

TANGERINE RD. & FIRST AVE. (SILVERHAWKE BLOCK 5) REZONING SITE ANALYSIS

PREPARED BY:



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PARADIGM #19ADA02

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I. INTRODUCTION

This site analysis has been prepared in support of a proposed downzoning of approximately 13.44 acres of commercially zoned land southeast of the intersection of Tangerine Road and First Avenue. Many years ago, the General Plan designated the subject property as Neighborhood Commercial / Office in anticipation of growing demand for neighborhood-scale retail and service businesses as a result of future housing growth. Over the years, only a fraction of the anticipated residential units has been developed, and remaining residential land is scarce, so little additional demand for non-residential uses is expected. This downzoning will allow the subject property to be developed residentially so it can support existing local businesses and also help meet continued strong demand for a variety of housing product types in Oro Valley. For additional information about the history of the property and this proposal, please refer to Section III of this document.

II. INVENTORY & ANALYSIS

The purpose of the Inventory & Analysis section of this document is to catalog the various developmental opportunities and constraints impacting the property in order to provide a meaningful and relevant context for the development proposal detailed elsewhere in this document. Only through careful consideration of these existing conditions can a design be truly appropriate for the area and compatible with its surroundings.

A. EXISTING LAND USES

1. Site Location

The subject property consists of one parcel located within Township 12 South, Range 14 East, Section 6, Town of Oro Valley, Pima County, Arizona. The subject property totals approximately 13.44± acres and is located southeast of the intersection of Tangerine Road and First Avenue.

Pima County tax assessor designates the subject property as parcel 220-06-0640.

Per Pima County GIS, the administrative address for this project is 6088 W. Arizona Pavilions Dr. Ste. 2, Tucson, AZ 85743. Please refer to Exhibit II-A-1: Site Location Map.

2. Existing Zoning and Land Uses

The subject property is currently undeveloped and vacant. Please refer to Exhibit II-A-2: Existing Land Uses.

The subject property is currently zoned C-1 (Commercial). Please refer to Exhibit II-A-3: Existing Zoning.

The subject property is located within an area that was rezoned in 2015 along with the Villages at Silverhawke residential areas. The property is located just south of the Rancho Vistoso PAD and west of the Catalina Shadows Estates Subdivision.

3. Existing Zoning and Land Uses within One-Quarter Mile

a. Existing Zoning & Land Uses

The subject property is surrounded by the following existing zonings and existing land uses. Please refer to Exhibit II-A-2: Existing Land Uses, and Exhibit II-A-3: Existing Zoning.

N:	Existing zoning:	Rancho Vistoso PAD, Open Space
	Existing land use:	Undeveloped Land

NE:	Existing zoning:	Rancho Vistoso PAD, Open Space
	Existing land use:	Undeveloped Land
E:	Existing zoning:	R1-7 Residence Zone
	Existing land use:	Villages at Silverhawke Phase 3
SE:	Existing zoning:	R1-7 Residence Zone
	Existing land use:	Villages at Silverhawke Phase 3
S:	Existing zoning:	R1-7 Residence Zone
	Existing land use:	Villages at Silverhawke Phase 3
SW:	Existing zoning:	R1-7 Residence Zone
	Existing land use:	Villages at Silverhawke Phase 3
W:	Existing zoning:	C-1 Commercial Zone
	Existing land use:	Undeveloped Land
NW:	Existing zoning:	Rancho Vistoso PAD
	Existing land use:	Undeveloped Land

b. Number of Stories of Existing Structures

There are no existing buildings on the subject property.

c. Pending Rezoning

There are no pending rezonings within one-quarter mile of the subject property.

d. Conditionally Approved Zonings

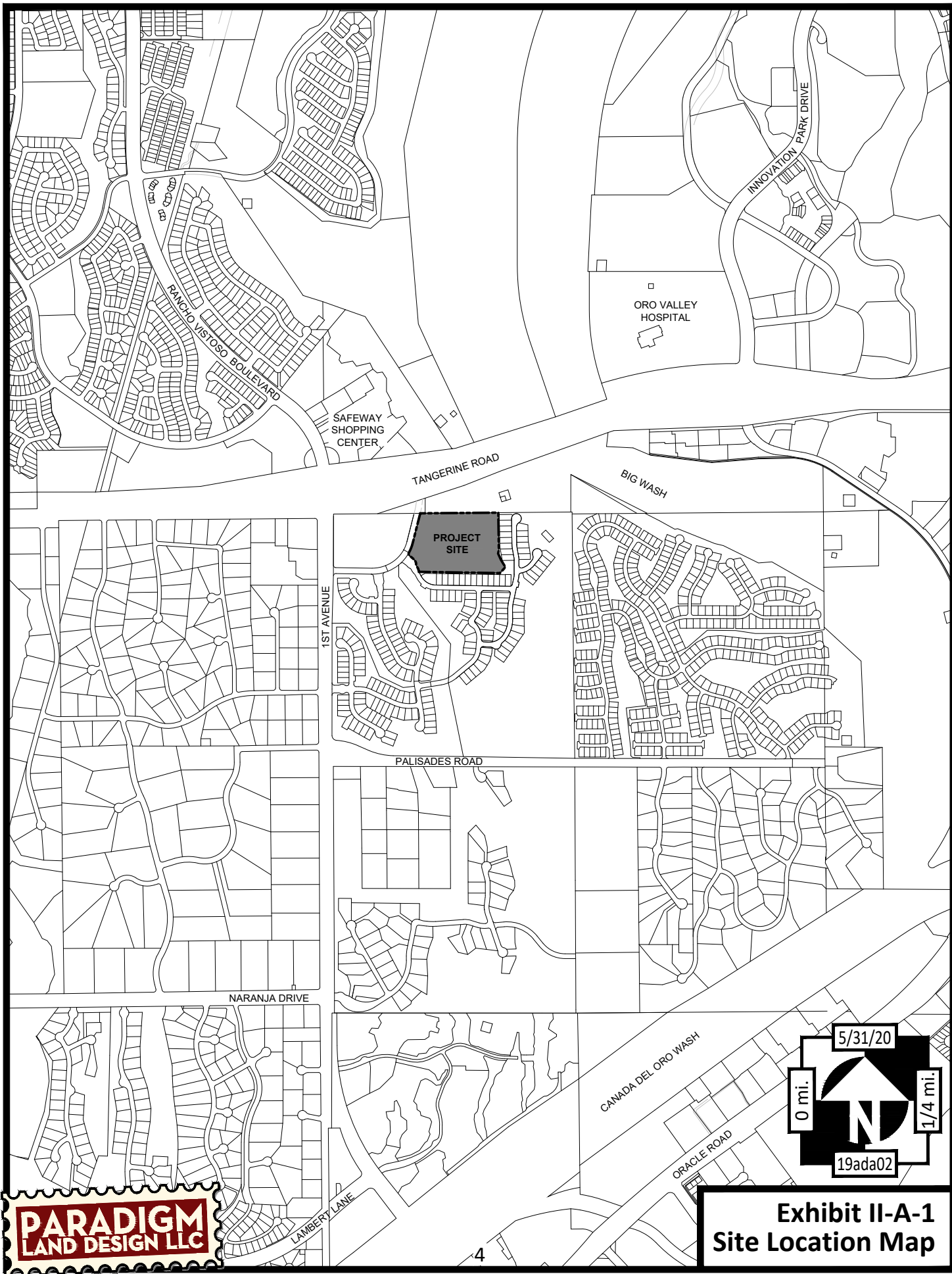
There are no conditionally approved zonings within one-quarter mile of the subject property.

e. Approved Subdivisions & Development Plans

The Villages Phases 1 to 3 and the Catalina Shadows subdivisions are within one-quarter mile.

f. Architectural Styles used in Adjacent Properties

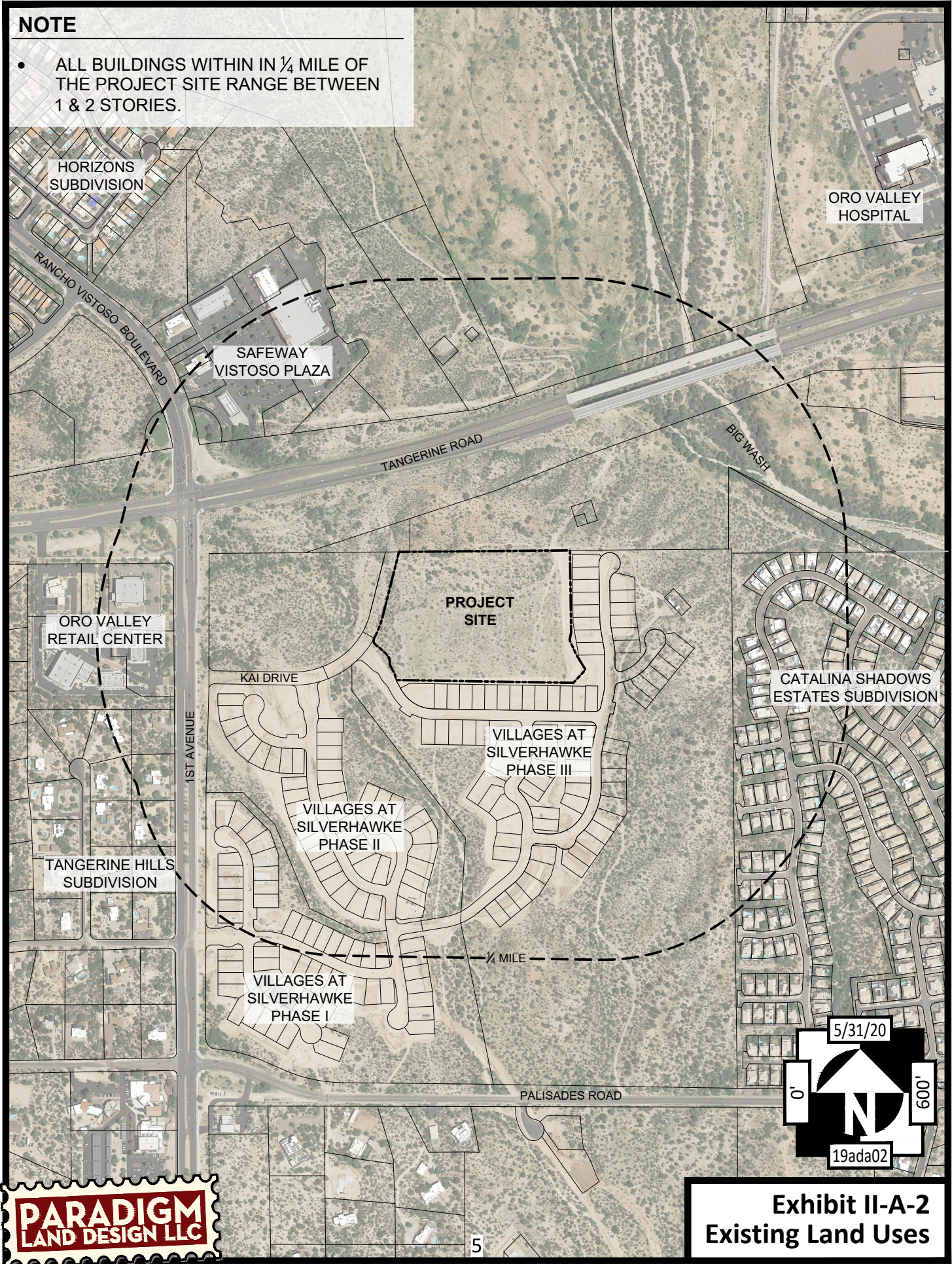
There are no existing structures within 100 feet of the project site.



**Exhibit II-A-1
Site Location Map**

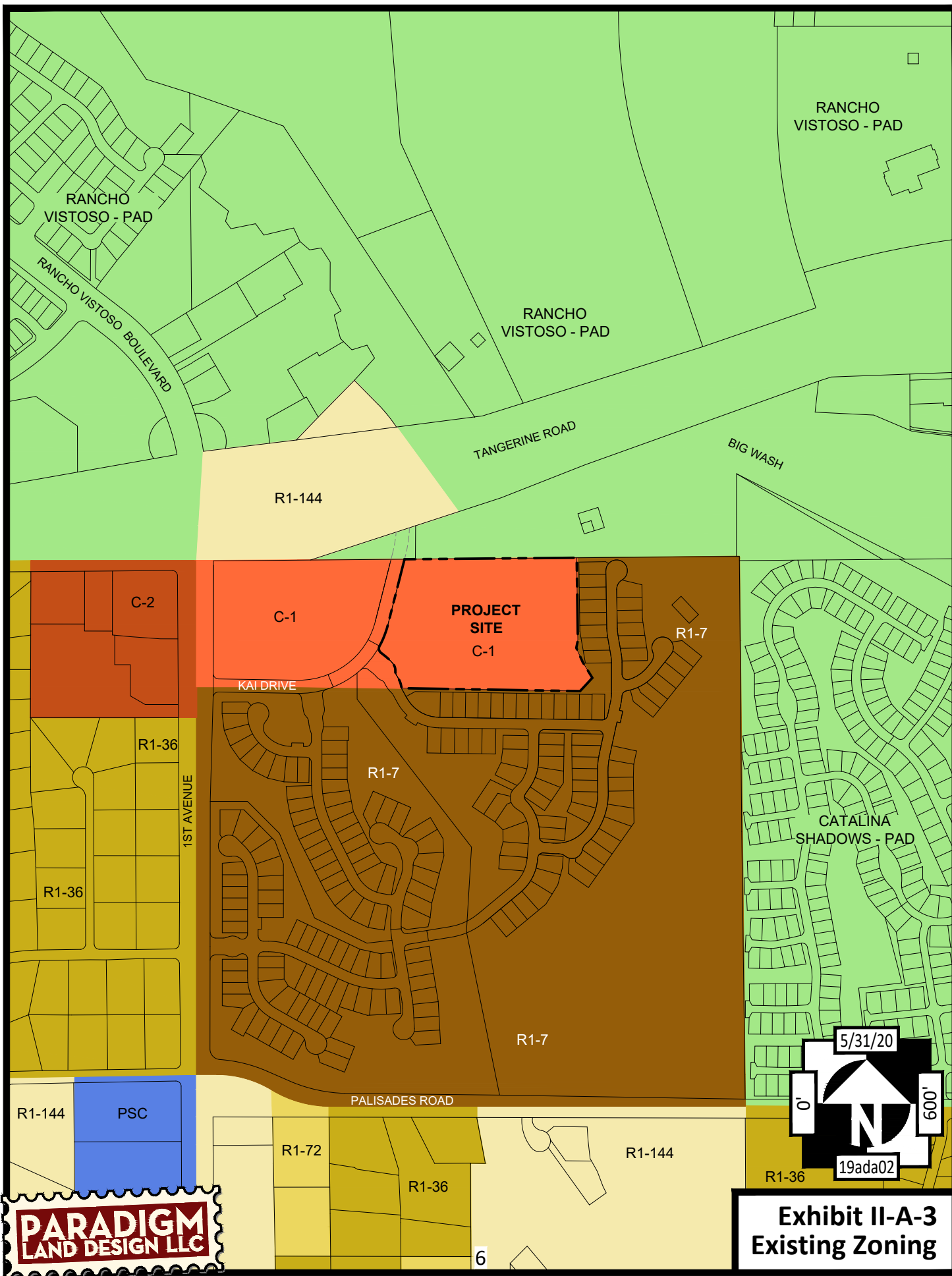
NOTE

- ALL BUILDINGS WITHIN IN $\frac{1}{4}$ MILE OF THE PROJECT SITE RANGE BETWEEN 1 & 2 STORIES.



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Exhibit II-A-2
Existing Land Uses



B. ENVIRONMENTALLY SENSITIVE LANDS

1. Existing ESL Conservation Categories

Per the 2015 rezoning, there is no required ESOS onsite. Please refer to Exhibit 11-B-1: ESL Categories.

LEGEND

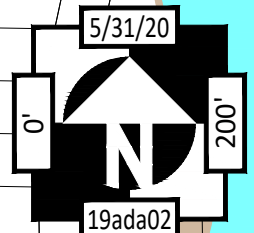
- RESOURCE MANAGEMENT AREA TIER 2 (25% OPEN SPACE)
- RESOURCE MANAGEMENT AREA TIER 1 (66% OPEN SPACE)
- CRITICAL RESOURCE AREA (95% OPEN SPACE)

NOTE

- PROJECT SITE CONTAINS 0.0 ACRES OF ESL
- ESL AREAS FROM APPROVED 2015 REZONING
- THERE ARE NO MAJOR OR MINOR ROCK OUTCROPS ON-SITE
- THERE ARE NO DISTINCTIVE INDIVIDUAL NATIVE PLANTS ON-SITE

TANGERINE ROAD

KAI DRIVE



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Exhibit II-B-1
ESL Categories

C. TOPOGRAPHY**1. Existing Topographic Character**

The topography of the subject property is characterized by a gentle southward slope. The subject property generally slopes downward from the north to the south towards the Cañada del Oro Wash, located slightly more than one mile south of the subject property.

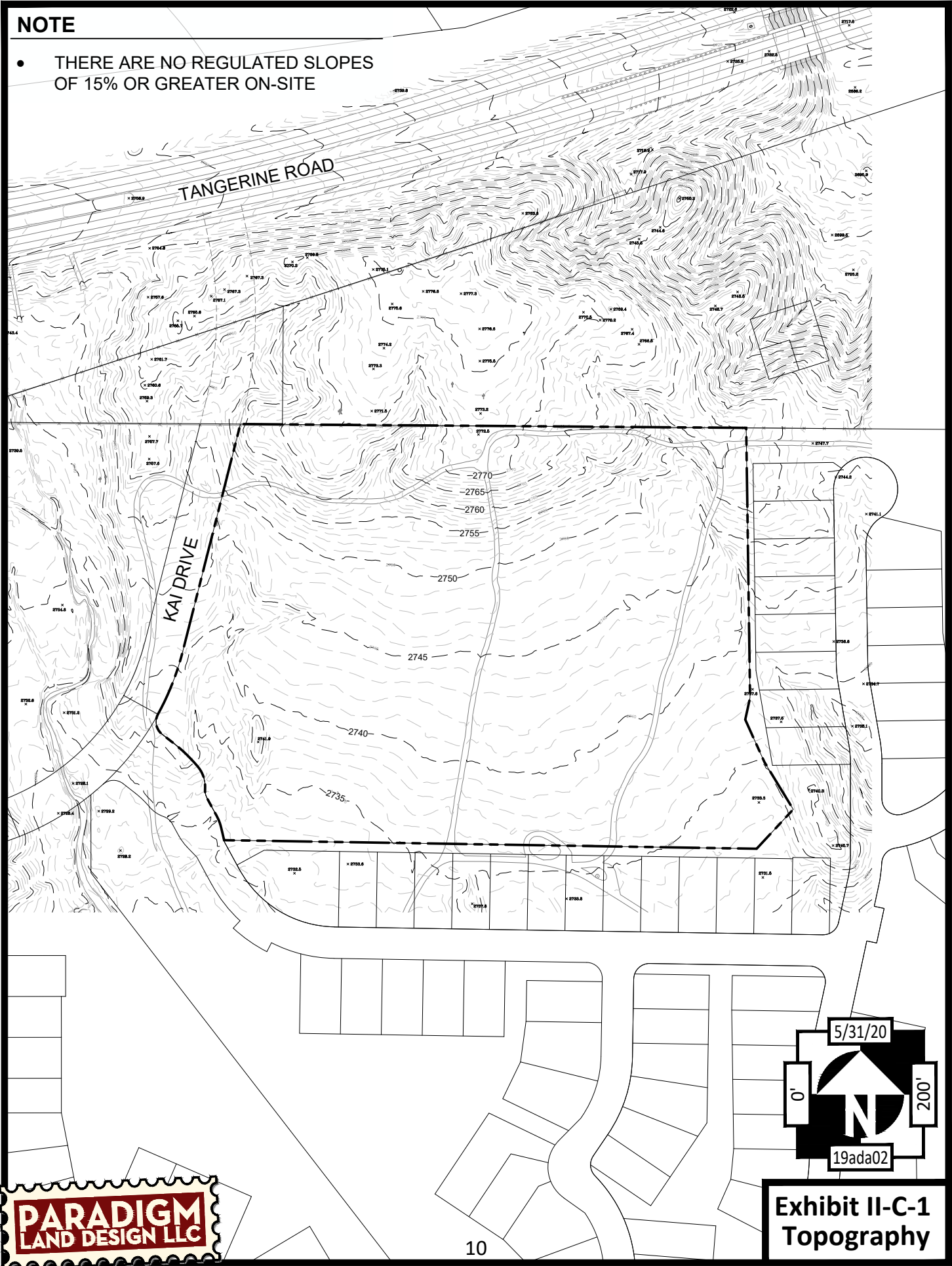
Slopes less than 15% characterize the vast majority of the subject property with elevations ranging from approximately 2,775 feet at the highest point on the north side of the subject property to 2,735 feet at the lowest point on the southeast corner of the subject property. The site does not contain any washes. The site contains a single area of slopes exceeding 15%, which is located along its northern edge. The site does not contain any restricted peaks/ridges or rock outcrops. Please refer to Exhibit II-C-1: Topography.

2. ESLO Slope Analysis Acreage Table.

Slope Category	Area (SF)	% of Site	% of Allowed Disturbance	Allowable Disturbance (SF)
0-15%	564,196	96.39%	100%	564,196
15-18%	9,011	1.54%	40%	3,604
18-20%	7,307	1.25%	30%	2,192
20-25%	3,743	0.64%	20%	749
25-33%	927	0.16%	5%	46
33%+	121	0.02%	4%	5
	585,305	100.00%	97.52%	570,792

NOTE

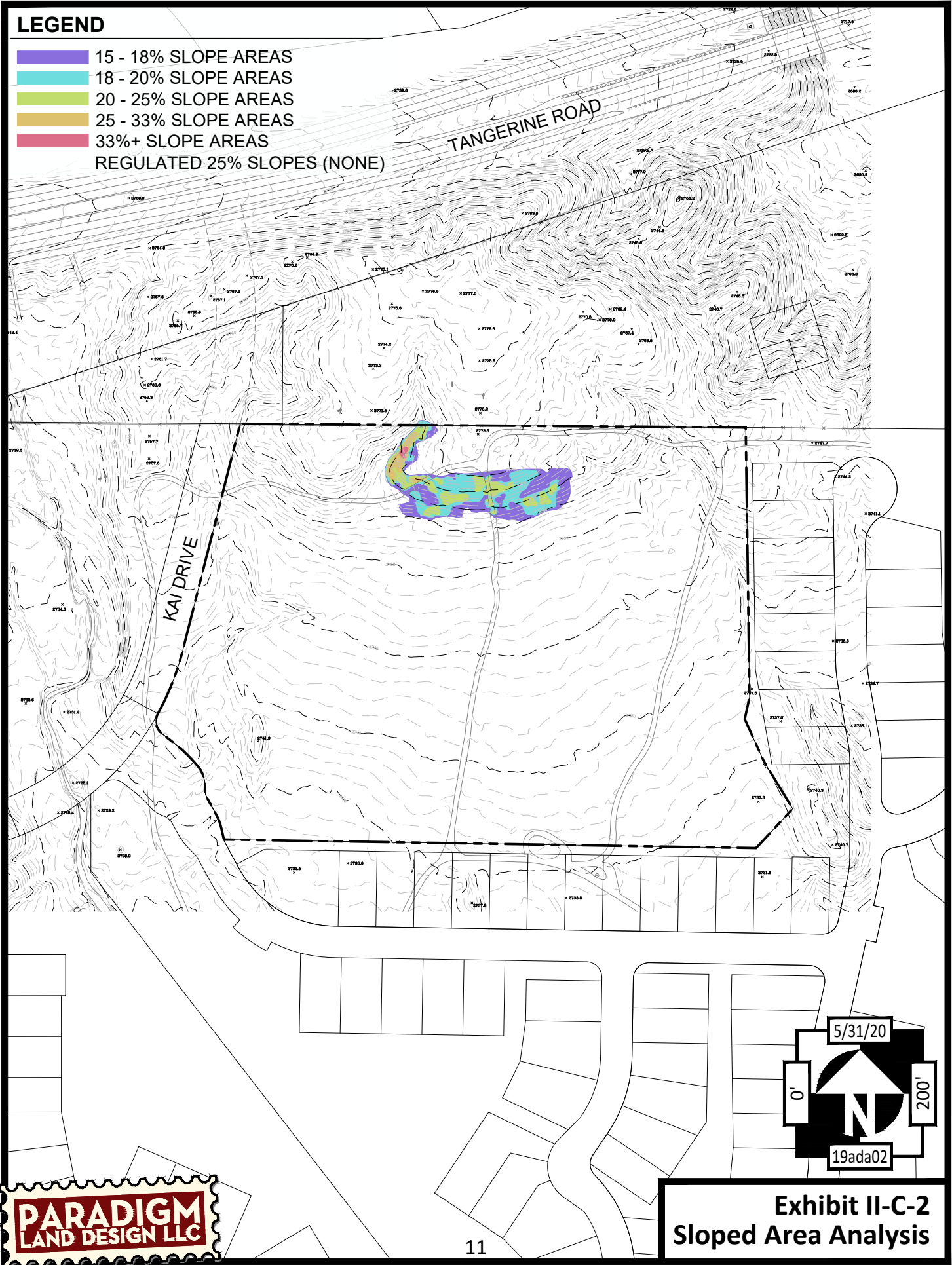
- THERE ARE NO REGULATED SLOPES OF 15% OR GREATER ON-SITE



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- 15 - 18% SLOPE AREAS
- 18 - 20% SLOPE AREAS
- 20 - 25% SLOPE AREAS
- 25 - 33% SLOPE AREAS
- 33%+ SLOPE AREAS
- REGULATED 25% SLOPES (NONE)



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D. CULTURAL / ARCHAEOLOGICAL / HISTORIC RESOURCES**1. Cultural Resource Surveys**

According to a search of the site files and records retained at Arizona State Museum, 48 cultural resource survey projects were conducted within a one-mile radius of the project area between 1979 and 2014. The entire project area was surveyed three times: during the Amphitheater School Survey in 2002, the Palisades North Property archaeological research survey in 2014, and the Villages at Silverhawke Class III Cultural Resources Survey in 2016. Please refer to Exhibit II-D-1: Archeological Survey.

2. Archaeological Sites

The archaeological survey found no cultural resource sites on the subject property.

3. Degree of Potential Resource Recovery

According to the ASM, there is a high degree of potential recovery of prehistoric and historic resources within the subject property. Any resources identified or discovered on the property during construction will be treated according to State and local antiquities laws.

Exhibit II-D-1: Archaeological Survey

VILLAGES AT SILVERHAWKE CLASS III
CULTURAL RESOURCES SURVEY OF 150
ACRES IN ORO VALLEY, PIMA COUNTY,
ARIZONA

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MCA Cultural Resources Report No. 2016.047
Arizona Antiquities Act Blanket Permit No. 2016-033bl

November 2, 2016

MCA Consulting
Professional Archaeological Services
Tucson, Arizona



E. HYDROLOGY

1. Offsite Watersheds

The offsite watershed is very small (<2 acres) and contributes minimal stormwater flow to the subject property. Please refer to Exhibit II-E-1: Offsite Hydrology.

2. Balanced / Critical Basins

The site is within the Critical Basin.

3. Offsite Features Affecting Site

The two small upstream watersheds are entirely undeveloped. The downstream property is the Villages at Silverhawke Phase 3 subdivision, which has been designed to collect existing stormwater runoff from the subject property. Please refer to Exhibit II-E-1: Offsite Hydrology.

4. Size of Upstream Watershed

Two small upstream watersheds impact the property. They total 1.92 acres. Please refer to Exhibit II-E-1: Offsite Hydrology.

5. Onsite Hydrology Characteristics

a. 100-Year Floodplains with Discharges \geq 50 CFS

There are no 100-year floodplains with discharges \geq 50 CFS on the subject property.

b. Areas of Sheet Flooding

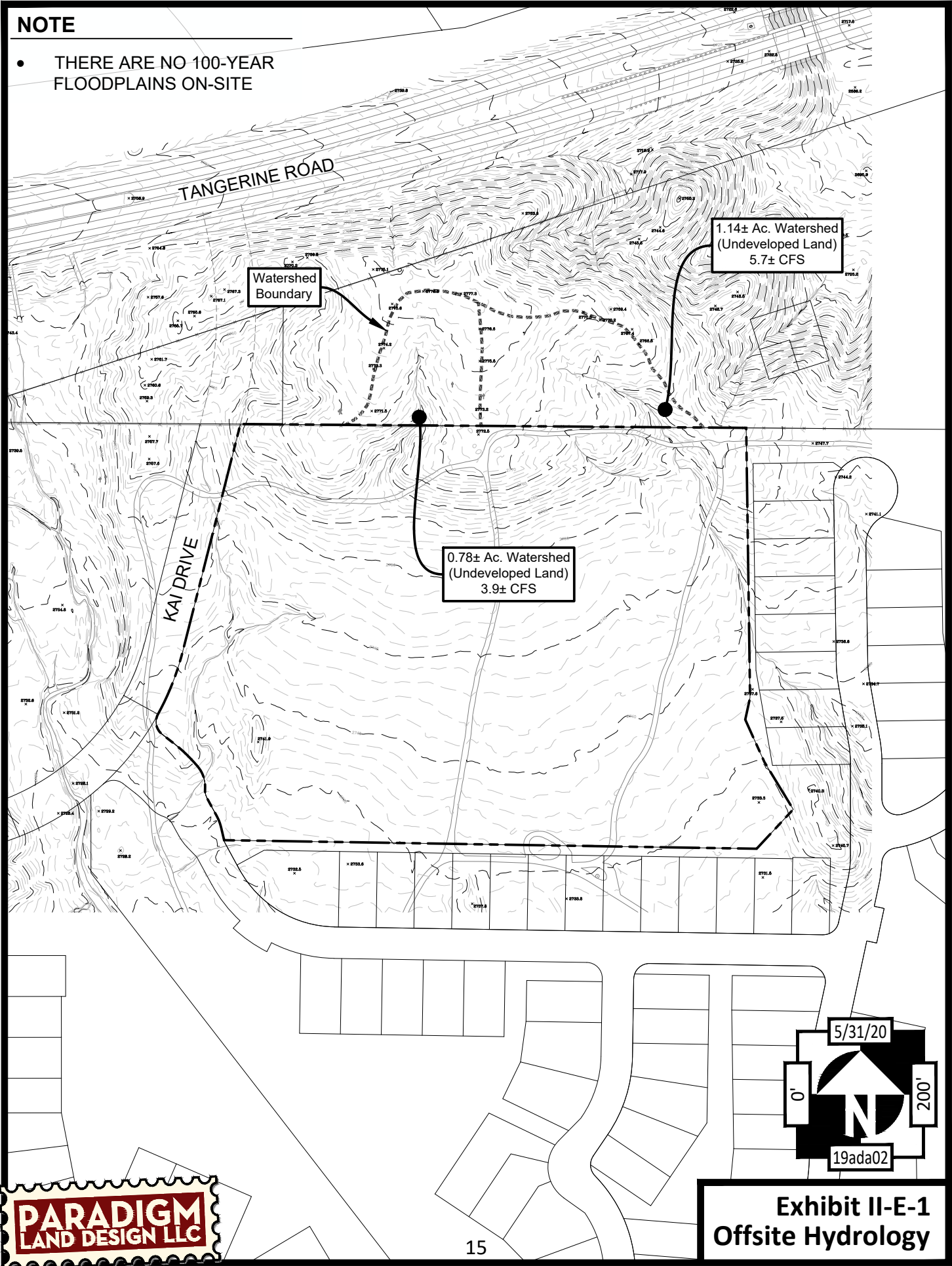
There are no areas of sheet flooding onsite.

c. Federally Mapped Floodways & Floodplains

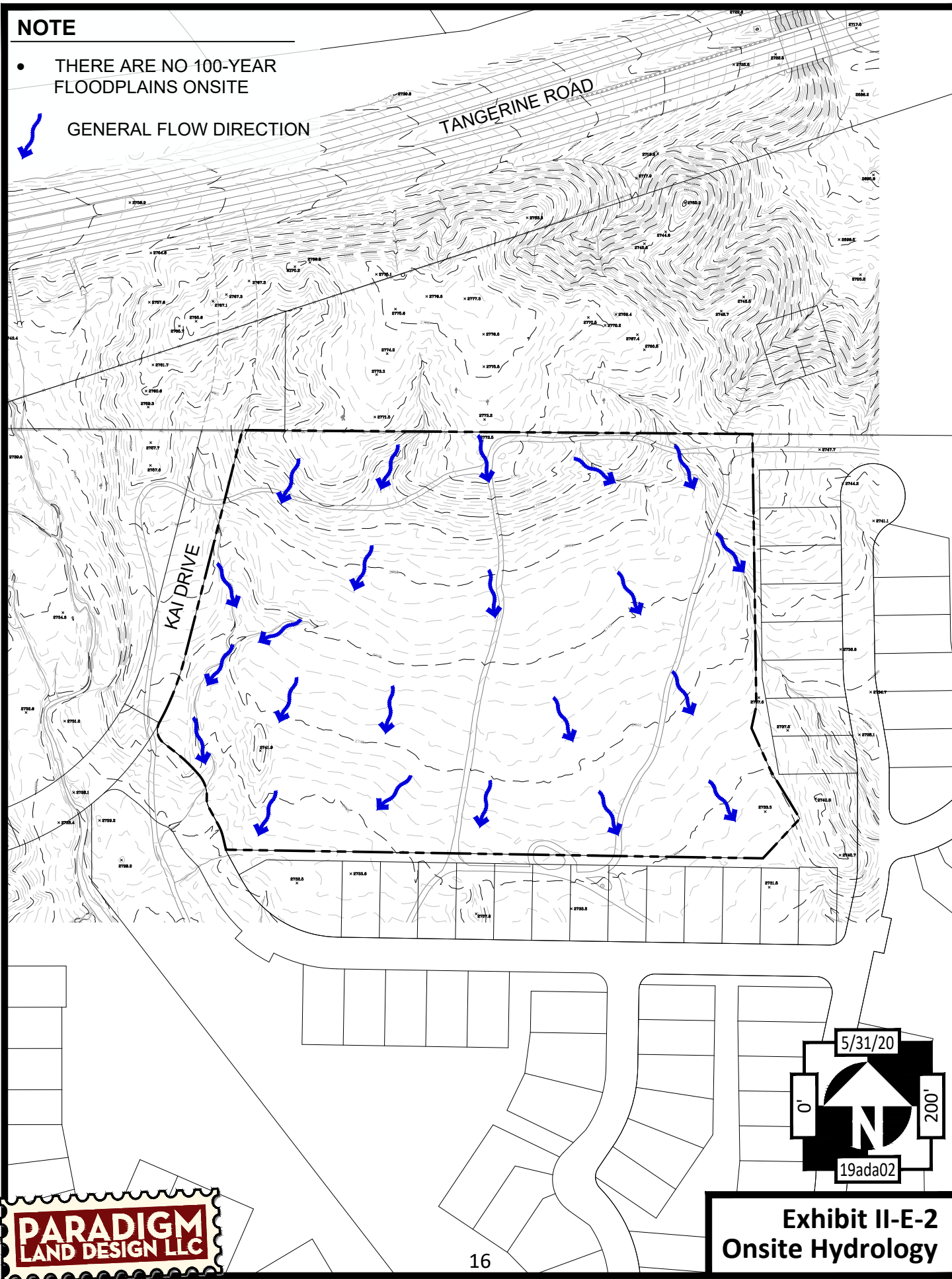
The site does not lie within a FEMA designated 100-year floodplain or floodway.

NOTE

- THERE ARE NO 100-YEAR FLOODPLAINS ON-SITE



- THERE ARE NO 100-YEAR FLOODPLAINS ONSITE



F. VEGETATION

1. Vegetation Communities and Associations on the Site

The vegetation community on the property is typical of the Sonoran Desert Scrub Region, Arizona Upland Subdivision, Paloverde-Cacti-Mixed Scrub Series (David E. Brown: Biotic Communities). Typical species found in this biome include Bursage (*Ambrosia deltoidea*) and Foothills Palo Verde (*Cercidium microphyllum*). Please refer to Exhibit II-F-1: Vegetation.

2. Significant Cacti and Groups of Trees and Federally-Listed Threatened or Endangered Species

The following significant plant species were found on the project site: Fishhook Barrel Cactus (*Ferocactus wislizenii*), Ocotillo (*Fouquieria splendens*), Engelmann Prickly Pear (*O.p. var. Discata*), Foothills Palo Verde (*Cercidium microphyllum*), Velvet Mesquite (*Prosopis velutina*), Creosote Bush (*Larrea tridentata*), Cat-claw Acacia (*Acacia greggii*), Desert Hackberry (*Celtis pallida*), Strawberry Hedgehog (*Echinocereus engelmannii*), Teddy Bear Cholla (*Opuntia bigelovii*), Jumping Cholla (*Opuntia fulgida*), Brittlebush (*Encelia ferinose*), Desert Broom (*Baccharis sarathoides*), Fairy Duster (*Calliandra eriophylla*), Triangle Leaf Bursage (*Ambrosia deltoidea*), and Saguaro (*Carnegiea gigantea*).

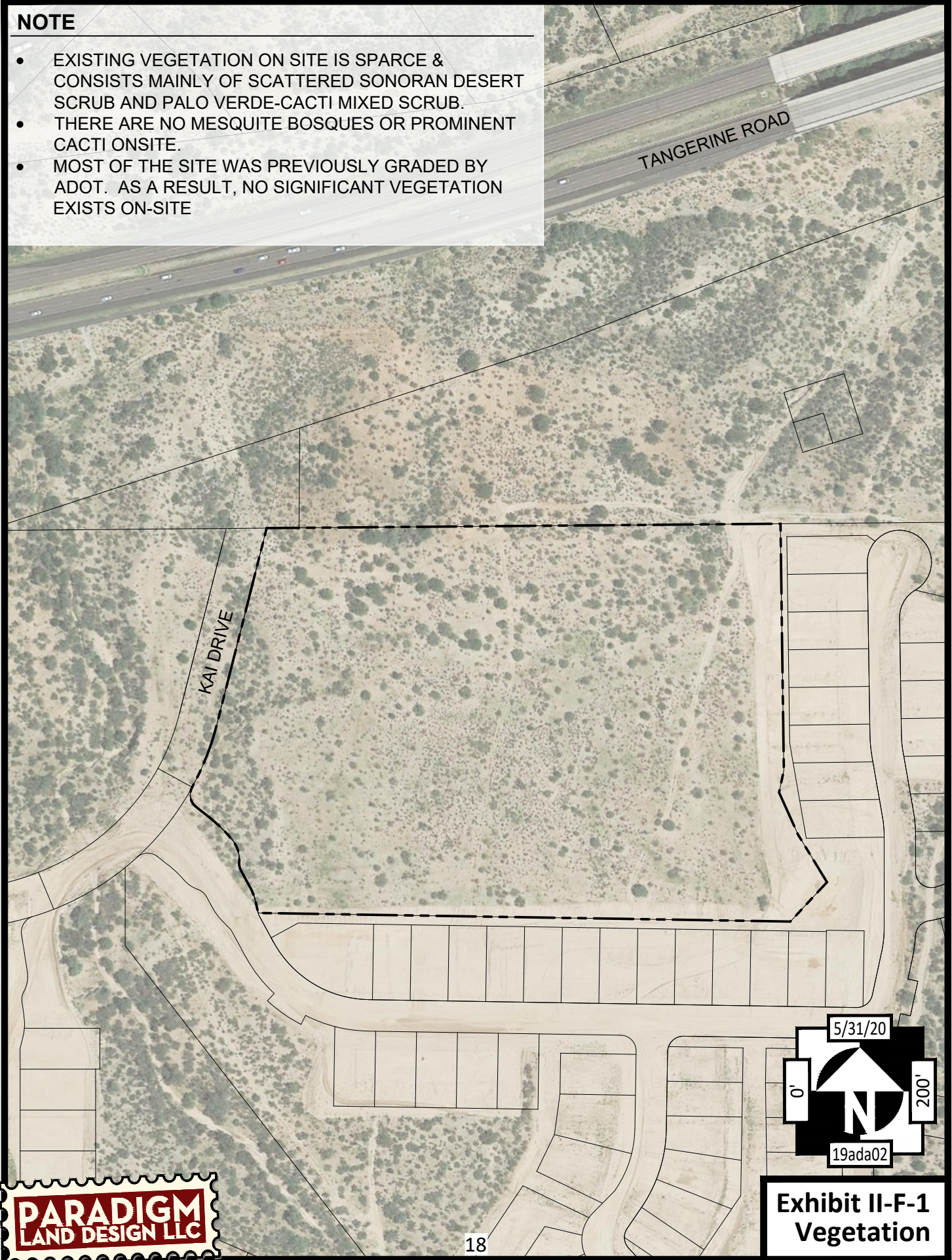
According to the Arizona Game and Fish Department, the following species are known to occur in the vicinity of the project site – Pima Indian Mallow (*Abutilon parishii*), designated as Sensitive and Salvage Restricted and Trelease Agave (*Agave schottii treleasei*), designated as Sensitive and Highly Safeguarded. Please refer to Exhibit II-F-1: Vegetation.

3. Vegetation Densities by Approximate Percentage of Plant Cover

As determined by field reconnaissance and analysis of aerial photographs, the subject property is characterized by low vegetation density, due to ADOT's clearing and mass-grading of nearly the entire property. Please refer to Exhibit II-F-1: Vegetation.

NOTE

- EXISTING VEGETATION ON SITE IS SPARSE & CONSISTS MAINLY OF SCATTERED SONORAN DESERT SCRUB AND PALO VERDE-CACTI MIXED SCRUB.
- THERE ARE NO MESQUITE BOSQUES OR PROMINENT CACTI ONSITE.
- MOST OF THE SITE WAS PREVIOUSLY GRADED BY ADOT. AS A RESULT, NO SIGNIFICANT VEGETATION EXISTS ON-SITE



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G. WILDLIFE

1. Arizona Game & Fish Dept. Online Review Tool Results

Please refer to Appendix C – AZ Game & Fish Dept. Online Review Tool Results.

2. Significant Wildlife Species

The following special status wildlife species have been documented within three miles of the project site: Pima Indian Mallow (*Abutilon parishi*), Giant Spotted Whiptail (*Aspidoscelis stictogramma*), Red-backed Whiptail (*Aspidoscelis xanthonota*), Yellow-billed Cuckoo (*Coccyzus americanus*), Southwestern Willow Glycatcher (*Empidonax traillii extimus*), American Peregrine Falcon (*Falco peregrinus anatum*), Cactus Ferruginous Pygmy-owl (*Glaucidium brasilianum cactorum*), Sonoran Desert Tortoise (*Gopherus morafkai*), Reticulate Gila Monster (*Heloderma suspectum suspectum*), Gila Monster (*Heloderma suspectum*), Antelope Jackrabbit (*Lepus alleni*), Lowland Leopard Frog (*Lithobates yavapaiensis*), Lemmon Cloak Fern (*Notholaena lemmonii*), Desert Box Turtle (*Terrapene ornata luteola*).

H. VIEWSHEDS

1. Views onto and across the Site from the Adjacent Properties

The Tortolita Mountains to the northwest are slightly visible from the subject property. The Santa Catalina Mountains, including Pusch Ridge, to the east and southeast are highly visible from the subject property. Views of the mountains will be minimally impacted by the proposed development. There are no views or vistas from areas beyond adjacent properties that may be noticeably affected by the development of the site. The views from existing residential subdivisions surrounding the subject property will not be adversely affected by the proposed development. Please refer to Exhibit II-H-1: Viewsheds and Exhibit II-H-2: Viewshed Photographs for more information.





2. Areas of High Visibility from Adjacent Offsite Locations

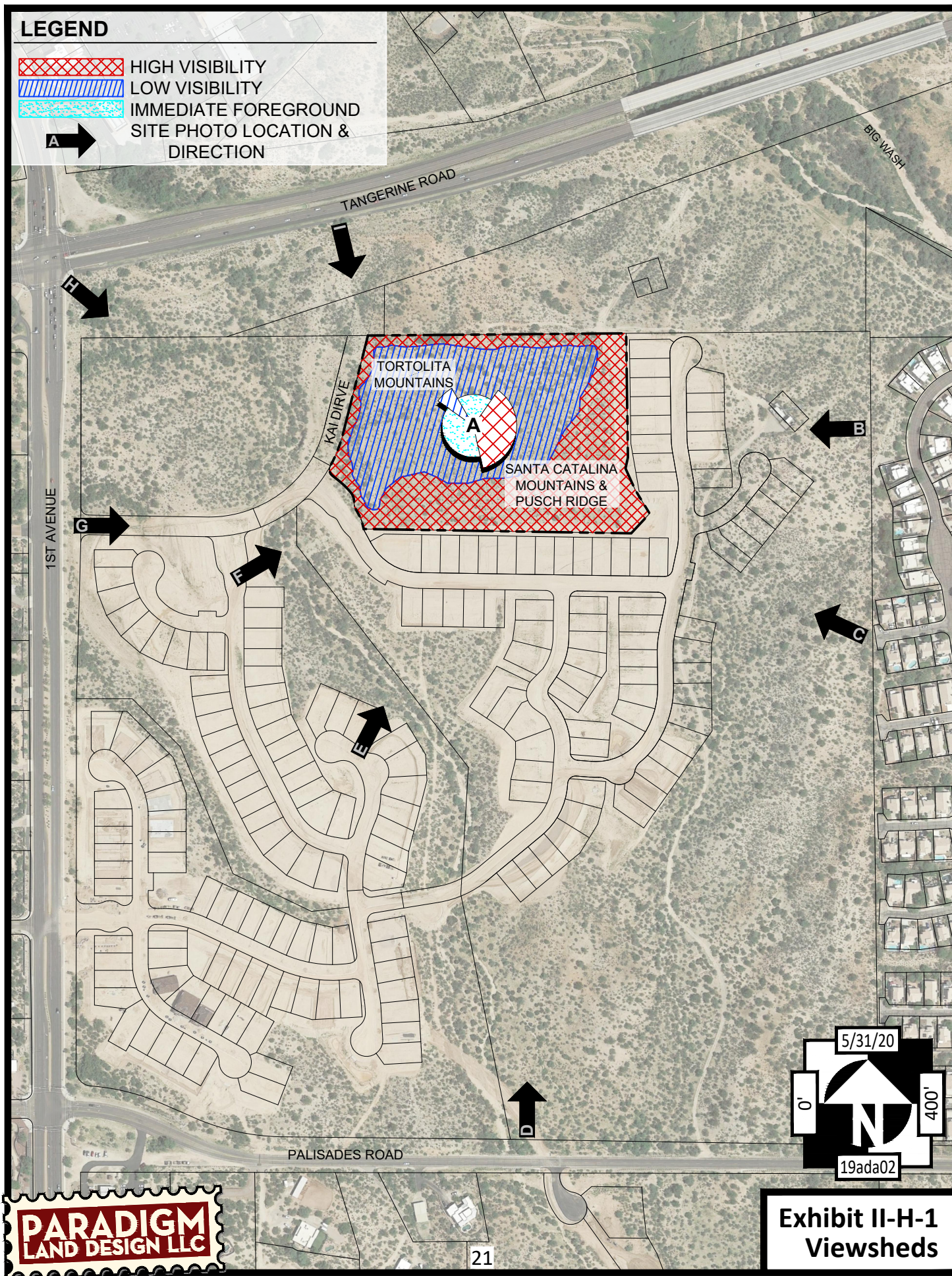
Portions of the property are visible from adjacent properties in Silverhawke Phase 3. The subject property is visible from these properties in its entirety. However, the subject property is barely visible from both Tangerine Road and First Avenue. It is not at all visible from the nearest residences in the Catalina Shadows subdivision. The proposed development will likewise be visible to other residences in Silverhawke Phase 3, slightly visible from both Tangerine Road and First Avenue, and not visible from the nearest Catalina Shadows residences. The areas of high, medium, and low visibility were determined by field observation, topography, and aerial photograph reconnaissance. Please refer to Exhibit II-H-1: Viewsheds and Exhibit II-H-2: Viewshed Photographs for more information.

3. Provide Photographs that Depict Proposed Structures Superimposed on Existing Landscape

The proposed development will consist of residential and quasi-residential components integrated in a well-designed manner to fit with the existing nature of the site. However, at this time, a developer for this property has not been selected and the specific nature of structures has not yet been determined. Please refer to Exhibit II-H-1: Viewsheds and Exhibit II-H-2: Viewshed Photographs for more information.

LEGEND

-  HIGH VISIBILITY
-  LOW VISIBILITY
-  IMMEDIATE FOREGROUND
-  SITE PHOTO LOCATION & DIRECTION



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Exhibit II-H-2: Viewshed Photographs



Exhibit II-H-2: Viewshed Photographs (Cont'd)



Exhibit II-H-2: Viewshed Photographs (Cont'd)



Exhibit II-H-2: Viewshed Photographs (Cont'd)



Exhibit II-H-2: Viewshed Photographs (Cont'd)



Exhibit II-H-2: Viewshed Photographs (Cont'd)



I. TRAFFIC

1. All Existing and Proposed Off-site Streets between the Development and the Nearest Arterial Streets

Primary access to the subject property will be from First Avenue. Other major streets within one mile of the subject property are Rancho Vistoso Boulevard, Tangerine Road, Naranja Drive, Lambert Lane, and Oracle Road. Roads adjacent to and within one-mile distance from the subject property are generally in excellent condition. Please refer to Exhibit II-I-1: Major Roads.

2. All Arterial Streets within One Mile of the Project Site

Road	Section	Existing ROW	Ultimate ROW	Travel Lanes	Capacity	Speed Limit	ADT (PAG)	Surface Conditions	Scheduled Improvements
First Ave.	Tangerine to Lambert	125'	150'	4	35,000	45	16,000	Paved w/ multi-use path	None
	Lambert to Oracle	125'	150'	4	35,000	45	24,500	Paved w/ bike lane	None
Tangerine Rd.	La Canada to First	300'	300'	4	35,000	45	17,600	Paved w/ multi-use path	None
	First to Oracle	300'	300'	4	35,000	45	10,500	Paved w/ multi-use path	None
Palisades Rd.	First to Terminus	90'	90'	2	8,500	35-45	Unknown	Paved	None
Naranja Dr.	La Canada to First	150'	150'	2	8,500	45	4,000	Paved w/ bike lanes	None
Rancho Vistoso	Tangerine to Moore	150'	150'	4	35,000	35	17,000	Paved w/ sidewalk & bike lane	None
Lambert Ln.	First to Pusch View	90'	90'	2	8,500	40	12,000	Paved w/ multi-use path	Completed 2013
	Pusch View to La Canada	150'	150'	4					
Oracle Rd.	First to Tangerine	200'	200'	6	60,000	50	25,000	Paved w/ bike lanes	None

3. Existing and Proposed Intersections on Arterials within One Mile of the Site, Most Likely to be Used by Traffic from This Site

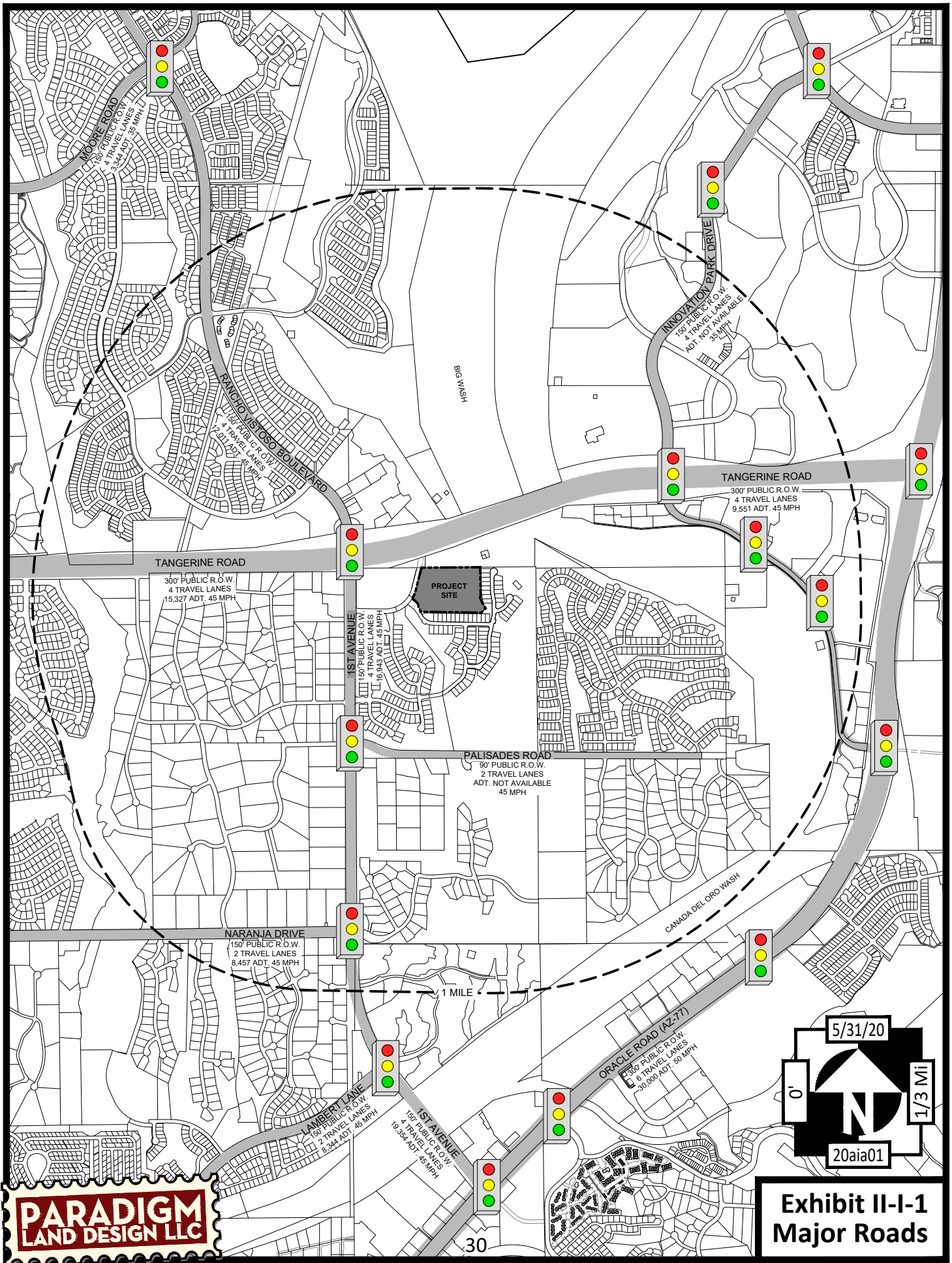
Arterial intersections within one mile of the site that will likely carry traffic generated by this development include Tangerine road and First Avenue, Tangerine Road and Oracle Road, and First Avenue and Naranja Drive. Please refer to Exhibit II-I-1: Major Roads.

4. Existing Bicycle and Pedestrian Ways Adjacent to the Site and their Connections with Streets, Parks, and Schools

According to the Oro Valley Bikeways Map Existing Routes and Surfaces 2006, there are paved shoulders along Tangerine Road and First Avenue, which are classified as follows:

- East of First Avenue, along Tangerine Road (paved shoulder and shared use path).
- West of First Avenue, along Tangerine Road (shared use path and signed bike route w/ on-street bike lane).
- First Avenue (shared use path and signed bike route with on-street bike lane).
- Naranja Drive (paved shoulder).
- Lambert Lane (shared use path and signed bike route with on-street bike lane).
- Oracle Road (paved shoulder).

There is a shared use path and signed bike route with on-street bike lane along the shoulder of Tangerine Road, which provides connection to a shared use path and a paved shoulder bike route along First Avenue. According to the Oro Valley Bikeways Map Existing Routes and Surfaces, the First Avenue paved shoulder also provides connectivity to the Naranja Drive paved shoulder bike route and the Lambert Lane shared use path. Ultimately, the First Avenue paved shoulder connects to the paved shoulder bike route along Oracle Road.



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Exhibit II-I-1
Major Roads

J. RECREATION & TRAILS

1. Parks

The Naranja Townsite Park, consisting of approximately 213 acres, is approximately one mile west of the subject property, located north of Naranja Drive and approximately one mile west of First Avenue. This park features active and passive recreational areas, walking trails, and an archery range.

The Catalina State Park, consisting of approximately 5,500 acres, is located approximately one mile east of the subject property, just east of Oracle Road. This park features active and passive recreational areas, a visitor center, an equestrian area, and several hiking trails.

The Cañada del Oro Riverfront Park, consisting of approximately 30 acres, is located just over one mile south of the subject property, south of Lambert Lane. This park features active and passive recreational areas, ball fields, and walking paths. Please refer to Exhibit II-J-1: Schools, Recreation & Trails.

2. Nearby Bicycle / Pedestrian Ways

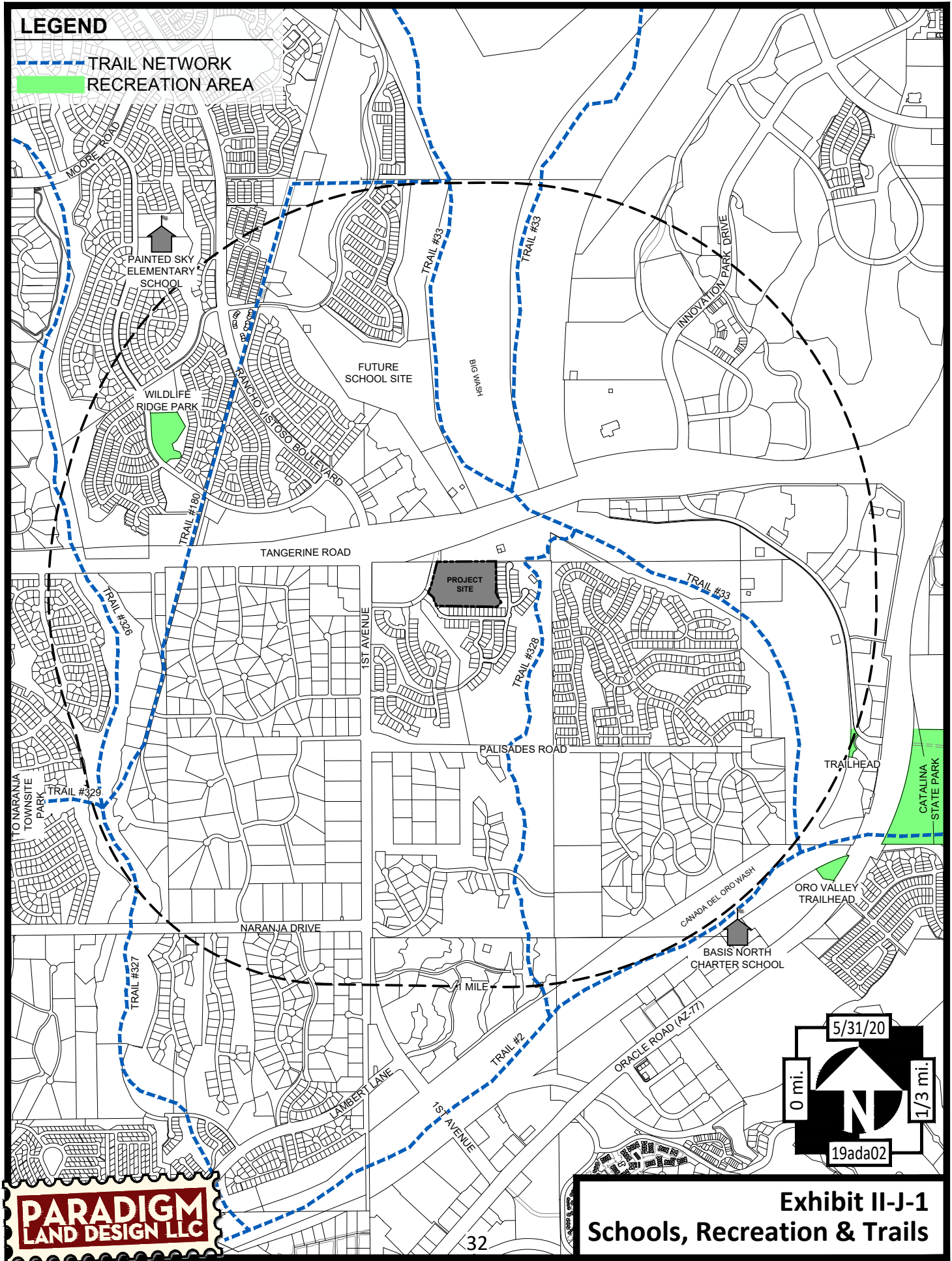
Both northbound and southbound First Avenue and eastbound and westbound Tangerine Road include paved bicycle lanes. First Avenue includes a concrete sidewalk on the street's east side, and Tangerine Road features a paved pedestrian path on the south side of the street.

3. Trails / Trail Access Adjacent to the Site

Trail #328 passes by the subject property from north to south, ultimately connecting to Trail #33, located approximately three-quarter mile east of the subject property along the eastern side of the Big Wash. Trail #328 also connects with Trail #2, located approximately one mile south of the subject property along the Cañada del Oro Wash. Please refer to Exhibit II-J-1: Schools, Recreation & Trails.

LEGEND

TRAIL NETWORK
RECREATION AREA



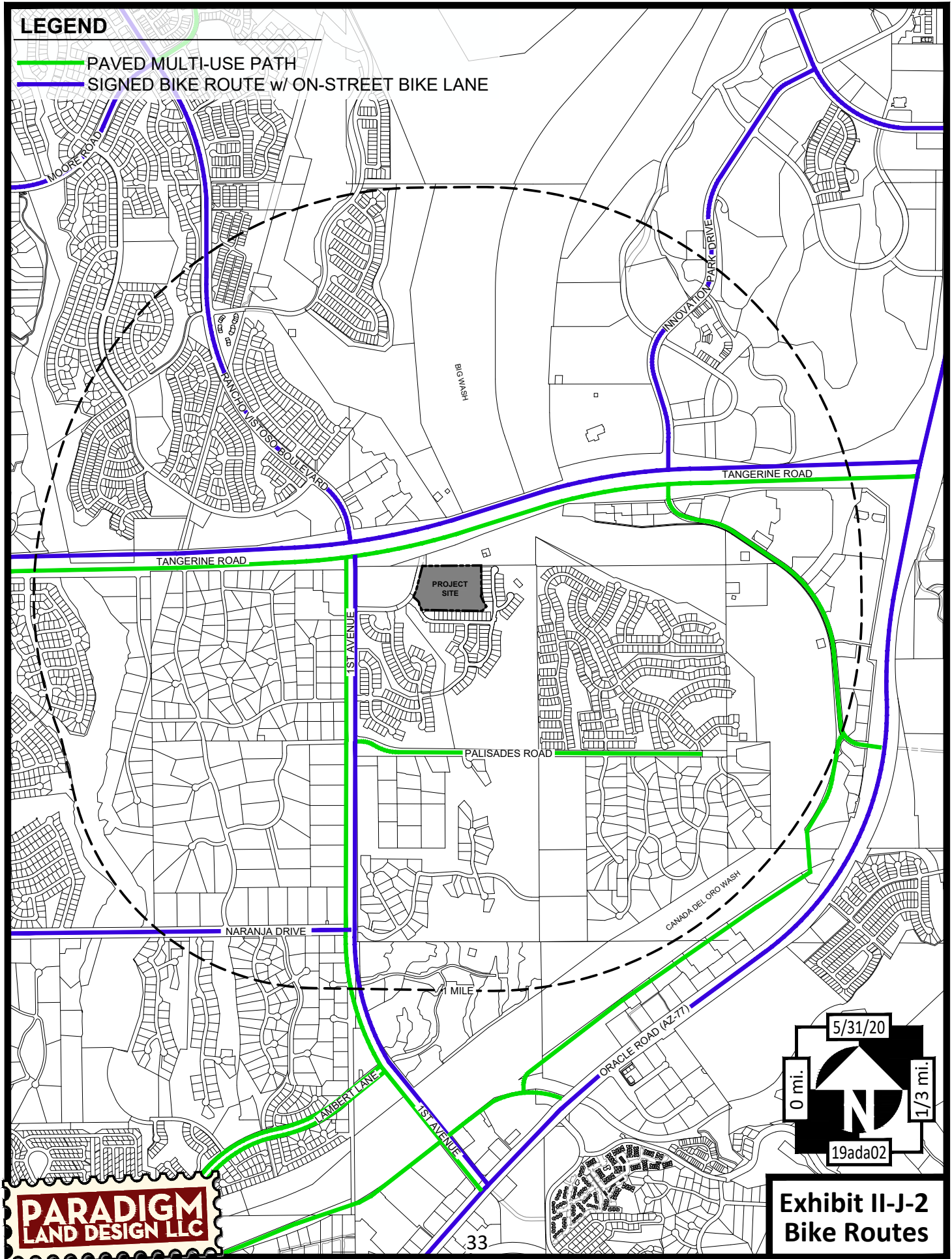
PARADIGM
LAND DESIGN LLC

Exhibit II-J-1
Schools, Recreation & Trails

LEGEND

PAVED MULTI-USE PATH

SIGNED BIKE ROUTE w/ ON-STREET BIKE LANE



PARADIGM
LAND DESIGN LLC

33

Exhibit II-J-2
Bike Routes

K. SCHOOLS

Students within this development will be served by schools in the Amphitheater Unified School District or by one of the charter schools within the area. Painted Sky Elementary is approximately one mile to the north of the project site, and Basis North is slightly more than one mile to the southeast of the project site. Students living within the subject property will be served by the following Amphitheater public schools: Painted Sky Elementary, Coronado K-8 School, and Ironwood Ridge High School. Please refer to Exhibit II-J-1: Schools, Recreation & Trails.

L. UTILITIES**1. Water**

Oro Valley Water Utility services the parcels adjacent to the subject property. The subject property will connect to the existing water lines.

2. Sewer

A 12" public sewer line runs along the west side of the subject property. Please refer to Exhibit II-L-1: Existing Sewer.

3. Dry Utilities

The subject property will connect to existing dry utility infrastructure. TEP provides electricity to the surrounding property, while Southwest Gas provides gas and Comcast provides telecommunications infrastructure.

LEGEND

- SEWER PIPE
- SEWER MANHOLE

TANGERINE ROAD




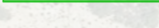
KAI DRIVE

EXISTING
SEWER STUB

PARADIGM
LAND DESIGN LLC

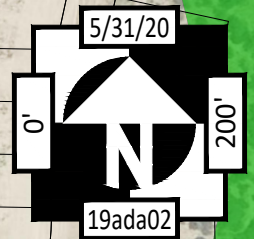
Exhibit II-L-1
Existing Sewer

LEGEND

-  HIGH VISIBILITY
-  LOW VISIBILITY
-  CRITICAL RESOURCE AREA (NONE ONSITE)
-  100-YEAR FLOODPLAIN (NONE ONSITE)

TANGERINE ROAD

KAI DRIVE



PARADIGM
LAND DESIGN LLC

III. LAND USE PROPOSAL

A. PROJECT OVERVIEW

The subject property is part of a larger land holding that was acquired by the Kai family over half a century ago. Much of that original land holding has been developed over the years for various residential purposes. This property is platted as Silverhawke Block 5 and is currently zoned for commercial development along with Block 4 to the west. Block 4 is right on the corner of Tangerine and First, and we believe someday it will be viable for commercial development. Unfortunately, several factors make this property, Block 5, unsuitable for commercial use: First, it has poor visibility from nearby streets. This alone is a critical flaw for retail. Second, it is physically located well off the corner of Tangerine and First. Third, there is an abundance of more suitable undeveloped commercial parcels nearby. Fourth, the market for retail floorspace is weak in this part of the Tucson metro area, partially due to that abundance of commercially zoned land and partially due to a lack of the residential density needed to support extensive retail. And lastly, a relatively low number of additional residential units are likely ever to be built within the parcel's retail service area, so the retail market is not likely ever to improve much at this location. All these factors lead us to believe that the most viable, and most appropriate, use for this property would be for residential or senior care uses.

Over 15 years ago a list of General Plan Special Area Policies were applied to the overall "Kai-Capri" property, which encompassed roughly 290 acres east of First Avenue from Tangerine Road to Naranja Drive. The Policies provided direction for development of the entire property including the identification of approximately 24 acres at the corner of Tangerine at First as being appropriate for commercial development, so that portion of the Kai-Capri property was designated in the General Plan as Neighborhood Commercial / Office ("NCO"). Our proposed downzoning from C-1 Commercial to R-6 Residential will not require an amendment to the General Plan land use map because R-6 is a permitted zoning classification within the NCO designation. However, text amendments to the Special Area Policies are needed to allow this property to be developed for residential purposes.

Our proposed downzoning includes several Tentative Development Plans, depicting different development scenarios that we believe to be viable and appropriate uses for this property, including:

- A rental casita product similar to a number of others that have been very successful around Tucson and Phoenix. The residents of this sort of development are typically renters by choice, meaning that they could afford to purchase a home but prefer not to at this time. The project will be well-landscaped, featuring a central recreational amenity such as a pool and spa area, and is most often entirely single-story.
- A gated, two-story apartment community in an amenitized and well-landscaped setting. As with the rental casita scenario the project would include a central recreation area with a clubhouse and rental office. And also, as with the casita scenario, residents in apartments such as this usually chose to live in an apartment even though they have the means to purchase a home.
- A senior care facility to meet the significant unmet need in the senior care industry. An increasing number of people are deciding that modern senior care facilities are an attractive living option that

provides resort-like amenities and also the support that many aging people, or their spouses, require. The development will include a main two-story building where assisted living, memory care, and/or independent living quarters are offered. Around the perimeter one-story independent living cottages would provide a place where those requiring less care could live with a bit more room while still benefiting from the amenities and services available at the main building. Senior care facilities are very low traffic generators, and they're just as quiet if not quieter than other residential areas in Oro Valley.

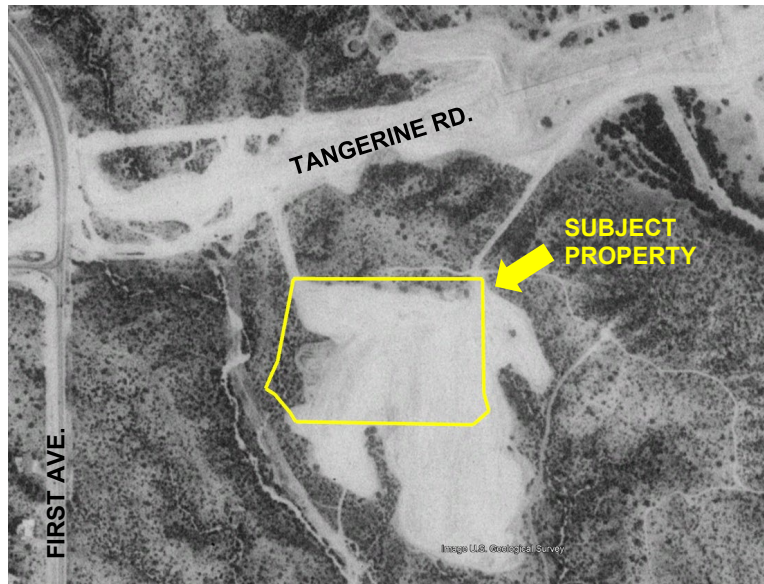
- A single-family neighborhood featuring two-story townhome-style housing or one- and two-story detached homes similar to the nearby Villages at Silverhawke or Catalina Shadows subdivisions.

Regardless of which development scenario comes to fruition, several facts will remain the same:

- ✓ Building heights will not exceed the two-story limitation that is already in place under the existing C-1 zoning.
- ✓ Traffic generation will be equivalent or most likely lower than what could be expected if developed under the existing C-1 zoning.
- ✓ Any of the proposed development types will benefit the struggling retailers that have already established themselves in Oro Valley.
- ✓ The nearest residents in the Catalina Shadows subdivision are over 800 feet away and will be separated from this development not only by distance but also by homes to be built within the Villages at Silverhawke Phase 3. The nearest neighbors in the Villages at Silverhawke Phase 2 subdivision, which was part of the rezoning that created the subject property's C-1 zoning, are at least 350 feet away and separated from this development by a wash and the Villages Phase 3. The nearest neighbors in the Tangerine Hills subdivision are nearly 1,100 feet away and are separated from this development by a wash, the Villages Phases 2 & 3 subdivisions, and First Avenue. The nearest homes in Rancho Vistoso are over 2,000 feet away.



- ✓ This development will not negatively impact any nearby homeowners in the area.
- ✓ The proposed amendment and its associated downzoning request will not impact the natural beauty and environmental resources more than under existing zoning. In fact, most of the parcel was previously graded by ADOT, as evidenced by this 1992 aerial photo:



B. YOUR VOICE, OUR FUTURE CONFORMANCE

Oro Valley's Your Voice, Our Future General Plan includes many goals and policies that support the development of appropriate, transitional, and viable land uses such as those proposed by this amendment and associated downzoning. Below are a sample of goals and policies that this proposal supports:

- 3.4.A. & D. – A robust local economy and job market that provide opportunities for quality employment, build on Oro Valley's assets, and encourage high-quality growth. A community with a wide range of services, amenities, shopping and dining opportunities and housing types that meet the needs of current and future residents.
 - ✓ A robust economy within Oro Valley will be fueled by successful businesses in Oro Valley. Businesses can provide a wide range of services, shopping, and dining opportunities only when they thrive. They thrive when they have enough customers living and working within their service area. Oro Valley's generally low residential densities do not provide enough customers for most Oro Valley businesses within their services areas, so additional residential units are needed to help fulfill this General Plan goal. Ideally the development of additional residential units is not unreasonably impactful to nearby residents nor it is on land that is environmentally sensitive. This property fits those two criteria perfectly.
 - ✓ Given that existing Oro Valley businesses are already struggling, re-designating undeveloped and less desirable commercial land to provide much needed additional residential units is appropriate from a long-range land use planning standpoint. The intersection of Tangerine

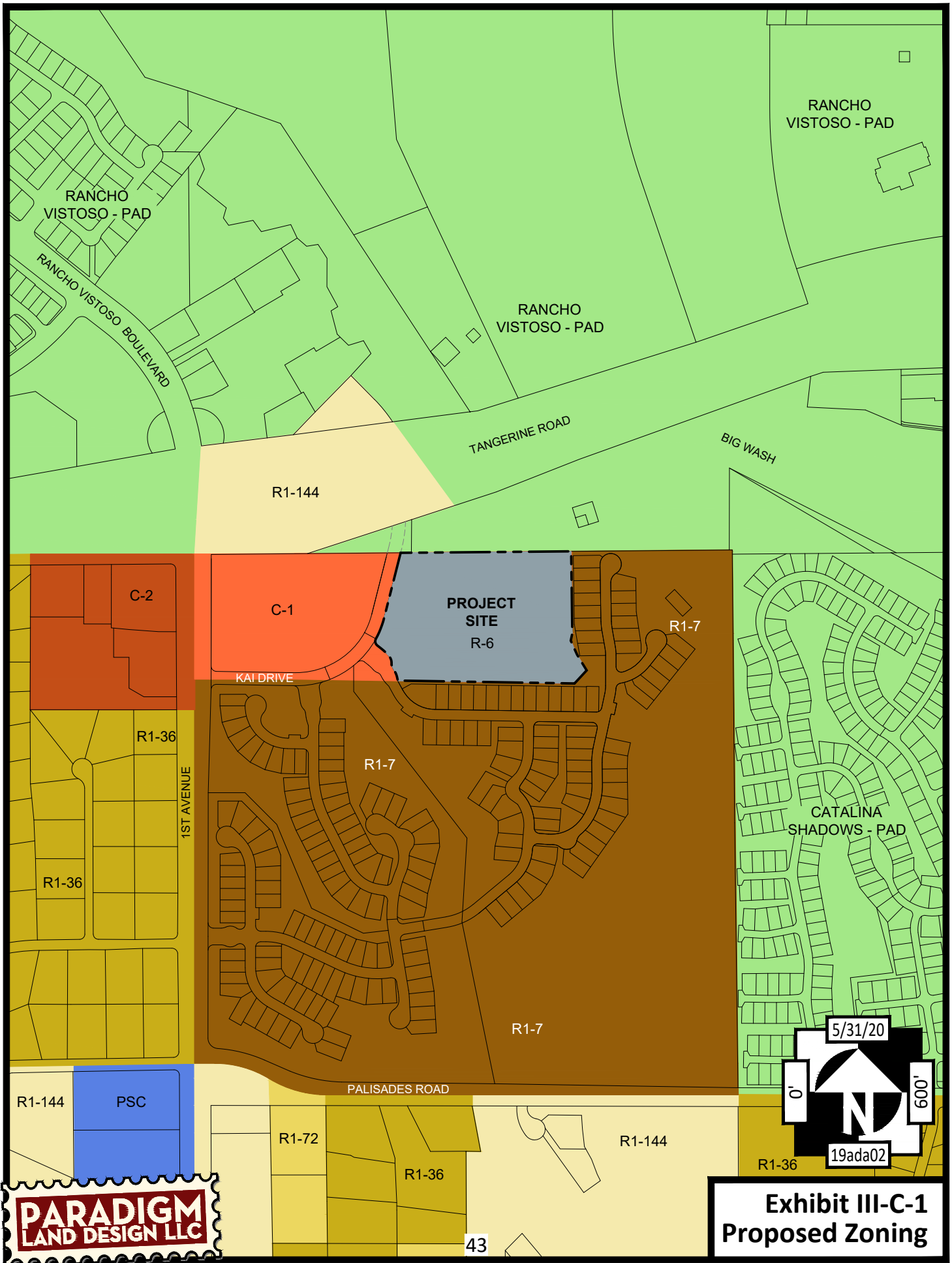
Road and First Avenue is surrounded by 81 acres of commercially zoned parcels spread over all four corners, but only 29% of the acreage is developed, leaving nearly 60 acres of undeveloped, marginally viable commercial land that is not currently benefitting the property owners, nearby businesses, or the Town in general. This proposed amendment will help realign this commercial intersection to better support the General Plan's goal of achieving a robust local economy.

- 3.6.CC.7. – Support the development of diverse housing types within the community.
 - ✓ Oro Valley's residential market is dominated by single-family detached homes, which doesn't align with the broader spectrum of housing options demanded by existing and future residents. Additional denser transitional residential housing units such as apartments, rental casitas, townhomes, and senior care campuses are needed to make living in Oro Valley accessible to everyone.
- 3.6.CC.8.– Foster development of complete neighborhoods with easy access to transportation and employment options, and commercial areas that offer amenities and services for residents' daily needs.
 - ✓ The General Plan describes a complete neighborhood as including parks and other outdoor spaces, recreational facilities, access to quality housing, and safe and varied transportation options. It goes on to describe a complete community as one that serves the needs of residents on a day-to-day basis and is "a good place to open a business". This proposed amendment will fulfil these goals by providing another quality housing option for existing and future residents, an recreation area, convenient pedestrian and bicycle access to the nearby sidewalk and pathway system, convenient access to nearby commercial areas, and additional residents to help local businesses thrive.
- 5.4.X. – Effective transitions between differing land uses and intensities in the community.
 - ✓ Residential-scale development such as that which is proposed provides a graduated transition in density and land use and is generally accepted to be less impactful to nearby homeowners than the commercial developments that could be built on the property under existing zoning. Landscaped bufferyards will be incorporated into the development to further soften the boundary between this and nearby developments.
- 5.5.LU.5. – Provide diverse land uses that meet the Town's overall needs and effectively transition in scale and density adjacent to neighborhoods.
 - ✓ Currently Oro Valley has more commercially zoned land than can be supported by its residential and employment density. Conversely, the Town's supply of higher density residential units is deficient relative to demand and relative to the General Plan's goal of providing a full spectrum of housing options. Allowing this property to develop as a higher density residential or senior care neighborhood would help address both of these statistics.

- 5.5.LU.7. – Coordinate planning for land use and transportation in order to promote growth areas and transit and commercial corridors.
 - ✓ A General Plan Tier II Growth Area is designated over the entire 81 acres of commercially zoned land centered around the intersection of First Avenue and Tangerine Road. The General Plan defines a Growth Area as a location that is “particularly suitable” for a planned concentration of a range of more intensive land uses. Development within Tier II Growth Areas must limit impacts to nearby homeowners, which this proposal achieves. This proposal also provides for a “sensible pattern of land development” coupled with infrastructure funding that is “coordinated with development activity” (i.e. developed-funded).
- 5.5.LU.9. – Promote the design of cohesive developments that enhance and promote the pedestrian experience.
 - ✓ Whether this property is developed as a senior care campus or a residential neighborhood that is not age-restricted, it will include an internal sidewalk/pathway system with connections to external sidewalk and trail alignments.
- 5.7.DG.1. – Require new development to pay its share toward the cost of additional public facility and service needs generated by new development while balancing public and private interests in cost allocation.
 - ✓ This project will fund the construction of the final leg of the Kai Drive connection between First Avenue and Tangerine Road. That roadway construction effort will also include extension of utilities necessary to serve the development. Beyond providing the actual infrastructure improvements needed to serve this development, impact fees will be paid to help cover the cost of maintaining the Town’s broader public infrastructure networks.

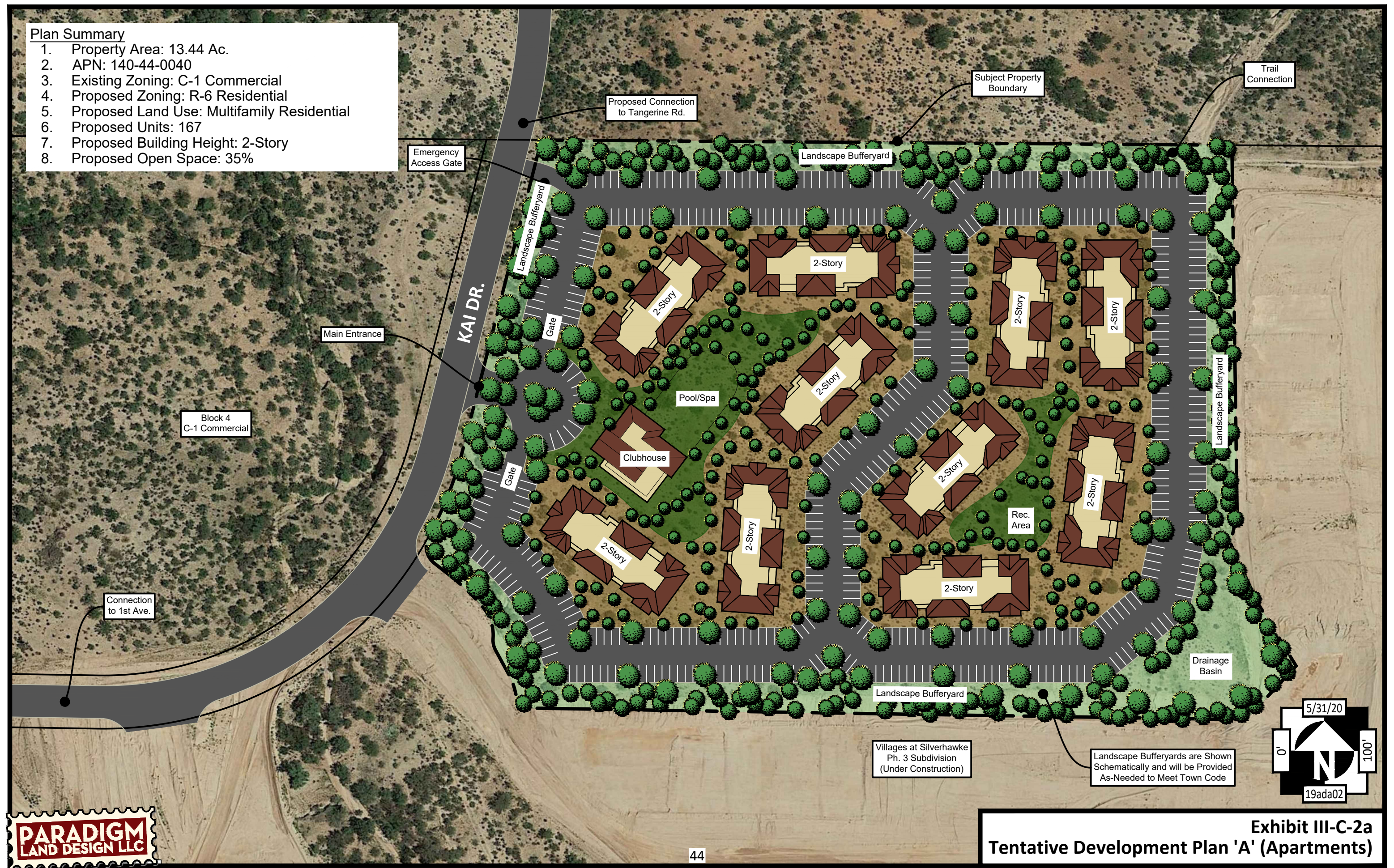
C. LAND USES

1. Please refer to Exhibit III-C-1: Proposed Zoning.
2. The proposed development will have no impact on existing onsite land uses because the site is currently undeveloped.



Plan Summary

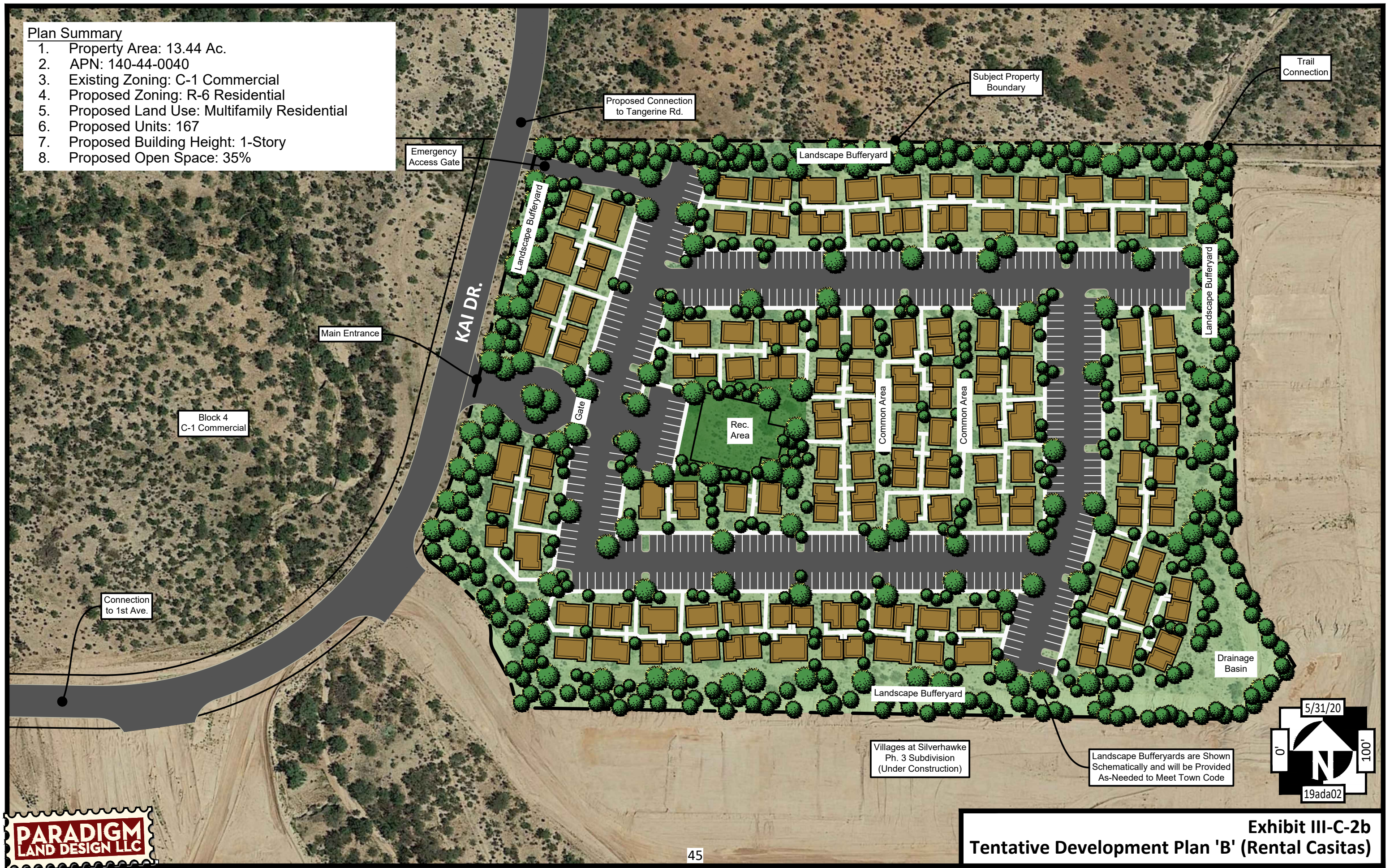
1. Property Area: 13.44 Ac.
2. APN: 140-44-0040
3. Existing Zoning: C-1 Commercial
4. Proposed Zoning: R-6 Residential
5. Proposed Land Use: Multifamily Residential
6. Proposed Units: 167
7. Proposed Building Height: 2-Story
8. Proposed Open Space: 35%



PARADIGM
LAND DESIGN LLC

Plan Summary

1. Property Area: 13.44 Ac.
2. APN: 140-44-0040
3. Existing Zoning: C-1 Commercial
4. Proposed Zoning: R-6 Residential
5. Proposed Land Use: Multifamily Residential
6. Proposed Units: 167
7. Proposed Building Height: 1-Story
8. Proposed Open Space: 35%



PARADIGM
LAND DESIGN LLC

Plan Summary

1. Property Area: 13.44 Ac.
2. APN: 140-44-0040
3. Existing Zoning: C-1 Commercial
4. Proposed Zoning: R-6 Residential
5. Proposed Land Use: Senior Care (Independent Living / Assisted Living / Memory Care)
6. Proposed Building Height: 1-Story Cottages, 2-Story Main Building
7. Proposed Open Space: 35%

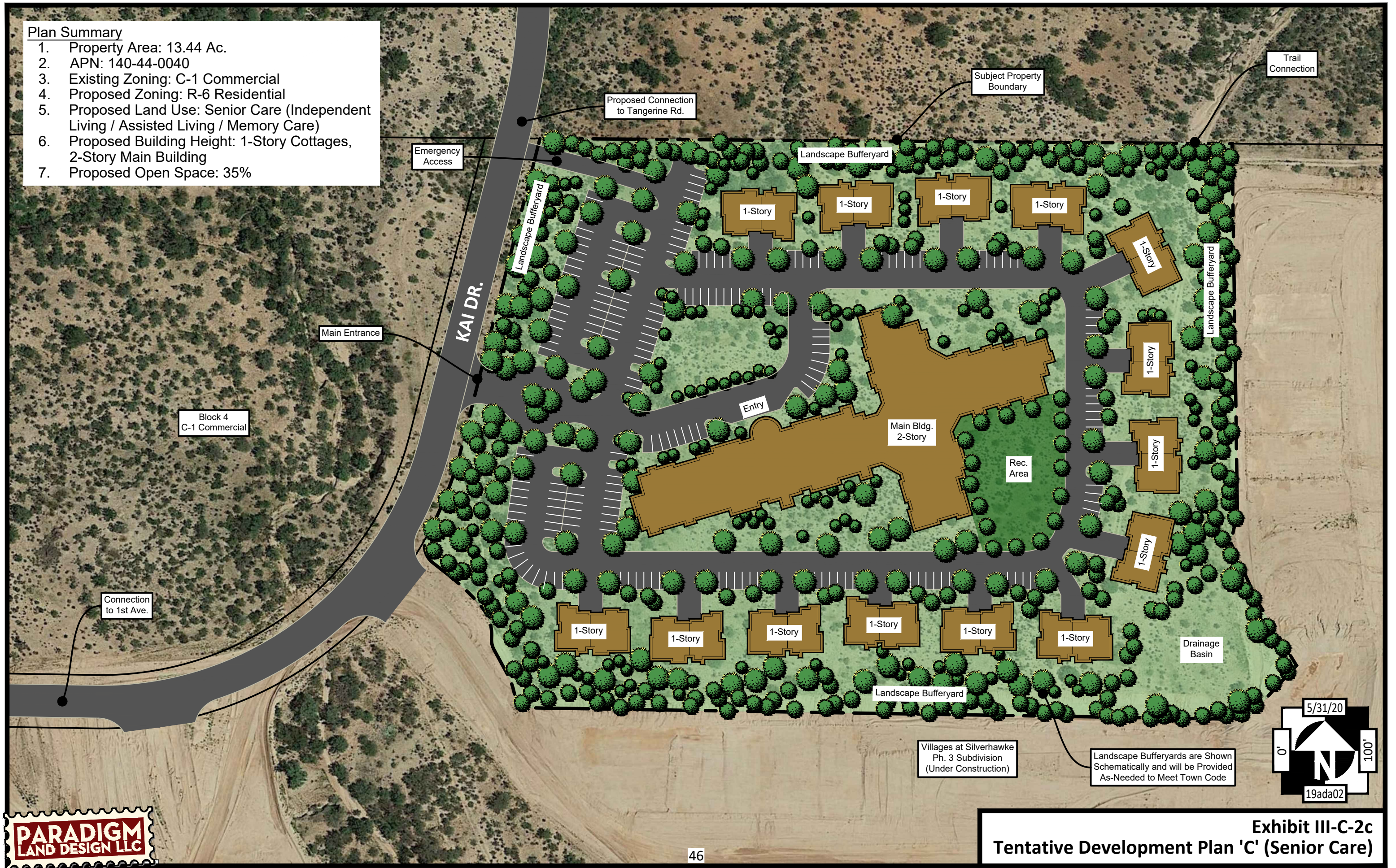
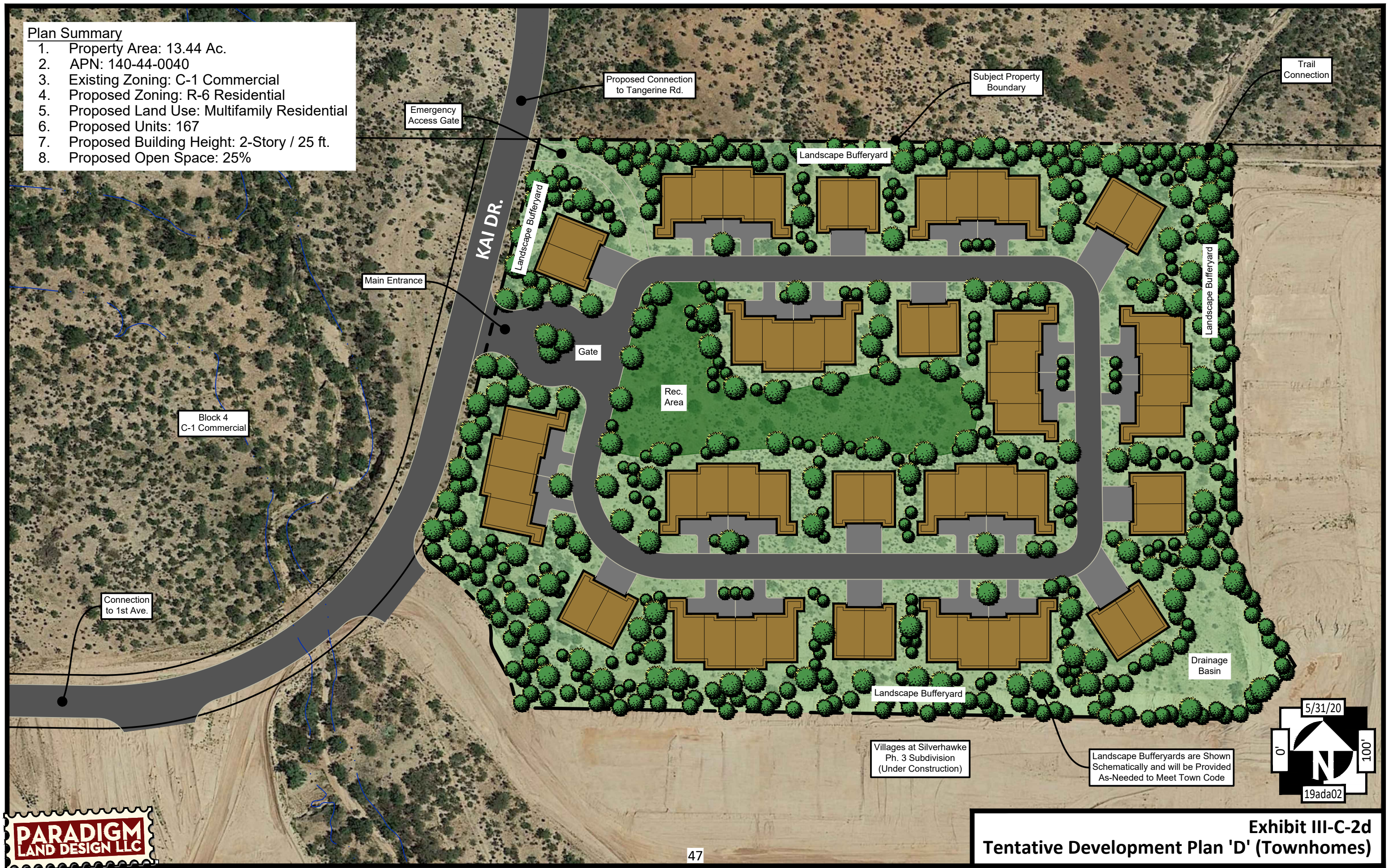


Exhibit III-C-2c
Tentative Development Plan 'C' (Senior Care)

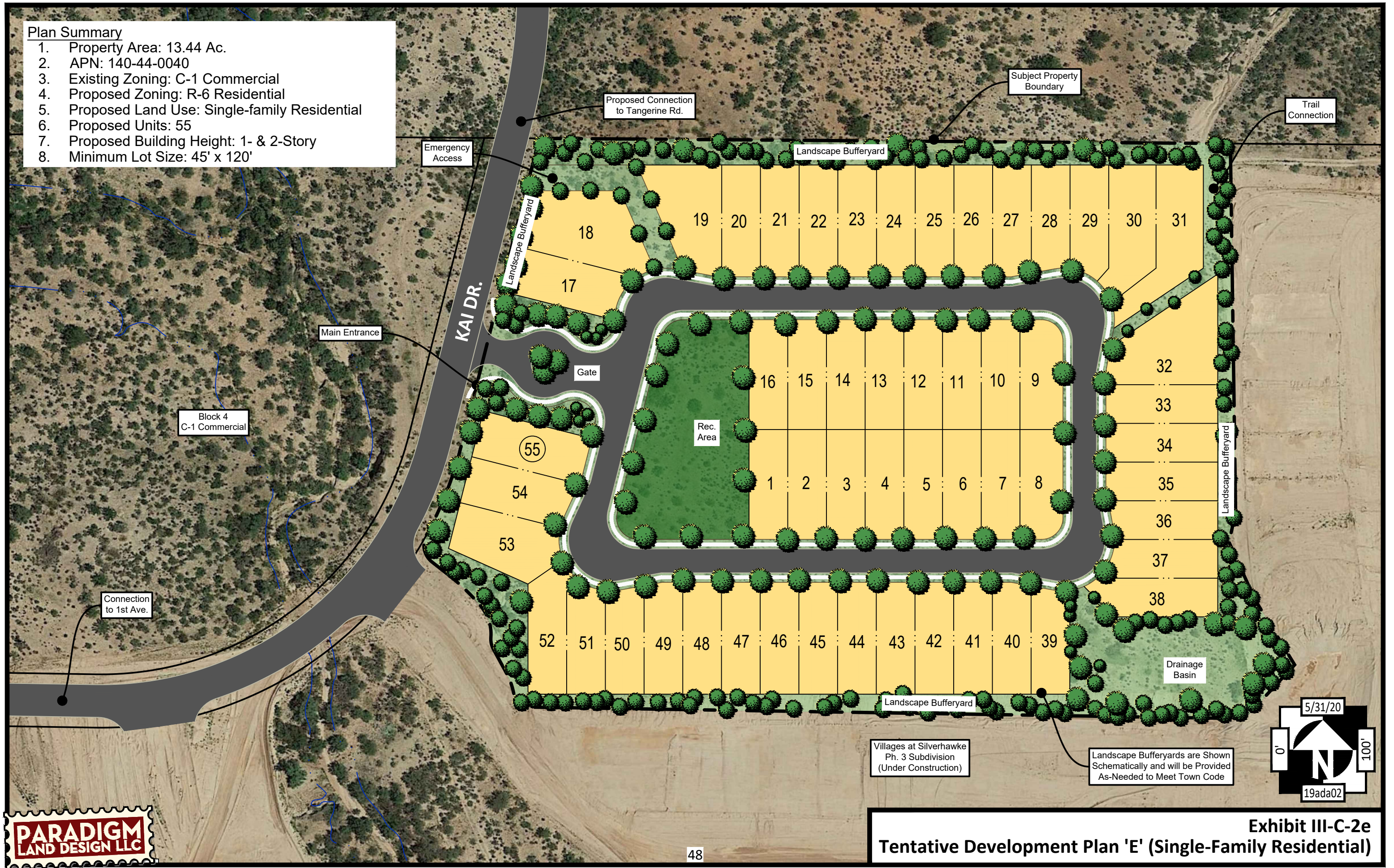
Plan Summary

1. Property Area: 13.44 Ac.
2. APN: 140-44-0040
3. Existing Zoning: C-1 Commercial
4. Proposed Zoning: R-6 Residential
5. Proposed Land Use: Multifamily Residential
6. Proposed Units: 167
7. Proposed Building Height: 2-Story / 25 ft.
8. Proposed Open Space: 25%



Plan Summary

1. Property Area: 13.44 Ac.
2. APN: 140-44-0040
3. Existing Zoning: C-1 Commercial
4. Proposed Zoning: R-6 Residential
5. Proposed Land Use: Single-family Residential
6. Proposed Units: 55
7. Proposed Building Height: 1- & 2-Story
8. Minimum Lot Size: 45' x 120'



D. ENVIRONMENTALLY SENSITIVE LANDS

Per the 2015 rezoning of the entire 148-acre property at the southeast corner of Tangerine Road and First Avenue, no ESOS is required on this subject property.

There are no Priority Conservation Areas onsite.

E. TOPOGRAPHY

Most of the subject property has been previously graded by ADOT, and thus has an existing even downward slope generally from north to south. The south-facing slope of a low offsite ridgeline extends into the northern edge of the subject property. That portion of the property contains minimal areas of slope greater than 15%. Per the ESLO slope calculations in Section II.C. of this document, approximately 97.5% of the subject property may be graded. The 2.5% to be left as natural open space will be along the northern boundary where the gradual hillside exists.

There are no Hillside Conservation Areas onsite.

LEGEND

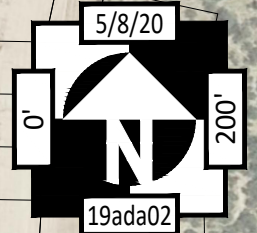
PROPOSED GRADED AREA (13.1± ACRES)

TANGERINE ROAD

The 2.5% Natural Open Space
requirement per the ESLO
slope calculations will generally
be met in this area

KAI DRIVE

5/8/20



PARADIGM
LAND DESIGN LLC

50

Exhibit III-E-1
Proposed Grading Area

F. CULTURAL / ARCHAEOLOGICAL / HISTORIC RESOURCES

As discussed in Section II of this document, here are no cultural resource sites within the subject property. Even so, should qualifying artifacts or remains be discovered during construction they will be handled according to applicable antiquities laws.


G. HYDROLOGY

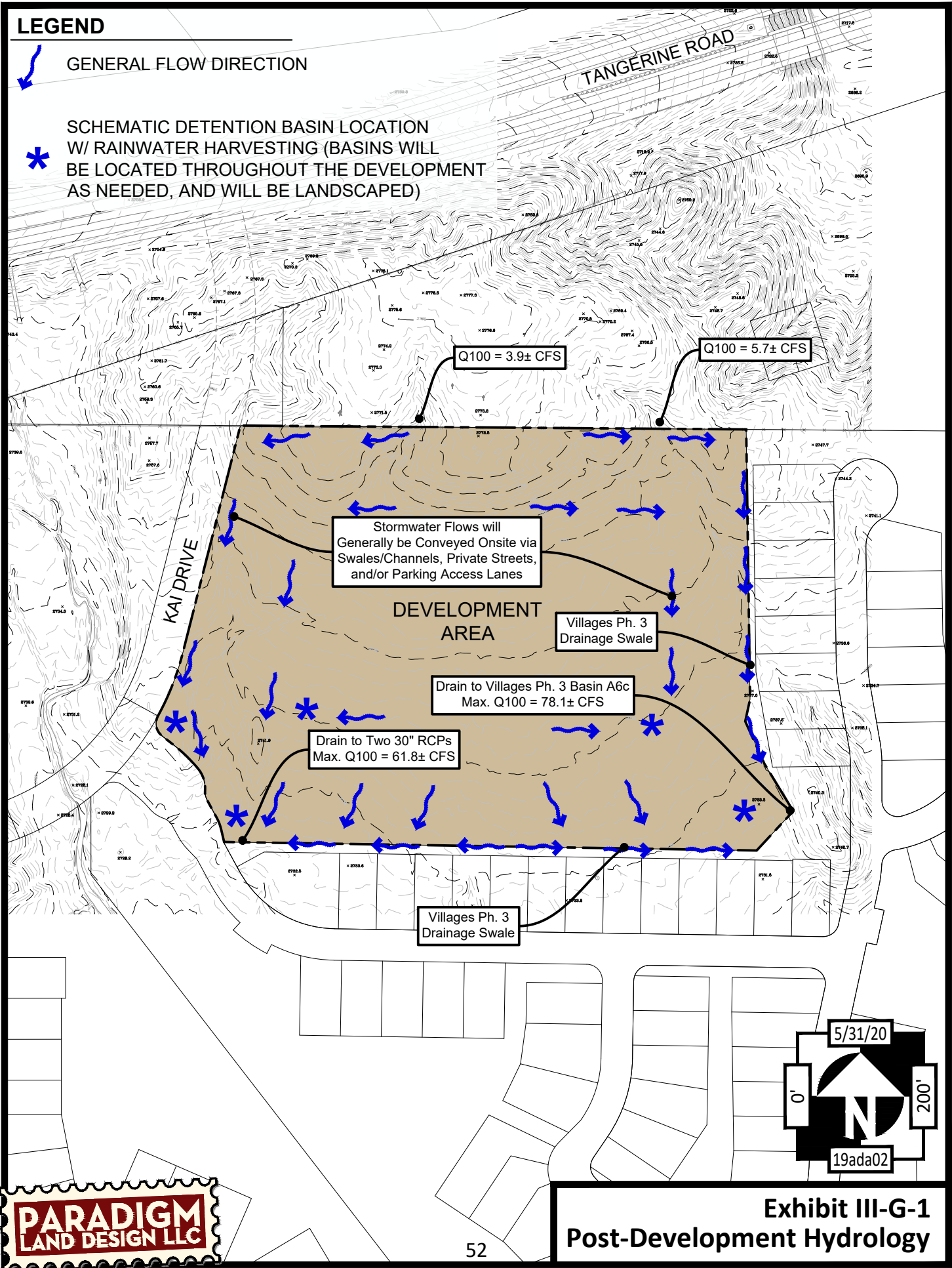
The upstream watershed impacting the subject property is very small, so most of the stormwater runoff leaving the subject property is generated onsite. Development of the subject property will increase the amount of impervious cover and therefore the post-development stormwater runoff as well. Detention basins will be constructed to detain the increased runoff. Outlet structures will meter the basin exit flows to return them to pre-development conditions as they leave the subject property. The Villages at Silverhawke Phase 3 subdivision shares the entire downstream property boundary with the subject property. That subdivision is currently under construction and has been designed to accept the pre-development stormwater flows that currently exit the subject property during a storm event.

There are no regulated 100-year floodplains onsite.

LEGEND

 GENERAL FLOW DIRECTION

 SCHEMATIC DETENTION BASIN LOCATION
W/ RAINWATER HARVESTING (BASINS WILL
BE LOCATED THROUGHOUT THE DEVELOPMENT
AS NEEDED, AND WILL BE LANDSCAPED)



H. VEGETATION

Please refer to Appendix B – Site Resource Inventory. There are not individual plants or groups of plants that qualify as Significant Vegetation according to Town Code. This is due to the fact that most of the property has previously graded by ADOT a number of years ago. Even so, during the development review process the Native Plant Preservation Plan will identify individual plant specimens that may be viable for transplant and reuse within the project's landscape design.

I. WILDLIFE

Wildlife access to the site is limited by the Villages at Silverhawke subdivisions to the south and Tangerine Road to the north. Additionally, the previous mass grading of the property eliminated high-value habitat onsite.

J. VIEWSHEDS

The nearest residents in the Catalina Shadows subdivision are over 800 feet away and will be separated from this development not only by distance but also by homes to be built within the Villages at Silverhawke Phase 3. The nearest neighbors in the Villages at Silverhawke Phase 2 subdivision, which was part of the rezoning that created the subject property's C-1 zoning, are at least 350 feet away and separated from this development by a wash and the Villages Phase 3. The nearest neighbors in the Tangerine Hills subdivision are nearly 1,100 feet away and are separated from this development by a wash, the Villages Phases 2 & 3 subdivisions, and First Avenue. The nearest homes in Rancho Vistoso are over 2,000 feet away.

The subject property is minimally visible from Tangerine Road and First Avenue, so views from those roadways will not be impacted by this development.

The only nearby subdivision form which this project will be highly visible is the Villages at Silverhawke Phase 3, which is under construction with no actual residents yet. Even so, it is very important to remember that the existing commercial zoning of the subject property would allow development of a less compatible use than those uses proposed by this downzoning.

K. TRAFFIC

Access to the subject property will be via an extension of Kai Drive, which is a platted public roadway looping from First Avenue northeast to Tangerine Road. Once completed, Kai Drive will allow existing and future residents of this property and the Villages at Silverhawke subdivisions to access eastbound Tangerine Road directly without going through the Tangerine / First intersection. Similarly, the proposed left turn into Kai Drive from Tangerine will provide westbound motorists more convenient access to the subject property, Villages subdivisions, and future Block 4 retail opportunities. A previous traffic report by Southwest Traffic Engineering has shown that the Kai Drive loop connection to Tangerine is an improvement over the lone First Avenue access configuration that was shown in the 2015 rezoning.

An update to the previous traffic report is included with this document. The summary statement is that the proposed residential uses will have equal or less impact on nearby traffic patterns than would a commercial development on the subject property under existing zoning. Please refer to Appendix A – Traffic Impact Statement.

L. RECREATIONS & TRAILS

In similar fashion to the recreation areas provided throughout the Villages at Silverhawke subdivisions, a recreation area will be provided onsite for future residents. Additionally, pedestrian connections will be provided to the future sidewalk along Kai Drive, which will connect to the multi-use paths along Tangerine Road and First Avenue. To the north of the subject property a hiking trail connection will be provided to the Pima County open space containing Trail #328. During the master planning and rezoning of the overall Kai-Capri property the Trail #328 alignment was refined and memorialized within public trail easements.

M. SCHOOLS

Students within this development will be served by schools in the Amphitheater Unified School District or by one of the charter schools within the area. Painted Sky Elementary is approximately one mile to the north of the project site, and Basis North is slightly more than one mile to the southeast of the project site. Students living within the subject property will be served by the following Amphitheater public schools: Painted Sky Elementary, Coronado K-8 School, and Ironwood Ridge High School. A school capacity letter has been requested from Amphi School District.

N. UTILITIES

1. Water

The project will be served by Oro Valley Water Utility. A public water line will be extended along Kai Drive into the project. A water system loop will be created via a stub connection provided at the subject property's southeast corner from the Villages at Silverhawke Phase 3 subdivision.

2. Sewer

The project will connect to the public sewer system at a manhole at the southwest corner of the subject property. Please refer to Exhibit III-O-1: Sewer Capacity Letter

Exhibit III-O-1: Sewer Capacity Letter



May 8, 2020

Paul Oland
Paradigm Land Design LLC
7090 N Oracle Road, Suite 178-193
Tucson, Arizona 85704

Sewerage Capacity Investigation No. P20WC00079 Type I

**RE: Silverhawke Block 5, Parcel 220060640
Estimated Flow 36,072 gpd (ADWF).**

Greetings:

The above referenced project is tributary to the Tres Rios Wastewater Reclamation Facility via the Canada del Oro Interceptor.

Capacity is currently available for a project this size in the existing public sewer G-89-023, downstream from manhole 5310-B-15, via the proposed G-2019-056, from proposed manhole 40.

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. Allocation of capacity is made by the Type III Capacity Response.

If further information is needed, please feel free to contact us at (520) 740-6607.

Reviewed by: Kurt Stemm, CEA Sr.

3. Dry Utilities

Tucson Electric Power, Southwest Gas, and Comcast Communications have all indicated they will provide service to the subject property via extensions of their facilities in Kai Drive along the property's western border.

O. BUFFERYARDS

The subject property is bounded on the west by the Kai Drive alignment, on the north by County-owned open space, and on the south and east by the Villages at Silverhawke Phase 3 subdivision. Along its shared boundary with the subject property the Villages subdivision already includes a landscape bufferyard that will count toward this project's required landscape bufferyard along that boundary. Landscape bufferyards will also be provided along the northern and western boundaries as required by Town Code.

IV. APPENDIX A – TRAFFIC IMPACT STATEMENT



1 June 2020

David Laws, PE
Town of Oro Valley
Division Manager – Permitting
11000 N. La Canada Drive
Oro Valley, Arizona 85737

**SUBJECT: SILVERHAWKE BLOCK 5
KAI DRIVE/FIRST AVENUE
TRAFFIC IMPACT STATEMENT**

Dear Mr. Laws,

Please find enclosed a traffic impact statement (TIS) regarding the Silverhawke Block 5 project located on the east side of Kai Drive, east of First Avenue in Oro Valley, Arizona. The vicinity of the project is shown in **Figure 1**. There are currently five possible scenarios for this project site: apartments, casitas (similar to apartments), senior care, townhomes, and single-family residential. For the purposes of this report, the apartment concept was analyzed, as it is expected to be the highest trip generator from the proposed scenarios. The proposed apartment option will consist of a proposed 167 unit apartment land use, as shown in **Figure 2**. The future site will be served by two proposed access points.

This site was included in the analysis from the approved *The Villages at Silverhawke Traffic Impact Analysis* (Original TIA) dated 28 November 2017 and completed by Southwest Traffic Engineering, LLC (SWTE). The Original TIA analyzed the entire Silverhawke development. The Silverhawke Block 5 project is part of Phase IV of the total development plan. Phase IV assumed the development of office space and shopping center space in the Original TIA, while the current development plan is proposing various possible residential uses.

The purpose of this traffic impact statement is to compare the estimated the traffic generation associated with the proposed project, using an apartment land use, to the trip generation from the Original TIA and identify the possible impacts of the site on the immediate area.

Existing Conditions

The project is located on an undeveloped parcel of land on the east side of Kai Drive, approximately 860 feet east of First Avenue and 280 feet south of Tangerine Road.

Tangerine Road is an east/west aligned roadway that offers two through lanes in each direction separated by a raised median. The posted speed limit of the roadway is 45 miles per hour (mph).

First Avenue is a north/south aligned roadway that provides two through lanes for each direction of travel, separated by a raised median. This roadway offers access to Tangerine Road to the north of the project site and Oracle Road to the south. The posted speed limit on First Avenue is 45 mph.

Kai Drive is a three-lane roadway that ‘dead-ends’ approximately 600 feet east of First Avenue. This roadway provides one through lane in each direction separated by a two-way center left turn lane. Kai Drive aligns with Oro Valley Retail Center Driveway located on the west side of First Avenue.

Access

The Silverhawke Block 5 apartment site option will be served by two gated access points, Main Access and an emergency access. Kai Drive will be completed as part of the project. Currently, Kai Drive extends east from First Avenue for approximately 600 feet. When completed, this roadway will then curve to the north and connect to Tangerine Road, forming a three-leg un-signalized intersection.

Main Access will be located on the east side of Kai Drive, approximately 575 feet south of Tangerine Road. This access point will offer full access to the site.

An emergency access will be located approximately 200 feet north of Main Access and will provide emergency vehicle access only.

Westbound vehicles exiting the site at the intersection of Main Access/Kai Drive will be offered a shared left/right turn lane. Northbound traffic will make use of a shared through/right turn lane. The southbound approach to the intersection will be provided with a two-way center left turn lane and one through lane.

Trip Generation

Trip generation was developed utilizing nationally agreed upon data contained in the Institute of Transportation Engineers (ITE) publication *Trip Generation Manual, 10th Edition*, 2017. The Silverhawke Block 5 project trip generation was estimated for the construction of 167 apartment units based on ITE Land Use Code 220, Multifamily Housing Low-Rise (LUC 220). The result is the expected weekday trip generation for the project as shown in **Table 1**. The complete trip generation calculations can be found in the Appendix.

Table 1 – Weekday Project Site Generated Trips (Possible Development Plan)

Time Period	167 Units Multifamily Housing (LUC 220)
Average Daily, Inbound (vtpd)	611
Average Daily, Outbound (vtpd)	611
Total Daily	1,222
AM Peak Hour, Inbound (vtph)	18
AM Peak Hour, Outbound (vtph)	60
Total AM Peak	78
PM Peak Hour, Inbound (vtph)	59
PM Peak Hour, Outbound (vtph)	35
Total PM Peak	94

vtpd - vehicle trips per day, vtph - vehicle trips per hour

In the Original TIA, Phase IV included land to the east and the west of Kai Drive. The Silverhawke Block 5 site encompasses the Phase IV area east of Kai Drive. It was originally assumed that Phase IV would include the construction of 59,588 square feet of office space and 59,588 square feet of shopping center space.

The site plan from the Original TIA does not specify the location of the proposed office or shopping center spaces. However, shopping centers are typically located adjacent to major roadways for increased visibility to attract customers. For the purposes of this analysis, it was assumed that the proposed shopping center space would be located to the west of Kai Drive, closer to First Avenue, and that the Silverhawke Block 5 site would replace the proposed office space.

The Original TIA estimated the trip generation for 59,588 square feet of office space in Phase IV using the *ITE Trip Generation Manual, 9th Edition, 2012* based on ITE LUC 710, General Office Building. In order to provide a consistent comparison between the development assumed in the Original TIA and the current development plan, trip generation for office space was calculated using the current ITE publication *Trip Generation Manual, 10th Edition, 2017*, as shown in **Table 2**.

Table 2 – Weekday Site Generated Trips (Original TIA)

Time Period	59,588 sqft General Office Building (LUC 710)
Average Daily, Inbound (vtpd)	321
Average Daily, Outbound (vtpd)	321
Total Daily	642
AM Peak Hour, Inbound (vtph)	71
AM Peak Hour, Outbound (vtph)	12
Total AM Peak	83
PM Peak Hour, Inbound (vtph)	11
PM Peak Hour, Outbound (vtph)	59
Total PM Peak	70

vtpd - vehicle trips per day, vtph - vehicle trips per hour

The anticipated difference in trip generation between the proposed apartments and the previously proposed office space is shown in **Table 3**.

Table 3 – Weekday Peak Hour Site Generated Trip Comparison

Time Period	167 Units Multifamily Housing (LUC 220)	59,588 sqft Office Space (LUC 710)	Difference
Average Daily, Inbound (vtpd)	611	321	290
Average Daily, Outbound (vtpd)	611	321	290
Total Daily	1,222	642	580
AM Peak Hour, Inbound (vtph)	18	71	-53
AM Peak Hour, Outbound (vtph)	60	12	48
Total AM Peak	78	83	-5
PM Peak Hour, Inbound (vtph)	59	11	48
PM Peak Hour, Outbound (vtph)	35	59	-24
Total PM Peak	94	70	24

vtpd - vehicle trips per day, vtph - vehicle trips per hour

Red indicates a reduction

Conclusion

The Silverhawke Block 5 apartment option is predicted to generate 5 fewer weekday AM peak hour trips and 24 additional weekday PM peak hour trips to the surrounding roadway network when compared to the office land use assumed in the Original TIA.

Daily trips would be expected to increase from office space to apartments, as is currently planned, since one resident of an apartment will generate more daily trips than one office worker during the day, as the office worker mostly stays at the office during the day. The traffic pattern during the AM peak would also change between office space and apartments as residents leave for jobs in the morning, where office trips lean to more inbound trips. In the PM peak hour, this pattern reverses itself as the apartments see residents returning home and office workers leave the site.

As noted in **Table 3**, the AM peak hour comparison shows a decrease of inbound traffic and a slightly smaller increase in outbound traffic, resulting in a slight decrease in AM peak hour trips. Similarly, the PM peak hour comparison shows an increase for inbound traffic and a slight decrease for outbound traffic bringing about an overall increase in PM peak hour traffic.

While a daily increase in trips is expected, these trips will likely be distributed throughout the day. Traffic patterns will also change when the PM peak hour shifts to more vehicles entering (rather than leaving) the site when the planned office space saw more vehicles exiting (rather than entering) the site during the PM peak. This switch in patterns may actually improve the operation of the study intersections during the controlling factor PM peak hour as delays are normally generated by vehicles exiting a site rather than entering it. These change in traffic volumes and patterns are not expected to have a significant impact on the surrounding roadway network. The results from the Original TIA are expected to remain applicable with this land use change.

Thank you again for your time and review of this TIS. If you have any questions regarding the TIS, please feel free to contact me at 602.266.7983.

Respectfully Submitted,



Andrew Smigielski, PE, PTOE, PTP
Southwest Traffic Engineering, LLC
Senior Traffic Engineer

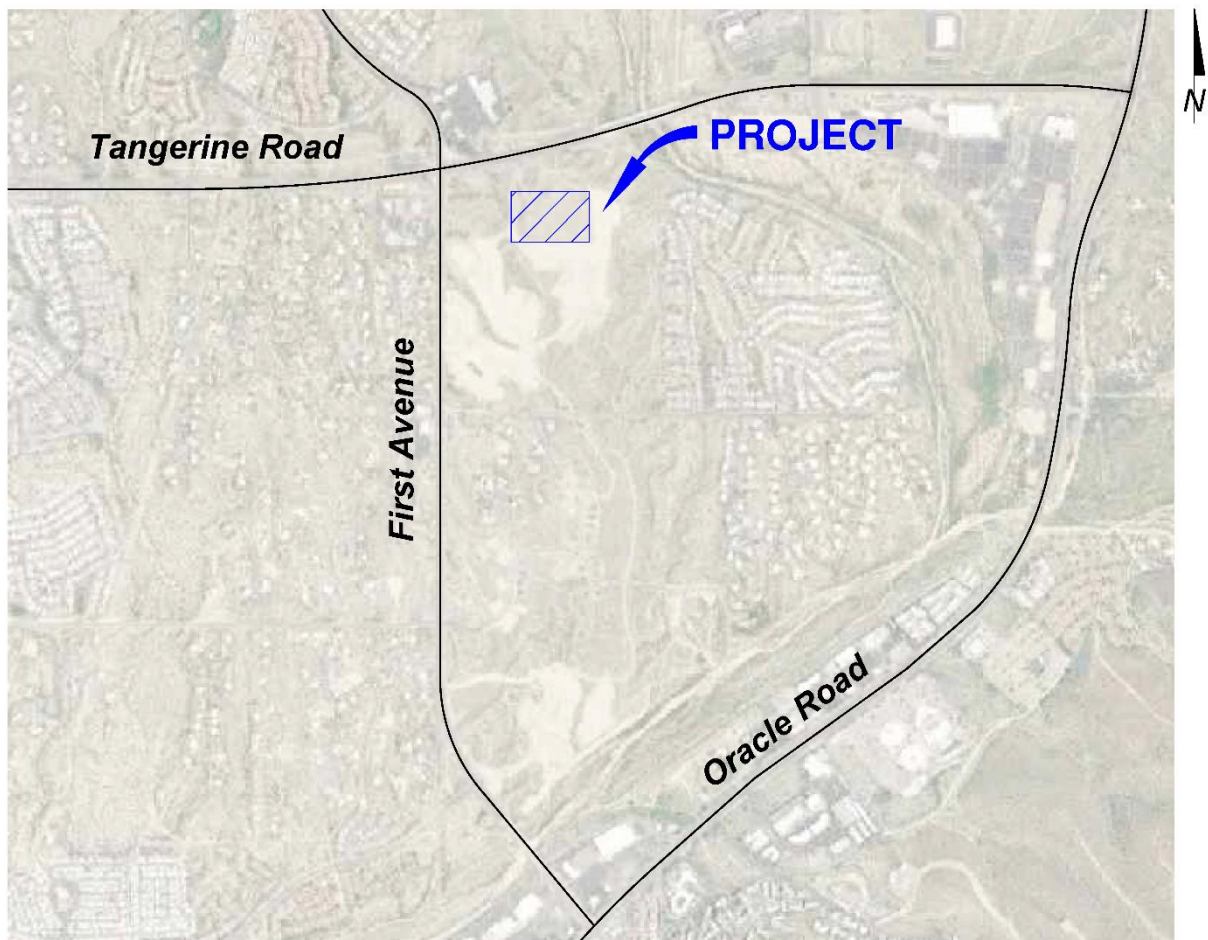


cc: Herb Kai, Capri Company, LLC
Paul Oland, Paradigm Land Design (by email)

Attachments:

- Figure 1 – Vicinity Map
- Figure 2 – Site Plan
- Figure 3 – Original TIA Site Plan

Figure 1 – Vicinity Map



LEGEND:

— = Existing Road

 = Project Site

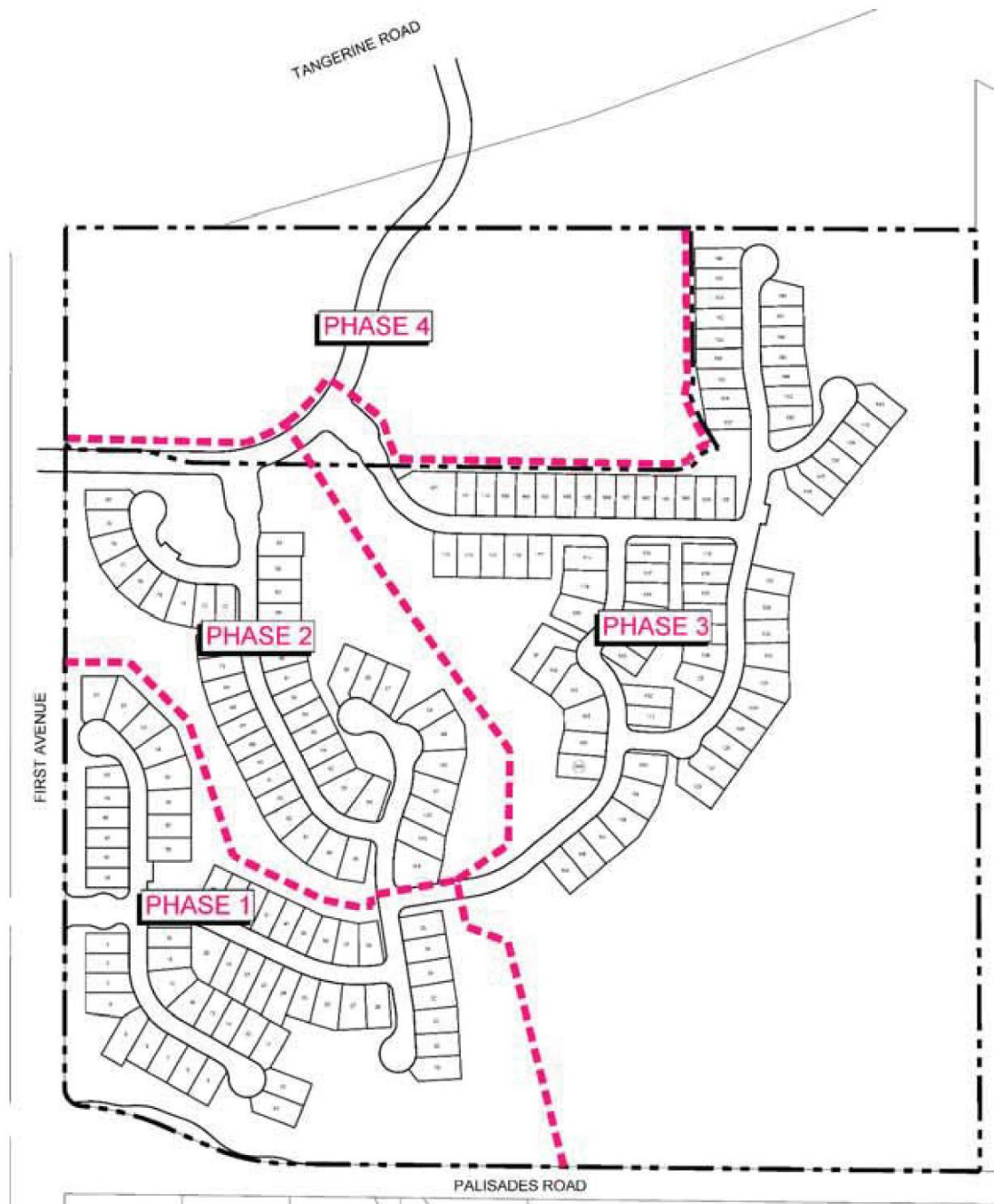
Plan Summary

1. Property Area: 13.44 Ac.
2. APN: 140-44-0040
3. Existing Zoning: C-1 Commercial
4. Proposed Zoning: R-6 Residential
5. Proposed Land Use: Multifamily Residential
6. Proposed Units: 167
7. Proposed Building Height: 2-Story
8. Proposed Open Space: 35%



PARADIGM
LAND DESIGN LLC

Figure 3 – Original TIA Site Plan



V. APPENDIX B – SITE RESOURCE INVENTORY

01 SITE RESOURCE INVENTORY PLAN






02 LOCATION MAP

SCALE: 3" = 1 MILE



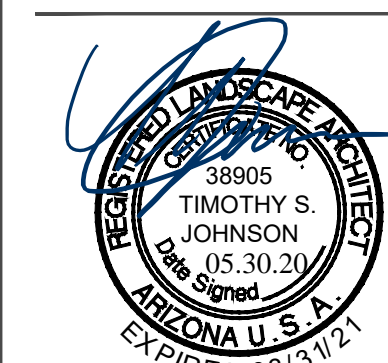
03 LEGEND

	PROPERTY BOUNDARY
	LOT LINES
NONE	IDENTIFIED SPECIMEN & ID
	1 FOOT CONTOUR INTERVAL
NONE	ORO VALLEY RIPARIAN / ESOS AREAS



JStudio LA, LLC
landscape architecture
+ site planning
8197 north white stallion pl,
tucson, az, 85743
520.405.9642
www.jstudio.biz

**SILVERHAWKE NORTH
BLOCK 5 (SRI)
PARCEL 220-06-0640
ORO VALLEY, AZ**



NO.	REVISION	DATE
X	XXXXXXX	XX.XX.XX
X	XXXXXXX	XX.XX.XX
X	XXXXXXX	XX.XX.XX
X	XXXXXXX	XX.XX.XX
X	XXXXXXX	XX.XX.XX

- ☐ SCHEMATIC DESIGN
- ☐ DESIGN DEVELOPMENT
- ☐ CONSTRUCTION DOCUMENTS
- ☒ AGENCY REVIEW
- ☐ BIDDING/PRICING PACKAGE
- ☐ CONSTRUCTION ISSUE

PROJ. NO.: CCL.01
DATE: 20.05.26
DRAWN BY: TSJ
CHECKED BY: TSJ

AGENCY REFERENCE NO.:
OV1700647, OV1600017,
OV914-002, OV115-003

SITE RESOURCE INVENTORY

SRI
PLAN VIEW
L1.0

01 of 02

SUBMITTAL HISTORY:

1ST 05.30.20 TOWN OF ORO VALLEY



ORO VALLEY APPROVAL

Planning & Zoning Administrator	Date
---------------------------------	------

OWNER / DEVELOPER:
CAPRI COMPANY, LLC
6088 W ARIZONA PAVILIONS DR #2
TUCSON, AZ, 85743
ATTN: HERB KAI, MANAGER

PROJECT:
SILVERHAWKE NORTH BLK-5
SITE RESOURCE INVENTORY
REF. #:

SITE ADDRESS:
NO SITUS ADDRESS
PARCEL ID: 220-06-0640

LEGAL DESCRIPTION:
PORTION OF SECTION 6,
TOWNSHIP 12 SOUTH, RANGE 14
EAST, G.&S.R.M., PIMA COUNTY,
ARIZONA

01SRI NOTES

1. ZONING:

1.1. EXISTING: C-1 COMMERCIAL

1.2. PROPOSED: R-6 RESIDENTIAL
2. GROSS SITE AREA: 13.4 ACRES
3. APPLICABLE REZONING CONDITIONS INCLUDE:

5.G. "NATIVE PLANT PRESERVATION: THE NATIVE PLANT SALVAGE AND MITIGATION REQUIREMENTS OF SECTION 27.6 ARE WAIVED FOR ALL DEVELOPMENT WITHIN DEVELOPMENT ENVELOPES."
4. LIST ALL APPLICABLE GENERAL PLAN, REZONING, CONDITIONAL USE PERMIT (CUP), OR ANNEXATION CONDITIONS AND ASSOCIATED CASE NUMBER IMPACTING THE PROJECT, INCLUDING ANY APPLICABLE PIMA COUNTY CASE NUMBERS.
5. THERE ARE NO VARIANCES APPLICABLE TO THIS PROPERTY.
6. THE VAST MAJORITY OF THIS SITE WAS DISTURBED AND GRADED IN THE EARLY 1990s AS EVIDENT IN HISTORICAL AERIAL IMAGERY. AS A RESULT THERE IS NO SIGNIFICANT VEGETATION ON SITE AS DEFINED BY ORO VALLEY 27.6.B.3.
7. SIGNIFICANT VEGETATION INFORMATION:

7.1. STANDS OF SIGNIFICANT VEGETATION:

NO SIGNIFICANT VEGETATION EXISTING ON SITE (PER INVENTORY ON 05.18.20.)

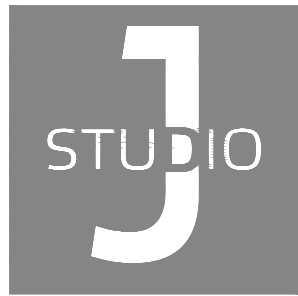
7.2. INDIVIDUAL PLANTS OF SIGNIFICANT VEGETATION:

NO SIGNIFICANT VEGETATION EXISTING ON SITE (PER INVENTORY ON 05.18.20.)

7.1. TOTAL AMOUNT PRESENT ON-SITE: 0 SF

7.2. TOTAL AMOUNT BEING DISTURBED: 0 SF

7.3. TOTAL PERCENTAGE DISTURBED: 0%
8. SIGNIFICANT VEGETATION MITIGATION: NONE REQUIRED.
9. THIS AERIAL PHOTO IS LESS THAN TWO YEARS OLD.
10. THIS SITE HAS NO UNIQUE ROCK OUTCROPPINGS.
11. NO PORTION OF THE SITE HAS SLOPES GREATER THAN 15%.
12. THE MAJORITY OF THE SITE HAS BEEN PREVIOUSLY DISTURBED.
13. THERE ARE NO MAPPED WASHES ON THE SITE.
14. NO SIGNIFICANT VEGETATION PRESENT ON SITE AND NO TAGS USED IN SRI INVENTORY.
15. ANY SPADED OR BOXED TREE TRANSPLANTED ON SITE THAT DIES DUE TO NEGLECT OR LACK OF MAINTENANCE SHALL BE REPLACED WITH THE SAME SIZE AND SPECIES OF THE ORIGINAL SALVAGED TREE, AS REQUIRED BY THE SALVAGE PLAN.
16. NO SALVAGE OF PLANTS REGULATED BY THE ENDANGERED SPECIES ACT AND/OR THE ARIZONA NATIVE PLANT LAW MAY OCCUR WITHOUT THE ISSUANCE OF THE APPROPRIATE PERMIT BY THE STATE DEPARTMENT OF AGRICULTURE.
17. SALVAGE OF OPERATIONS SHALL NOT COMMENCE UNTIL THE ZONING INSPECTOR HAS PERFORMED AN INSPECTION AND GIVEN APPROVAL TO BE SALVAGED.
18. TEMPORARY NURSERY SHALL BE IN CONFORMANCE WITH SECTION 27.6.B.4.J.
19. ANY PLANT THAT MEETS THE SALVAGE CRITERIA IN SECTION 27.6.B.4 SHALL BE PRESERVED IN PLACE OR TRANSPLANTED ON-SITE. ANY PLANTS THAT MEET THE SALVAGE CRITERIA THAT ARE DESTROYED SHALL BE REPLACED ON A ONE-TO-ONE RATIO OF THE SAME SPECIES AND SIZE AS THAT DESTROYED. FIVE UNDERSTORY PLANTS FROM THE SUPPLEMENTAL ARIZONA DEPARTMENT OF WATER QUALITY NATIVE PLANT LIST WILL BE PLANTED FOR EVERY MITIGATED TREE.
20. THE LIMITS OF GRADING SHALL BE STAKED IN THE FIELD, IN ACCORDANCE WITH SECTION 27.6.B.7.C.II.
21. DISTURBANCE OUTSIDE THE APPROVED GRADING LIMITS SHALL NOT BE PERMITTED.



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+ site planning
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SILVERHAWKE NORTH
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NO.	REVISION	DATE
X	xxxxxxx	xx.xx.xx
X	xxxxxxx	xx.xx.xx
X	xxxxxxx	xx.xx.xx
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OV914-002, OV115-003

SITE
RESOURCE
INVENTORY

SRI
NOTES
L2.0

02 of 02



ORO VALLEY APPROVAL

Planning & Zoning AdministratorDate

OWNER / DEVELOPER:
CAPRI COMPANY, LLC
6086 W ARIZONA PAVILIONS DR #2
TUCSON, AZ, 85743
ATTN: HERB KAI, MANAGER

PROJECT:
SILVERHAWKE NORTH BLK-5
SITE RESOURCE INVENTORY
REF. #:

SITE ADDRESS:
NO SITUS ADDRESS
PARCEL ID: 220-06-0640
LEGAL DESCRIPTION:
PORTION OF SECTION 6,
TOWNSHIP 12 SOUTH, RANGE 14
EAST, G.&S.R.M., PIMA COUNTY,
ARIZONA

VI. APPENDIX C – AZ GAME & FISH DEPT. ONLINE REVIEW TOOL RESULTS

Arizona Environmental Online Review Tool Report



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

Project Name:

Silverhawke Blk 5

Project Description:

Proposed downzoning to allow residential development of the property.

Project Type:

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

Contact Person:

Paul Oland

Organization:

Paradigm Land Design LLC

On Behalf Of:

CONSULTING

Project ID:

HGIS-11152

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

Appendix C – AZ Game & Fish Dept. Online Review Tool Results (Cont'd)

Arizona Game and Fish Department
Project ID: HGIS-11152

project_report_silverhawke_blk_5_35825_37004.pdf
Review Date: 5/13/2020 05:01:32 PM

Disclaimer:

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

Locations Accuracy Disclaimer:

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

Appendix C – AZ Game & Fish Dept. Online Review Tool Results (Cont'd)

Arizona Game and Fish Department
Project ID: HGIS-11152

project_report_silverhawke_blk_5_35825_37004.pdf
Review Date: 5/13/2020 05:01:32 PM

Recommendations Disclaimer:

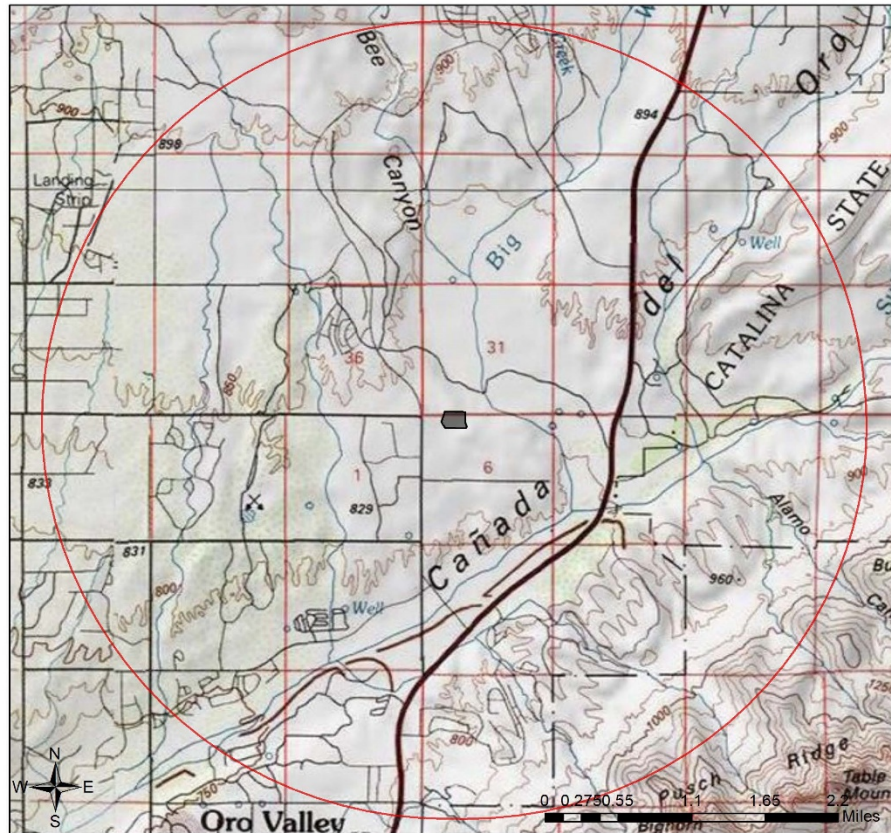
1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department,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

Appendix C – AZ Game & Fish Dept. Online Review Tool Results (Cont'd)

Arizona Game and Fish Department
Project ID: HGIS-11152

project_report_silverhawke_blk_5_35825_37004.pdf
Review Date: 5/13/2020 05:01:32 PM

Silverhawke Blk 5
USA Topo Basemap With Locator Map



- Project Boundary
- Buffered Project Boundary

Project Size (acres): 13.44

Lat/Long (DD): 32.4230 / -110.9568

County(s): Pima

AGFD Region(s): Tucson

Township/Range(s): T11S, R14E; T12S, R14E

USGS Quad(s): ORO VALLEY

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



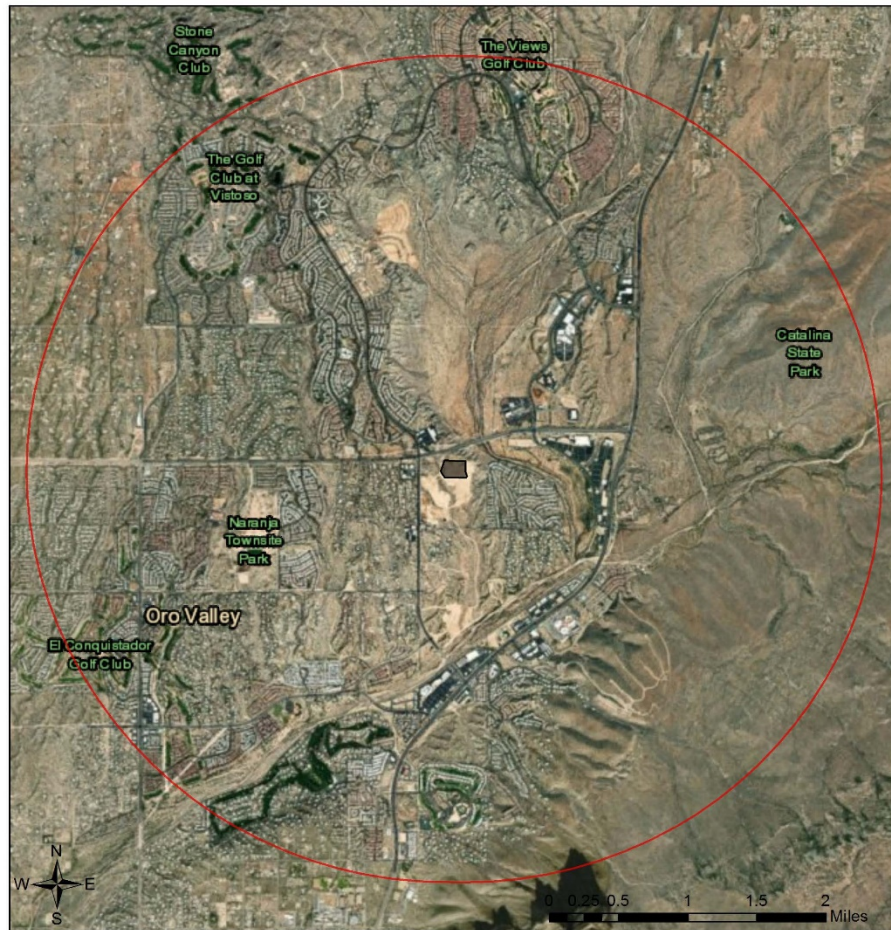
Appendix C – AZ Game & Fish Dept. Online Review Tool Results (Cont'd)

Arizona Game and Fish Department
Project ID: HGIS-11152

project_report_silverhawke_blk_5_35825_37004.pdf
Review Date: 5/13/2020 05:01:32 PM

Silverhawke Blk 5

Web Map As Submitted By User



- ☐ Project Boundary
- ☐ Buffered Project Boundary

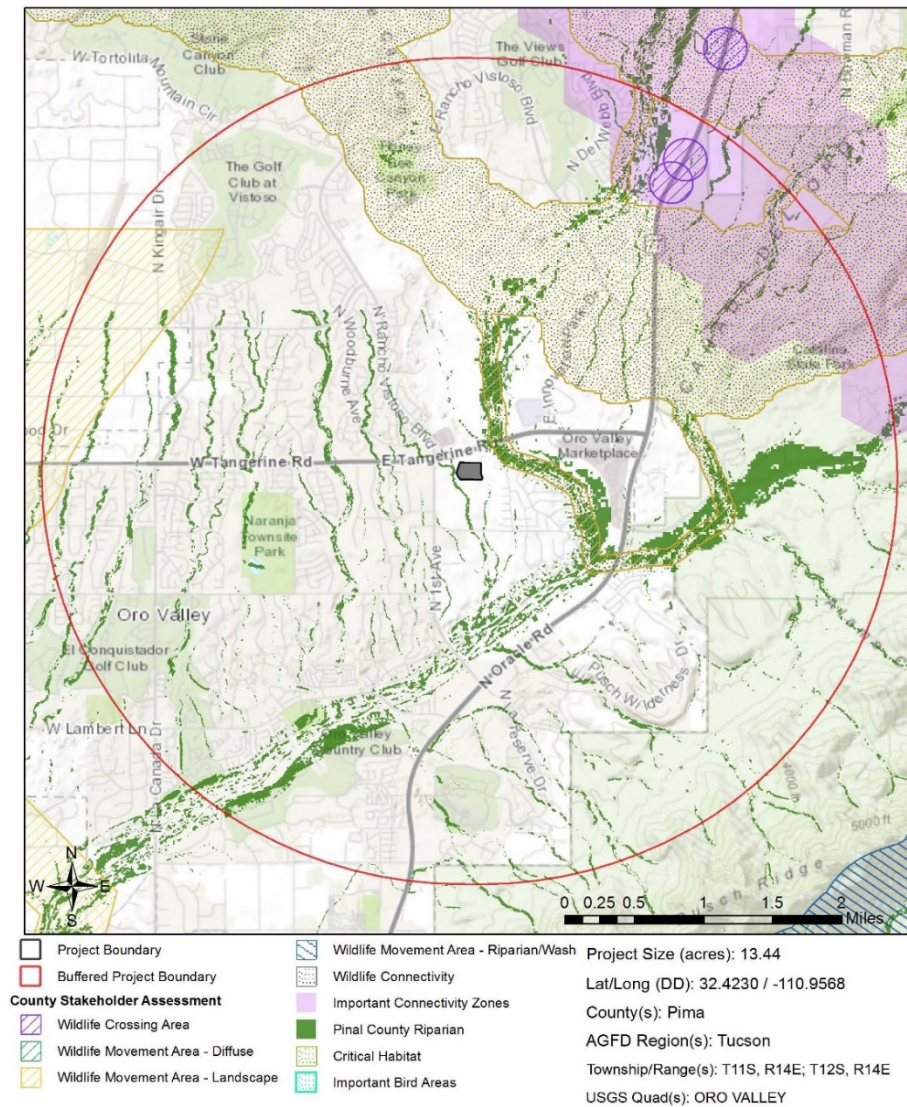
Project Size (acres): 13.44
Lat/Long (DD): 32.4230 / -110.9568
County(s): Pima
AGFD Region(s): Tucson
Township/Range(s): T11S, R14E; T12S, R14E
USGS Quad(s): ORO VALLEY

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,
USGS, AeroGRID, IGN, and the GIS User Community

Arizona Game and Fish Department
Project ID: HGIS-11152

project_report_silverhawke_blk_5_35825_37004.pdf
Review Date: 5/13/2020 05:01:32 PM

Important Areas



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

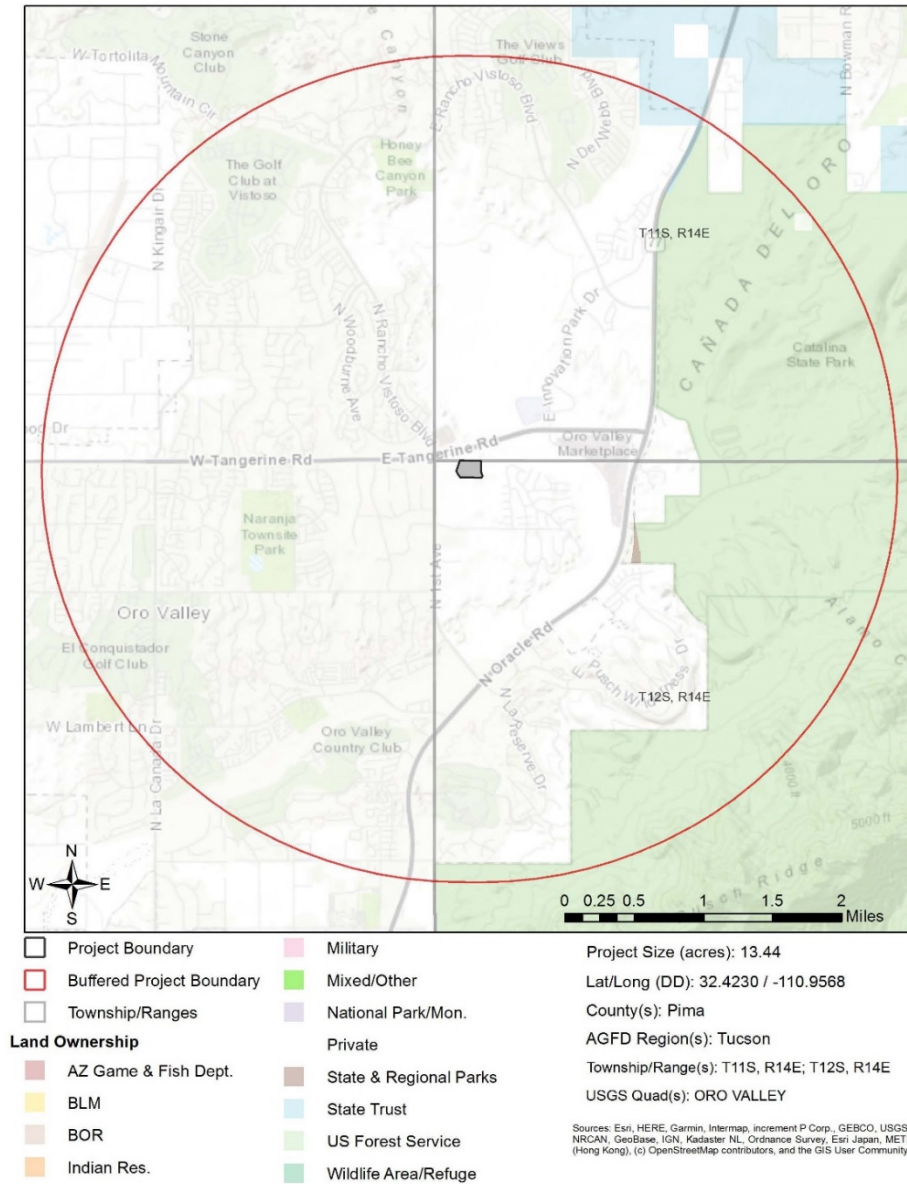
Appendix C – AZ Game & Fish Dept. Online Review Tool Results (Cont'd)

Arizona Game and Fish Department
Project ID: HGIS-11152

project_report_silverhawke_blk_5_35825_37004.pdf
Review Date: 5/13/2020 05:01:32 PM

Silverhawke Blk 5

Township/Ranges and Land Ownership



Appendix C – AZ Game & Fish Dept. Online Review Tool Results (Cont'd)

Arizona Game and Fish Department
Project ID: HGIS-11152

project_report_silverhawk_blk_5_35825_37004.pdf
Review Date: 5/13/2020 05:01:32 PM

Special Status Species Documented within 3 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Abutilon parishii</i>	Pima Indian Mallow	SC	S	S	SR	
<i>Aspidoscelis stictogramma</i>	Giant Spotted Whiptail	SC	S			1B
<i>Aspidoscelis xanthonota</i>	Red-backed Whiptail	SC	S			1B
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo (Western DPS)	LT	S			1A
<i>Empidonax traillii eximius</i>	Southwestern Willow Flycatcher	LE				1A
<i>Falco peregrinus anatum</i>	American Peregrine Falcon	SC	S	S		1A
<i>Glaucidium brasilianum cactorum</i>	Cactus Ferruginous Pygmy-owl	SC	S	S		1B
<i>Gopherus morafkai</i>	Sonoran Desert Tortoise	CCA	S	S		1A
<i>Heloderma suspectum suspectum</i>	Reticulate Gila Monster					1A
<i>Heloderma suspectum</i>	Gila Monster					1A
<i>Lepus alleni</i>	Antelope Jackrabbit					1B
<i>Lithobates yavapaiensis</i>	Lowland Leopard Frog	SC	S	S		1A
<i>Notholaena lemmonii</i>	Lemmon Cloak Fern	SC				
<i>Terrapene ornata luteola</i>	Desert Box Turtle			S		1A

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife/planning/wildlife-guidelines/status-definitions/>.

Special Areas Documented within the Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Riparian Area	Riparian Area					

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife/planning/wildlife-guidelines/status-definitions/>.

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

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Aix sponsa</i>	Wood Duck					1B
<i>Ammospermophilus harrisi</i>	Harris' Antelope Squirrel					1B
<i>Anthus spragueii</i>	Sprague's Pipit	SC				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>Aspidoscelis xanthonota</i>	Red-backed Whiptail	SC	S			1B
<i>Botaurus lentiginosus</i>	American Bittern					1B
<i>Calypte costae</i>	Costa's Hummingbird					1C
<i>Chilomeniscus stramineus</i>	Variable Sandsnake					1B
<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

Appendix C – AZ Game & Fish Dept. Online Review Tool Results (Cont'd)

Arizona Game and Fish Department
Project ID: HGIS-11152

project_report_silverhawk_blk_5_35825_37004.pdf
Review Date: 5/13/2020 05:01:32 PM

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

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Cynanthus latirostris</i>	Broad-billed Hummingbird		S			1B
<i>Dipodomys spectabilis</i>	Banner-tailed Kangaroo Rat			S		1B
<i>Empidonax wrightii</i>	Gray Flycatcher					1C
<i>Euderma maculatum</i>	Spotted Bat	SC	S	S		1B
<i>Eumops perotis californicus</i>	Greater Western Bonneted Bat	SC		S		1B
<i>Falco peregrinus anatum</i>	American Peregrine Falcon	SC	S	S		1A
<i>Glaucidium brasilianum cactorum</i>	Cactus Ferruginous Pygmy-owl	SC	S	S		1B
<i>Gopherus morafkai</i>	Sonoran Desert Tortoise	CCA	S	S		1A
<i>Haliaeetus leucocephalus</i>	Bald Eagle	SC, BGA	S	S		1A
<i>Heloderma suspectum</i>	Gila Monster					1A
<i>Inoilius alvarius</i>	Sonoran Desert Toad					1B
<i>Kinosternon sonoriense sonoriense</i>	Desert Mud Turtle			S		1B
<i>Lasiurus blossevillii</i>	Western Red Bat		S			1B
<i>Lasiurus xanthinus</i>	Western Yellow Bat		S			1B
<i>Leopardus pardalis</i>	Ocelot	LE				1A
<i>Leptonycteris yerbabuenae</i>	Lesser Long-nosed Bat	SC				1A
<i>Lepus alleni</i>	Antelope Jackrabbit					1B
<i>Macrotus californicus</i>	California Leaf-nosed Bat	SC		S		1B
<i>Melanerpes uropygialis</i>	Gila Woodpecker					1B
<i>Meleagris gallopavo mexicana</i>	Gould's Turkey		S			1B
<i>Melospiza lincolnii</i>	Lincoln's Sparrow					1B
<i>Melospiza aberti</i>	Abert's Towhee		S			1B
<i>Micrathene whitneyi</i>	Elf Owl					1C
<i>Micruroides euryxanthus</i>	Sonoran Coralsnake					1B
<i>Myiarchus tyrannulus</i>	Brown-crested Flycatcher					1C
<i>Myotis occultus</i>	Arizona Myotis	SC		S		1B
<i>Myotis velifer</i>	Cave Myotis	SC		S		1B
<i>Myotis yumanensis</i>	Yuma Myotis	SC				1B
<i>Nyctinomops femorosaccus</i>	Pocketed Free-tailed Bat					1B
<i>Oreoscoptes montanus</i>	Sage Thrasher					1C
<i>Oreothlypis luciae</i>	Lucy's Warbler					1C
<i>Panthera onca</i>	Jaguar	LE				1A
<i>Peucaea carpalis</i>	Rufous-winged Sparrow					1B
<i>Phrynosoma solare</i>	Regal Horned Lizard					1B
<i>Phyllorhynchus browni</i>	Saddled Leaf-nosed Snake					1B
<i>Progne subis hesperia</i>	Desert Purple Martin			S		1B
<i>Setophaga petechia</i>	Yellow Warbler					1B
<i>Sphyrapicus nuchalis</i>	Red-naped Sapsucker					1C
<i>Spizella breweri</i>	Brewer's Sparrow					1C

Appendix C – AZ Game & Fish Dept. Online Review Tool Results (Cont'd)

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

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Tadarida brasiliensis</i>	Brazilian Free-tailed Bat					1B
<i>Toxostoma lecontei</i>	LeConte's Thrasher			S		1B
<i>Troglodytes pacificus</i>	Pacific Wren					1B
<i>Vireo bellii arizonae</i>	Arizona Bell's Vireo					1B
<i>Vulpes macrotis</i>	Kit Fox	No Status				1B

Species of Economic and Recreation Importance Predicted within the Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Callipepla gambelii</i>	Gambel's Quail					
<i>Odocoileus hemionus</i>	Mule Deer					
<i>Pecari tajacu</i>	Javelina					
<i>Puma concolor</i>	Mountain Lion					
<i>Zenaida asiatica</i>	White-winged Dove					
<i>Zenaida macroura</i>	Mourning Dove					

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

Project Type Recommendations:

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

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

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

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Minimize potential introduction or spread of exotic invasive species. Invasive species can be plants, animals (exotic snails), and other organisms (e.g., microbes), which may cause alteration to ecological functions or compete with or prey upon native species and can cause social impacts (e.g., livestock forage reduction, increase wildfire risk). The terms noxious weed or invasive plants are often used interchangeably. Precautions should be taken to wash all equipment utilized in the project activities before leaving the site. Arizona has noxious weed regulations (Arizona Revised Statutes, Rules R3-4-244 and R3-4-245). See Arizona Department of Agriculture website for restricted plants, <https://agriculture.az.gov/>. Additionally, the U.S. Department of Agriculture has information regarding pest and invasive plant control methods including: pesticide, herbicide, biological control agents, and mechanical control, <https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/water/quality/?cid=stelprdb1044769>. The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information <https://www.azgfd.com/hunting/regulations>.

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

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

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

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

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

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

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

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

Based on the project type entered, coordination with Arizona Department of Water Resources may be required (<https://new.azwater.gov/>).

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

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

Development plans should provide for open natural space for wildlife movement, while also minimizing the potential for wildlife-human interactions through design features. Please contact Project Evaluation Program for more information on living with urban wildlife at PEP@azgfd.gov or at <https://www.azgfd.com/wildlife/planning/wildlifeguidelines/> and <https://www.azgfd.com/Wildlife/LivingWith/>.

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

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

Project Location and/or Species Recommendations:

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

Arizona Department of Agriculture

1688 W Adams St.

Phoenix, AZ 85007

Phone: 602.542.4373

<https://agriculture.az.gov/sites/default/files/Native%20Plant%20Rules%20-%20AZ%20Dept%20of%20Ag.pdf> starts on page 44

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

Phoenix Main Office
9828 North 31st Avenue #C3
Phoenix, AZ 85051-2517
Phone: 602-242-0210
Fax: 602-242-2513

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

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

HDMS records indicate that Sonoran Desert Tortoise have been documented within the vicinity of your project area. Please review the Tortoise Handling Guidelines found at: <https://www.azgfd.com/wildlife/nongamemanagement/tortoise/>

This review has identified riparian areas within the vicinity of your project. During the planning stage of your project, avoid, minimize, or mitigate any potential impacts to riparian areas identified in this report. Riparian areas play an important role in maintaining the functional integrity of the landscape, primarily by acting as natural drainages that convey water through an area, thereby reducing flood events. In addition, riparian areas provide important movement corridors and habitat for fish and wildlife. Riparian areas are channels that contain water year-round or at least part of the year. Riparian areas also include those channels which are dry most of the year, but may contain or convey water following rain events. All types of riparian areas offer vital habitats, resources, and movement corridors for wildlife. The Pinal County Comprehensive Plan (i.e. policies 6.1.2.1 and 7.1.2.4), Open Space and Trails Master Plan, Drainage Ordinance, and Drainage Design Manual all identify riparian area considerations, guidance, and policies. Guidelines to avoid, minimize, or mitigate impacts to riparian habitat can be found at <https://www.azgfd.com/wildlife/planning/wildlifeguidelines/>. Based on the project type entered, further consultation with the Arizona Game and Fish Department and Pinal County may be warranted.