Houghton Link Trail (#195).

#### **I-I. CULTURAL RESOURCES: ARCHAEOLOGICAL AND HISTORIC SITES**

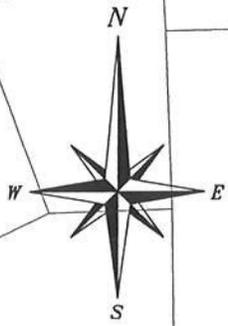
1. A letter is enclosed as Exhibit I-I, written by David Stephens, PhD of the firm Professional Archaeological Services of Tucson, which addresses the following:
  - a. It states that a field survey for cultural resources was conducted on the site on August 13, 2009.
  - b. It indicates that there are no archaeological or historic resources on the site.
  - c. The letter indicates the lack of need for any further analysis, which according to the archaeologist means that the likelihood of there being any sub-surface findings is not significant.
  - d. It indicates that there is no need for further archaeological study.
2. No mapping is necessary due to the lack of resources found.
3. A field study has been conducted. A copy will be submitted with the tentative plat.

#### **I-J. AIR QUALITY**

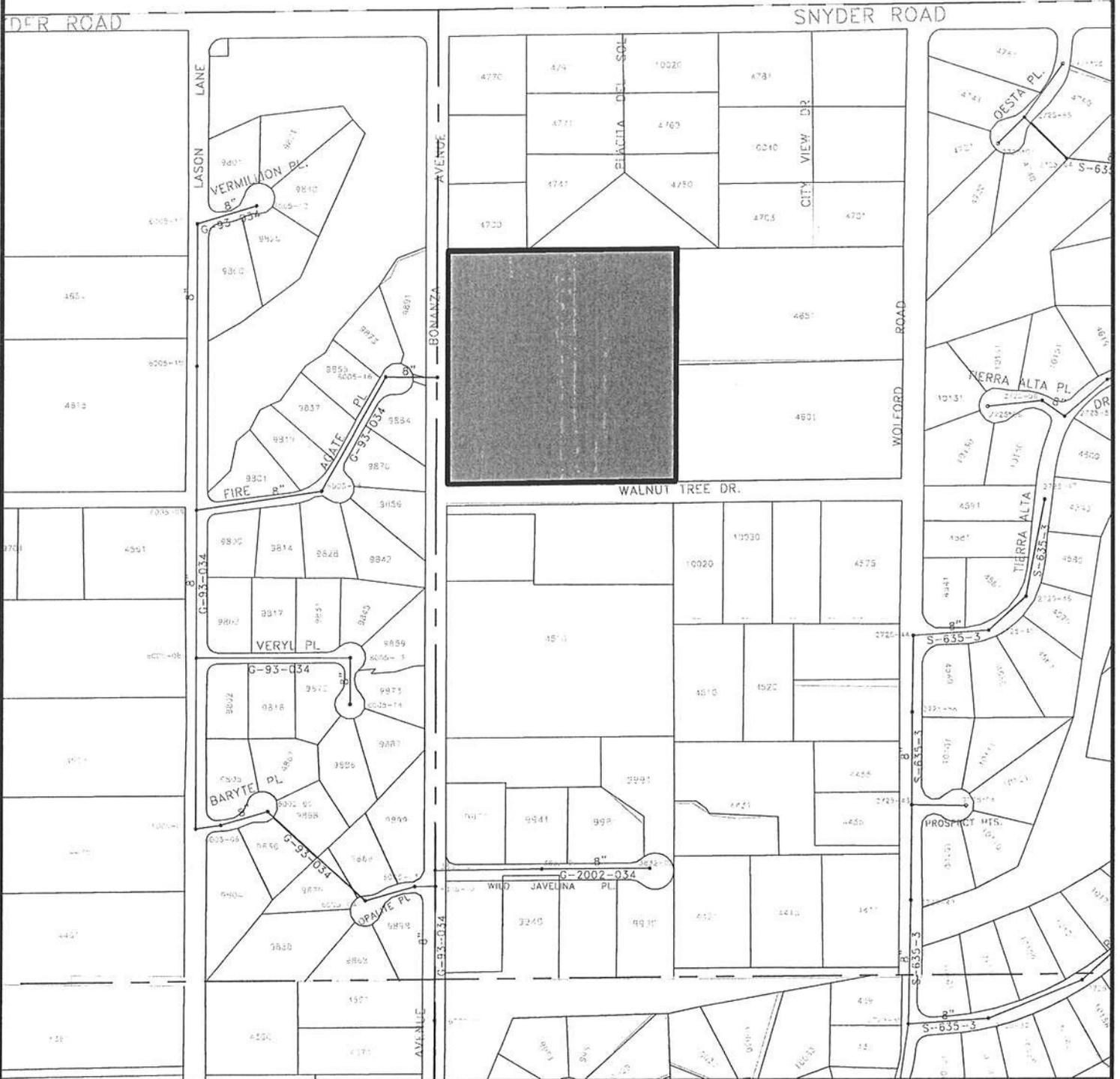
1. As this project is residential this section does not apply.

#### **I-K. COMPOSITE MAP**

Exhibit I-K.1 graphically integrates the significant site features identified in the Report. It shows the 100-year floodplain, erosion hazard setback & riparian habitat area in the southeast corner of the site per the Hydrology Map. This same area is also labeled as important vegetation related to soils stabilization. The map also shows the saguaros as shown on Exhibit I-D.7/9. There are no other features listed in the Checklist that apply. In addition to the paper copy of the Composite Map there is an acetate overlay of the same (i.e. Exhibit I-K.2) which can be used over the Preliminary Development Plan. This overlay does not have topography since there are no significant topographic features.



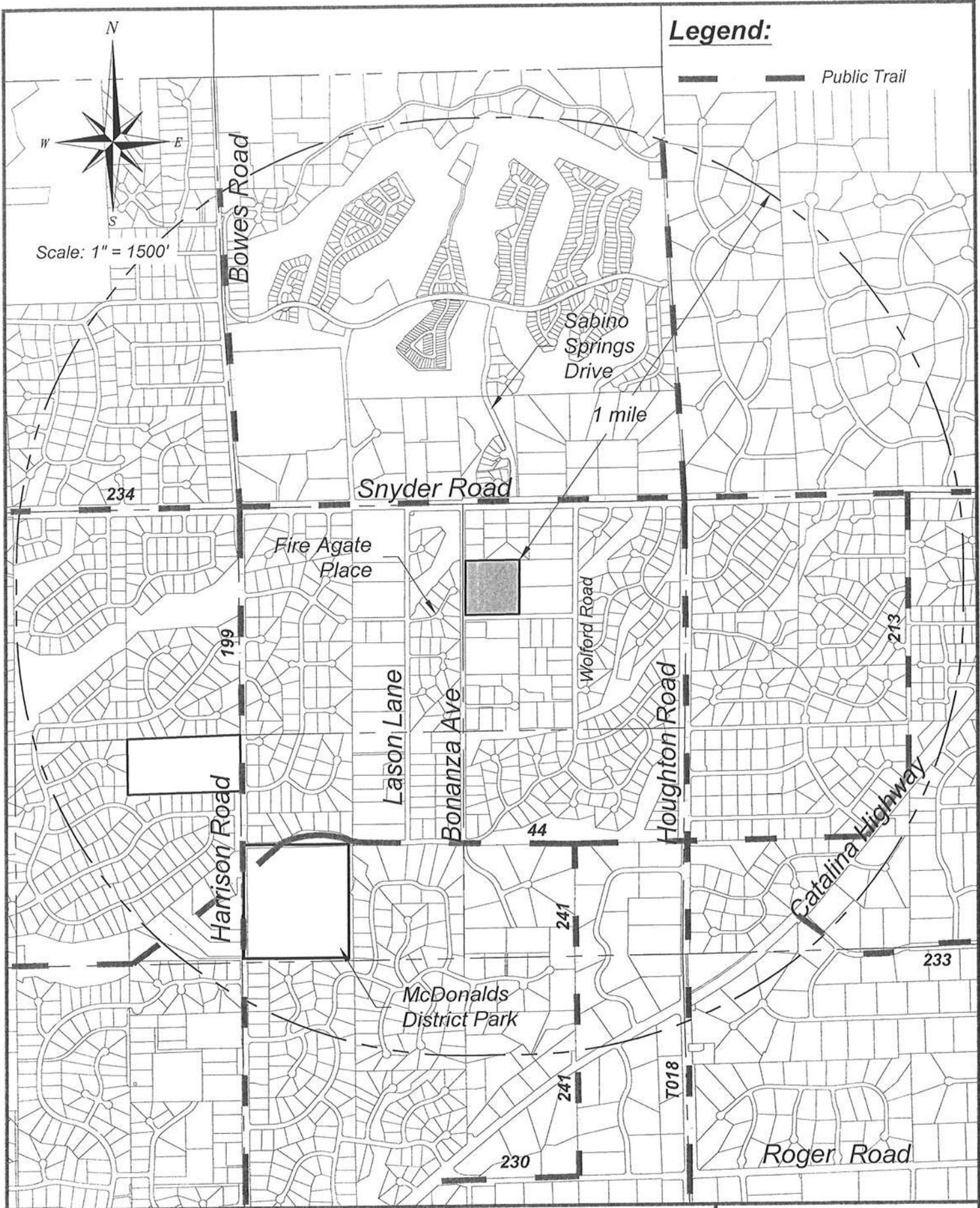
Scale: 1" = 400'



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 Pima County, Arizona

Exhibit I-G.1  
 Sewer Map



**Legend:**

Public Trail

18 November, 2013

Mr. Jerry DeGrazia  
The DeGrazia Company  
4030 N. Painted Quail Place  
Tucson, AZ 85750

Ex. I-I

RE: Results of **Bonanza (114-21-3220)**  
Archival and Site Files Research  
PAST Job No. 091936

Dear Mr. DeGrazia:

Personnel from P.A.S.T. researched the relevant archives for the subject property. Information from the archival research are summarized below.

<b>Date of Archaeology Study:</b>	<b>August 8, 2009</b>	
<b>Type of Archaeological Survey:</b>	<b>Pedestrian - Intensive/100%</b>	<b>T13S R15E S23</b>
<b>P.A.S.T Project Number:</b>	<b>091936</b>	<b>Report Date: 8/13/2009</b>
<b>Project Title:</b>	<b>Archaeological Survey of the Bonanza (114-21-3220) Project</b>	
<b>Archaeological Sites Found/Recorded Within the Study Area:</b>	<b>NONE</b>	
<b>Recommendations for Further Studies Within the Study Area:</b>	<b>NONE</b>	

Thank you for the opportunity to work with you on this project. If I may be of any further assistance please do not hesitate to contact me.

Sincerely,

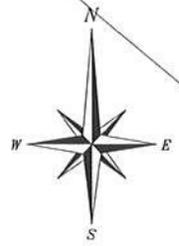


David V. M. Stephen, PhD  
Senior Archaeologist

State Antiquities Permit No. 2009-057bl

Page 24





Scale: 1" = 100'

S 89° 51' 33" E 628.79'

Bonanza Avenue

N 00° 46' 38" E 647.39'

S 00° 55' 12" W 647.57'

N 89° 50' 40" W 627.18'

Walnut Tree Drive

Erosion Hazard  
Setback Line

Vegetation Especially Important  
for Soils Stabilization

Xeroriparian C  
Area

100 Year Floodline

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Pima County, Arizona

Exhibit I-K.2  
Composite Map Overlay

## PART II LAND USE PROPOSAL

### II-A. PROJECT OVERVIEW

1. The entire property in question is to be rezoned from SR to CR-1. Therefore there is no need to create a map for this item.
2. The property is to be subdivided into 10 lots for residential development.
  - a. The site constraints do not provide much in terms of limiting the prospective development of the site. The design that is presented by this rezoning complies with the opportunities of the site in terms of existing land use & topography & hydrology & access & sewer & trails & archaeology. The only significant constraint on the site is the hydrology in terms of the main wash running through the southeast corner of the site, which is to be left natural. To a lesser extent the number of saguaros is another constraint which was evaluated, but found not to have a significant impact on the development, given the plan. The design inherent in the site plan is ideal given the site conditions.
  - b. The 10 lots being proposed translates to 10 residences per 9.33 acres, which is the same as 1.07 units per acre (i.e. 1.07 RAC). This is less than the 1.2 RAC provided for in the Comprehensive Plan, which officially calls for LIU 1.2. There are no Regional or Special or Rezoning Policies that apply.
  - c. As the date of the writing of this report there has yet to be any meetings with the surrounding property owners.
  - d. The proposed residential development will change the land use of the subject property from vacant land to productive low density residential use. The proposed use will comply with the surrounding development as described in Section I-A.
  - e. The Smart Growth principles and single family development on CR-1 lots don't mesh at first review. These principles, as presented by the Smart Growth Network are 1) Mix land uses, 2) take advantage of compact building design, 3) Create walkable neighborhoods, 4) Preserve open space, farmland, natural beauty and critical environmental areas, 5) Strengthen and direct development towards existing communities, and 6) Make development decisions predictable, fair and cost effective. The type of CR-1 single family development that is being proposed here doesn't constitute mixed land use or compact building design. However, the proposed development will afford walking opportunities in the low trafficked streets nearby as the residents in the nearby homes afford themselves of. The proposed development will result in large portions of individual lots that will be left natural just like that on existing nearby lots. The proposed development will be compatible with the nearby land use by being of a similar land use and density. The proposed development will also be predictable in the eyes of the nearby existing residences since it will be so similar to the land use pattern that already exists.
  - f. With the development consisting of lots with a minimum of 36,000 square feet, and with the homes separated by at least 20 feet and likely much more, the opportunity for solar energy use is great. The type of development planned (i.e. CR-1 single family housing) has the potential to satisfy the Green Building Program, if the future home builder chooses to pursue.

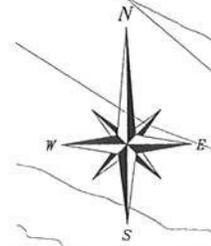
3. The property is not subject to 1) Buffer Overlay Zone, 2) the Gateway Overlay Zone, 3) the Hillside Development Zone, 4) the Cluster Development Option, 5) the Historic Zone, or 5) the Airport Environs and Facilities Zone. It is, however, subject to the Native Plant Preservation Ordinance (NPPO). Compliance with the NPPO will be achieved by using the Selective Plant Preservation Method. Each lot will be inventoried individually at the time of tentative plat development, and mitigation for impacted native vegetation, including saguaros, will be determined through a 'Single Lot' Native Plant Preservation Plan at the time a site plan for each lot is developed.

## II-B. PRELIMINARY DEVELOPMENT PLAN

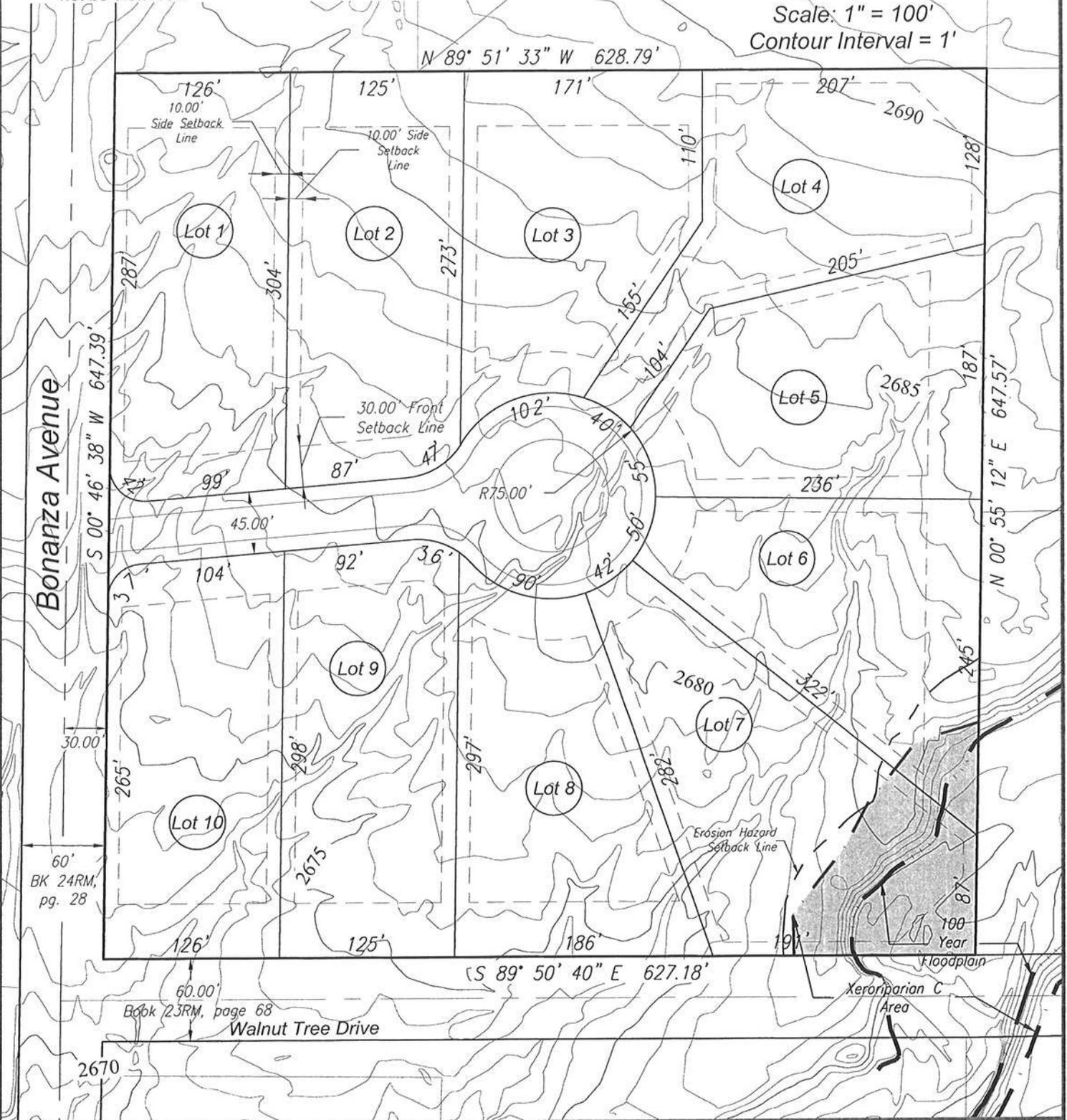
1. Exhibit II-B.1a depicts the Preliminary Development Plan with topography. Exhibit II-B.1b. is the same but without topo, and in the form of a removable transparency overlay. These exhibits address all of the elements identified in the Section II-B.1 of the Checklist, covering the same elements as identified in Zoning Code Section 18.91.030E, to the extent that they apply. The following is provided for clarification:
  - a. The site boundaries and the preliminary lot dimensions are shown.
  - b. A building envelope is defined by notes on Exhibit II-B.1a as the building setbacks shown on the same exhibit. Said Note #2 indicates that on Lots 6 & 7 the building envelope shall exclude the 100 year floodplain & Xeroriparian C & the Erosion Hazard Setback.
  - c. The adjacent right-of-ways are shown.
  - d. The one future point of access within the site is shown.
  - e. Parking will be accommodated within garages or under carports, as well as in the driveway. A typical driveway is shown within Lot 1.
  - f. There are no required buffers or screening or walls.
  - g. There is no required landscaped area.
  - h. There are no required recreation areas or common areas or open spaces or natural areas. However, the area within the 100 year floodplain and that of the Xeroriparian C will be left as natural. Also, the perimeter of each lot is expected to be maintained as natural open space.
  - i. The one regulatory wash in the southeast corner will be maintained in its natural state, and is represented as such on the Plan.
  - j. This point is moot.
  - k. A separate version of the PDP is presented in Exhibit II-B.1.c which shows the properties within 300 feet. All land use within that radius is residential, with the exception of one vacant parcel. All homes are one story in height.
  - l. This point is moot.
  - m. There are none.
  - n. This point is moot. Sewers will be utilized.
  - o. This point is moot. There are no overlay zones.
  - p. This point is moot. There are no transit stops.
2. The following support data is provided:
  - a. Not applicable
  - b. The maximum building height will be 34 feet and two stories, as defined by the Zoning Code.
  - c. The total number of dwellings is 10.
  - d. The density is 1.1 RAC.

Notes:

1. Building envelopes shall be enclosed by the building setbacks shown on the plan. The setbacks shown on Lots 4 and 7 are in compliance with those allowed for a 'Gore' Lot per Zoning Code Section 18.03.020.L.11 & 12.
2. In addition to the above, the building envelopes on Lots 6 & 7 shall also exclude the 100 year floodplain, Xeroriparian C, and erosion hazard setback areas. This shall be implemented by a note or notation on the subdivision plat. Said note or notation shall stipulate that the vegetation within the 100 year floodplain and Xeroriparian C areas shall not be disturbed.



Scale: 1" = 100'  
Contour Interval = 1'



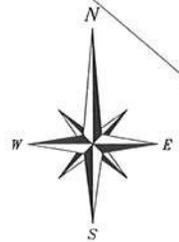
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7002 E. 4th Street Tucson, Arizona 85710 Phone: 520-885-5021

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Parcel No. 114-21-322A  
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Pima County, Arizona

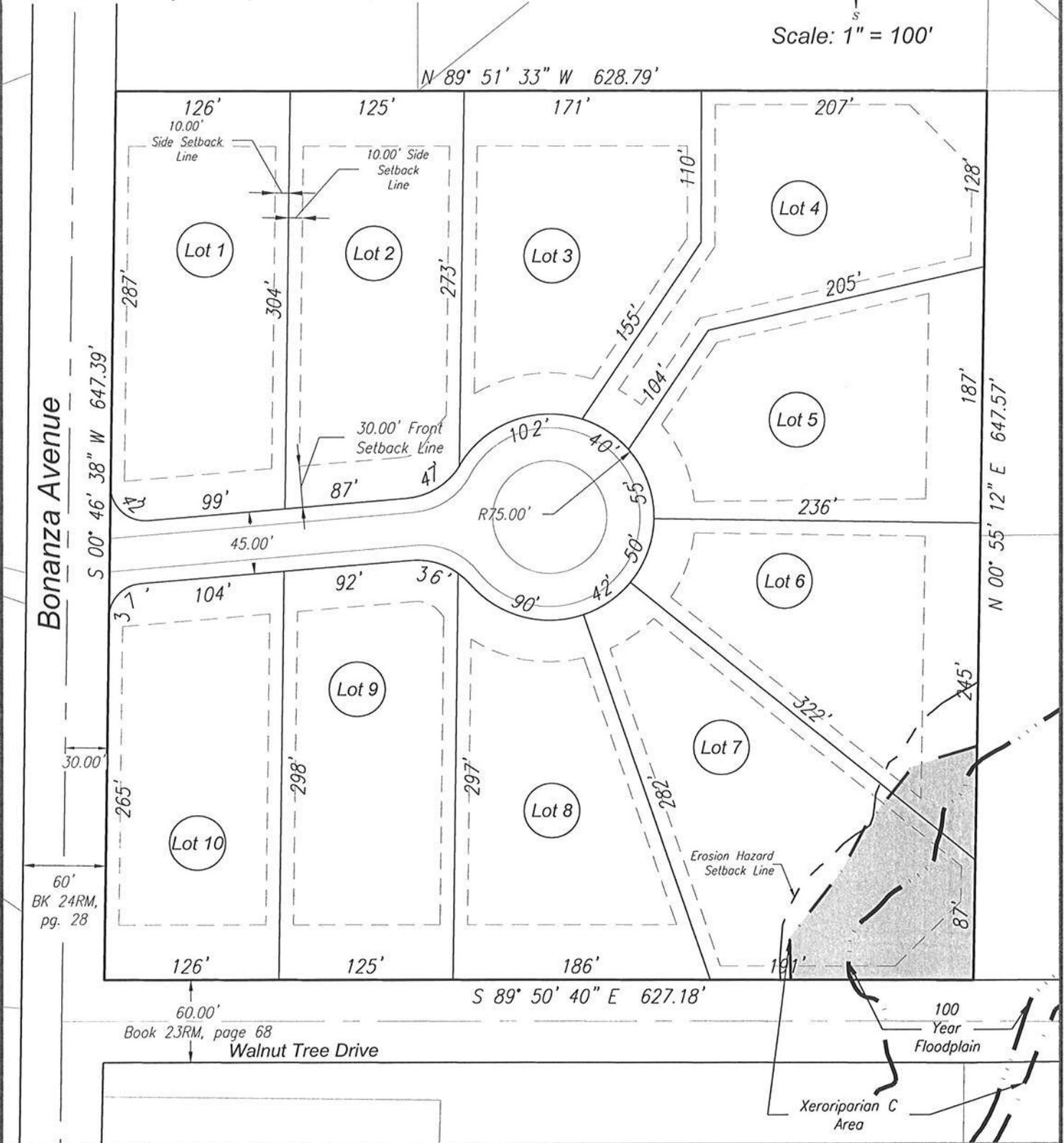
Exhibit II-B.1a  
Preliminary Development  
Plan

**Notes:**

1. Building envelopes shall be enclosed by the building setbacks shown on the plan. The setbacks shown on Lots 4 and 7 are in compliance with those allowed for a 'Gore' Lot per Zoning Code Section 18.03.020.L.11 & 12.
2. In addition to the above, the building envelopes on Lots 6 & 7 shall also exclude the 100 year floodplain, Xeroriparian C, and erosion hazard setback areas. This shall be implemented by a note on the subdivision plat. Said note shall stipulate that the vegetation within the 100 year floodplain and Xeroriparian C areas shall not be disturbed.



Scale: 1" = 100'



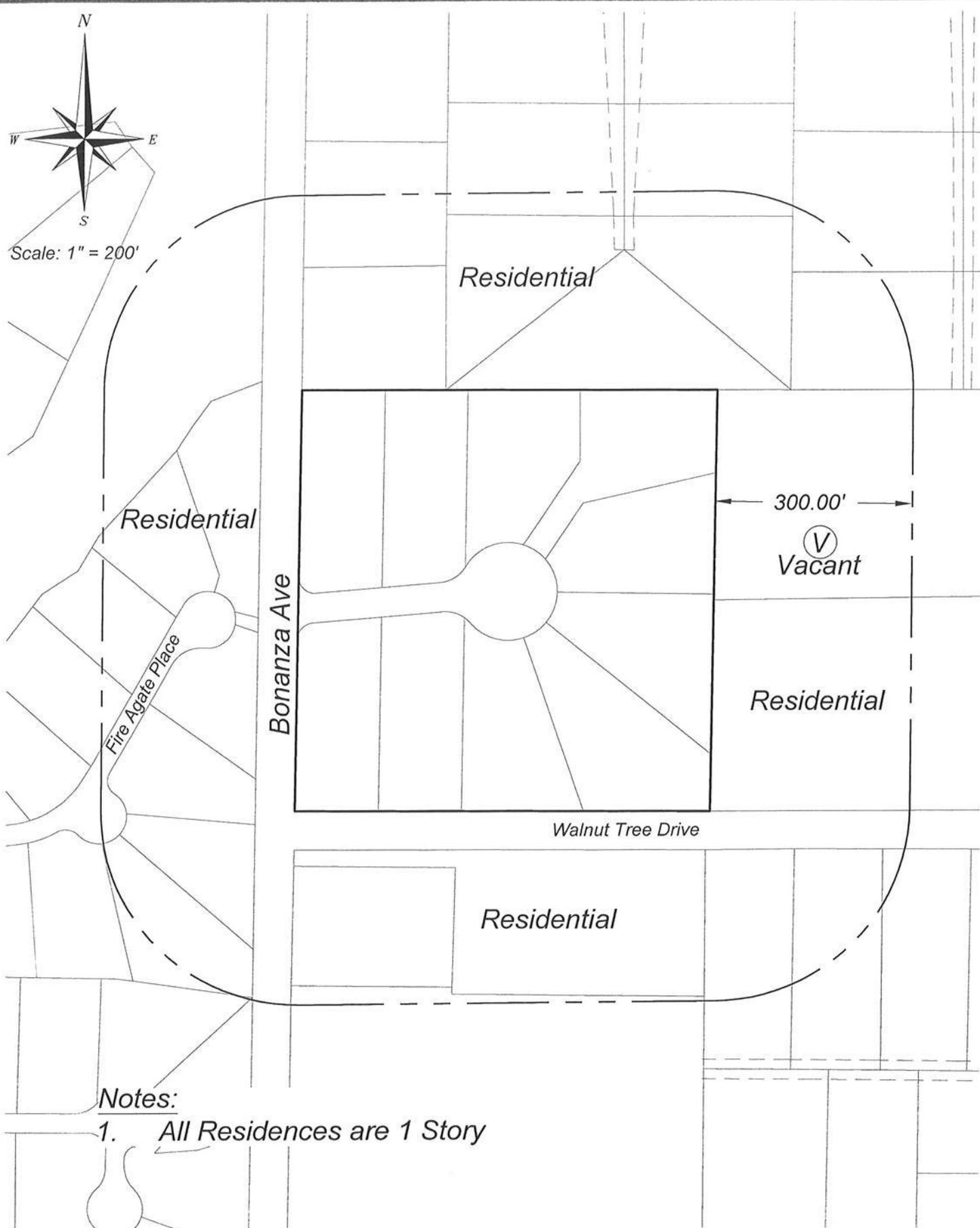
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 Pima County, Arizona

**Exhibit II-B.1b**  
**Preliminary Development Plan**



Scale: 1" = 200'



**Notes:**

- 1. All Residences are 1 Story

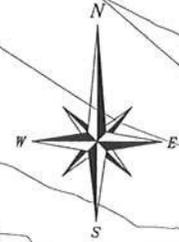
- e. Each dwelling will contain the required parking spaces onsite as determined by Line 1a of the Zoning Code Table 18.75.1.
- f. The landscaping will primarily be characterized as 'natural desert', however each lot will be allowed an active oasis landscaped area in the front and the rear yards, at the owner's choice.
- g. There is no natural and/or functional open space requirement, not even in regards to the NPPO, since the selective plant option will be used. The plan for NPPO compliance will call for full inventory & mitigation on a lot by lot basis. However, Note #2 on the PDP indicates that the area within the 100 year floodplain and erosion hazard setback and Xeroriparian C will be restricted from development. The area within the Xeroriparian C and 100 year floodplain will be left natural, with this area amounting to 0.36 acres. The PDP Note #2 also indicates that the vegetation within the 100 year floodplain and Xeroriparian C areas shall not be disturbed. A note on the subdivision plat shall be used to implement these commitments.
- h. Not applicable.

### **II-C. TOPOGRAPHY AND GRADING**

- 1. The site does not contain any slopes of 15 percent or greater.
- 2. There is no need to set aside natural area as a result of the Hillside Development Zone.
- 3. Even though the expectation is that the future home owner for each lot will maintain a substantial portion of his/her lot in its natural state, there is no amount of natural open space that is required. As such none is presented in the context of a requirement, except for the area within the 100 year floodplain & Xeroriparian C area noted in Section I-B.1.g. That area is shown Exhibit II-C.3. It amounts to 15,608 square feet, which represents about 4 per cent of the site. As stated before the actual amount of natural open space, after all construction is done, is expected to be much greater, but no commitment of an actual number is offered at this point, as no regulation requires that.
- 4. No cuts or fills of 5 feet or greater are expected
- 5. The 'cluster option' will not be used.

### **II-D. HYDROLOGY**

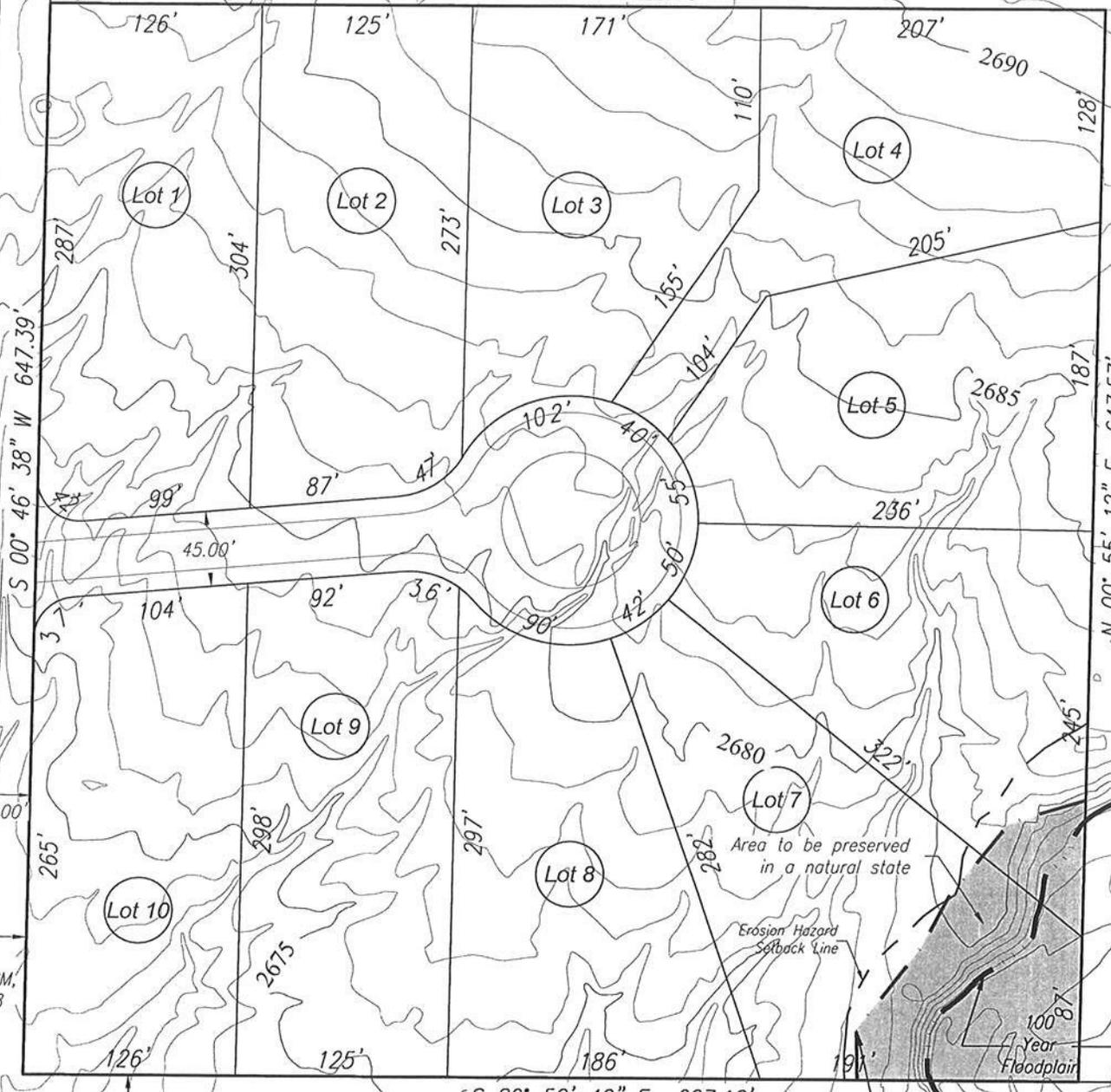
- 1. The layout is sensitive to both the one regulatory floodplain and the one riparian area (as defined by the Riparian Habitat Ordinance) on the site. Both of these constraints cross over the southeast corner of the property, all within two lots within the Preliminary Development Plan. Those lots (labeled as Lot #6 & #7) have sufficient room for a building envelope without encroaching into the 100 year floodplain, or the erosion hazard setback, or the Important Riparian Class C area. The way the subdivision has been laid out the offsite flow to this regulatory wash passes through the southeast corner of the site without any obstruction, allowing for this flow to continue downstream unaffected.
- 2. Avoidance will be achieved. The building envelope will not encroach into the regulatory 100 year floodplain. The individual lots will not be mass-graded and nuisance flows will be redirected around improvements on each lot to discharge in substantial conformance to existing drainage patterns. Even with the property being within a 'critical basin', any increase in peak discharge will be addressed by Detention/Retention In-Lieu Fees. It is understood that if the Detention Waiver Request



Scale: 1" = 100'  
Contour Interval = 1'

N 89° 51' 33" W 628.79'

Bonanza Avenue



S 00° 46' 38" W 647.39'

N 00° 55' 12" E 647.57'

S 89° 50' 40" E 627.18'

60'  
BK 24RM,  
pg. 28

60.00'  
Book 23RM, page 68

Walnut Tree Drive

2670

Note: Additional Natural Open Space is expected to be preserved by the builder and homeowner of each lot.

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Pima County, Arizona

Exhibit II-C.3  
Preliminary Grading  
Plan



is denied on-site detention will be required. Additionally, the project shall include 'first flush retention'. If the required peak discharge rate reduction can be accomplished through first flush retention and stormwater harvesting, a Detention Waiver and associated in-lieu fee should not be necessary. The developer and his engineer shall continue to talk to the Flood Control District during the platting process about this new 'first flush retention' Standard and its application to the subject project, and pursue the best solution to post-development runoff given the conditions of the proposed development.

3. Exhibit II-D.3 shows the post-development quantities of flow. The location and quantity of the one flow in excess of 100 cfs is the same as that before development, as is also the case for all of the minor flows.
4. Mitigation of drainage impacts is not necessary as there is minimal impact.
5. The property is within the boundaries of the Woodland Wash Special Study area. That 2010 Pima County Flood Control District study established floodplain boundaries. It did not establish policies affecting development. Otherwise there are no other Pima County flood control policies that affect the subject property.

## **II-E. BIOLOGICAL RESOURCES**

1. See Exhibit II-E.1 for a graphic response to the biological issues in the Checklist.
  - a. This is moot, as the site is outside of the CLS.
  - b. A complete avoidance of the saguaro population cannot be achieved due to its number and spatial distribution. The site will be subject to the Native Plant Preservation Ordinance at the time of platting. Given the relatively homogenous nature of the vegetation, along with the lot layout proposed, the 'Selective Plant Method' will be used for NPPO compliance. Each lot will be inventoried individually and mitigation for impacted native vegetation, including saguaros, will be determined at the time of site plan for each lot is developed. Grading is expected to be limited to building envelopes on each lot and the inventory data may be used to inform the design and layout of each house. A substantial amount of undisturbed area should remain in the 'post-development' condition.
  - c. This is moot, as the site does not contain any Ironwoods.
  - d. This is moot, as the site does not contain any Pima Pineapple Cactus.
  - e. This is moot, as the site does not contain any Needle-Spined Pineapple Cactus.
  - f. Other than the riparian habitat in the extreme southeast corner, which will be preserved, there are no other areas of significant or important vegetation.
2. This section does not apply as the property is outside of the CLS and unaffected by any Critical Landscape Connection.

## **II-F. LANDSCAPE AND BUFFER PLAN**

1. Given that the proposed zoning/use is CR-1 single family development and the adjacent zoning is all CR-1, Zoning Code Chapter 18.73 does not require any landscape bufferyards along any site boundary. Therefore there is no mapping for this section.
2. This is moot since no landscape bufferyards are required.
3. Individual "Single-Lot" NPPO plans will be prepared and submitted at the time of building site plans. Each lot will be responsible for its own mitigation, based on the existing inventory which will be done as part of the tentative plat process. These plans



will include saguaro mitigation, if required, along with mitigation for other regulated native plants.

## II-G. VIEWSHEDS

1. The development is not expected to block any significant views or vistas seen from adjacent properties, either close by or remote. The dominant offsite views are of the Catalina Mountains, to the north, which are not expected to be obscured at all.
2. No mitigation measures should be necessary given the conclusions expressed above.

## II-H. TRANSPORTATION

1. The PDP shows one new/proposed roadway within the property. This cul-de-sac roadway intersects with Bonanza Avenue approximately 310 feet north of the southwest property corner and Walnut Tree Drive, which essentially is a multi-parcel joint driveway. The cul-de-sac roadway is approximately 340 feet south of the northwest property corner, and about 940 feet south of Snyder Road. The location complies with all of the separation rules found in Sections 8.1.1.1 & 8.1.1.2 of the Pima County Subdivision and Development Street Standards. There are no driveway or street intersections on the other side of Bonanza Ave in the general area.
2. There are no future off-site road improvements that the proposed development depends upon for access.
3. There is no ADT information for Bonanza Ave available. The increase in ADT, at 10 trips per day per dwelling unit, is 100. Without a benchmark of the existing ADT on Bonanza Ave it is difficult to gauge the level of service impact, but it is thought that the increase in 100 ADT will not create an impact.
4. Given the anticipated lack of negative impact it is considered unnecessary to propose any traffic mitigation.
5. The standard 45 foot right-of-way cross-section for 'rural residential' local streets (Subdivision and Development Street Standards Detail 5.1) contains a 4' unpaved shoulder on both sides to accommodate pedestrians. It does not contain a bike lane. There are no regional pedestrian or bike paths/lanes nearby to tie in to.
6. The one new/proposed street is a 45 foot right-of-way. The cross-section is the Standard Detail 5.1. At the easterly terminus is a cul-de-sac bulb with an internal landscaped area similar to Street Standards Detail 3.5. This cul-de-sac has a 75 foot radius, made up of a 41 foot landscaped island, a 24 foot roadway, and a 10 foot outside buffer area which contains a 4' unpaved shoulder.
7. The existing roadway facilities adjacent to the property and from that street to the nearest arterial are sufficient, and so it is thought the project meets Transportation Concurrency.
8. Table 3.2 of the Street Standards indicates the number of peak hour trips per dwelling unit is 1.02. That would result in a total of 10.2 peak hour trips. That is far below the threshold for a Traffic Impact Statement, which is 100 peak hour trips.
9. A plan to reduce automobile dependence is not offered as one does not seem practical for such a parcel of land located in suburban Tucson, proposed for large lot development as is the case for all nearby existing development, and far removed from any transit line. There are no pedestrian pathways to connect to as all roads nearby area built to a rural cross-section.

## **II-I. ON-SITE WASTEWATER TREATMENT AND DISPOSAL**

1. This does not apply as sewers will be utilized.
2. This does not apply
3. This does not apply

## **II-J. SEWERS**

1. Enclosed as Exhibit II-J.1 is the PCRWRD Capacity Response Letter. It states, in part, that "capacity is currently available for this project..."
2. The property will be served by a connection to the existing 8-inch public sewer line that terminates with a manhole in Bonanza Ave, east of the Fire Agate Place cul-de-sac.
3. The one onsite sewer line is planned to be located within public right-of-way, under the new/proposed street.
4. This matter is moot as all sewers are anticipated to have gravity flow.

## **II-K. WATER**

1. The Preliminary Integrated Water Management Plan will be submitted under separate cover per a comment by Chris Poirier on March 11, 2014.

## **II-L. SCHOOLS**

1. There are no schools that are either within or abut the property.
2. Enclosed as Exhibit II-L.2 is a response letter from TUSD regarding school capacity. It addresses all of the topics described in the Checklist.
3. A meeting was held with Bryant Nodine and Shaun Brown of TUSD on January 15, 2014 regarding the school impacts. Subsequently Mr. Brown provided a letter regarding the capacity of the affected schools, which indicated that all affected schools currently have unused capacity. The property was actually purchased by the owner from TUSD, and the purchase agreement represents the agreement regarding development impacts.

## **II-M. RECREATION AND TRAILS**

1. There are no recreational areas provided within the project, as none are required nor deemed necessary given the low density and small number of lots being proposed. It is true that Zoning Code Section 18.69.090 does require a recreation area for all residential developments, it also allows for a full in lieu option for subdivisions of 65 lots or less. This in lieu option will be used.
2. This does not apply as there is no recreation area or open space.
3. The Pima Regional Trails System Master Plan does not show any trail within or adjacent to the project site. Therefore none are mapped.

## **II-N. CULTURAL RESOURCES: ARCHAEOLOGICAL AND HISTORIC SITES**

1. The P.A.S.T. letter, enclosed as Exhibit I-I, indicates that there was an archaeological study and the results were that there were no archaeological or historic resources on the site. Therefore there are no resources in need of mitigation.
2. Exhibit I-I indicates that an archaeological field survey and report has been performed.
3. The P.A.S.T. report indicates that there is no need for a mitigation plan.



**Pima County  
Regional Wastewater Reclamation Department**

*Ex. II - J. 1*

Jackson Jenkins  
Director

201 N. Stone Ave., 8<sup>th</sup> Floor  
Tucson, Arizona 85701  
(520) 724-6500

Website:  
<http://www.pima.gov/wwm>

January 7, 2014

Michael Marks  
MJM Consulting  
7002 E. 4th Street  
Tucson, AZ 85710

**Sewerage Capacity Investigation Response No. 13-277 Type I**

**RE: NEC Bonanza Ave. & Walnut Tree Drive on Parcel # 11421322A.  
Estimated Flow 2,160 gpd (ADWF).**

Greetings:

The above referenced project is tributary to the Ina Road Water Reclamation Facility via the North Rillito Interceptor.

Capacity is currently available for this project in the 8-inch public sewer G-93-034, downstream from manhole 6005-17.

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) 724-6642.

Respectfully,

A handwritten signature in black ink, appearing to read "Kurt Steen".

for  
Ben Fyock, P.E.  
PCRWRD Planning Section

BF:ks

c: T13, R15, Sec. 23



**TUCSON UNIFIED SCHOOL DISTRICT**  
 Department of Engineering, Facilities and Planning  
 Planning Services Section  
 2025 East Winsett Street  
 Tucson, Arizona 85719  
 (520) 225-4949  
 (520) 225-4939 (fax)



Ex. II-L.2

**To:** Michael Marks, AICP  
 MJM Consulting, Inc.

**From:** Shaun Brown  
 Planning Technician

**Date:** January 17, 2014

**Re:** Case/Project #:  
 Project Name: DeGrazia Bonanaza Ave  
 New Units: 10

IMPACTED SCHOOLS	CAPACITY	PROJECTED 2016 ENROLL	ADDITIONAL STUDENTS FROM PROJECT	PROJECTED ENROLL WITH PROJECT	STUDENTS EXCEEDING CAPACITY
Collier Elementary	460	196	2	198	-262/ -57%
Magee Middle	720	693	1	693	-27/ -4%
Sabino High	1950	993	1	994	-956/ -49%

Response:

Based on projected enrollment at TUSD, there is capacity to absorb the impact of proposed ten single-family detached residential homes.

## **II-O. ENVIRONMENTAL QUALITY**

1. Grading shall take place in accordance with the Pima County Grading Ordinance and the Pima County Air Quality Control permit process. The site, in terms of the construction & paving of the one street and the installation of utilities and the construction of the building pads & driveways, will be done according to approved construction plans and in accordance with the requirements of the Pima County Department of Environmental Quality.
2. A meeting was deemed not to be necessary as neither of the following items applies:
  - a. The proposed use will not be classified per to the Air Quality Code 17.12.140.
  - b. This item is moot as the proposed zoning is CR-1

## **II-P. AGREEMENTS**

1. There have been no discussions with the nearby neighborhoods as of yet. They will take place once the Site Analysis Report proceeds further through the review process.

## APPENDIX

1. The Preliminary Integrated Water Management Plan (i.e. the PIWMP)



William H. Baker Jr., P.E., R.L.S.  
Martin V. Magelli, P.E.

3561 E. Sunrise Dr., Suite 225  
Tucson, Arizona 85718  
520.318.1950 Fax 318.1930

## Preliminary Integrated Water Management Plan (PIWMP) for Bonanza Property

April 9, 2014  
BAE #2201

## Table of Contents

Introduction .....	3
1. Water Context .....	3
2. Brief Description of Property's Existing and Historic Water Use .....	3
3. Description of Property's Proposed Water Use .....	3
4. Description of Water Supply Options and Proposed Method of Delivery .....	3
5. Water Demand Projections .....	3
6. Proximity to Renewable and Potable Water Supplies (not required) .....	4
7. Groundwater-Dependent Ecosystems (not required) .....	4
8. Groundwater Depth and Trends (not required) .....	4
9. Geologic and Hydrogeologic Data (not required) .....	4
10. Area Water Supply (not required) .....	4
11. Well Test Data (not required) .....	4
12. Drawdown Analysis (not required) .....	4
References .....	5
Appendix - Exhibits .....	attached

Introduction

Baker & Associates Engineering, Inc. (BAE) has prepared this Preliminary Integrated Water Management Plan (PIWMP) for a proposed 9.3± acre development (Assessor Parcel 114-21-322A, which is located within Section 23 of Township 13 South, Range 15 East) (approximately 32.292152° latitude, -110.779596° longitude) at the northeast corner of Bonanza Ave. and Walnut Tree Drive (see Vicinity Map - Exhibit 1).

1. Water Context/Map

The subject development is within the 2005 Tucson Active Management Area, in an area that Tucson Water is reflected as the large municipal provider (see Exhibit 2).

2. Brief Description of Property's Existing and Historic Water Use

The property is currently undeveloped, has never been developed, so the property's existing and historic water use are no previous water use.

3. Description of Property's Proposed Water Use

As noted above, it is intended that the parcel be served by Tucson Water. Tucson Water has an assured water supply designation from the State of Arizona Department of Water Resources. An application for water service has been submitted to, and a letter of Water Availability (dated 2/10/14) has been received from Tucson Water for the proposed residential uses (see Exhibit 3).

4. Description of Water Supply Options and Proposed Method of Delivery

Existing water lines of Tucson Water are located immediately along the west boundary in the vicinity of the parcel, (see existing Tucson Water waterline reflected on Vicinity Map - Exhibit 1).

5. Water Demand Projections

5A. The planned zoning for the property is: CR-1 (min. 36,000 s.f./lot). Therefore, for this site, with the aforementioned proposed residential zoning, the hypothetical build-out would be as shown:

PROJECT OVERVIEW					
Zoning	Land Use	Acres	Lots	Demand per home (ac-ft/year)	Net Est'd Demand (ac-ft/year)
CR-1	Residential	9.3	10	0.46	4.6

Based upon *Table A: Estimated Baseline Water Demand for Residential Land Uses*, the estimated water demand for the anticipated 10 residential lots: (10 x 0.46 acre/feet/home = 4.6 acre/feet per year).

5B. The water conservation requirements would be satisfied by a commitment to obtain certification under the Pima County Green Building program, employing both indoor and outdoor conservation measures.

Since water service is to be provided by an existing Municipal Provider - Tucson Water, no new wells and no increased pumping of existing wells within one quarter mile of the site is anticipated, and the estimated yearly water demand of approximately 4.6 ac-ft is significantly less than 50 ac-ft/year, the following sections are not required.

6. Proximity to Renewable and Potable Water Supplies

not required

7. Groundwater-Dependent Ecosystems

not required

8. Groundwater Depth and Trends

not required

9. Geologic and Hydrogeologic Data

not required

10. Area Water Supply

not required

11. Well Test Data

not required

Since the proposed project is not anticipated to use over 50 acre-feet/year of water based upon the water demand calculator, and does have access to a renewable source of water, the following section is not required.

12. Drawdown Analysis

not required

References:

Mapping - by Arizona Department of Water Resources.

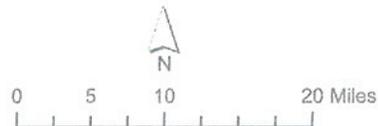
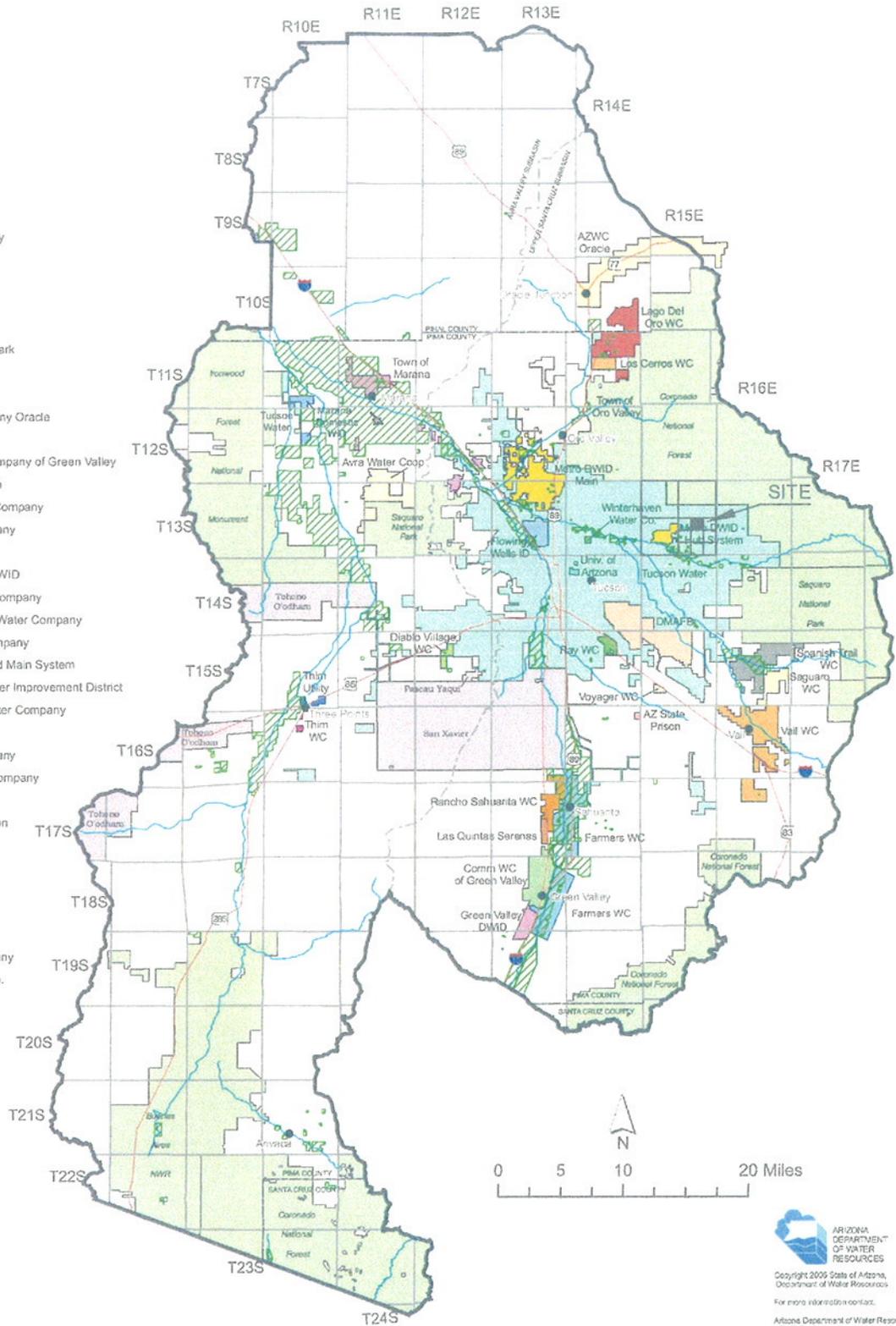
Appendix - Exhibits

Exhibit 1 ..... Vicinity Map  
Exhibit 2 ..... Tucson AMA Map  
Exhibit 3 ..... Water Availability Letter - from Tucson Water



# 2005 TUCSON ACTIVE MANAGEMENT AREA LARGE MUNICIPAL PROVIDERS

- City and Town
  - Major Road
  - River and Stream
  - Subbasin
  - Tucson AMA Boundary
  - County
  - Township and Range
  - GFR
  - Indian Reservation
  - National Forest and Park
- Water Provider**
- Arizona State Prison
  - Arizona Water Company Oracle
  - Avra Water Coop
  - Community Water Company of Green Valley
  - DMAFB Water System
  - Diablo Village Water Company
  - Farmers Water Company
  - Flowing Wells ID
  - Green Valley Water DWID
  - Lago Del Oro Water Company
  - Las Quintas Serenas Water Company
  - Los Cerros Water Company
  - Metro DWID - Hub and Main System
  - Marana Domestic Water Improvement District
  - Rancho Sahuarita Water Company
  - Ray Water Company
  - Saguaro Water Company
  - Spanish Trail Water Company
  - Thim Utility
  - Thim Water Corporation
  - Town of Marana
  - Town of Oro Valley
  - Tucson Water
  - University of Arizona
  - Vail Water Company
  - Voyager Water Company
  - Winterhaven Water Co.



ARIZONA DEPARTMENT OF WATER RESOURCES  
 Copyright 2005 State of Arizona, Department of Water Resources  
 For more information contact:  
 Arizona Department of Water Resources  
 3550 North Central Avenue  
 Phoenix, AZ 85012  
 Phone: (602) 771-9638  
 Email: [edstetson@azwater.gov](mailto:edstetson@azwater.gov)

## EXHIBIT 2 May, 2006

3/6/06 11:41 AM C:\arcwork\maph\exhibit09.mxd



February 10, 2014

MIM Consulting, Inc.  
7002 E 4th Street  
Tucson, AZ 85710

CITY OF  
TUCSON  
Water Department

Attn: Michael Marks

**SUBJECT: Water Availability for project: 600 S Bonanza, APN: 11421322A, Case #: 1431, T-13, R-15, SEC-23, Lots: 9999, Location Code: UNI, Total Area: 9.3ac Zoning: SR**

**WATER SUPPLY**

*Tucson Water will provide water service to this project based on the subject zoning of the above parcels. Tucson Water has an assured water supply (AWS) designation from the State of Arizona Department of Water Resources (ADWR). An AWS designation means Tucson Water has met the criteria established by ADWR for demonstration of a 100-year water supply – it does not mean that water service is currently available to the subject project.*

**WATER SERVICE**

The approval of water meter applications is subject to the current availability of water service at the time an application is received. The developer shall be required to submit a water master plan identifying, but not limited to: 1) Water Use; 2) Fire Flow Requirements; 3) Offsite/Onsite Water Facilities; 4) Loops and Proposed Connection Points to Existing Water System; and 5) Easements/Common Areas.

*Any specific area plan fees, protected main/facility fees and/or other needed facilities' cost, are to be paid by the developer. If the existing water system is not capable of meeting the requirements of the proposed development, the developer shall be financially responsible for modifying or enhancing the existing water system to meet those needs.*

*This letter shall be null and void two years from the date of issuance.*

Issuance of this letter is not to be construed as agency approval of a water plan or as containing construction review comments relative to conflicts with existing water lines and the proposed development.

If you have any questions, please call New Development at 791-4718.

Sincerely,

Scott Schladweiler, P.E.  
Engineering Manager  
Tucson Water Department

SS:ka  
CC:file



1000 N. GILBERT AVENUE • P.O. BOX 7770 • TUCSON, AZ 85724-0770  
TEL: 520-795-2500 • FAX: 520-795-2502 • TDD: 520-795-2503 • RELAY TEX: 800-877-8339



**EXHIBIT 3**

