SOUTHWEST
NATIVE DESIGN

LANDSCAPE ARCHITECTS
AND PLANNERS

Southwest Apache Junction Masterplan Community

SW
ND

SOUTHWEST NATIVE DESIGN

LANDSCAPE ARCHITECTS
AND PLANNERS

TIA BIAKAIDDY
SHINYE KIM
ANTHONY MARTIN
DYLAN MAYO
KATRYN SQUYRES
DENISE TORLONI

OUR MISSION

To create places inspired by local history and natural beauty of the surrounding environment to enhance the quality of life for the client, community, and local ecology now, and for the future.

This book contains all of the research conducted by Southwest Native Design prior to the start of the design process for the Southwest quadrant of Apache Junction. The final design concepts proposed by each group member are also included.

01 | Context

CONTEXT MAP

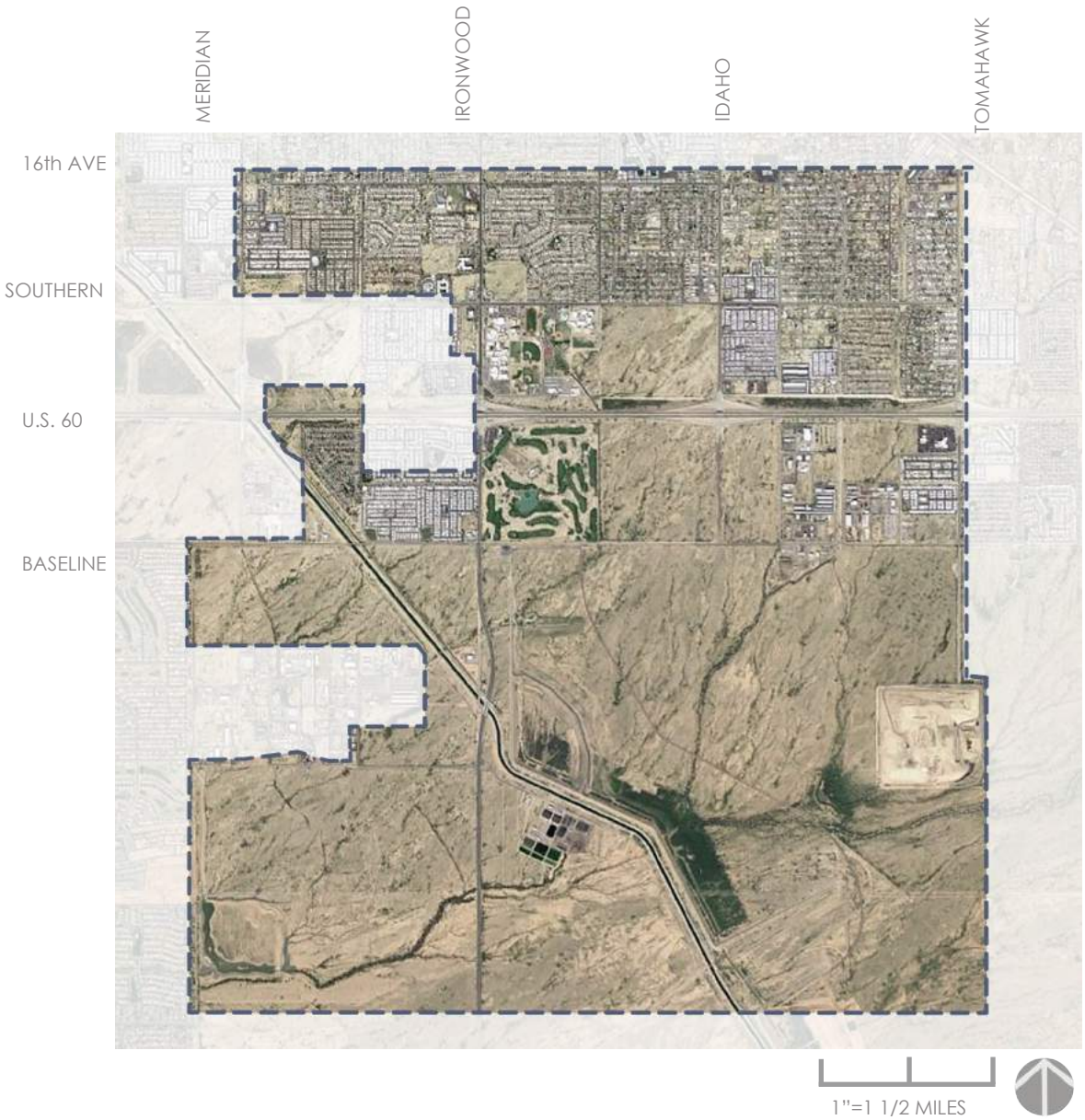
The City of Apache Junction is located thirty-six miles east of Phoenix, Arizona.

1"= 5 MILES

SITE BOUNDARY

Our group focused on the Southwest quadrant of Apache Junction.

The site boundry ran east along 16th avenue, south down Tomahawk until connecting with the city limits and following the border west to Meridian road and connecting back up to 16th avenue.



1863
Arizona split from the Territory of New Mexico to form Arizona Territory

1891
Jacob Waltz dies and leaves location of Lost Dutchman Gold Mine Unknown

1893
Goldfield Minding Town was established

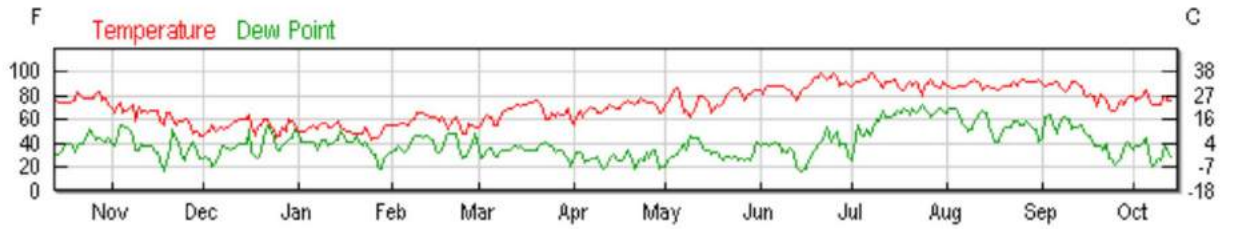
1912
Arizona became 48th State

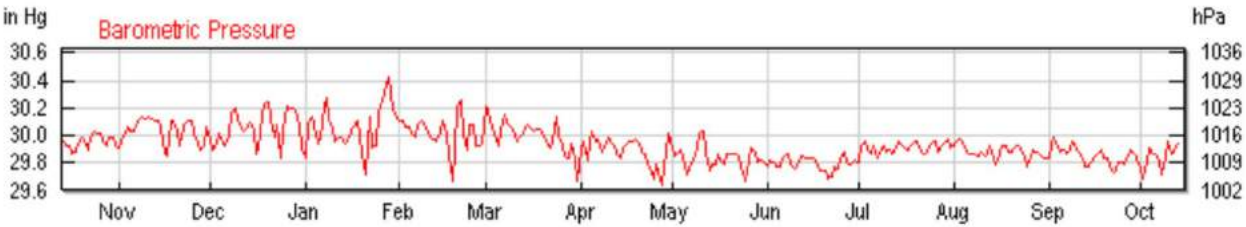
1977
Lost Dutchman State Park is open and dedicated on December 5

1978
Apache Junction established as a city on November 24

2003
Central Arizona Aqueducts designed as a National Recreational Trail

02 | INVENTORY

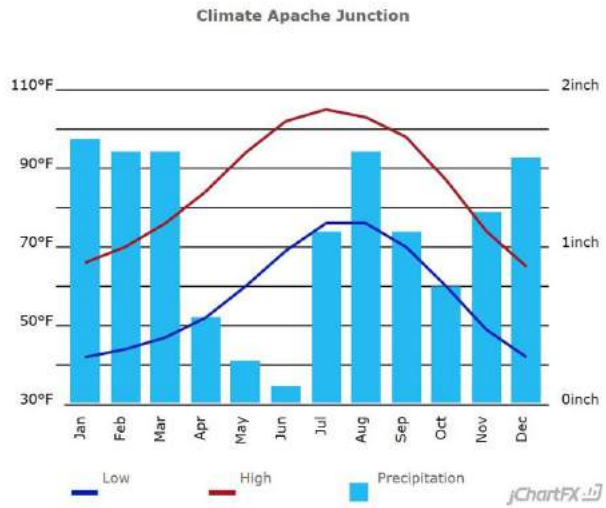




Apache Junction has an annual high temperature of 85.3 degrees F and an annual low temperature of 57.3 degrees F. Rainfall occurs the most during the winter months, as well as August during the monsoon season, receiving about 13.21 inches per year.

	Jan	Feb	Mar	Apr	May	Jun
Average high in °F:	66	70	76	84	94	102
Average low in °F:	42	44	47	52	60	69
Av. precipitation in inch:	1.69	1.61	1.61	0.55	0.28	0.12
Days with precipitation:	-	-	-	-	-	-
Hours of sunshine:	-	-	-	-	-	-

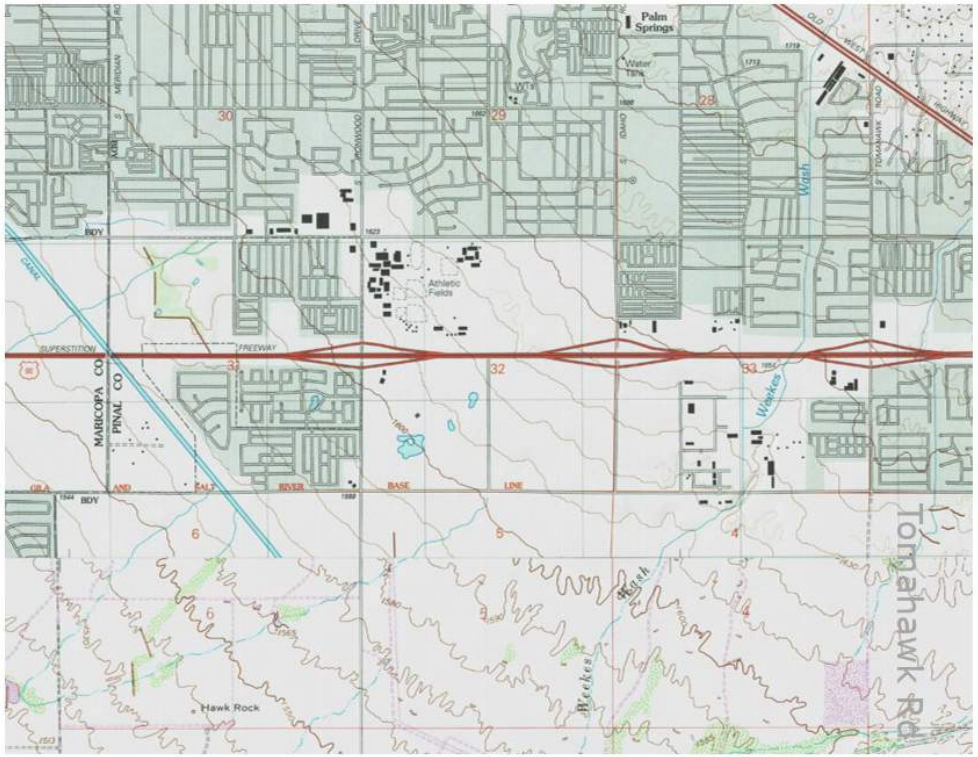
	Jul	Aug	Sep	Oct	Nov	Dec
Average high in °F:	105	103	98	87	74	65
Average low in °F:	76	76	70	60	49	42
Av. precipitation in inch:	1.1	1.61	1.1	0.75	1.22	1.57
Days with precipitation:	-	-	-	-	-	-
Hours of sunshine:	-	-	-	-	-	-



16TH Street

Southern Ave

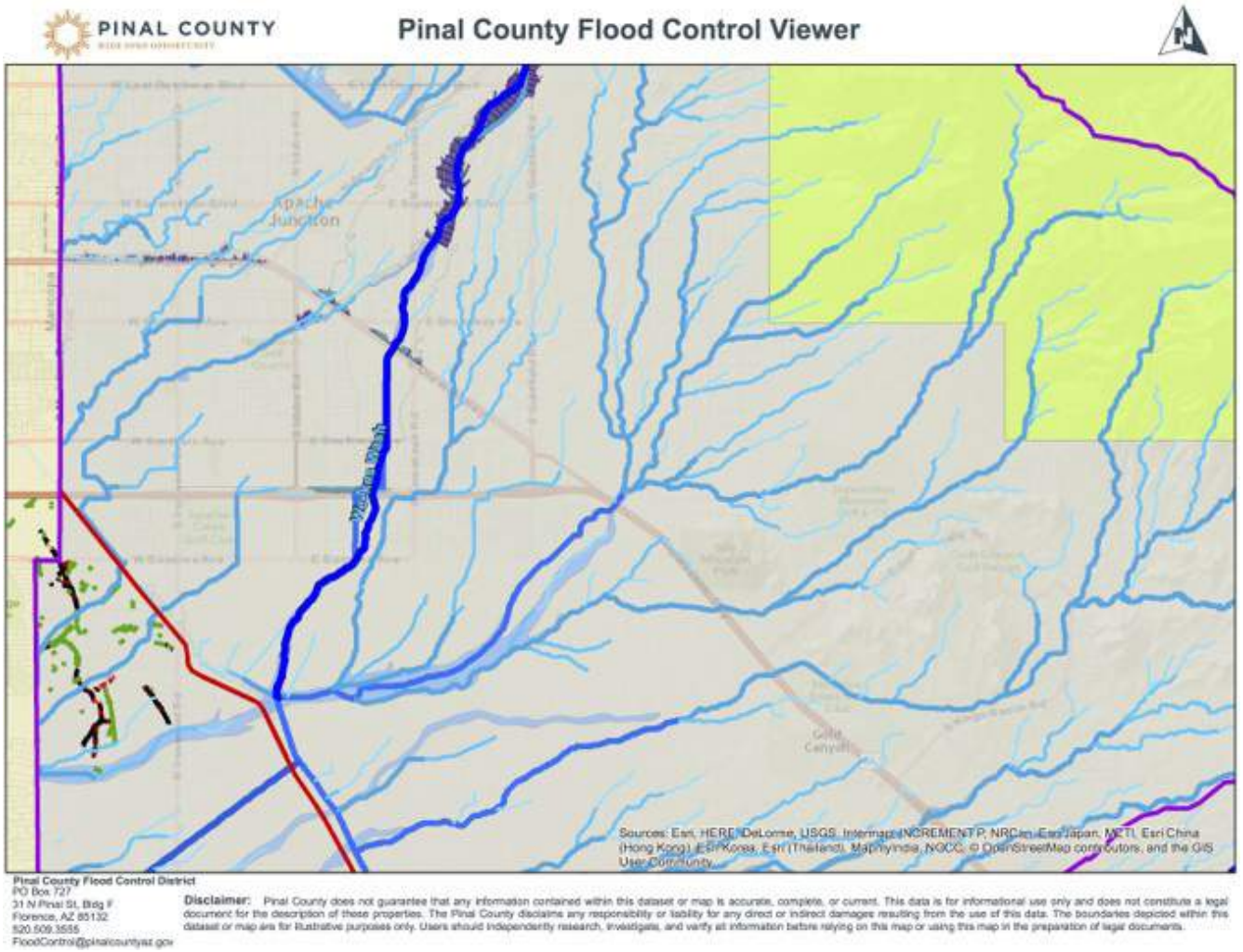
60



Apache Junction has a .5% Slope

MAJOR FEATURES

- Weekes Wash- regularly floods intersecting streets during heavy rainfall
- Central Arizona Project (CAP) Canal



BIRDS

- Gila Woodpecker
- Sparrows
- Quail

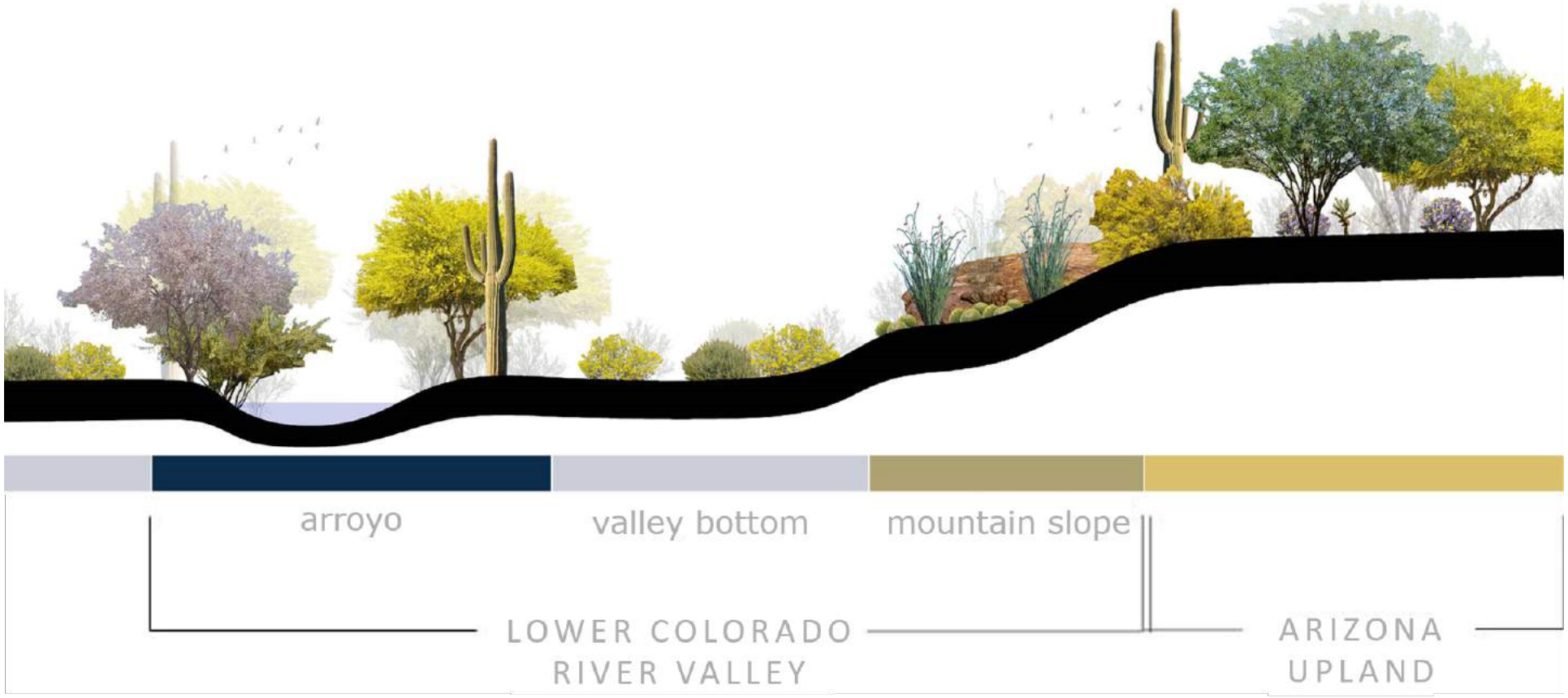
MAMMALS

- Several species of bats
- Antelope Jackrabbit
- Kit fox
- Mule Deer

REPTILES

- Gila Monster
- Several species of snakes
- Sonoran Desert Tortoise

ECOLOGICAL ZONES



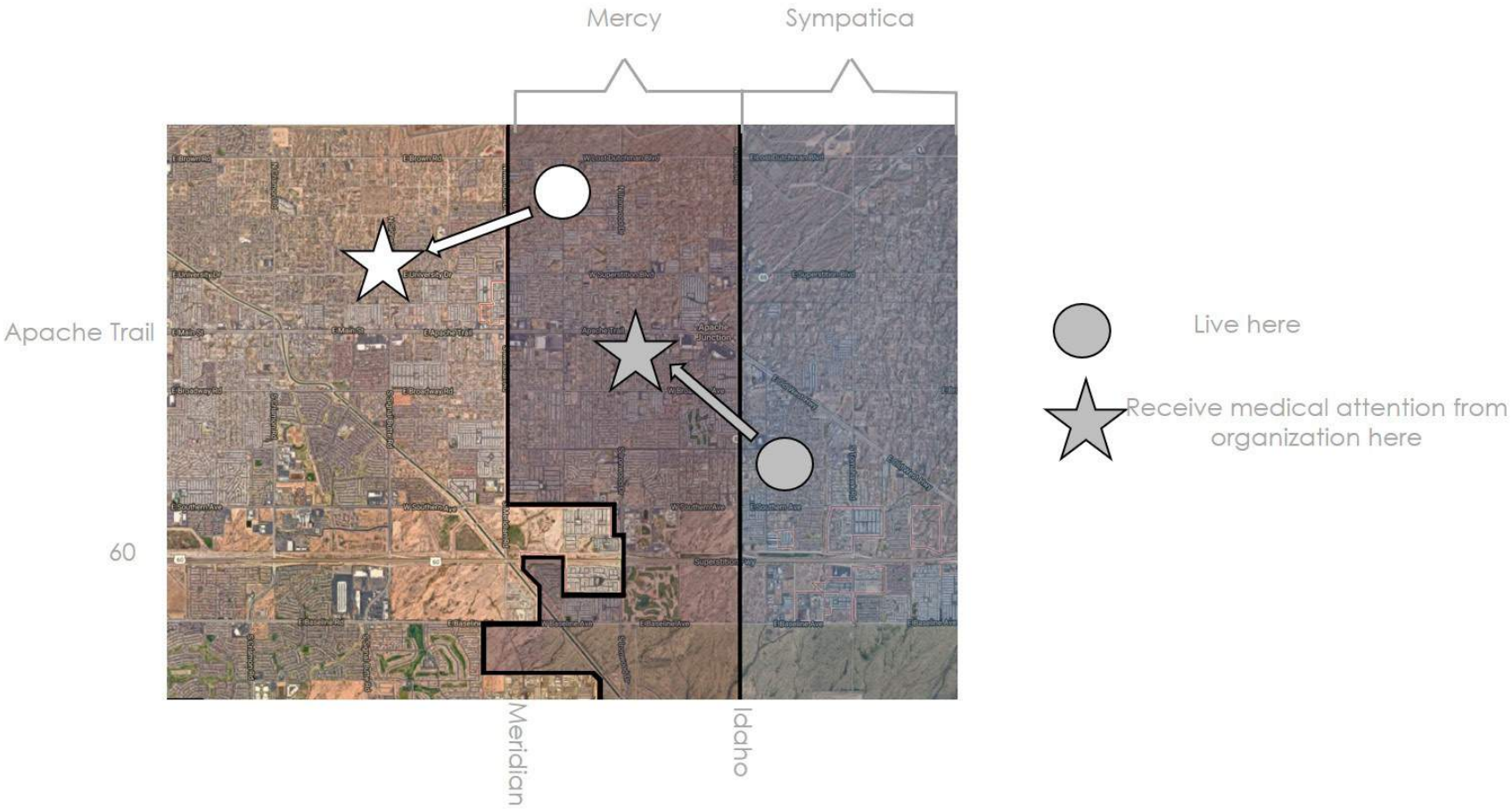
- Blue Palo Verde
- Saguaro
- Catclaw Acacia
- Ironwood

- Creosote
- White Bursage

- Barrel Cactus
- Ocotillo

- Blue Palo Verde
- Cholla
- Foothills Palo Verde
- Prickly Pear Cactus
- Saguaro
- Velvet Mesquite

EXISTING HEALTH DISTRICTS



Currently Apache Junction contains two main organizations that manage health opportunities for lower income families or homeless. If an individual lives in the east side of the city, their health organization will send them to another health facility on the other side of the city division line. However, if an individual lives on the west side, their health organiztion sends them over the county line to find help in Maricopa County, making the entire process extremely confusing.

One of the unique characteristics of the Phoenix metro area that Apache Junction contains is one of the many canals running through the outskirts of the city, specifically in the Southwest quadrant.

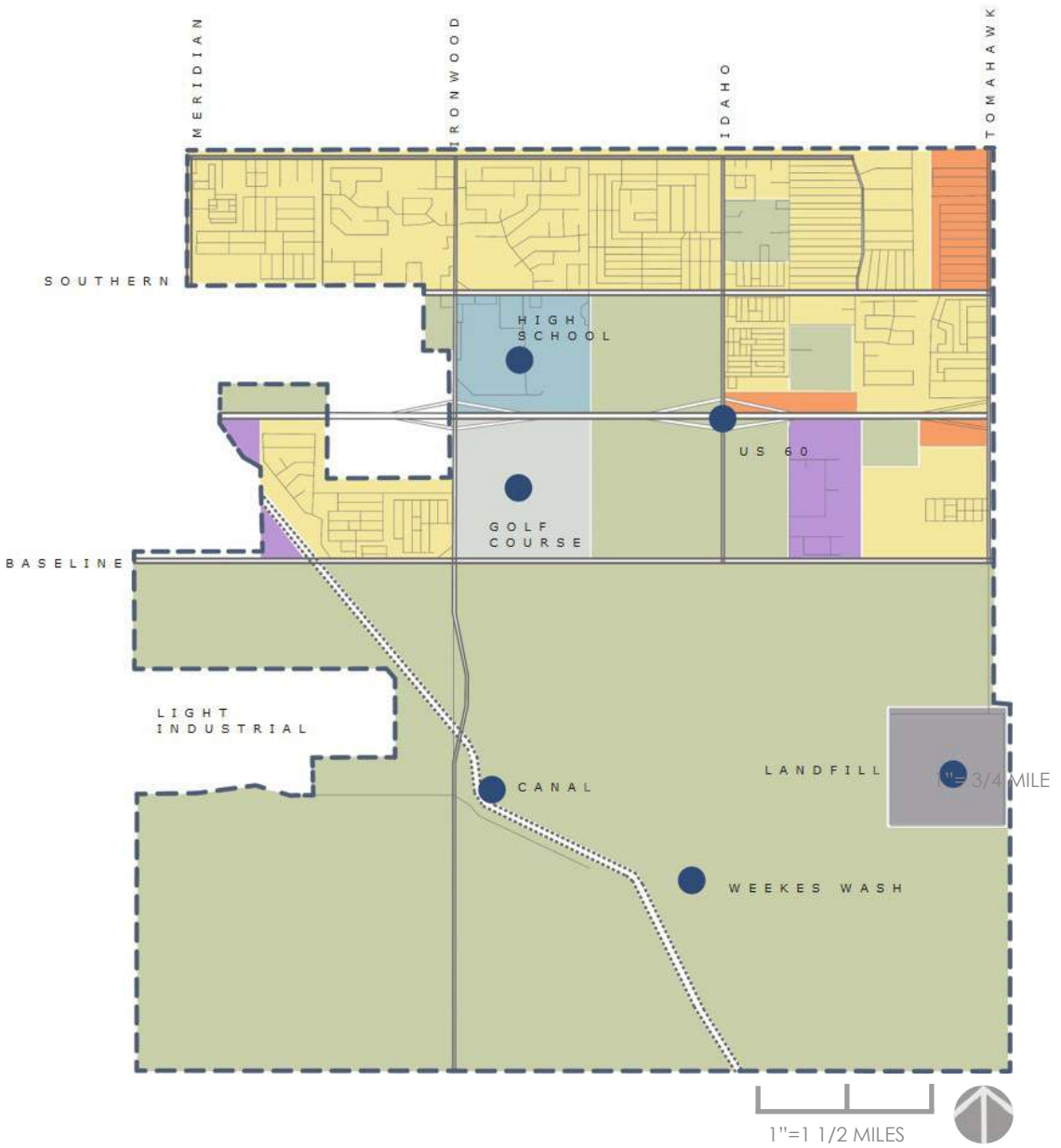
The canal, if opened to the public, would provide a pedestrian connection from Apache Junction to the greater Phoenix-metro area through networks of miles of trails.

03 | LAND USE

1"=1 1/4 MILES

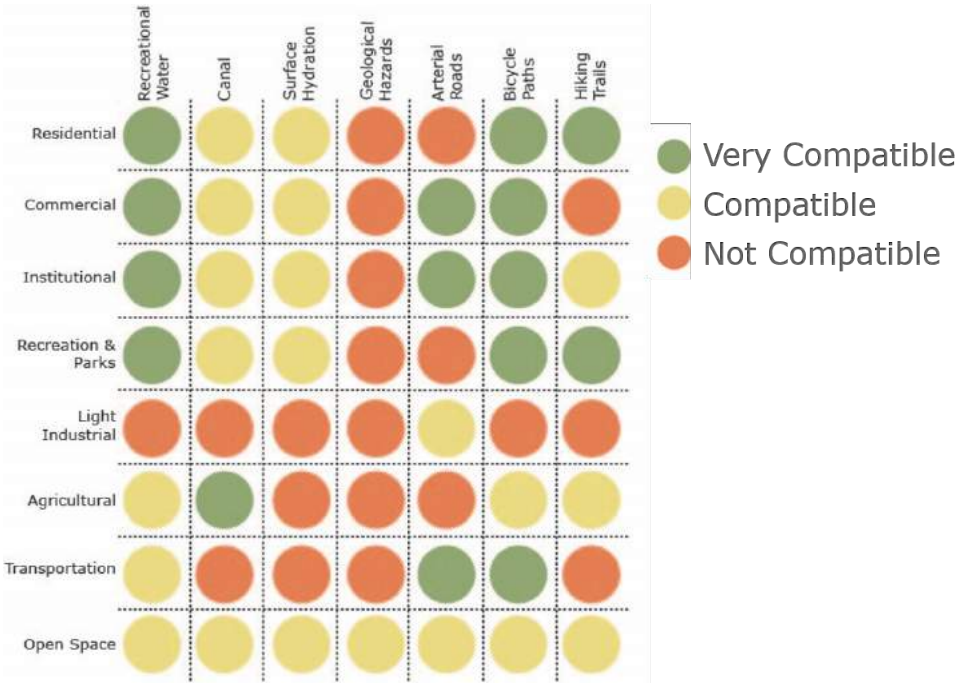
EXISTING LAND USE

The majority of the Southwestern quadrant of Apache Junction is composed by open space, with the second largest zone being residential. The area also contains the city landfill, which will be closed down within the next decade. The area also hosts a school, a golf course, and some small light industrial areas. Commercial spaces are almost non-existant.

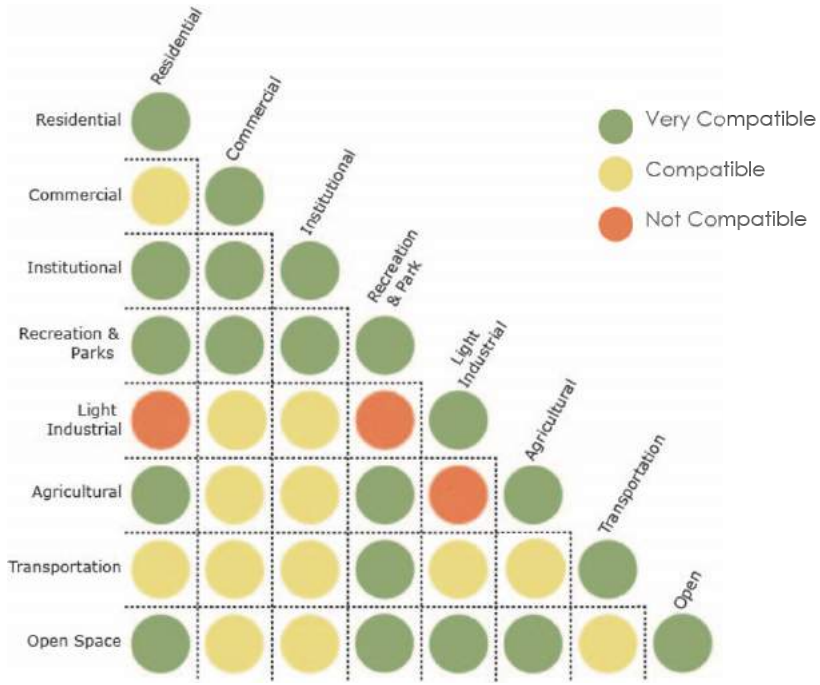


- Commercial
- Residential
- Open Land
- Special Use
- Institutional
- Light Industrial
- Civic/Infrastructure

LAND USE VS LAND USE

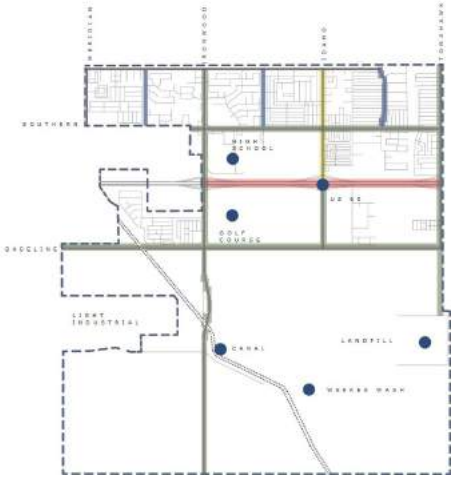


LAND USE VS HUMAN FACTORS



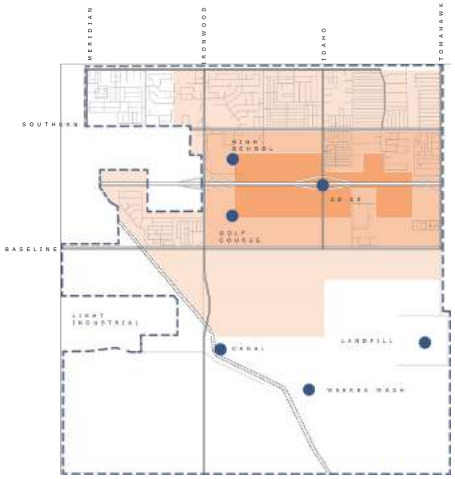
The majority of land uses are either compatible or very compatible. Really the only type of zoning to be aware of is light industrial.

CIRCULATION



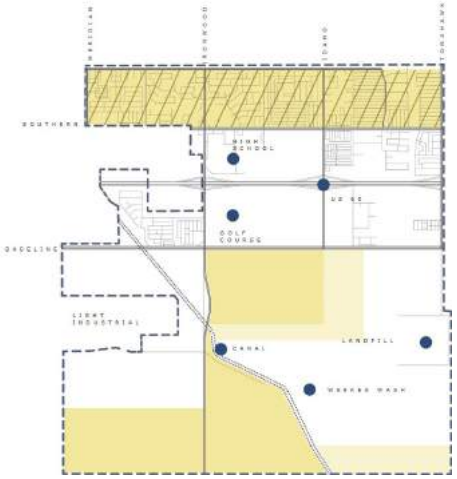
- Freeway
- Principal Arterial
- Minor Arterial
- Collector

COMMERCIAL



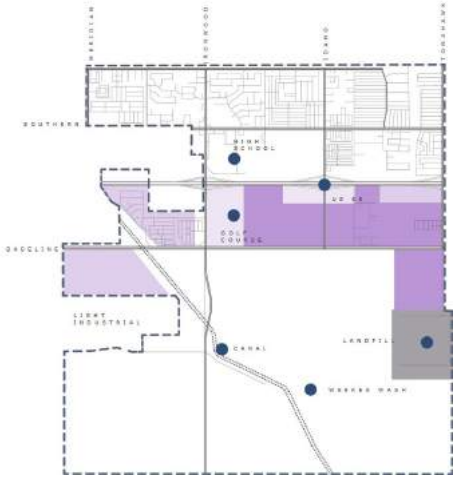
- Best use
- Good use
- Moderate use

RESIDENTIAL



- Infill
- Best use
- Good use

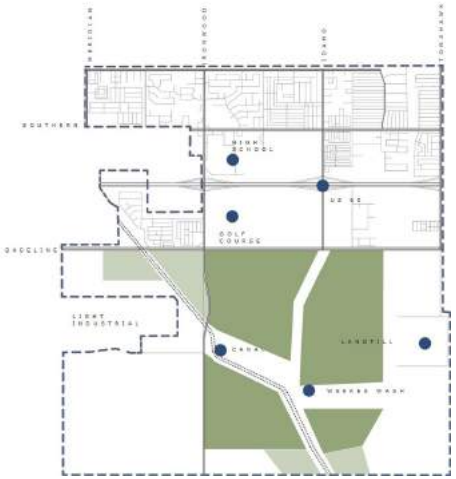
LIGHT INDUSTRIAL



- Landfill
- Best use
- Good use

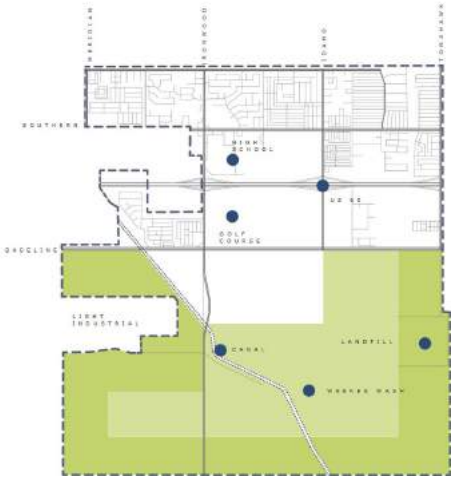
1"= 3/4 MILE

AGRICULTURAL



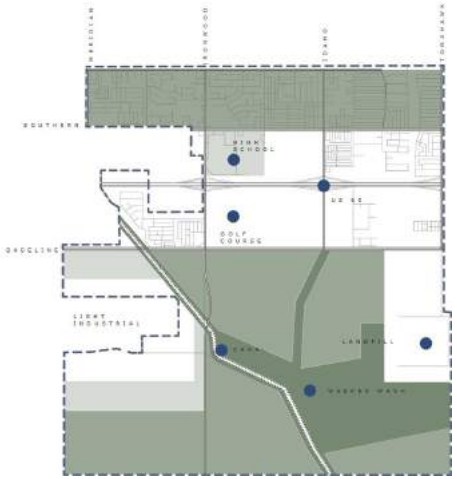
Best use
Good use

OPEN LAND



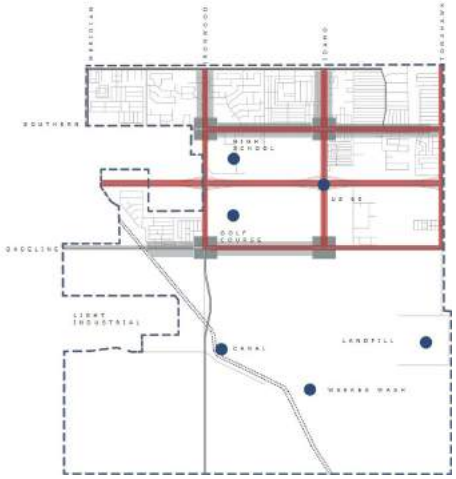
Best use
Good use

RECREATIONAL



Best use
Good use
Moderate use

TRANSPORTATION

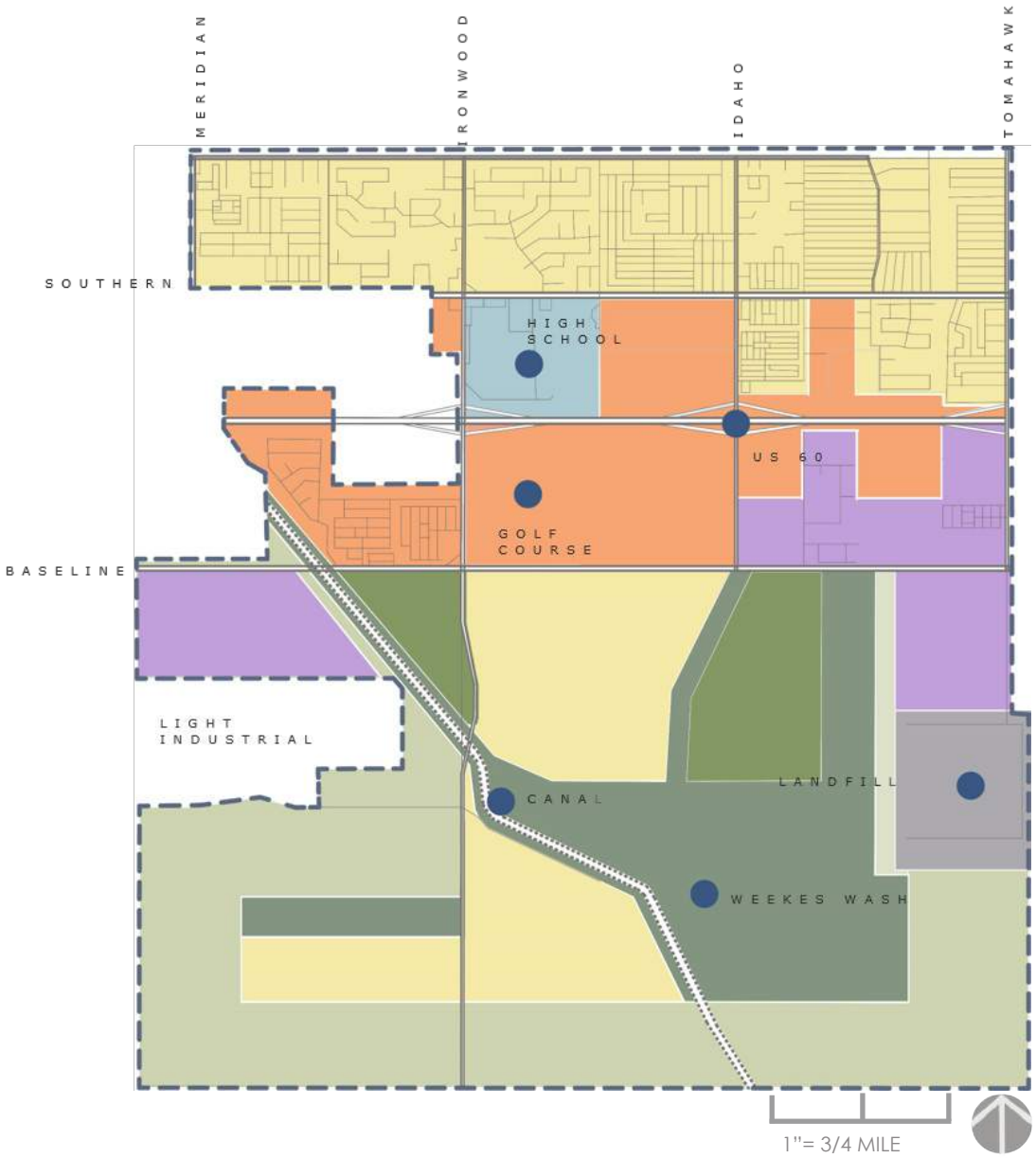


Bus routes
Best Bike Station
Moderate Bike Station

1"= 3/4 MILE

PROPOSED LAND USE

Largest land use increase within the Southwestern quadrant of Apache Junction was commercial, centered around U.S. 60 to draw in visitors. Large amounts of residential were also proposed for potential future migrating middle-class families from nearby Gilbert and Chandler. Agricultural space was added because of the benefits of flooding from Weekes Wash.



- Light Industrial
- Commercial
- Residential
- Agricultural
- Open Land
- Recreational
- Institutional
- Civic/Infrastructure

04 | DESIGN PROPOSALS

COMMUNITY CONNECTIVITY THROUGH RECREATION

DENISE TORLONI

VISION

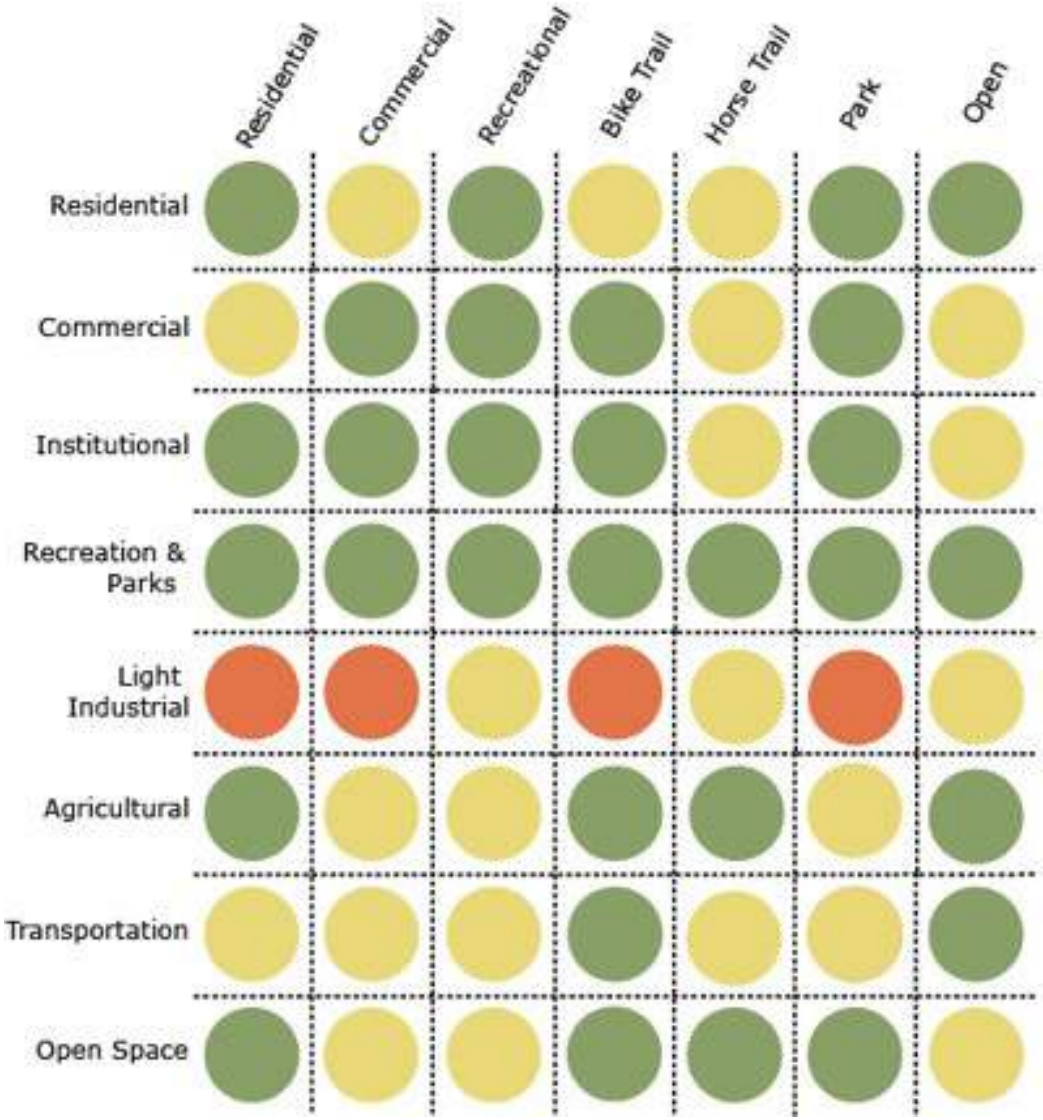
To capture the beauty of Apache Junction and cater to it's avid outdoor culture. An intricate chain of trails and parks will provide residents with more means to explore the outdoors, and attract visitors trying to escape the city!

OBJECTIVES

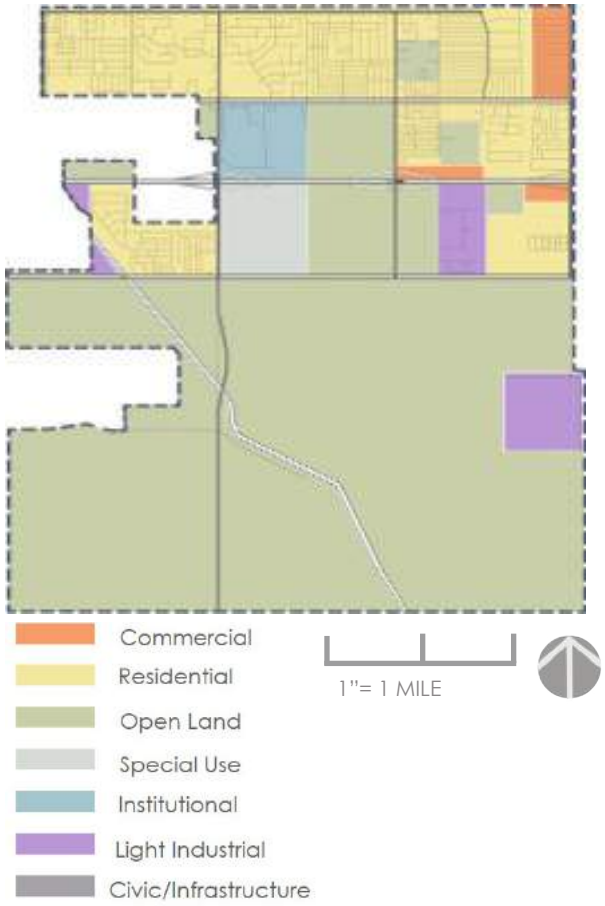
1. Highlight Apache Junctions **Natural Beauty**-the Superstition Mountains
2. Promote **Community Connectivity** through recreation
3. Create an **Identity** for Apache Junction

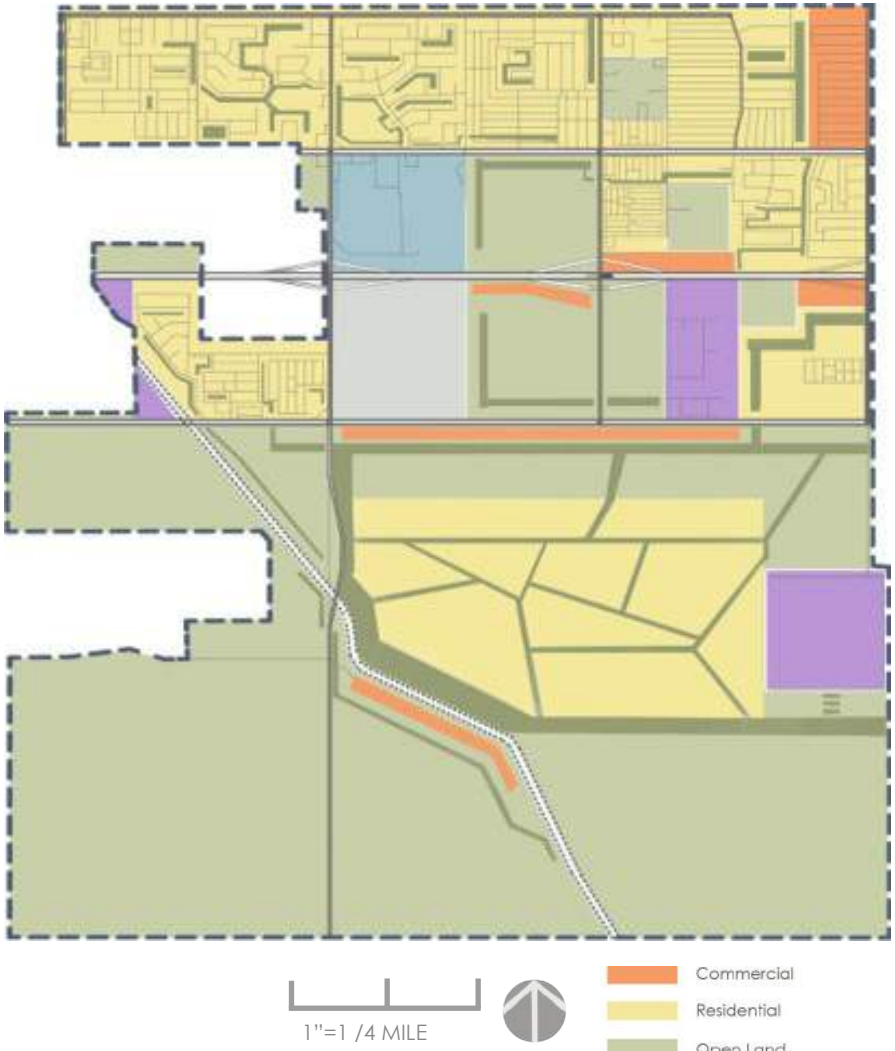
Land Use Compatibility Matrix

Looking at the data it is observed that
the proposed (top) and the existing (left) dont have any major conflicting areas, with the eception of light industrial. Being that the 40 Acres that was chosen to focus on does notcontain any major industrial buildings, there are no outstanding conflicts that need to be addressed.



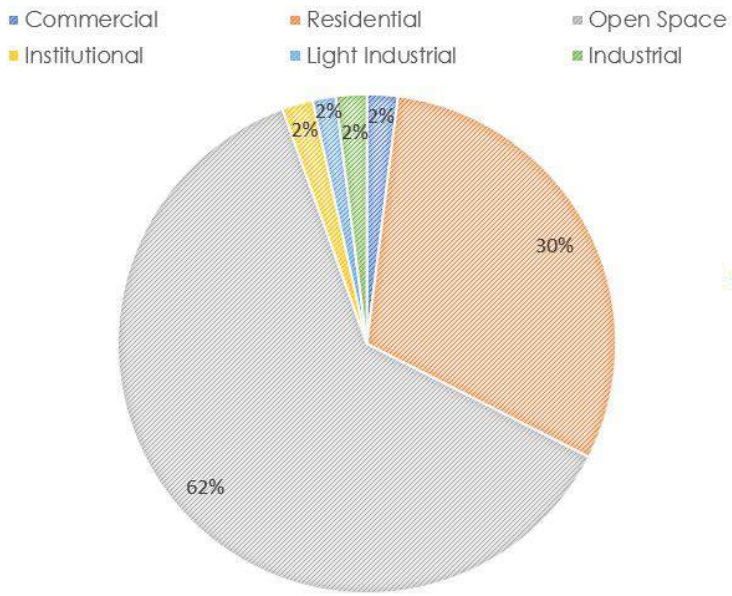
PROPOSED LANDUSE



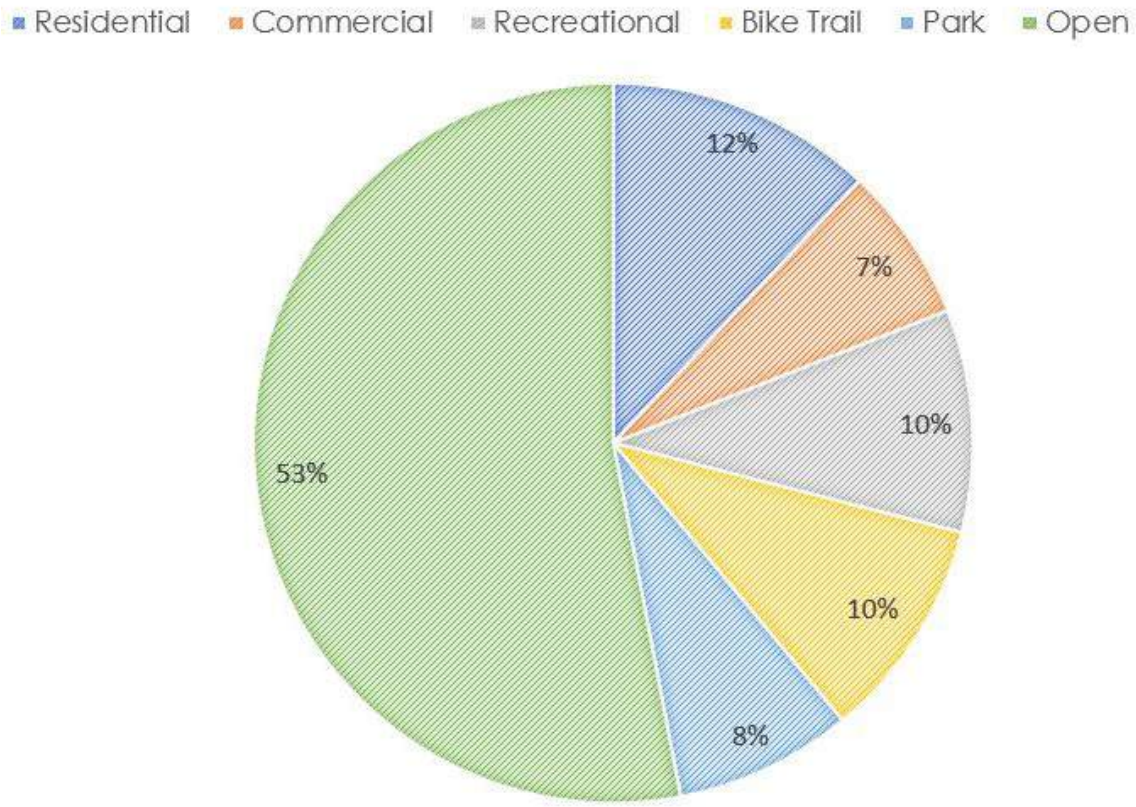


Comparing the existing (left) and proposed (right.)
It can be observed that the major changes proposed is more residential space with recreational land/trails cutting through it to connect the neighboorhoods with each other.

EXISTING LAND USE



PPROPOSED LAND USE



EMERALD NECKLACE

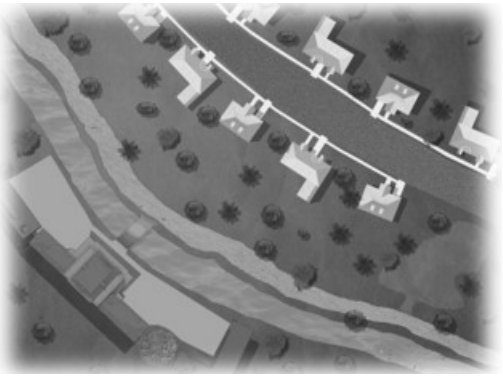
Inspiration for Dutchman's Necklace

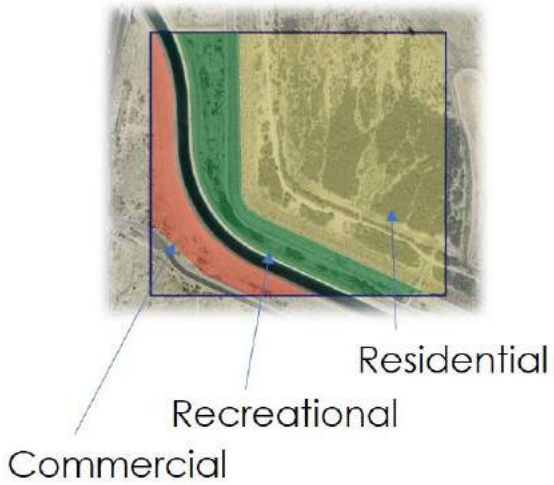
Boston | Fredrick Olmsted | 1,100 Acres

Includes;

- 3 Public Gardens
- Riverway
- Jamaica Pond
- Arboretum
- The Fens
- Boston Commons
- Multiple Gardens

Running its path throughout Apache Junction, it links neigborhoods, passes through existing parks and even the O.K Corral, leading to one of the main trails to The Superstition Mountains!





With multiple zones within close proximity, it makes for a community to feel more like home.
- Residential near recreational and Recreational close to Commercial.

1"=1 1/2 MILES

DUTCHMAN'S TRAIL

05 | DESIGN PROPOSALS

URBAN AGRICULTURE

TIA BIAKAIDDY

VISION

Create a healthy community that is fully aware of the food that is produced for their family and friends dinner table, while creating a fun and inviting natural desert community.

OBJECTIVES

1. Create easy access to seaonally locally grown food
2. Provide opportunities for a new form of community engagement
3. Create a new business opportunity for the City of Apache Junction
4. Establish a new form of community living

LAND USE ALLOCATION MAP

Pre-Exisiting Land Use Allocation Plan

1"= 1 MILE

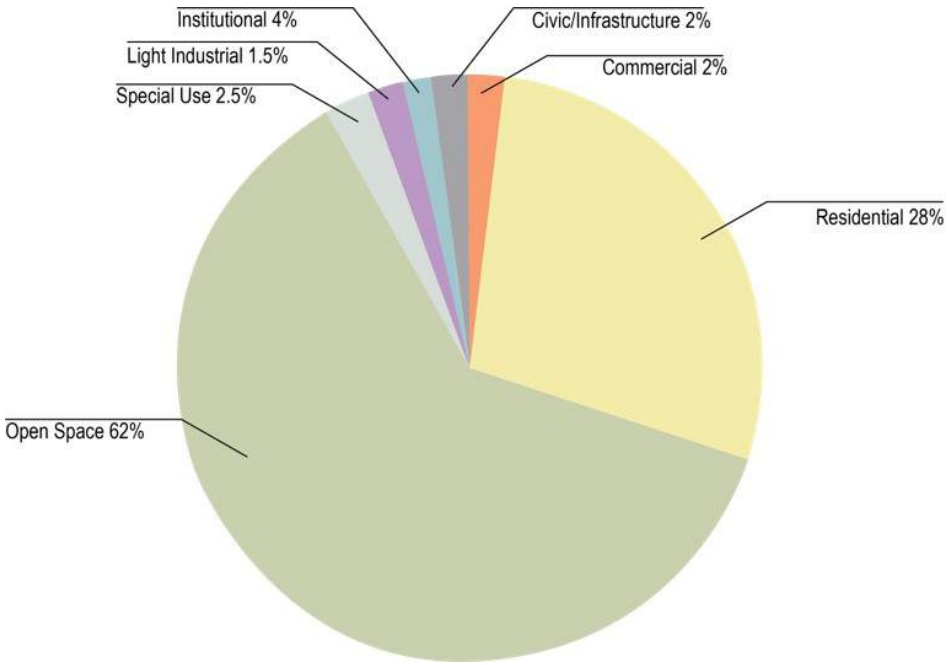
Commercial	2%
Residential	28%
Open Space	62%
Special Use	2.5%
Institutional	2%
Light Industrial	1.5%
Civic/Infrastructure	2%

1"= 3/4 MILE

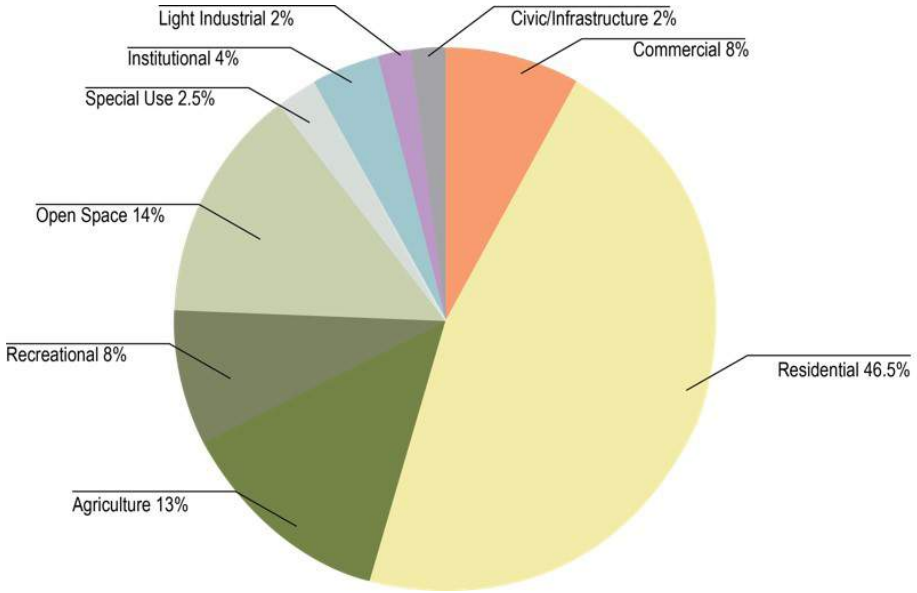
Proposed Land Use Allocation Plan

Commercial	8%
Residential	46.5%
Agriculture	13%
Recreational	8%
Open Space	14%
Special Use	2.5%
Institutional	4%
Light Industrial	2%
Civic/Infrastructure	2%

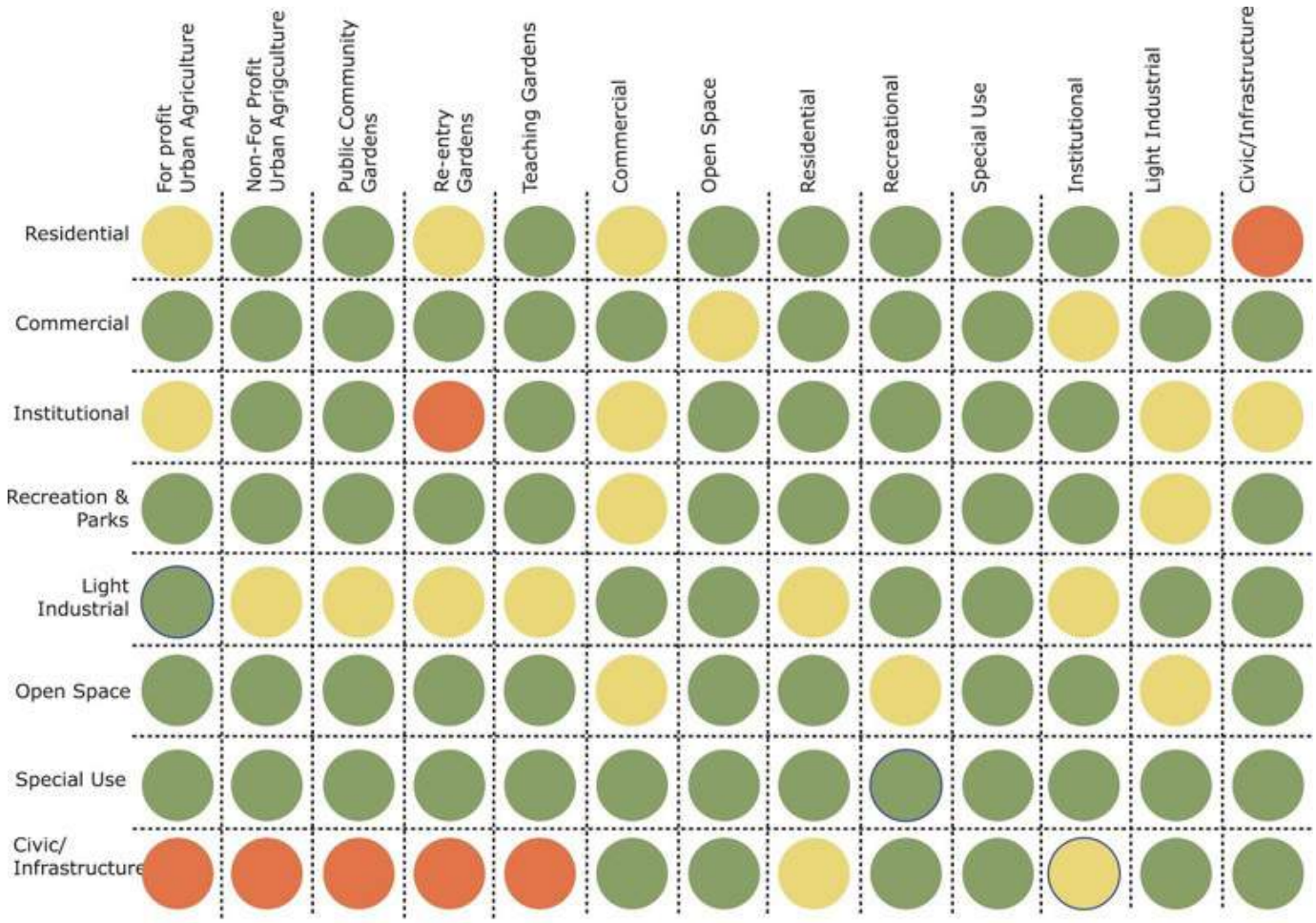
EXISTING



PROPOSED



COMPATABILITY



Proposed Land Use Allocation Plan

Commercial	8%
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Agriculture	13%
Recreational	8%
Open Space	14%
Special Use	2.5%
Institutional	4%
Light Industrial	2%
Civic/Infrastructure	2%

1"=1 1/2 MILES

1"=1 1/2 MILES

06 | DESIGN PROPOSALS

HEALTH SERVICES

ANTHONY MARTIN

VISION

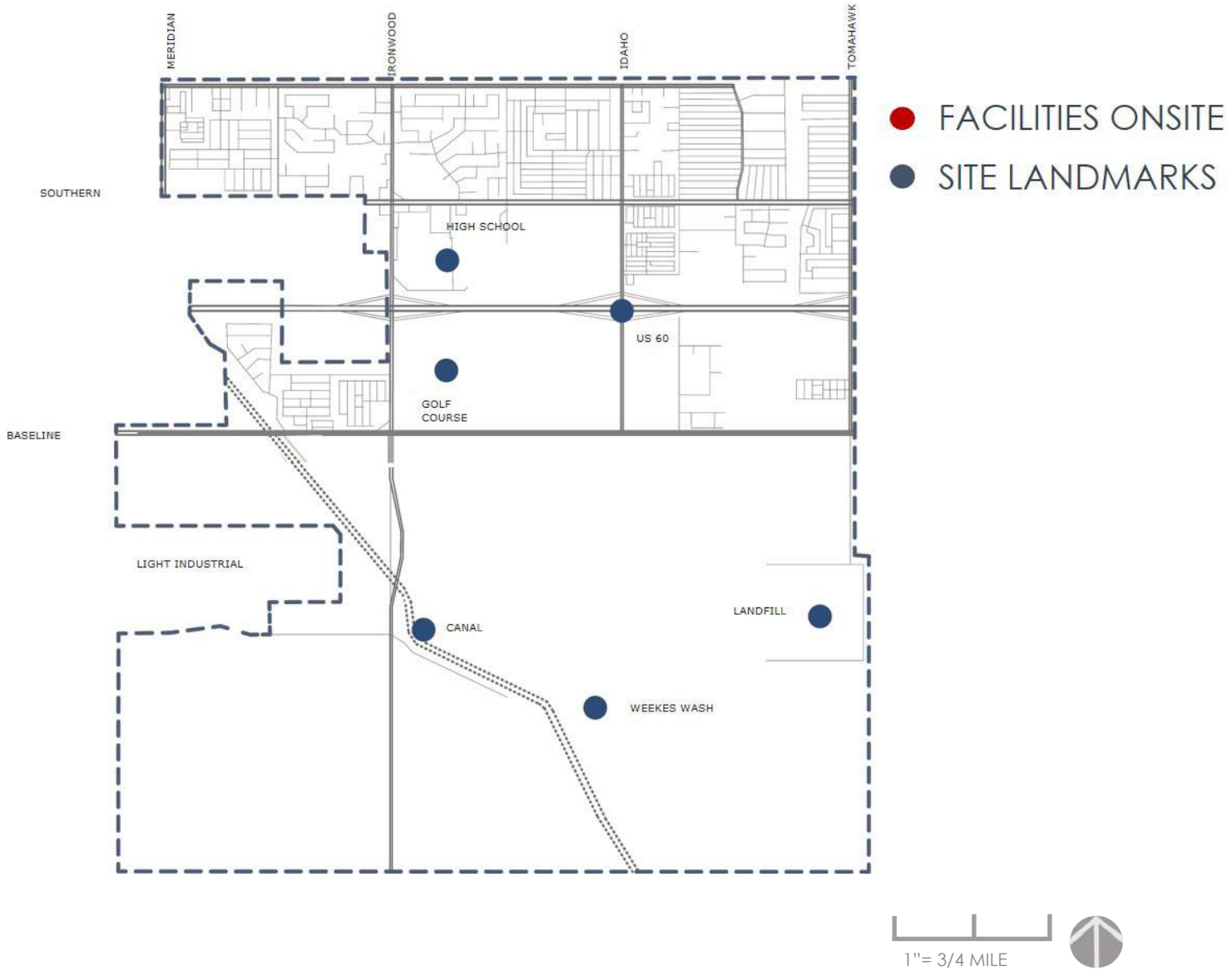
To design a healthy community that invites travelers as well as those in need to Apache Junction. To utilize Apache Junciton's natural beauty and contributes to building a prosperous city. Arizona has a market for rehabilitation and therapy. Apache Junction's location and cost of living makes it an ideal place to build a community around health and wellness.

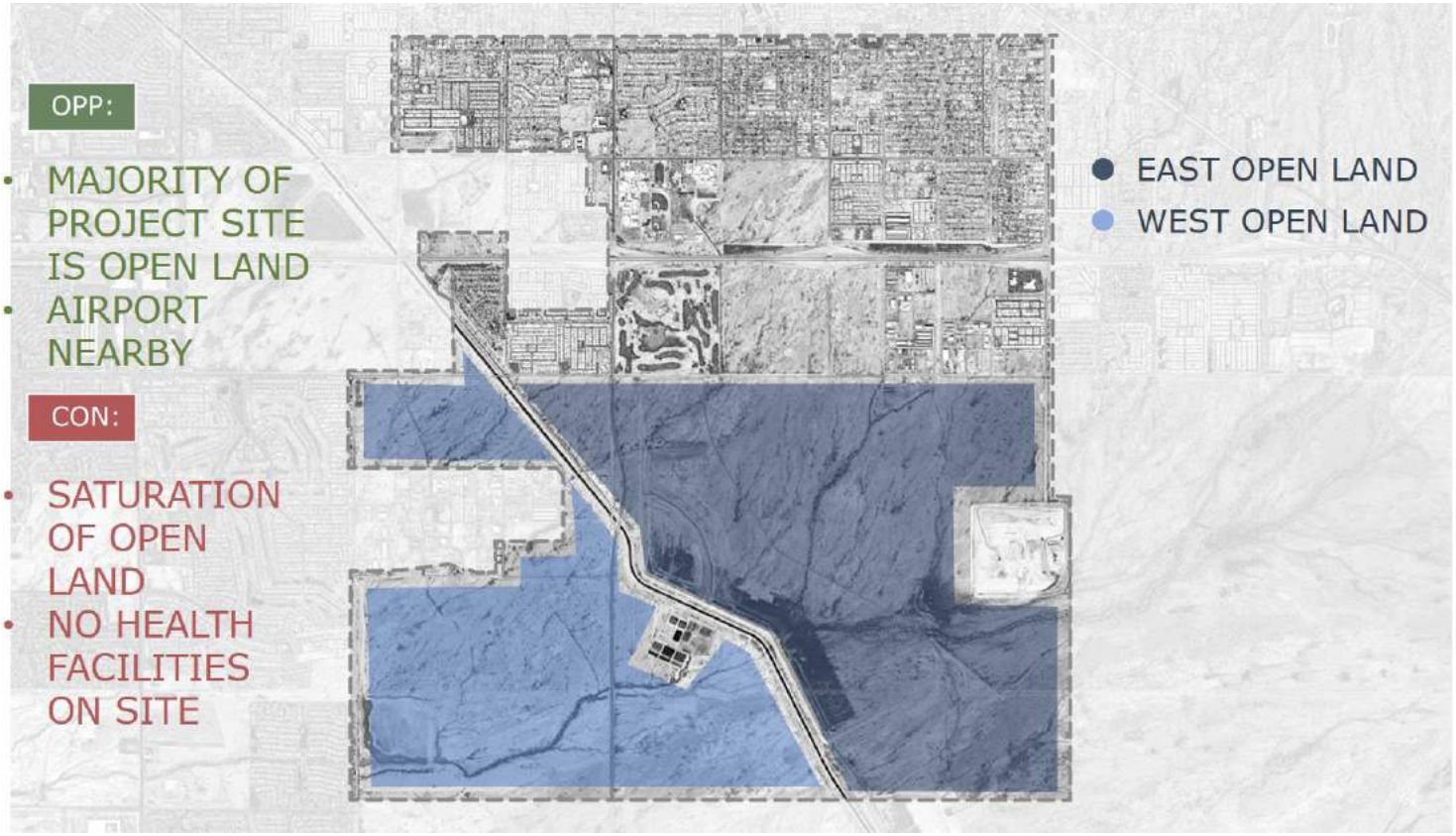
OBJECTIVES

1. Build Apache Junction to invite a Health and Recreation District.
2. Utilize the need for affordable and convenient health care by commercial and recreational design.
3. Attract passage to Apache Junction with nearby airport.

EXISTING HEALTH FACILITIES

- REHABILATATION
- ASSISTED LIVING
- WELLNESS CENTER




OPP:
• MAJORITY OF PROJECT SITE IS OPEN LAND
• AIRPORT NEARBY
CON:
• SATURATION OF OPEN LAND
• NO HEALTH FACILITIES ON SITE
EAST OPEN LAND
WEST OPEN LAND
1"=1 MILES

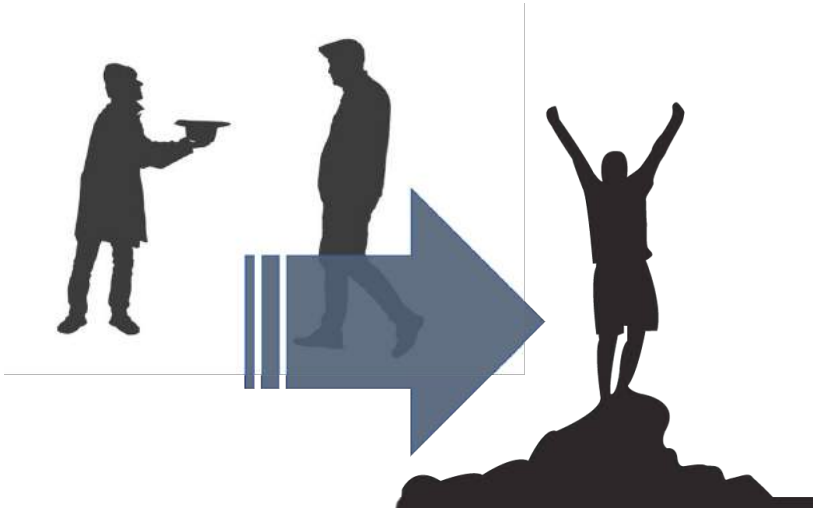
INPATIENT DRUG AND ALCOHOL

- luxury private facilities
- state funded or privately funded
- addiction and mental facilities

CONCIERGE HEALTHCARE

- Travel Medical Assistant
- Private Health Advisors
- Private Physician Practice
- Total Care Platform

TRANSITIONAL LIVING



- Treatment Services
- Sober Living Houses

ENRICHED RETIREMENT

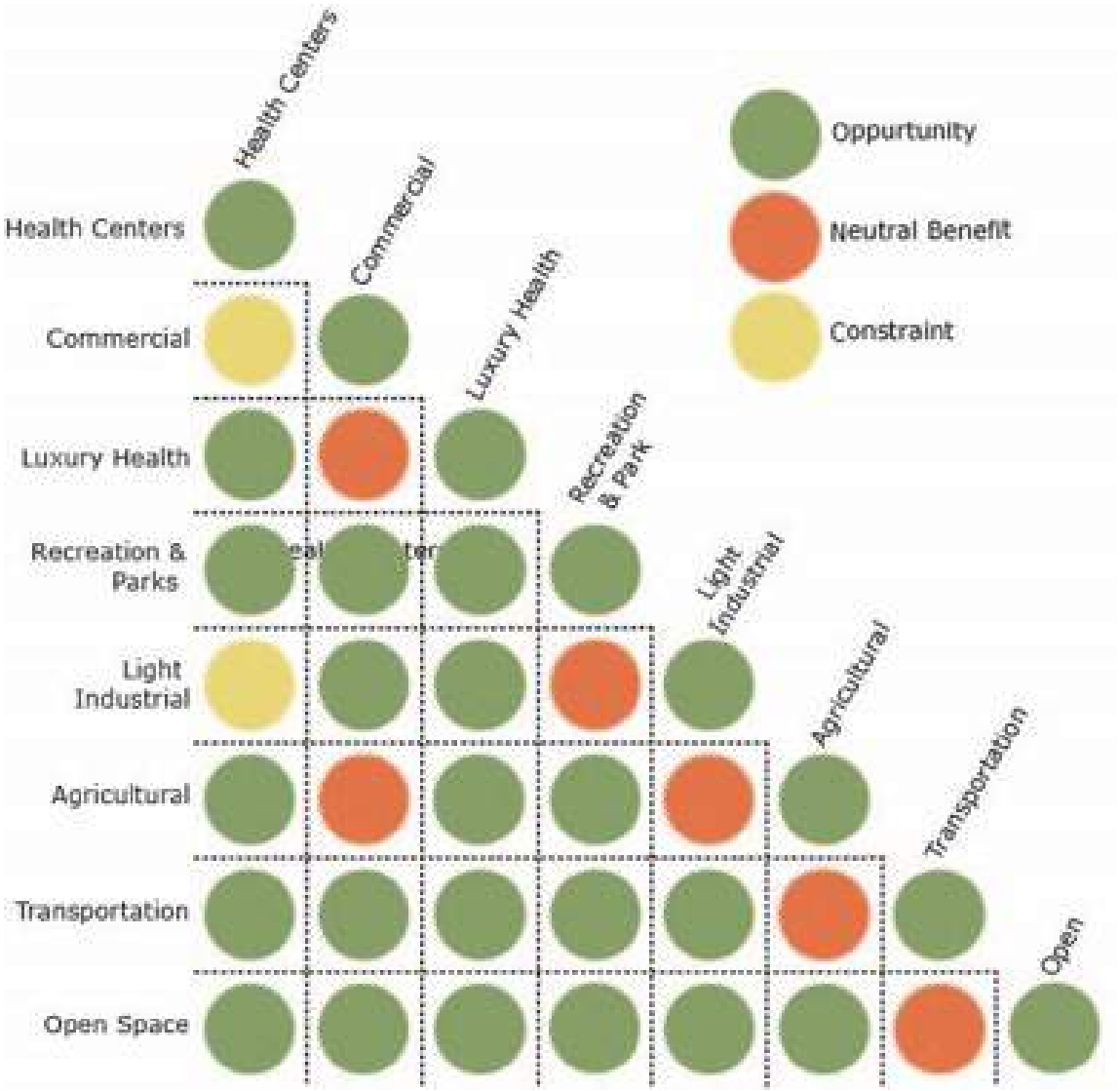
- Intellectual Wellness
- Physical Wellness
- Spiritual Wellness
- Emotional Wellness

ITINERANT HEALTHCARE

- Principally Community Organizaiton
- Technical Assistance
- Rural Healthcare Delivery
- Training and Employment

COMMERCIAL DEVELOPMENT

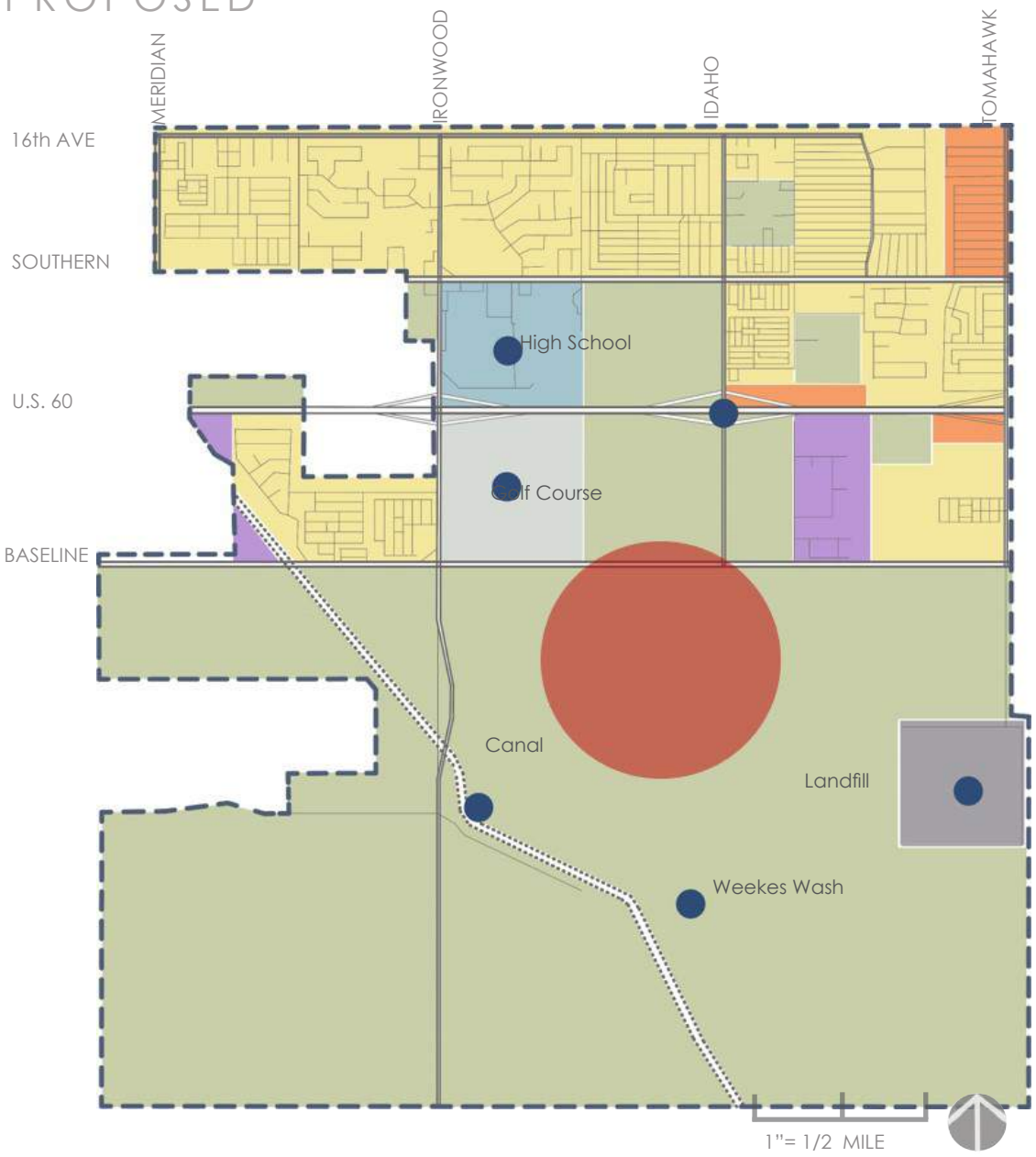
- Medical Manufacturing
- Real Estate Development
- Economic Prosperity


Health Centers
Commercial
Luxury Health
Recreation & Park
Light Industrial
Agricultural
Transportation
Open
Oppurtunity
Neutral Benefit
Constraint
Health Centers
Commercial
Luxury Health
Recreation & Parks
Light Industrial
Agricultural
Transportation
Open Space

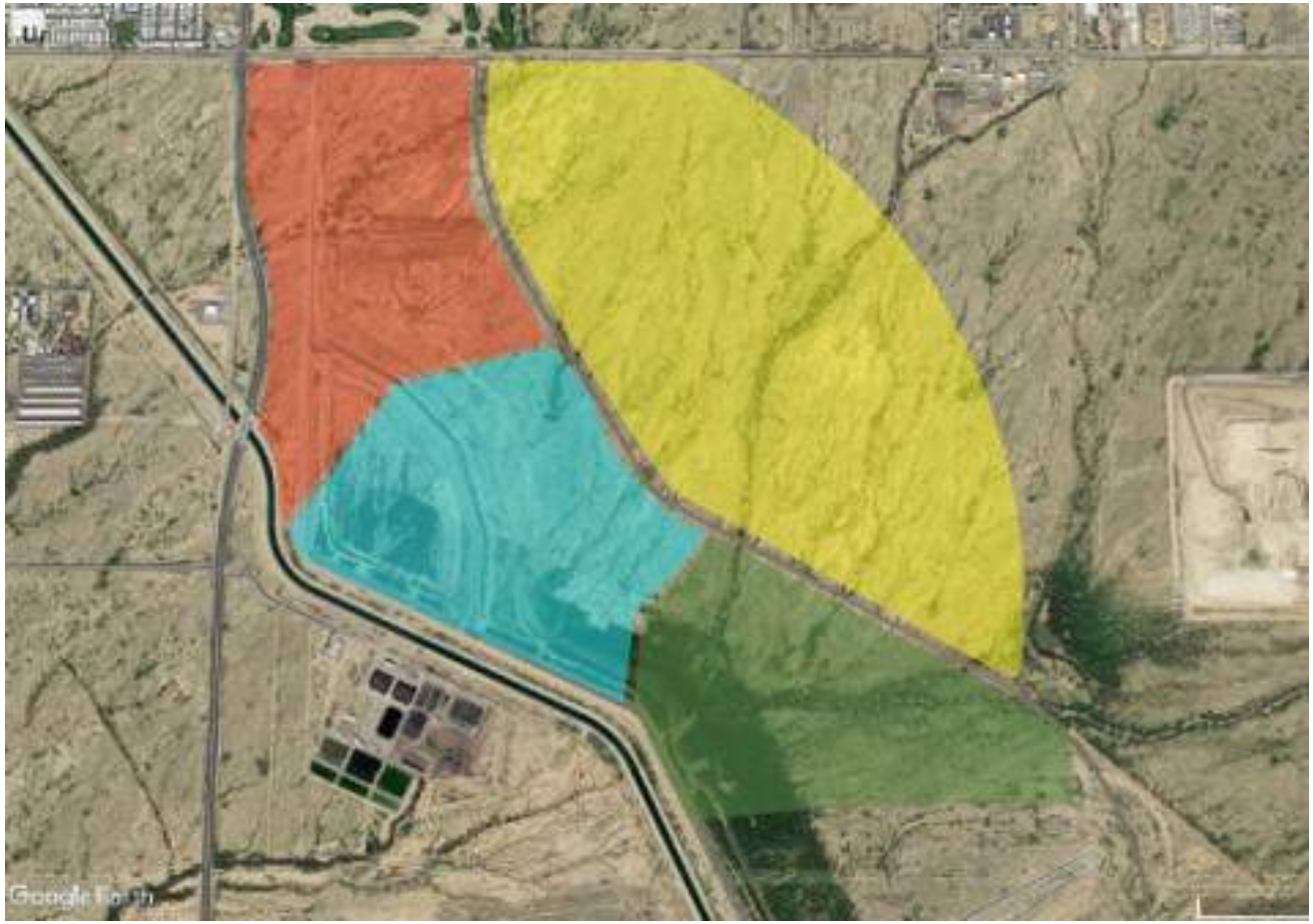
EXISTING

- Commercial
- Residential
- Open Land
- Special Use
- Institutional
- Light Industrial
- Civic/Infrastructure

PROPOSED

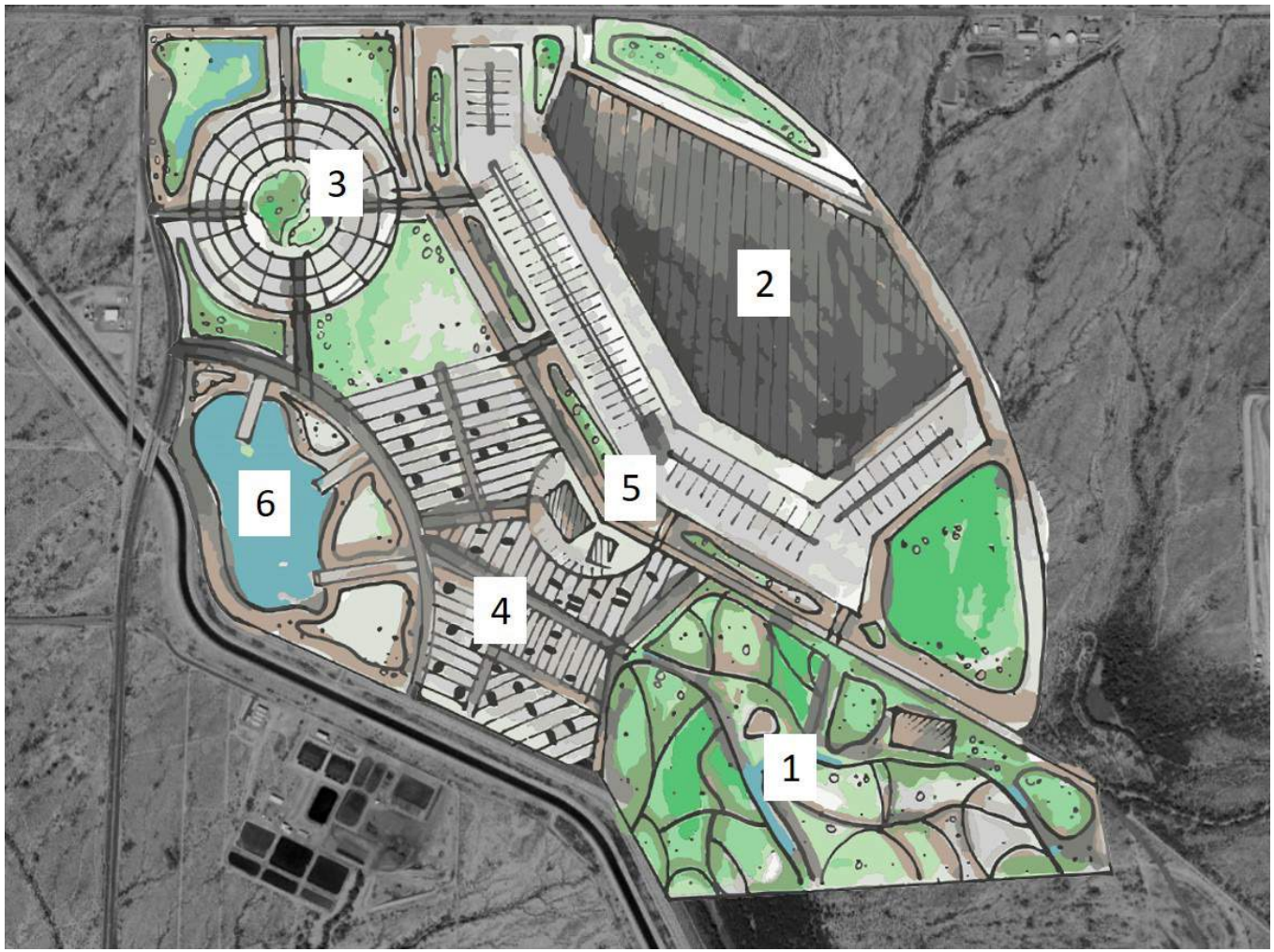


PROPOSED LAND USE



1"=1/2 MILE

1. Weekes Wash Recreation Center
2. Medical Center
3. Circular Retirement Community
4. Transitional Living Community
5. TLC Community Center
6. Weeks Canal Reservior



1"=1 1/4 MILES

07 | DESIGN PROPOSALS

COMMUNITY WALKABILITY

SHINYE KIM

VISION

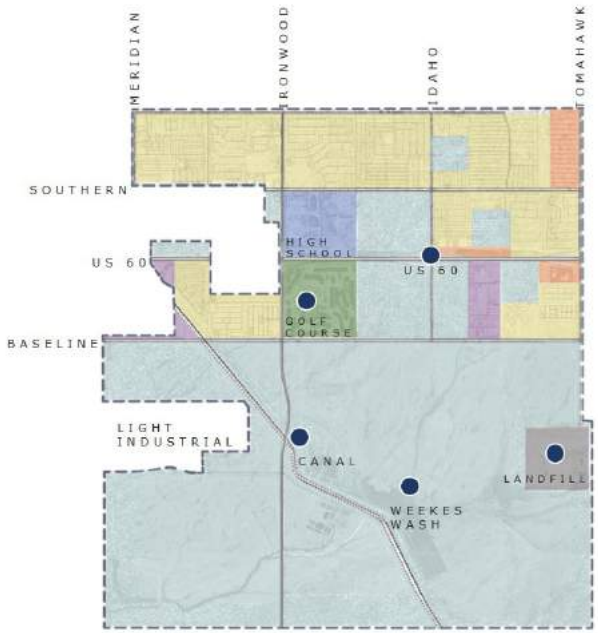
The purpose of this project is to develop a community within Apache Junction by providing complete streets that are safe, accessible, and pleasing to all age groups. All modes of transportation, including biking, walking, and public transportation, are encouraged by the design and give pedestrians convenient, affordable, and healthy options for travel.

OBJECTIVES

1. Provide multi-use transit system throughout Apache Junction by bringing in a bus route system that connects Apache Junction to nearby cities.
2. Build bike stations throughout the site to encourage a different mode of transportaion for a more accessible way of travel.
3. Design mixed land use that will encourage community engagement through connections of varied sectors that interact at provided corridors.

PROPOSED LAND USE

EXISTING



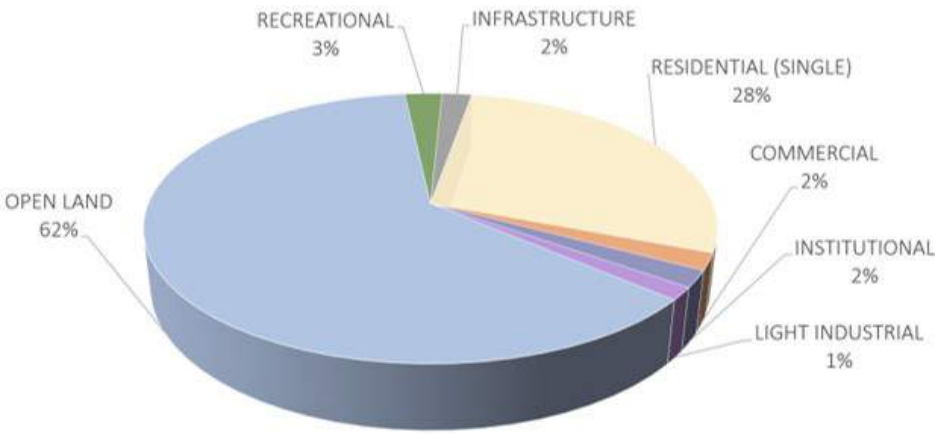
PROPOSED

1"= 3/4 MILES

ZONE COLOR	LANDUSE	EXISTING LANDUSE # OF ACRES	EXISTING LANDUSE % OF ACRES	PROPOSED LANDUSE # OF ACRES	PROPOSED LANDUSE % OF ACRES
	Residential (Low)	1792 ACRES	28 %	1600 ACRES	25 %
	Residential (Medium)	0 ACRES	0 %	384 ACRES	6 %
	Commercial	128 ACRES	2 %	704 ACRES	11 %
	Institutional	128 ACRES	2 %	224 ACRES	3.5 %
	Light Industrial	96 ACRES	1.5 %	486.4 ACRES	7.6 %
	Agricultural	0 ACRES	0 %	544 ACRES	8.5 %
	Open Land	3968 ACRES	62 %	1049.6 ACRES	16.4 %
	Recreational	160 ACRES	2.5 %	1280 ACRES	20 %
	Infrastructure	128 ACRES	2 %	128 ACRES	2 %
	TOTAL:	6,400 ACRES	100%	6,400 ACRES	100%

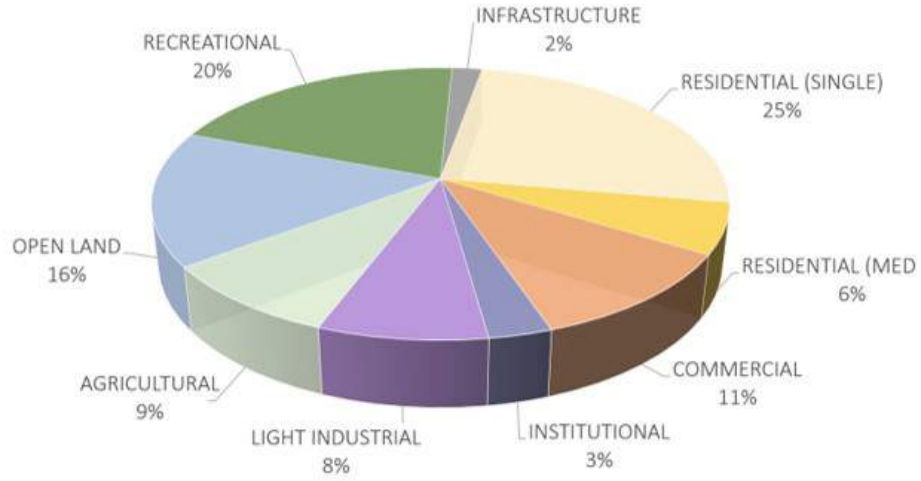
ZONING DISTRIBUTION

EXISTING



The majority of the existing landuse was covered by open land and 28% of residential space for single-family homes. There was only 2% of commercial landuse which was surprising due to having direct access to the U.S. 60 FWY.The beauty of having this part of the Apache Junction was because of that open space in the site. There was a lot of room for growth and to design it into a place where more of a community involvement can be achieve.

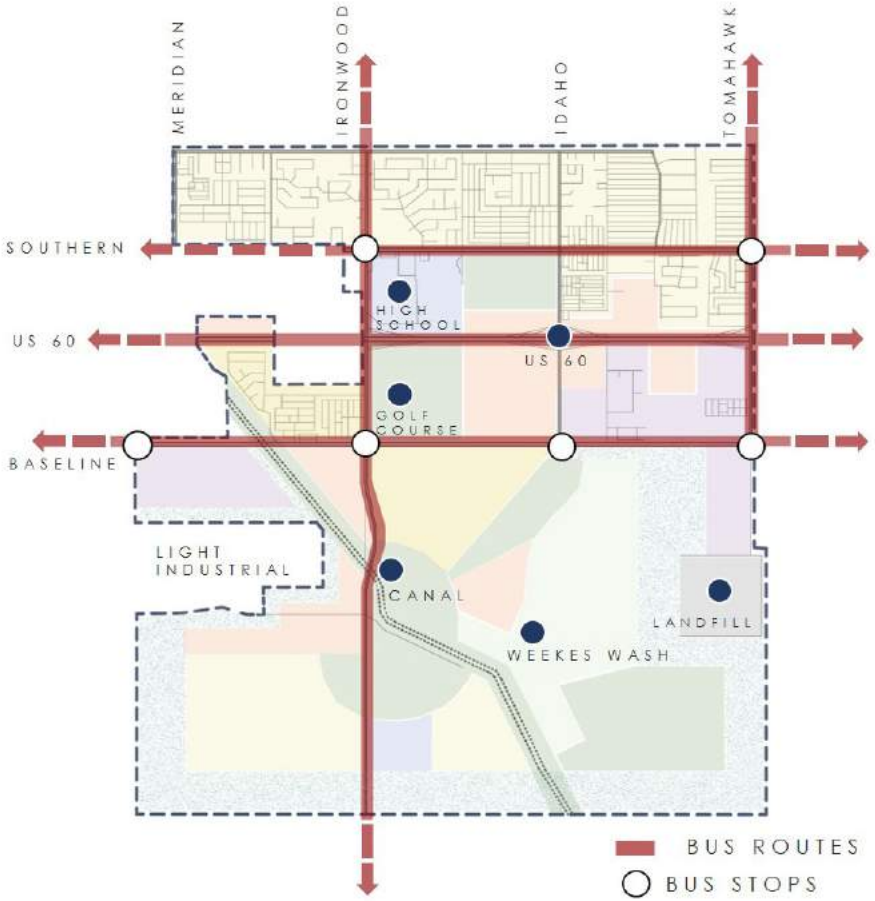
PROPOSED



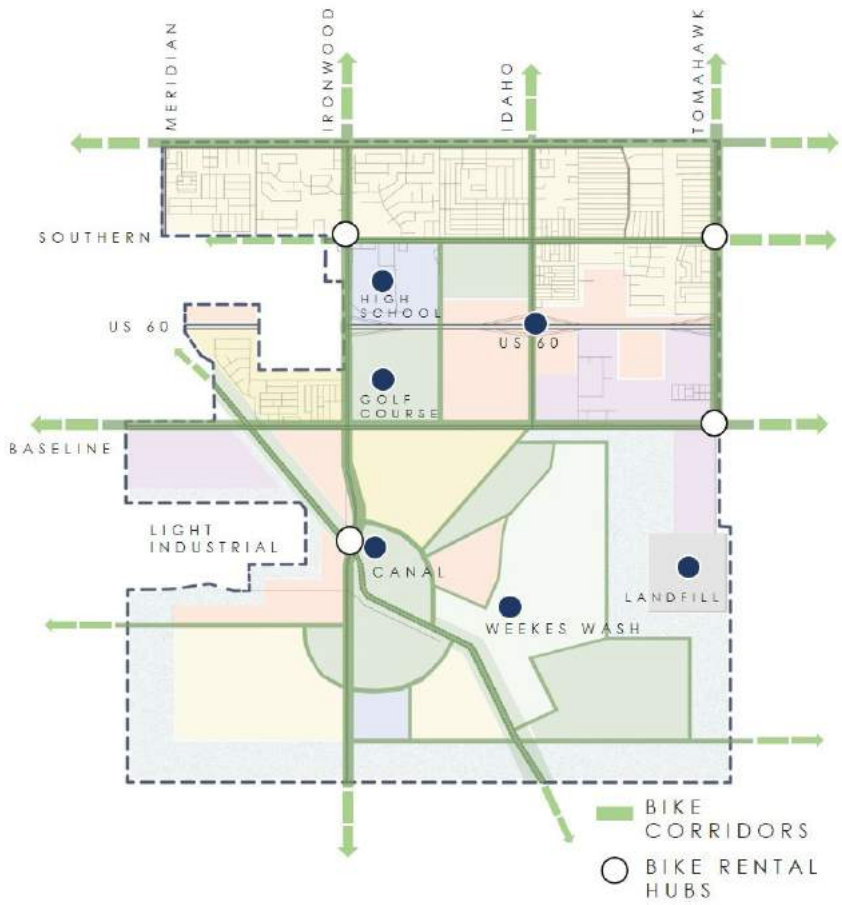
The proposed landuse was distributed to bring in more of a walking friendly neighborhood. I have added medium density housing which include some townhomes and condos. I brought this into the site to offer different type of housing to Southwest quandrant and to accommadate mixed landuse in the area. A big portion of recreational space was designed to create walkable and bikeable corridor space.

Currently there are no existing bus routes through Apache Junction. The closest one is located on Southern Ave. & Power Rd.

1"=1 1/4 MILES



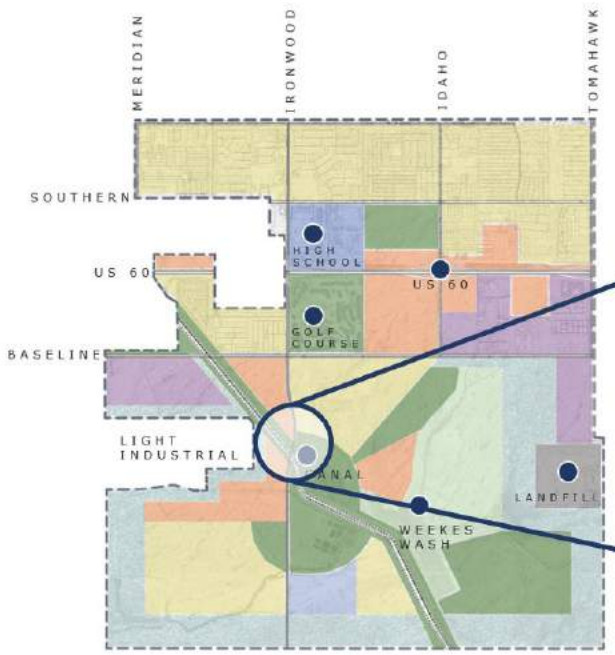
This is the purposed bus route system that can be incorporated into Southwest quandrant of Apache Junction. Southern Ave. travels straight through our site which was a great opportunity for my project since the closest stop of existing bus routes was Southern Ave & Power Rd.



The purpose of bike corridor was to help the residents and visitor to give them another option of travel through their community. It was designed to encourage people to increase their daily steps and to chose to walk rather than drive because it was accessible.

1"=1 MILE

40 ACRES SITE



COMMERCIAL

LOCAL MARKETS
COFFEE SHOPS

RESIDENTIAL

MEDIUM DENSITY
HOUSING: CONDOS

RECREATIONAL

COMMUNITY CENTER
CANAL TRAIL SYSTEM
DOG PARK

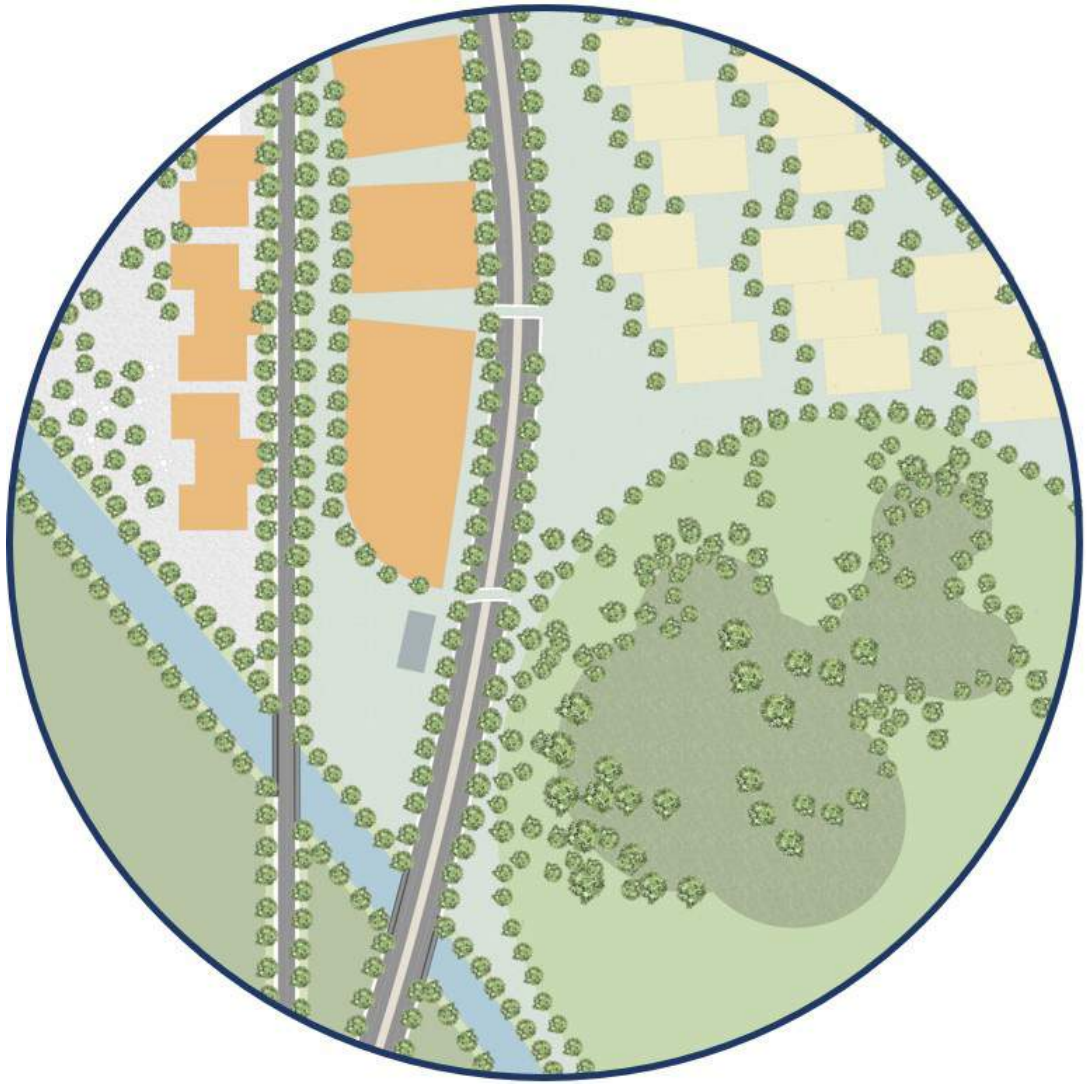
1"= 1/2 MILES

One of the bike station located in site to connect with trail systems and recreational area.

Local markets, coffee shops and outside seating areas with the view of the canal trail.

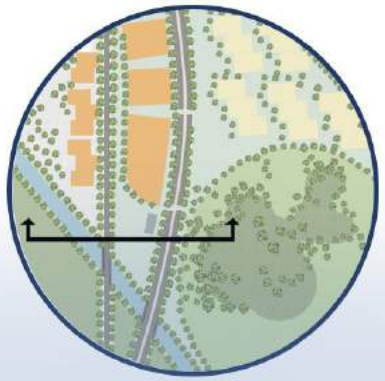
Recreational area in site include potential dog park and gathering open space for the community.

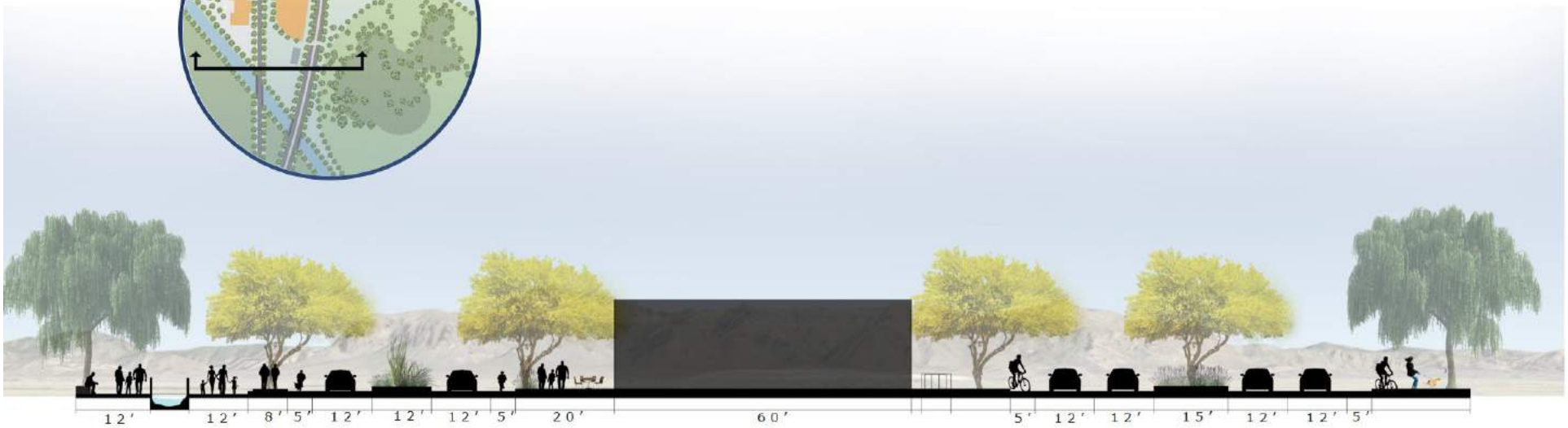
The trail system along the canal is a connecting routes to other parts of apache junction.



1"= 500'

ROADWAY SECTION





- CANAL TRAIL RECREATIONAL
- ROADWAYS
- SIDEWALK
- OUTDOOR COMMERCIAL
- COMMERCIAL
- SIDEWALK
- BIKE STATIONS
- MAIN ROADWAYS
- COMMUNITY OPEN SPACE
- CONNECTOR TO DOG PARK
- RECREATIONAL

1" = 24'- 0"

08 | DESIGN PROPOSALS

ARTS AND CULTURE

DYLAN MAYO

VISION

To create an environment and sense of place, inspired by the unique cultural influence of the community of Apache Junction whereas the arts and cultures are vibrantly expressed and displayed through the gathering of the community at a central community hub, also known as THE VILLAGE.

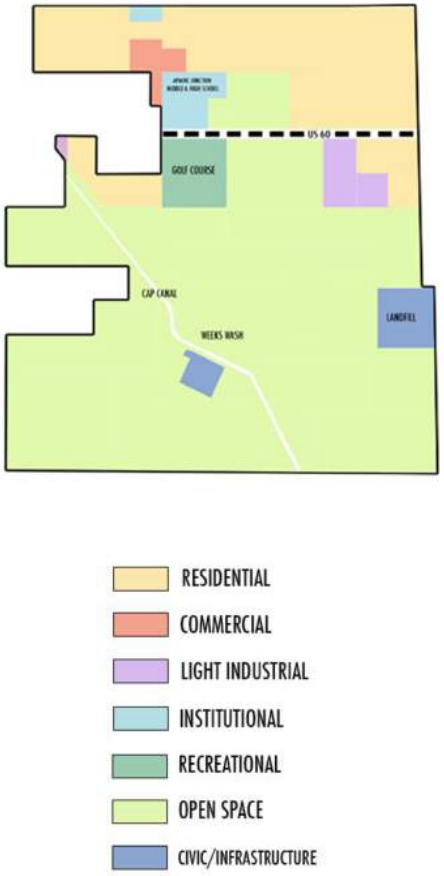
OBJECTIVES

1. Create an environment that develops a unique cultural sense of place
2. Provide the necessities for comfort: food, shade, seating, etc.
3. Develop a community hub that is capable of providing for a multi-use land platform

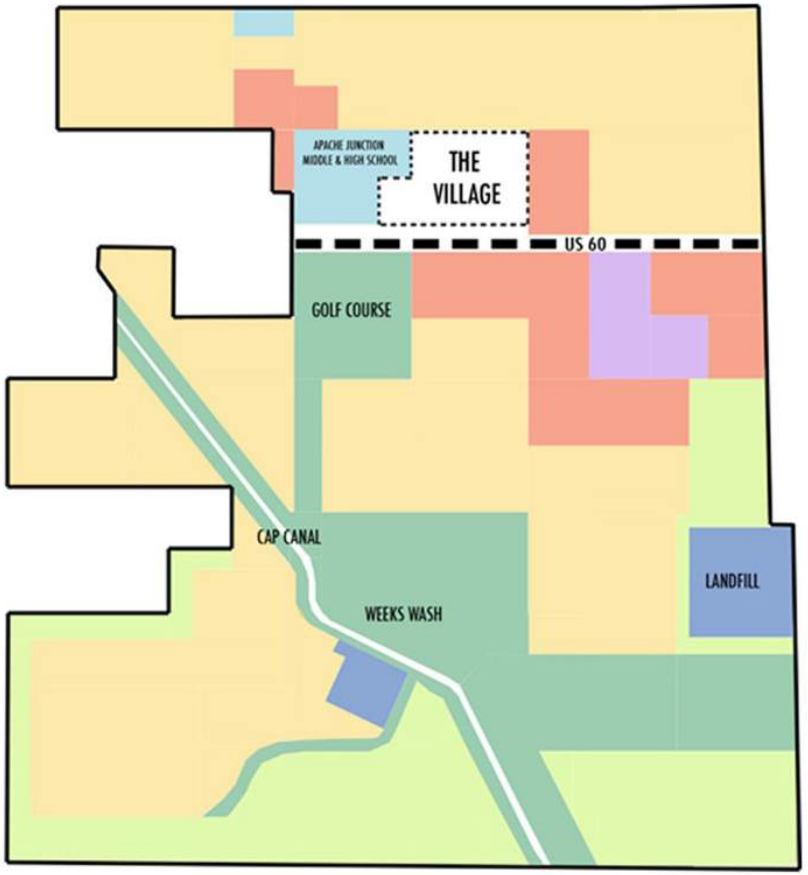
Simplistically, the perfect community is the meshing of three factors: ENGAGEMENT, FUNCTION, AND CULTURE.
The active engagement of the local populace and the city itself, the cultural identity created by the unique character of the community, and the simple functionality providing for the basic needs of the local inhabitats creates the environment for a vibrant successful community.

The current land use allocation for Southwest Apache Junction consists primarily of open space and residential with a few various other land uses. Looking forward into the future and seeing Apache Junction expanding, the
proposed land use projects more residential developement and turning some of the open space into recreational space with connecting trails and corridors. Also along the US60, the development of a commercial shopping center is projected to provide for the incoming residents moving into the new neighborhood developments.

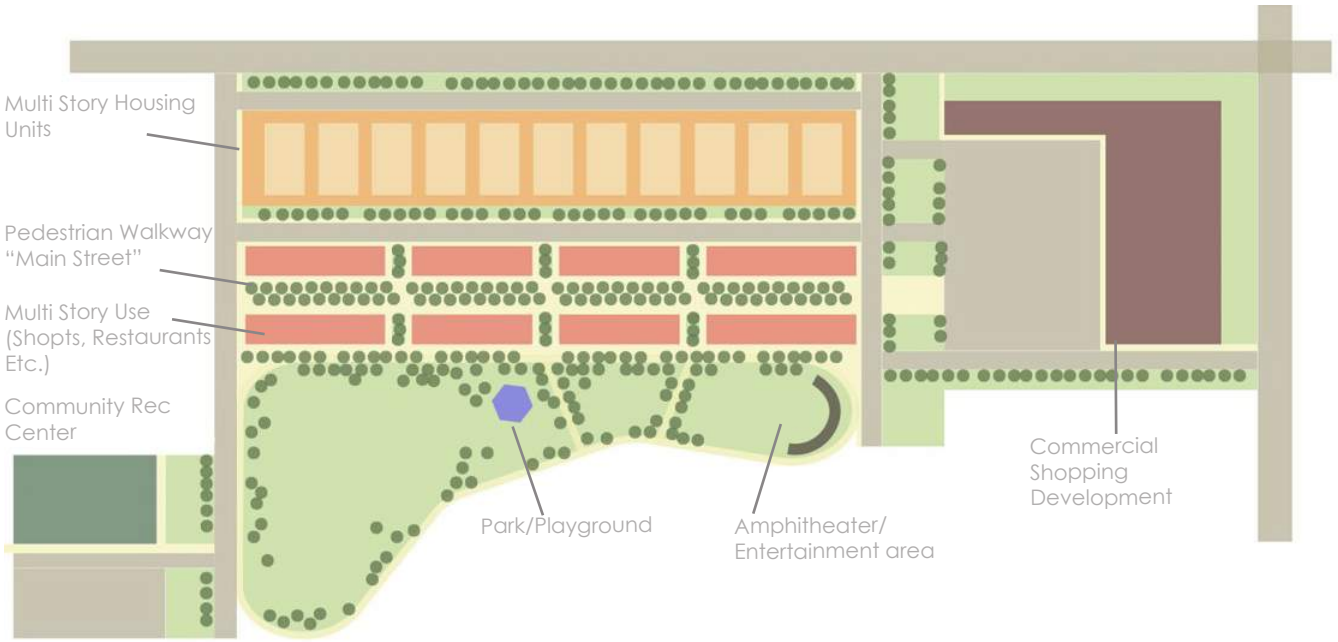
EXISTING



PROPOSED



The Village is a multi use community center that incorporates a multi story family housing complex for the families being attracted to the community, a commercial shopping plaza, a community rec center, and the focal point, the "main street" walk, lined with restaurants and shops that opens up to a park and entertainment center. All of these combined give enormous opportunity for culture and community engagement to develop.



SECTION

Shops/Restaurants | Main Pedestrian Walkway | Shops/Restaurants

1"=4'-0"

Perspective looking across park northwest toward the Superstition Mountains.

09 | DESIGN PROPOSALS

URBAN FORESTRY

KATRYN SQUYRES

VISION

To create a community within Apache Junction rooted in a firm ecological understanding and sense of stewardship towards surrounding vegetated urban environments. community residents and visitors will benefit from a green, living environment, both physically and psychologically throughout their every day lives.

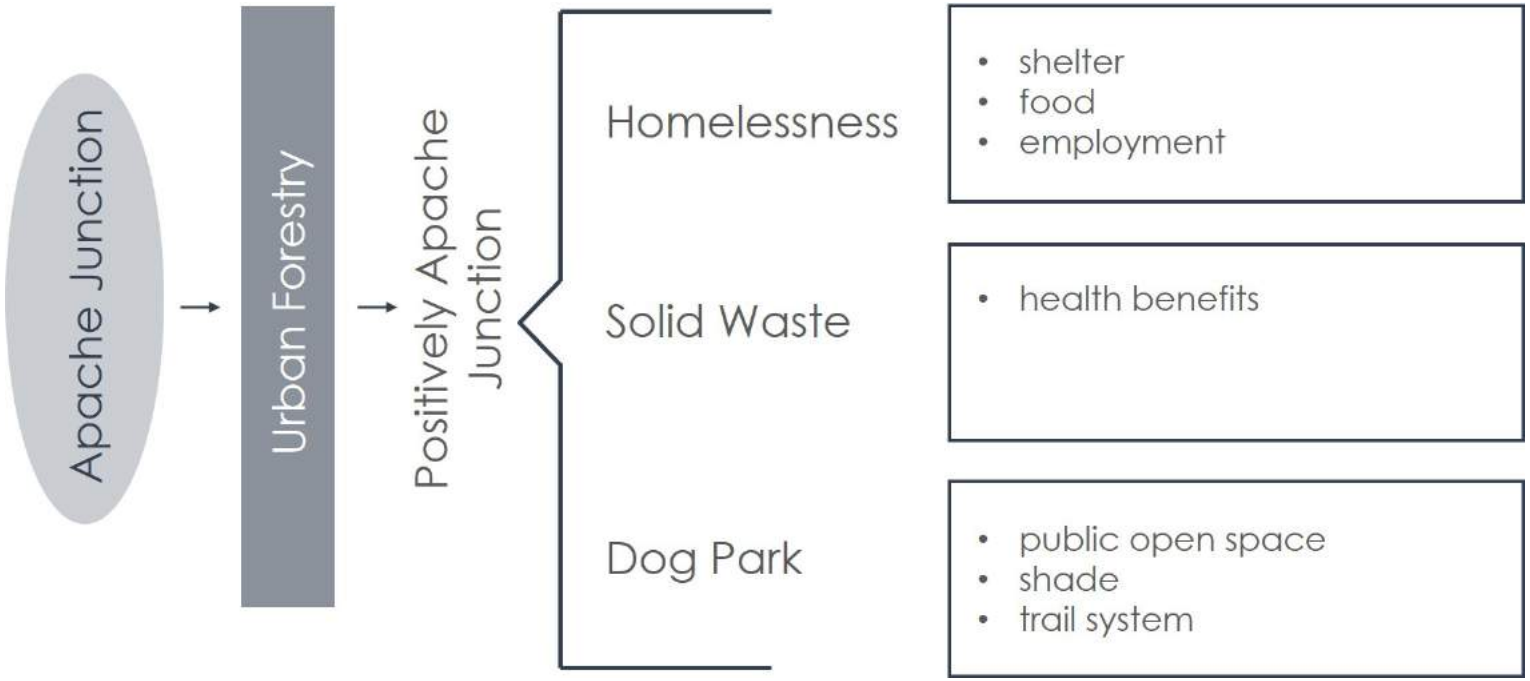
OBJECTIVES

1. Create 40% Urban Canopy coverage
2. Use native trees with a high CO2 capture rate
3. Establish a network of green pedestrian, equestrian, and bike trail systems throughout the site
4. Provide adequate housing designed to encourage outdoor recreation
5. Encourage a community that is actively aware of the benefits attained from a marriage between the urban and natural environments

BENEFITS

Urban Forestry is composed of a number of living, green elements implemented within a community, including community gardens, bioswales, green roofs, and open spaces. However Trees are probably the most important element to implement within an urban environment. Trees have a vast number of benefits, a few of which include:

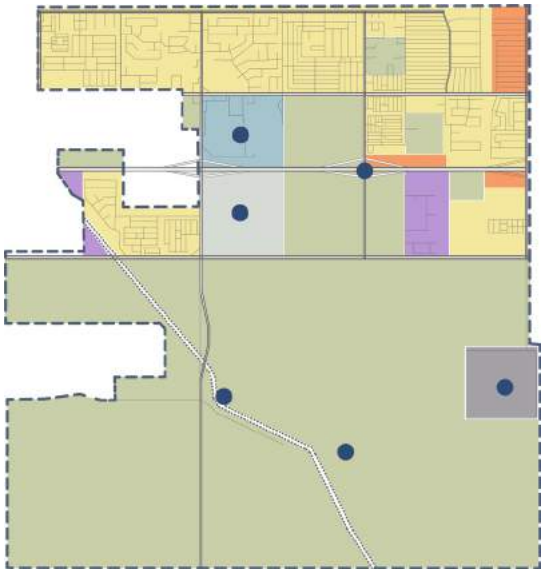
- absorbing and increasing oxygen levels with a site
- mitigate the urban heat island effect by producing natural shade
- act as a buffer and reduce noise pollution
- health benefits, including reducing stress and lengthening lifespans
- reduce stormwater runoff and erosion



Apache Junction asked for our group to think about solutions pertaining to four categories: Positively Apache Junction, Homelessness, Solid Waste, and Dog Parks. Before beginning the design process the Positively Apache Junction category was used to encompass the remaining categories. Each group was then viewed through the lens of Urban Forestry, and solutions for each were recognized.

LAND ALLOCATION MAP

EXISTING



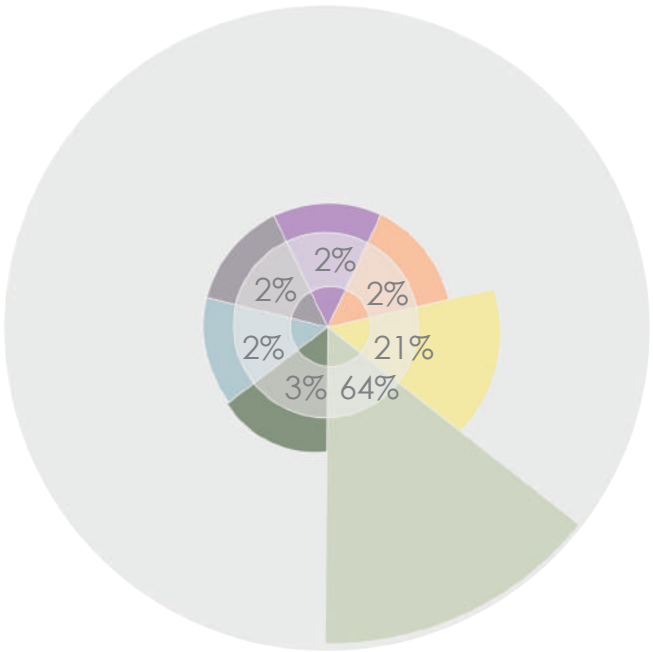
- light industrial
- commercial
- mixed use
- multi-family residential
- single-family residential
- agricultural
- parks/recreational
- institutional
- civic/ infrastructure

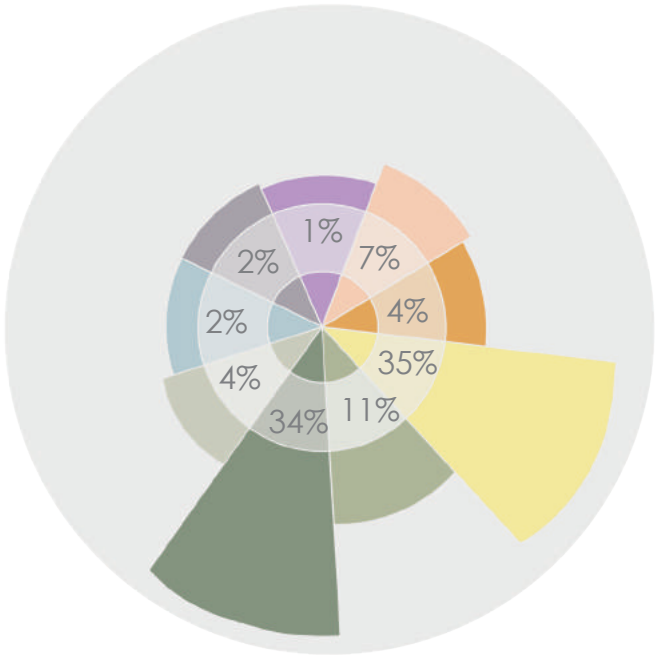
PROPOSED

EXISTING

PROPOSED

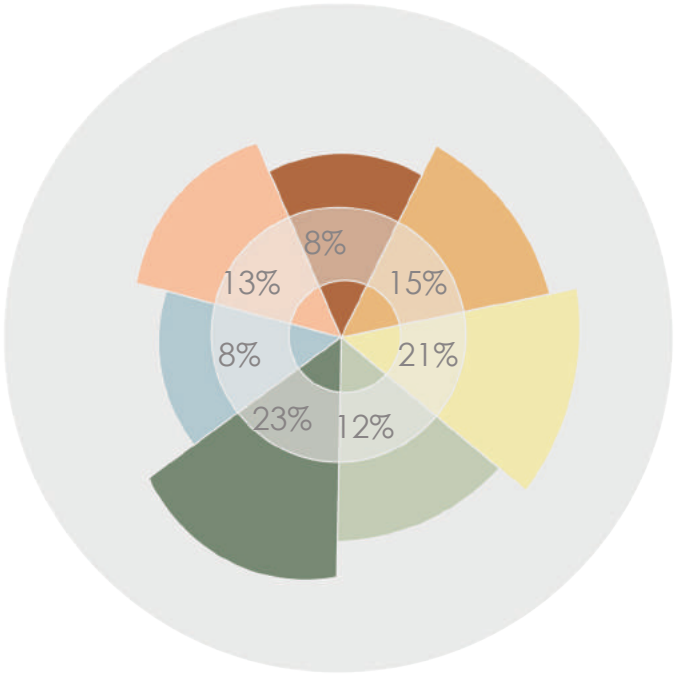
Proposed zoning in Apache Junction was layed out in an attempt to preserve the unique elemnt of this corner of the city: untouched native open land. Recreational trail spaces were increased dramatically to preserve the native ecosystems. Residential zoning was also increased to provide for future middle-class families migrating from Gilbert and Chandler- major technology driven centers to the west becoming increasingly more expensive to live in.





- light industrial
- commercial
- mixed use
- multi-family residential
- single-family residential
- agricultural
- parks/recreational
- institutional
- civic/ infrastructure

1. Tree pallet comprised of species native to the region; primarily Palo Verde, Mesquite, and Desert Ironwood
2. Backyard Access to native designed trail system
3. Smaller tree species planted around intersections to increase visibility
4. Community open spaces provide opportunities for community gardens
5. Pubic parks provide opportunities for community gatherings
6. Termination of Idaho Rd acts as a pedestrian gateway between urban and natural landscapes
7. Public sports park



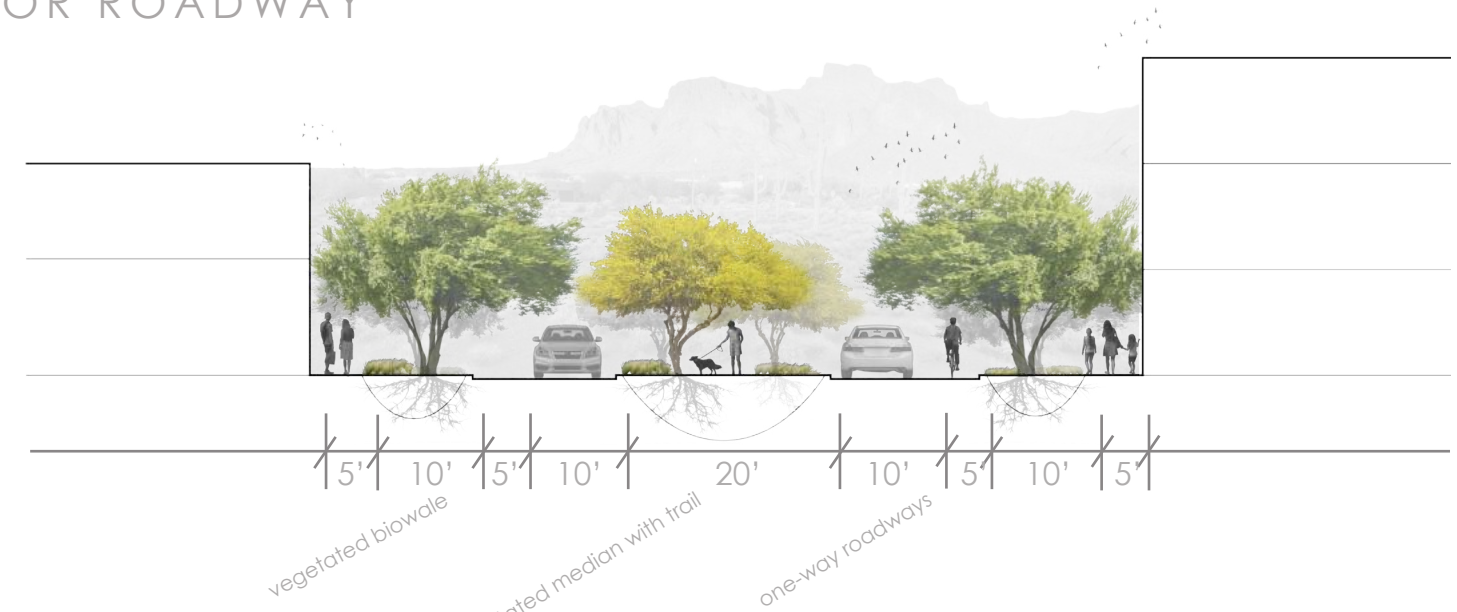
- commercial
- mixed use
- multi-family residential
- single-family residential
- agricultural
- parks/recreational
- institutional

1"=400'-50

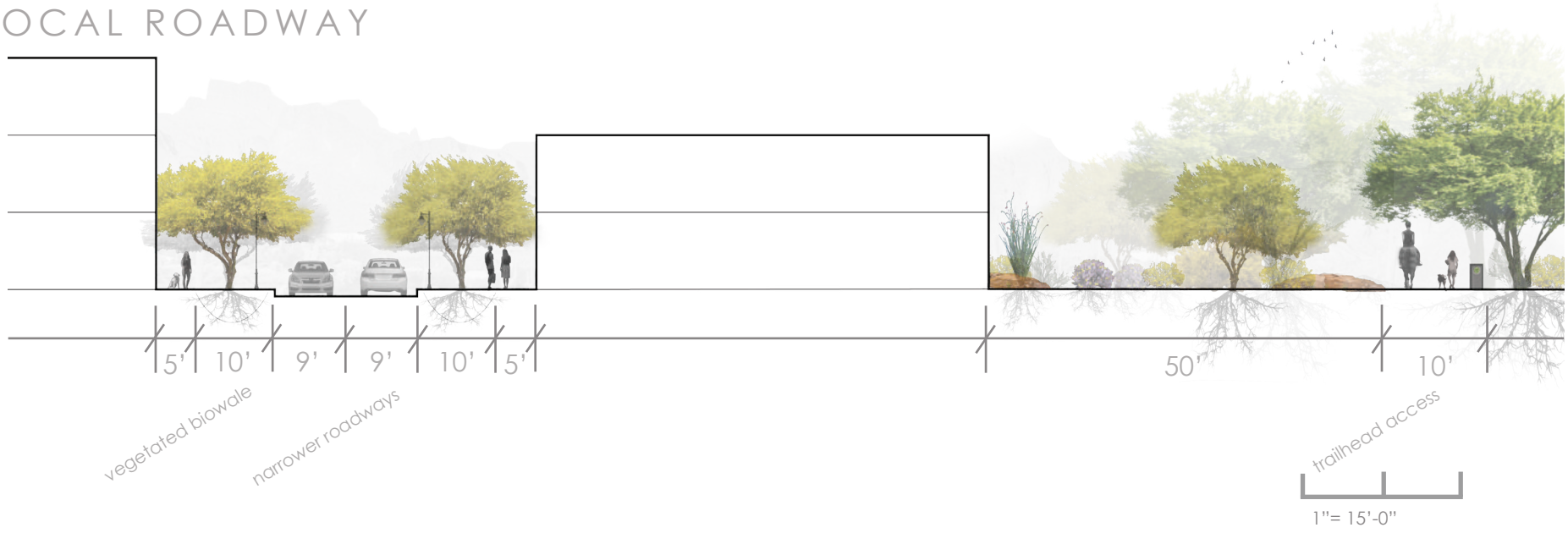
ARTERIAL ROADWAY

1"= 20'-0"

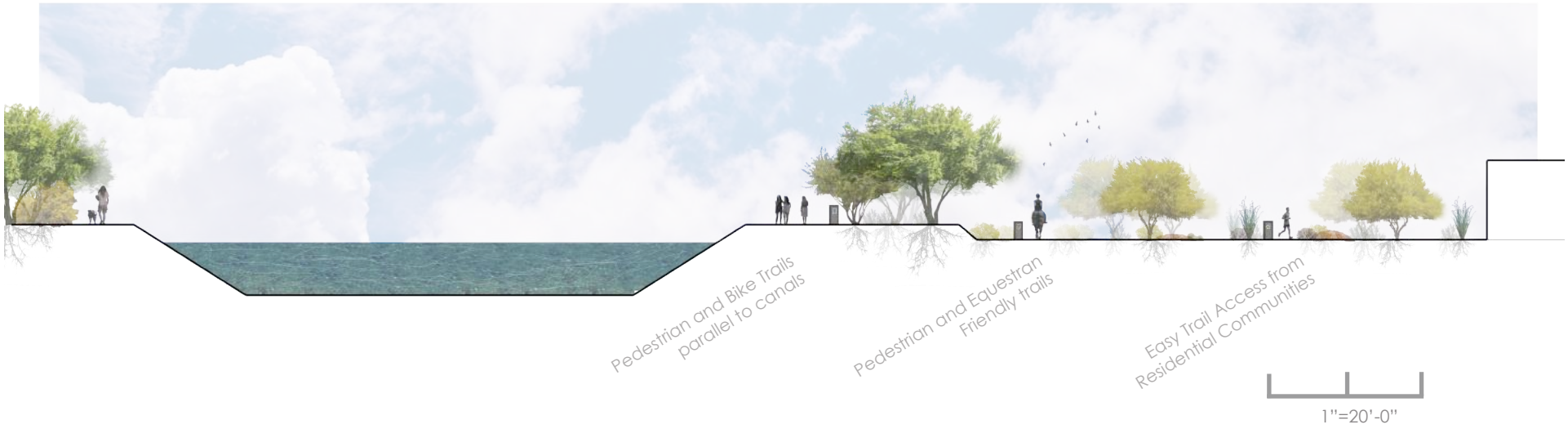
COLLECTOR ROADWAY



LOCAL ROADWAY



Trail Sections



RESIDENTIAL TRAIL

SOUTHWEST
NATIVE DESIGN

LANDSCAPE ARCHITECTS
AND PLANNERS

THANK YOU!